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PACKING SLIP

Document Number: **9074** Document Date: **03/31/2020** Page: **1/6**

Customer No: **C10101** Federal Tax ID - Business Partner: **834401895**

Customer PO: **PO-00382**

Your Contact: **Kurtis Favot**

Deliver To

BIRCHCLIFF ENERGY

35005 hwy 64a. Located 2 miles west of Fairview on highway 64a.
Shop number is 780 835 2241. Open from 7 am to 5 pm.

Bill-to Address

BIRCHCLIFF ENERGY
1000, 600 - 3rd Ave SW
Calgary AB T2P 0G5
CANADA

Delivery Date: **03/31/2020** SO#: **5143** SO Date: **11/20/2019**

SKU	Description	Quantity	UoM
001	101736 4" 150 RF DHV B115AF32 FP BV LCC NACE FLOATER 316 SS TRIM, R-PTFE SEAT, SS+GRAPHITE SEALS, API 608 PO-00382, CPO 1, TAG# 114BA140FP	3	EACH
	Serial Info:		
	# Serial Number		
	1 1711355		
	2 1711356		
	3 1711357		
002	100838 4" 150 RF DHV B5153F12-DIB-1 FP A105/LF2 NACE TRUN BV ENP TRIM, DPE R-PTFE SEAT, HNBR O-RING PO-00382, CPO 2, TAG# 114BB140FP	1	EACH
	Serial Number: 19031470		
003	100838 4" 150 RF DHV C313F6 RP LCC NACE SWING CHK VLV TRIM 12, API 594 PO-00382, CPO 3, TAG# 114CH140	2	EACH
	Serial Number: D1812081 D1812080		
004	101695 6" 150 RF DHV B5153F15-SPE (DB&B) FP A105/LF2 NACE TRUN BV ENP TRIM, DEVLON SEAT, HNBR O-RING, LV/OP PO-00382, CPO4, TAG# 168BA130FP	1	EACH
	Serial Info:		
	# Serial Number		
	1 18031054		

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SKU	Description	Quantity	UoM
006	101737 6" 150 RF DHV B115AF32 FP BV LCC NACE FLOATER 316 SS TRIM, R-PTFE SEAT, SS+GRAPHITE SEALS, API 608 PO-00382, CPO 5, TAG# 168BA140FP	8	EACH
	Serial Info:		
	# Serial Number		
	1 1809445		
	2 1809446		
	3 1809447		
	4 1809448		
	5 1809449		
	6 1809450		
	7 18101413		
	8 18101415		
006	101745 6" 300 RF DHV B130AF32 FP BV LCC NACE FLOATER 316SSTRIM,R-PTFE SEAT,SS+GRAPHITSEALS, LEVEROP,API608 PO-00382, CPO 6, TAG# 168BA341FP	3	EACH
	Serial Info:		
	# Serial Number		
	1 19023612		
	2 19023613		
	3 19023611		
007	100838 6" 150 RF DHV B5153F15-DIB-1 FP A105/LF2 NACE TRUN BV ENP TRIM, DPE DEVLON SEAT, HNBR O-RING, LVR OP PO-00382, CPO 7, TAG# 168BB141FP Serial Number: 19052356	1	EACH
008	100838 6" 300 RF DHV C120F2 GATE VLV WCB NACE TRIM 5 PO-00382, CPO 8, TAG# 168GA300 Serial Number: D1802079 D1802080	2	EACH
009	100838 8" 150 RF DHV B5153F15-GO-DIB-1 FP LF2 NACE TRUN BV ENP TRIM, DPE DEVLON SEAT, HNBR O-RING, G/OP PO-00382, CPO 9, TAG# 219BB141FP Serial Number: 19031494 19031493 19031490 19031497	4	EACH
010	100838 8" 300 RF DHV C120F2 GATE VLV WCB NACE TRIM 5 PO-00382, CPO 10, TAG# 219GA300 Serial Number: D18041296 D18041297 D18041288 D18041289 D1802106 D1802107	6	EACH
011	100838 AGCO H7HIS-4Q-SG 1/2" FNPT X 1/2" FNPT NEEDLE VALVE, 6000#, 316SS, NACE, GRAPHOIL PACKED PO-00382, CPO 11, TAG# 21NE1548 Serial Number: XY1406261	1	EACH

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SKU	Description	Quantity	UoM
002	100838 10" 150 RF DHV B5153F15-GO-SPE (DB&B) FP LF2 NACE TRUN BV ENPTRIM, DEVLON SEAT, HNBR O-RING, G/OP PO-00382, CPO 12, TAG# 273BA141FP Serial Number: 1807039	1	EACH
003	100838 10" 300 RF DHV B5303F15-GO-SPE (DB&B) FP A105/LF2 NACE TRUN BV ENPTRIM, DEVLON SEAT, HNBR O-RING G/O PO-00382, CPO 13, TAG# 273BA341FP Serial Number: 1905833	1	EACH
	Backorder:1		
004	100838 3/4" FRONTIER 3600# RP SWxTHD BV LF2/316/630 R-PTFE, Nace PO-00382, CPO 14, TAG# 27BA607 Serial Number: 191113	1	EACH
005	100838 3/4" FRONTIER 3600# RP SWxTHD BV LF2/316/630 R-PTFE, Nace PO-00382, CPO 15, TAG# 27BA637 Serial Number: 191113	1	EACH
006	100838 3/4" FRONTIER 3600# RP SWxTHD BV LF2/316/630 R-PTFE, Nace PO-00382, CPO 16, TAG# 27BA647 Serial Number: 191201	12	EACH
007	100838 3/4" 800 DHV F1800T33 THD GATE VLV A105 NACE TRIM 8 PO-00382, CPO 17, TAG# 27GA807 Serial Number: 1804024003-232 1804024003-360	2	EACH
008	100838 AGCO H7HIS-46Q-SG 3/4" MNPT X 1/2" FNPT NEEDLE VALVE, 6000#, NACE, GRAPHOIL PACKED PO-00382, CPO 18, TAG# 27x21NE1548M Serial Number: 1810102806	2	EACH
009	100838 12" 150 RF DHV B5153F15-GO-DIB-1 FP LF2 NACE TRUN BV ENP TRIM, DPE DEVLON SEAT, HNBR O-RING, G/OP PO-00382, CPO 19, TAG# 324BB141FP Backorder: 4	0	EACH
010	100838 12" 300 RF DHV C123F6 GATE VLV LCC NACE TRIM 12 PO-00382, CPO 20, TAG# 324GA300 Serial Number: D1811976 D1811975 D1806428 D1806427	4	EACH
011	100838 1" FRONTIER 3600# RP THD BV A105/316/630 R-PTFE, Nace PO-00382, CPO 21, TAG# 33BA608 Serial Number: 190911	2	EACH

Delivery Date: **03/31/2020** SO#: **5143** SO Date: **11/20/2019**

SKU	Description	Quantity	UoM
100838	1" FRONTIER 3600# RP SWXTHD BV LF2/316/630 R-PTFE, Nace PO-00382, CPO 22, TAG# 33BA647 Serial Number: 190707 190510	8	EACH
100838	1" 800 DHV F1800T33 THD GATE VLV A105 NACE TRIM 8 PO-00382, CPO 23, TAG# 33GA807 Serial Number: TZ18030772 TZ18030951 TZ19070256 TZ19070257 TZ19070220 TZ19070314 TZ19070313 TZ19070240 TZ19070162 TZ19070198 TZ19070312 TZ19070296	12	EACH
100838	1" 150 RF DHV F2151F73 GLOBE VLV LF2 NACE TRIM 12 PO-00382, CPO 24, TAG# 33GL130 Serial Number: TJ18060222	1	EACH
101708	2" 150 RF DHV B2150F32 RP BV WCB NACE FLOATER 316 SS TRIM, R-PTFE SEAT, SS+GRAPHITE SEALS, API 608 PO-00382, CPO 25, TAG# 60BA100 Serial Info: # Serial Number 1 18113910 2 18113921 3 18113903 4 18113923 5 18113892 6 18113891 7 18113917	7	EACH
101734	2" 150 RF DHV B115AF32 FP BV LCC NACE FLOATER 316 SS TRIM, R-PTFE SEAT, SS+GRAPHITE SEALS, API 608 PO-00382, CPO 26, TAG# 60BA100FP Serial Info: # Serial Number 1 18012418 2 18012428 3 18012439	3	EACH
100838	2" 150 RF DHV B2153F32 RP BV LF2 NACE FLOATER 316 SS TRIM, R-PTFE SEAT, SS +GRAPHITE SEALS, API 608 PO-00382, CPO 27, TAG# 60BA130 Serial Number: 19024571 19024561	2	EACH
100838	2" 150 RF DHV B1153F32 FP BV LF2 NACE FLOATER 316 SS TRIM, R-PTFE SEAT, SS +GRAPHITE SEALS, API 608 PO-00382, CPO 28, TAG# 60BA130FP Serial Number: 19021083 19021097 19021085 19021090 19021071 19021081 19021078 19021088	8	EACH

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SKU	Description	Quantity	UoM
000	100838 2" 150 RF DHV B1153F32 FP BV LF2 NACE FLOATER 316 SS TRIM, R-PTFE SEAT, SS +GRAPHITE SEALS, API 608 PO-00382, CPO 29, TAG# 60BA140FP Serial Number: 19021091 19021093 19021087 19021094	4	EACH
000	101742 2" 300 RF DHV B130AF32 FP BV LCC NACE FLOATER 316 SS TRIM, R-PTFE SEAT, SS+GRAPHITE SEALS, API 608 PO-00382, CPO 30, TAG# 60BA340FP Serial Info: # Serial Number 1 18013144 2 18013149 3 18013156 4 18013157 5 18013161	5	EACH
000	100838 2" 150 RF DHV B5153F12-DIB-1 FP A105/LF2 NACE TRUN BV ENP TRIM, DPE R-PTFE SEAT, HNBR O-RING PO-00382, CPO 31, TAG# 60BB141FP Serial Number: 19031462 19031448	2	EACH
000	100838 2" 150 RF DHV CE13FX/15 FP LCC NACE SWING CHK, 316+HNBR DISC, 316 SEAT, API 6D PO-00382, CPO 32, TAG# 60CH130 Serial Number: D19041026	1	EACH
000	100838 2" 300 RF DHV C120F3 GATE VLV WCB NACE TRIM 8 PO-00382, CPO 33, TAG# 60GA300 Serial Number: D1902089 D1902090 D1902092 D1902093 D1902094 D1902095 D1902097 D1902105 D1902107 D1902098	10	EACH
000	101735 3" 150 RF DHV B115AF32 FP BV LCC NACE FLOATER 316 SS TRIM, R-PTFE SEAT, SS+GRAPHITE SEALS, API 608 PO-00382, CPO 34, TAG# 89BA140FP Serial Info: # Serial Number 1 17121374	1	EACH

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Delivery Date: **03/31/2020**

SO#: **5143**

SO Date: **11/20/2019**

SKU	Description	Quantity	UoM
101743	3" 300 RF DHV B130AF32 FP BV LCC NACE FLOATER 316 SS TRIM, R-PTFE SEAT, SS+GRAPHITE SEALS, API 608 PO-00382, CPO 35, TAG# 89BA340FP	3	EACH

Serial Info:

#	Serial Number
1	17081979
2	17081993
3	17091635

Shipping Type: **Drydan Transport Ltd.**


Freight Charge: **PREPAID**

Based On Sales Orders 5143.

Confirmation of Delivery Note

Signature

Date

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE ISO 9001:2015, API Q1: 9 TH ED				REPORT NO.	M18120422
					DATE	Dec/4/2018
					PAGE	1 of 6
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE	
ALTEK Industrial	ST4036		SO1711005	5	NA	
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.	
B115AF32	4"FB	150LB	RF Flange	10 PCS	NA	
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER		
FLOATING BALL VALVE	Two-Piece Body, A352 LCC Body, 316SS Trim, R-PTFE Seat Insert		Lever Op	1711352-1711361		
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.		
API 608-2012	<input type="checkbox"/> QSL 1	<input type="checkbox"/> QSL 2	<input type="checkbox"/> API 6FA, 3RD, Ed	<input type="checkbox"/> NACE MR-0175-2002		
	<input type="checkbox"/> QSL 3	<input type="checkbox"/> QSL 4	<input checked="" type="checkbox"/> API 607, 6TH, Ed	<input checked="" type="checkbox"/> NACE MR-0103-2012		

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	CAP	BALL	SEAT ASSEMBLY	STEM
BASE MATERIAL	A352 LCC	A352 LCC	A182 F316	R-PTFE	A182 F316
FACE MATERIAL	NA	NA	NA	R-PTFE	NA
NAME OF PART	BOLT/STUDS	NUTS	GASKET		
BASE MATERIAL	A320 L7M	A194 7M	SS+GRAPHITE		
FACE MATERIAL	NA	NA	NA		

PRESSURE TEST REPORT

Have been tested good according to API 598, CSA Z245.15-17 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				OTHER
		H.P. CLOSURE (HYDROSTATIC) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	
PRESSURE (PSIG)	450	325	325	80	80	NA
DURATION (Minutes)	2	2	2	2	2	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	MSS SP-55-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.*
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO. M18120422

DATE Dec/4/2018

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	ST4036	FLOATING BALL VALVE	4"FB 150LB	B115AF32
MATERIAL	ASTM A352.LCC	Material Origin	P.R.C	

HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	910	1h/25mm, ≥2h	Gas	Water cooling to room temp.	
Temper.	650	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	SI	Cu	NI	Cr	Mo	V	Nb	AL	N	CE
	0.250	1.200	0.040	0.045	0.600	0.300	0.500	0.500	0.200	0.030	-	-	-	0.430
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (-46°C) J, 10*10mm Any direction								
	485-655	275	22	35		SINGLE MIN ≥27J								
L6537	0.205	1.080	0.029	0.014	0.463	0.020	0.019	0.048	0.005	0.004	-	-	-	0.399
	545	370	32	66	165	32	36	40						
L6975	0.209	1.070	0.021	0.014	0.437	0.032	0.026	0.091	0.008	0.003	-	-	-	0.412
	590	335	31	62	160	28	38	36						
L6977	0.208	1.070	0.020	0.014	0.444	0.029	0.022	0.116	0.009	0.003	-	-	-	0.415
	545	350	29	51	165	40	46	32						
L6986	0.197	1.020	0.021	0.015	0.450	0.031	0.024	0.056	0.007	0.003	-	-	-	0.384
	530	310	29	58	161	28	30	36						
L6990	0.209	1.010	0.022	0.016	0.383	0.030	0.023	0.086	0.009	0.003	-	-	-	0.400
	560	380	28	54	170	36	34	30						
L6995	0.193	1.030	0.020	0.014	0.415	0.031	0.025	0.065	0.007	0.003	-	-	-	0.383
	575	425	28	56	174	38	34	40						
T3170	0.185	0.974	0.022	0.014	0.331	0.043	0.225	0.211	0.005	0.005	-	-	-	0.409
	523	287	30	41	154	33	31	30						
T3173	0.193	0.981	0.020	0.015	0.342	0.045	0.221	0.215	0.005	0.006	-	-	-	0.409
	523	284	33	40	152	31	32	33						
T3174	0.192	0.953	0.021	0.014	0.336	0.051	0.219	0.218	0.003	0.003	-	-	-	0.414
	529	279	30	41	153	32	30	29						
T3175	0.190	0.966	0.022	0.015	0.322	0.046	0.225	0.204	0.006	0.005	-	-	-	0.412
	525	283	32	40	154	29	31	30						
T3176	0.184	0.989	0.020	0.016	0.327	0.052	0.224	0.219	0.004	0.004	-	-	-	0.413
	519	288	31	42	162	32	30	29						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: **DHV Industries, Inc.**
3451 Pegasus Drive
Bakersfield, CA 93308 U.S.A
 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO. M18120422

DATE Dec/4/2018

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	ST4036	FLOATING BALL VALVE	4"FB 150LB	B115AF32
MATERIAL	ASTM A182 F316	Material Origin	P.R.C	

HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Solution	1040	1h/25mm, ≥1h	Elec	Water cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	SI	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.060	2.000	0.045	0.030	1.000	-	10.00-14.00	16.00-18.00	2.00-3.00	-	-	-	0.100	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	YS. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (-°C) J								
	515	205	30	50										
ZC1298	0.044	0.810	0.038	0.002	0.360	-	10.070	16.360	2.050	-	-	-	0.070	-
	532	232	45	65	170									
HH1801	0.021	1.130	0.023	0.002	0.610	-	10.090	16.320	2.070	-	-	-	0.050	-
	535	234	49	59	172									

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

DHV Industries, Inc.
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A

QUALITY ASSURANCE MANAGER:

Terry Gonsman
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204-3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO. M18120422

DATE Dec/4/2018

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	ST4036	FLOATING BALL VALVE	4"FB 150LB	B115AF32

MATERIAL	ASTM A320 L7M	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	880	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	(-73°C) J								
	690	550	18	50	235	AVG ≥ 27, MIN ≥ 20								
10536	0.430	0.890	0.028	0.031	0.290	-	-	0.880	0.190	-	-	-	-	-
	725	565	18	55	215	34	38	40						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.


WITNESSED BY:

DHV Industries, Inc.
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A

QUALITY ASSURANCE MANAGER:

Terry Gonsman
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE			REPORT NO.	M19110509
				DATE	Nov/5/2019
				PAGE	1 of 6
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE
	6030		SO1903019	2	NA
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.
B5153F12-DIB-1	4"FB	150LB	RF Flange	10 PCS	NA
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER	
TRUNNION BALL VALVE	Three-Piece Body, A350 LF2 Body, C.S.+ENP Trim, R-PTFE Seat Insert		Lever Op	SEE PAGE 2-HT	
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.	
API 6D-2014	<input checked="" type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4		<input checked="" type="checkbox"/> API 6FA, 4RD.Ed <input type="checkbox"/> API 607, 7TH.Ed	<input checked="" type="checkbox"/> NACE MR-0175-2015 <input type="checkbox"/> NACE MR-0103-2012	

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	ADAPTER	BALL/TRUNNION	SEAT ASSEMBLY	STEM
BASE MATERIAL	A350 LF2	A350 LF2	A350 LF2	A350 LF2	A29 4140
FACE MATERIAL	NA	NA	ENP	ENP+R-PTFE	ENP
NAME OF PART	BOLT/STUDS	NUTS	SPRING	GASKET	O-RING SEAL
BASE MATERIAL	A320 L7M	A194 7M	B637-UNS N07750	S.S.+GRAPHITE	HNBR
FACE MATERIAL	NA	NA	NA	NA	NA

PRESSURE TEST REPORT

Have been tested good according to API 6D, CSA Z245.15-17 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT(BI-DIRECTIONAL) CLOSURE TESTING					OPTIONAL SEAT TESTING	
		STANDARD		OPTIONAL		STANDARD		
		H.P. CLOSURE (HYDROSTATIC) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		<input checked="" type="checkbox"/> DBB	<input checked="" type="checkbox"/> DIB-1	<input type="checkbox"/> DIB-2
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	FROM BOTH VALVE ENDS	CAVITY TO BOTH DPE SEATS	CAVIT TO ONE DPE SEAT
PRESSURE (PSIG)	450	325	325	80	80	325	325	NA
DURATION (Minutes)	2	2	2	2	2	2	2	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	ASME B16.34-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* QUALITY ASSURANCE MANAGER: *Terry Gonsman*
 3451 Pegasus Drive
 Bakersfield, CA 93308. U.S.A Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6030	TRUNNION BALL VALVE	4"FB 150LB	B5153F12-DIB-1

MATERIAL	ASTM A350 LF2	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	930	1h/25mm, ≥2h	Elec	Water cooling to room temp.	
Temper	620	1h/25mm, ≥1h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
 Have been tested good according to the material specification and purchase order requirements

	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	SI	Cu	Ni	Cr	Mo	V	Nb	Bal.	Cr+Mo	CE
STD	0.230	0.60-1.35	0.035	0.025	0.15-0.30	0.400	0.400	0.300	0.120	0.080	0.020	1.000	0.320	0.430
	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-46°C) J, 10*10mm longitudinal direction								
HEAT NO.	485-655	250	22	30	140-197	SINGLE MIN ≥27 J								
XP7008	0.200	0.970	0.012	0.005	0.260	0.094	0.026	0.033	0.005	0.001	0.003	0.159	0.038	0.377
	585	426	31	76	187	154	186	154						
23191	0.200	0.860	0.024	0.008	0.210	0.090	0.070	0.140	0.050	0.030	0.010	0.380	0.190	0.398
	530	295	29	38	153	32	30	32						
NLY9207	0.180	0.960	0.014	0.007	0.190	0.130	0.070	0.150	0.008	0.002	0.001	0.360	0.158	0.385
	495	270	25	33	162	50	40	45						
XS1062	0.210	0.790	0.023	0.014	0.190	0.220	0.220	0.130	0.080	0.040	0.011	0.690	0.210	0.421
	585	320	59	78	181	88	83	89						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.*
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A
Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19110509
DATE	Nov/5/2019
PAGE	5 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
/	6030	TRUNNION BALL VALVE	4"FB 150LB	B5153F12-DIB-1

MATERIAL	ASTM A320 L7M	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-73°C) J								
	690	550	18	50	200-235	AVG ≥27, MIN ≥20								
10536	0.430	0.890	0.028	0.031	0.290	-	-	0.880	0.190	-	-	-	-	-
	725	565	18	55	216	34	38	40						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

QUALITY ASSURANCE MANAGER

Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19110509
DATE	Nov/5/2019
PAGE	6 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6030	TRUNNION BALL VALVE	4"FB 150LB	B5153F12-DIB-1

MATERIAL	ASTM A194 7M	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)					IMPACT TEST (-73°C) J								
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	AVG ≥ 27, MIN ≥ 20								
10537	0.430	0.780	0.030	0.029	0.260	-	-	0.890	0.210	-	-	-	-	-
					186	42	39	37						


We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* 3451 Pegasus Drive Bakersfield, CA 93308. U.S.A

QUALITY ASSURANCE MANAGER: *Terry Gonsman* Terry Gonsman Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

LINE# 3

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE				REPORT NO.	DM19060108
					DATE	Jun/5/2019
					PAGE	1 of 6
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE	
	5621		DS1812023	3	NA	
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.	
C313F6	4"	150LB	RF	30 PCS	DC313F611	
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER		
CAST STEEL SWING CHECK VALVE	A352 LCC Body, 316SS Trim, 316SS/STL6 Seat Face,		NA	D1812059-D1812088		
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.		
API 594-2010, 7 TH ,ED	<input type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4	<input type="checkbox"/> API 6FA, 3 RD .Ed <input type="checkbox"/> API 607, 6 TH .Ed	<input checked="" type="checkbox"/> NACE MR-0175/ISO15156-2015 <input checked="" type="checkbox"/> NACE MR-0103-2012			

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	BONNET	DISC	SEAT RING	
BASE MATERIAL	A352 LCC	A352 LCC	A350 LF2	A350 LF2	
FACE MATERIAL	NA	NA	316SS	STL6	
NAME OF PART	BOLT/STUDS	NUTS			
BASE MATERIAL	A320 L7M	A194 7M			
FACE MATERIAL	NA	NA			

PRESSURE TEST REPORT

Have been tested good according to API 598 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				OTHER
		H.P. CLOSURE (HYDROSTATIC) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input type="checkbox"/> REQUIRED <input checked="" type="checkbox"/> OPTIONAL		
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	
PRESSURE (PSIG)	450	NA	325	NA	NA	NA
DURATION (Minutes)	1	NA	1	NA	NA	NA
RESULT	GOOD		GOOD			

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	MSS SP-55-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:



QUALITY ASSURANCE MANAGER:

Terry Gonsman - DHV Industries, Inc.
 Terry Gonsman 3451 Pegasus Drive
 Quality Assurance Manager Bakersfield, CA 93308, U.S.A

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	DM19060108
DATE	Jun/5/2019
PAGE	3 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5621	CAST STEEL SWING CHECK VALVE	4" 150LB	C313F6
MATERIAL	ASTM A352 LOC			

HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	920	1h/25mm, ≥2h	Gas	Water cooling to room temp.	
Temper	650	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	V	Bal.	N	Other
	0.230	0.600	1.200	0.035	0.035	0.500	0.200	0.500	0.060	0.300	0.030	1.000	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	(-45°C) J								
	485-655	275	22	35	140-237	AVG ≥20, MIN ≥16								
L8413	0.191	0.482	1.010	0.021	0.014	0.284	0.032	0.016	0.002	0.026	0.003	0.362	-	-
	575	419	27	62	174	53	41	35						
L8430	0.196	0.480	1.060	0.023	0.017	0.041	0.005	0.017	0.001	0.033	0.003	0.099	-	-
	523	323	34	65	150	42	28	42						
L8444	0.203	0.470	1.040	0.024	0.018	0.040	0.004	0.017	0.002	0.032	0.002	0.096	-	-
	552	371	28	65	168	40	60	40						
L8762	0.210	0.452	1.050	0.024	0.021	0.031	0.006	0.018	0.002	0.033	0.003	0.091	-	-
	547	365	33	72	153	61	58	52						
L9068	0.202	0.442	1.050	0.023	0.015	0.063	0.010	0.032	0.006	0.034	0.002	0.141	-	-
	617	458	27	70	180	74	61	79						
L9069	0.208	0.473	1.020	0.022	0.017	0.122	0.008	0.035	0.002	0.026	0.002	0.192	-	-
	587	421	28	64	173	68	42	51						
L9071	0.207	0.456	1.010	0.022	0.017	0.077	0.007	0.029	0.002	0.030	0.003	0.144	-	-
	566	379	31	70	159	58	60	34						
L9081	0.206	0.444	1.060	0.022	0.017	0.088	0.009	0.027	0.002	0.030	0.003	0.156	-	-
	569	380	30	66	175	29	24	27						
L9087	0.203	0.507	1.040	0.022	0.016	0.050	0.005	0.020	0.004	0.030	0.003	0.108	-	-
	608	430	26	63	174	36	44	30						
L9097	0.203	0.463	1.050	0.022	0.016	0.058	0.009	0.026	0.002	0.039	0.004	0.136	-	-
	573	410	33	69	170	56	37	58						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: _____

QUALITY ASSURANCE MANAGER:

Terry Gonsman
 Quality Assurance Manager
DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

This certificate is in compliance with EN 10204 3.1.



DHW VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	DM19060108
DATE	Jun/5/2019
PAGE	4 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5621	CAST STEEL SWING CHECK VALVE	4" 150LB	C313F6

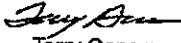
MATERIAL	ASTM A350 LF2
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HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	930	1h/25mm, ≥2h	Elec	Water cooling to room temp.	
Temper	620	1h/25mm, ≥1h	Gas or Elec	Air cooling to room temp.	


CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Si	Mn	P	S	Cr	Mo	Ni	Cr+Mo	Cu	V	Nb	Bal.	Other
	0.230	0.15-0.30	0.60-1.35	0.035	0.025	0.300	0.120	0.400	0.320	0.400	0.080	0.020	1.000	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-46°C) J								
	485-655	250	22	30	140-197	AVG. ≥20, MIN. ≥16								
09ZT0129	0.200	0.230	1.050	0.023	0.010	0.054	0.007	0.031	0.085	0.100	0.003	0.001	0.195	-
	612	365	36	48	171	171	28	30	31					

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:	QUALITY ASSURANCE MANAGER:  Terry Gonsman Quality Assurance Manager DHW Industries, Inc. 3451 Pegasus Drive Bakersfield, CA 93308. U.S.A
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This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE ISO 9001:2015, API Q1: 9 TH ED			REPORT NO.	M18092411
				DATE	Sep/24/2018
				PAGE	1 of 6
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE
ALTEK Industrial	ST4141		SO1803008	7	NA
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.
B5153F15-SPE	6"FB	150LB	RF Flange	20 PCS	NA
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER	
TRUNNION BALL VALVE	Three-Piece Body, A350 LF2 Body, C.S.+ENP Trim, DEVLON Seat Insert		Lever Op	18031035-18031054	
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.	
API 6D-2014	<input checked="" type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4	<input checked="" type="checkbox"/> API 6FA, 3RD.Ed <input type="checkbox"/> API 607, 6TH.Ed	<input checked="" type="checkbox"/> NACE MR-0175-2015 <input type="checkbox"/> NACE MR-0103-2012		

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	ADAPTER	BALL	SEAT ASSEMBLY	STEM
BASE MATERIAL	A350 LF2	A350 LF2	A350 LF2+ENP	A350 LF2+ENP	A29 4140+ENP
FACE MATERIAL	NA	NA	NA	DEVLON	NA
NAME OF PART	BOLT/STUDS	NUTS	SPRING	GASKET	O-RING SEAL
BASE MATERIAL	A320 L7M	A194 7M	B637-UNS N07750	S.S.+GRAPHITE	HNBR
FACE MATERIAL	NA	NA	NA	NA	NA

PRESSURE TEST REPORT

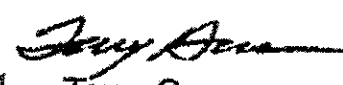
Have been tested good according to API 6D, CSA Z245.15-17 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT(BI-DIRECTIONAL) CLOSURE TESTING					OPTIONAL SEAT TESTING	
		STANDARD		OPTIONAL		STANDARD		
		H.P. CLOSURE (HYDROSTATIC) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		<input checked="" type="checkbox"/> DBB	<input type="checkbox"/> DIB-1	<input type="checkbox"/> DIB-2
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	FROM BOTH VALVE ENDS	CAVITY TO BOTH DPE SEATS	CAVIT TO ONE DPE SEAT
PRESSURE (PSIG)	450	325	325	80	80	325	NA	NA
DURATION (Minutes)	5	5	5	5	5	5	NA	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD		

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	ASME B16.34-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industrial Services, Inc.*
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	M18092411
DATE	Sep/24/2018
PAGE	4 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	ST4141	TRUNNION BALL VALVE	6"FB 150LB	B5153F15-SPE

MATERIAL	ASTM A29 4140	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	930	1h/25mm, ≥2h	Elec	Water cooling to room temp.	
Temper	620	1h/25mm, ≥1h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.43	0.75-1.00	0.035	0.040	0.15-0.35	0.350	0.250	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (-°C) J								
J21501832-946	690	550	18	45	-	-	-	-	-	-	-	-	-	-
	0.390	0.840	0.015	0.005	0.200	0.010	0.017	0.996	0.175	-	-	-	-	-
	712	568	19	50	193	-	-	-	-	-	-	-	-	-

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information in this report is true and correct to the best of our knowledge.


WITNESSED BY:

DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

QUALITY ASSURANCE MANAGER

Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE			REPORT NO.	M19111810
				DATE	Nov/18/2019
				PAGE	1 of 9
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE
	5197		SO1809005	5	NA
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.
B115AF32	6"FB	150LB	RF Flange	61 PCS	NA
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER	
FLOATING BALL VALVE	Two-Piece Body, A352 LCC Body, 316SS Trim, R-PTFE Seat Insert		Lever Op	1809421-1809481	
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.	
API 608-2012	<input type="checkbox"/> QSL 1	<input type="checkbox"/> QSL 2	<input type="checkbox"/> API 6FA, 4RD.Ed	<input checked="" type="checkbox"/> NACE MR-0175-2015	
	<input type="checkbox"/> QSL 3	<input type="checkbox"/> QSL 4	<input checked="" type="checkbox"/> API 607, 7TH.Ed	<input checked="" type="checkbox"/> NACE MR-0103-2015	

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	CAP	BALL	SEAT ASSEMBLY	STEM
BASE MATERIAL	A352 LCC	A352 LCC	A182 F316	R-PTFE	A182 F316
FACE MATERIAL	NA	NA	NA	R-PTFE	NA
NAME OF PART	BOLT/STUDS	NUTS	GASKET		
BASE MATERIAL	A320 L7M	A194 7M	SS+GRAPHITE		
FACE MATERIAL	NA	NA	NA		

PRESSURE TEST REPORT

Have been tested good according to API 598, CSA Z245.15-17 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				OTHER
		H.P. CLOSURE (HYDROSTATIC) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	
PRESSURE (PSIG)	450	303	303	80	80	NA
DURATION (Minutes)	5	5	5	5	5	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	MSS SP-55-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.*
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A.

Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

REPORT NO.	M19111810
DATE	Nov/18/2019
PAGE	2 of 9

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5197	FLOATING BALL VALVE	6"FB 150LB	B115AF32

CRATE NO.: 65-75 **QUANTITIES:** 61 PCS

SERIAL NO.	MATERIAL AND HEAT NUMBER					REMARKS
	BODY	CAP	BALL	STEM	OTHER	
	A352 LCC	A352 LCC	A182 F316	A182 F316		
1809421	T3337	T3344	43415	HH1801		
1809422	T3328	T3339	43415	HH1801		
1809423	T3328	T3343	43415	HH1801		
1809424	T3342	T3331	43415	HH1801		
1809425	T3329	T3340	43415	HH1801		
1809426	T3342	T3331	43415	HH1801		
1809427	T3326	T3333	43415	HH1801		
1809428	T3326	T3340	43415	HH1801		
1809429	T3335	T3338	43415	HH1801		
1809430	T3327	T3343	43415	HH1801		
1809431	T3344	T3342	43415	HH1801		
1809432	T3345	T3340	43415	HH1801		
1809433	T3334	T3338	43415	HH1801		
1809434	T3346	T3342	43415	HH1801		
1809435	T3341	T3346	43415	HH1801		
1809436	T3340	T3339	43415	HH1801		
1809437	T3335	T3333	43415	HH1801		
1809438	T3327	T3328	43415	HH1801		
1809439	T3341	T3328	43415	HH1801		
1809440	T3343	T3339	43415	HH1801		
1809441	T3338	T3247	43415	HH1801		
1809442	T3331	T3344	43415	HH1801		
1809443	T3342	T3334	43415	HH1801		
1809444	T3346	T3333	43415	HH1801		
1809445	T3330	T3332	43415	HH1801		
1809446	T3328	T3334	43415	HH1801		
1809447	T3327	T3331	43415	HH1801		
1809448	T3327	T3333	43415	HH1801		
1809449	T3344	T3246	43415	HH1801		
1809450	T3345	T3337	43415	HH1801		
1809451	T3331	T3329	43415	HH1801		
1809452	T3252	T3327	43415	HH1801		
1809453	T3344	T3336	43415	HH1801		
1809454	T3326	T3340	43415	HH1801		
1809455	T3333	T3331	43415	HH1801		
1809456	T3341	T3341	43415	HH1801		
1809457	T3345	T3337	43415	HH1801		
1809458	T3343	T3344	43415	HH1801		
1809459	T3333	T3337	43415	HH1801		
1809460	T3330	T3245	43415	HH1801		



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19111810
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5197	FLOATING BALL VALVE	6"FB 150LB	B115AF32

MATERIAL	ASTM A352 LOC	Material Origin	P.R.C
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	910	1h/25mm, ≥2h	Gas	Water cooling to room temp.	
Temper	650	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Al	Bal.	N	CE
	0.230	1.200	0.035	0.035	0.600	0.300	0.500	0.500	0.200	0.030	0.060	1.000	-	0.430
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-45°C) J, 10*10mm Any direction								
	485-655	275	22	35	140-237	SINGLE MIN ≥27 J								
T3245	0.183	0.947	0.023	0.014	0.325	0.048	0.224	0.223	0.004	0.003	0.018	0.502	-	0.405
	520	289	31	42	155	31	30	29						
T3246	0.185	0.963	0.022	0.014	0.329	0.044	0.225	0.227	0.005	0.002	0.013	0.503	-	0.410
	528	284	30	39	152	33	32	31						
T3247	0.195	0.951	0.022	0.015	0.341	0.051	0.227	0.224	0.004	0.004	0.014	0.510	-	0.418
	518	277	33	40	154	30	31	32						
T3252	0.192	0.962	0.020	0.017	0.330	0.047	0.230	0.208	0.004	0.005	0.015	0.494	-	0.414
	536	279	32	43	156	32	31	30						
T3326	0.195	0.939	0.020	0.017	0.342	0.046	0.233	0.225	0.004	0.003	0.016	0.511	-	0.417
	516	284	33	40	157	31	30	32						
T3327	0.193	0.938	0.023	0.014	0.336	0.043	0.225	0.227	0.004	0.003	0.013	0.502	-	0.414
	529	284	33	40	155	29	30	31						
T3328	0.193	0.952	0.021	0.016	0.328	0.044	0.218	0.231	0.006	0.005	0.014	0.504	-	0.418
	532	290	31	40	159	33	30	31						
T3329	0.187	0.947	0.020	0.017	0.344	0.049	0.226	0.225	0.005	0.007	0.011	0.512	-	0.411
	520	294	30	42	163	32	31	30						
T3330	0.189	0.933	0.023	0.014	0.339	0.05	0.229	0.229	0.004	0.003	0.016	0.515	-	0.410
	519	291	31	43	159	30	29	31						
T3331	0.19	0.936	0.022	0.013	0.334	0.042	0.230	0.230	0.003	0.004	0.010	0.509	-	0.412
	525	281	32	40	157	29	31	30						
T3332	0.185	0.954	0.021	0.016	0.328	0.049	0.235	0.224	0.005	0.005	0.015	0.518	-	0.410
	519	287	30	39	155	32	30	31						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19111810
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5197	FLOATING BALL VALVE	6"FB 150LB	B115AF32

MATERIAL	ASTM A352 LCC	Material Origin	P.R.C
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	910	1h/25mm, ≥2h	Gas	Water cooling to room temp.	
Temper	650	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Al	Bal.	N	CE
	0.230	1.200	0.035	0.035	0.600	0.300	0.500	0.500	0.200	0.030	0.060	1.000	-	0.430
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-46°C) J, 10*10mm Any direction								
	485-655	275	22	35	140-237	SINGLE MIN ≥27 J								
T3333	0.193	0.952	0.020	0.017	0.341	0.046	0.218	0.226	0.006	0.003	0.013	0.499	-	0.416
	525	286	34	40	154	33	32	30						
T3334	0.191	0.937	0.023	0.014	0.337	0.039	0.227	0.233	0.004	0.003	0.012	0.506	-	0.413
	527	279	33	41	158	32	31	29						
T3335	0.188	0.943	0.021	0.016	0.339	0.041	0.225	0.234	0.005	0.005	0.015	0.510	-	0.412
	530	277	31	38	160	30	31	32						
T3336	0.018	0.948	0.022	0.015	0.328	0.045	0.226	0.216	0.003	0.006	0.012	0.496	-	0.239
	532	285	30	45	156	31	32	33						
T3337	0.187	0.95	0.020	0.017	0.333	0.049	0.229	0.229	0.005	0.007	0.014	0.519	-	0.412
	526	289	32	40	159	32	33	34						
T3338	0.191	0.943	0.023	0.014	0.328	0.049	0.226	0.217	0.005	0.004	0.015	0.501	-	0.412
	526	281	32	40	158	32	30	31						
T3339	0.195	0.944	0.023	0.014	0.328	0.043	0.236	0.225	0.006	0.004	0.013	0.514	-	0.418
	526	276	32	42	161	29	30	31						
T3340	0.194	0.951	0.021	0.016	0.339	0.051	0.231	0.229	0.005	0.003	0.015	0.519	-	0.419
	522	283	32	43	155	33	31	32						
T3341	0.189	0.949	0.023	0.014	0.342	0.042	0.23	0.230	0.004	0.003	0.010	0.509	-	0.413
	521	280	33	41	163	31	30	29						
T3342	0.1878	0.957	0.022	0.015	0.347	0.051	0.235	0.223	0.003	0.005	0.011	0.517	-	0.413
	529	291	34	40	156	33	32	31						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

DHV Industries Inc
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A

Terry Gonsman
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19111810
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5197	FLOATING BALL VALVE	6"FB 150LB	B115AF32

MATERIAL	ASTM A352 LCC	Material Origin	P.R.C
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HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	910	1h/25mm, ≥2h	Gas	Water cooling to room temp.	
Temper	650	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Al	Bal.	N	CE
	0.230	1.200	0.035	0.035	0.600	0.300	0.500	0.500	0.200	0.030	0.060	1.000	-	0.430
	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-46°C) J, 10*10mm Any direction								
HEAT NO.	485-655	275	22	35	140-237	SINGLE MIN ≥27 J								
T3343	0.192	0.951	0.021	0.016	0.332	0.050	0.225	0.234	0.005	0.007	0.015	0.521	-	0.418
	520	289	30	39	162	32	31	30						
T3344	0.187	0.946	0.02	0.017	0.323	0.048	0.228	0.233	0.004	0.005	0.012	0.518	-	0.411
	518	290	31	42	158	33	30	31						
T3345	0.186	0.949	0.022	0.015	0.337	0.043	0.231	0.219	0.005	0.003	0.014	0.501	-	0.408
	527	293	32	41	157	32	31	33						
T3346	0.188	0.943	0.023	0.014	0.324	0.049	0.228	0.228	0.006	0.004	0.015	0.515	-	0.411
	523	285	30	40	156	31	30	29						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

DHV Industries
3451 Pegasus Drive
Bakersfield, CA 93308. U.S.A

QUALITY ASSURANCE MANAGER
Terry Gonsman
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19111810
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER	
	5197	FLOATING BALL VALVE	6"FB 150LB	B115AF32	
MATERIAL	ASTM A182 F316	Material Origin	P.R.C		
HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Solution	1040	1h/25mm, ≥1h	Elec	Water cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.080	2.000	0.045	0.030	1.000	-	10.00-14.00	16.00-18.00	2.00-3.00	-	-	-	0.100	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-°C) J								
	515	205	30	50	150-237									
43415	0.022	1.060	0.028	0.009	0.480	-	10.130	16.370	2.160	-	-	-	0.020	-
	580	270	38	62	152	-	-	-	-	-	-	-	-	-
HH1801	0.021	1.130	0.023	0.002	0.610	-	10.090	16.320	2.070	-	-	-	0.050	-
	535	234	49	59	175	-	-	-	-	-	-	-	-	-

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.*
 3451 Pegasus Drive
 Bakersfield, CA 93308. U.S.A

QUALITY ASSURANCE MANAGER:
Terry Gonsman
 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19111810
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5197	FLOATING BALL VALVE	6"FB 150LB	B115AF32

MATERIAL	ASTM A194 7M	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT


Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.8-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST							
	T.S. MPa	Y.S. MPa	EL (%)	R.A. (%)	HARD (HB)	(-73°C) J								
	-	-	-	-	159-235	AVG ≥27, MIN ≥20								
10537	0.430	0.780	0.030	0.029	0.260	-	-	0.890	0.210	-	-	-	-	-
					186	42	39	37						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* QUALITY ASSURANCE MANAGER: *Terry Gonsman*
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A
 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE			REPORT NO.	M19112422
				DATE	Nov/24/2019
				PAGE	1 of 7
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE
	5433		SO1810035	2	NA
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.
B115AF32	6"FB	150LB	RF Flange	23 PCS	NA
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER	
FLOATING BALL VALVE	Two-Piece Body, A352 LCC Body, 316SS Trim, R-PTFE Seat Insert		Lever Op	18101410-18101432	
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.	
API 608-2012	<input type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4		<input type="checkbox"/> API 6FA, 4RD.Ed <input checked="" type="checkbox"/> API 607, 7TH.Ed	<input checked="" type="checkbox"/> NACE MR-0175-2015 <input checked="" type="checkbox"/> NACE MR-0103-2015	

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	CAP	BALL	SEAT ASSEMBLY	STEM
BASE MATERIAL	A352 LCC	A352 LCC	A182 F316	R-PTFE	A182 F316
FACE MATERIAL	NA	NA	NA	R-PTFE	NA
NAME OF PART	BOLT/STUDS	NUTS	GASKET		
BASE MATERIAL	A320 L7M	A194 7M	SS+GRAPHITE		
FACE MATERIAL	NA	NA	NA		

PRESSURE TEST REPORT

Have been tested good according to API 598, CSA Z245.15-17 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				OTHER
		H.P. CLOSURE (HYDROSTATIC) ■ REQUIRED □ OPTIONAL		L.P. CLOSURE (AIR) ■ REQUIRED □ OPTIONAL		
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	
PRESSURE (PSIG)	450	303	303	80	80	NA
DURATION (Minutes)	5	5	5	5	5	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	MSS SP-55-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.*
 Terry Gonsman
 Quality Assurance Manager
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A.

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19112422
DATE	Nov/24/2019
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5433	FLOATING BALL VALVE	6"FB 150LB	B115AF32
MATERIAL	ASTM A352 LCC	Material Origin	P.R.C	

HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	910	1h/25mm, ≥2h	Gas	Water cooling to room temp.	
Temper	650	≥4h	Gas or Elec	Air cooling to room temp.	


CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Al	Bal.	N	CE
	0.230	1.200	0.035	0.035	0.600	0.300	0.500	0.500	0.200	0.030	0.060	1.000	-	0.430
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-46°C) J, 10*10mm Any direction								
	485-655	275	22	35	140-237	SINGLE MIN ≥27 J								
T3249	0.189	0.947	0.021	0.016	0.337	0.050	0.228	0.222	0.002	0.004	0.016	0.506	-	0.411
	517	281	33	42	158	30	31	33						
T3251	0.189	0.948	0.020	0.017	0.337	0.042	0.226	0.231	0.004	0.004	0.014	0.507	-	0.413
	522	280	34	42	156	33	32	31						
T3326	0.195	0.939	0.020	0.017	0.342	0.046	0.233	0.225	0.004	0.003	0.016	0.511	-	0.417
	516	284	33	40	157	31	30	32						
T3327	0.193	0.938	0.023	0.014	0.336	0.043	0.225	0.227	0.004	0.003	0.013	0.502	-	0.414
	529	284	33	40	155	29	30	31						
T3328	0.193	0.952	0.021	0.016	0.328	0.044	0.218	0.231	0.006	0.005	0.014	0.504	-	0.418
	532	290	31	40	159	33	30	31						
T3329	0.187	0.947	0.020	0.017	0.344	0.049	0.226	0.225	0.005	0.007	0.011	0.512	-	0.411
	520	294	30	42	163	32	31	30						
T3331	0.190	0.936	0.022	0.013	0.334	0.042	0.230	0.230	0.003	0.004	0.010	0.509	-	0.412
	525	281	32	40	157	29	31	30						
T3332	0.185	0.954	0.021	0.016	0.328	0.049	0.235	0.224	0.005	0.005	0.015	0.518	-	0.410
	519	287	30	39	155	32	30	31						
T3333	0.193	0.952	0.020	0.017	0.341	0.046	0.218	0.226	0.006	0.003	0.013	0.499	-	0.416
	525	286	34	40	154	33	32	30						
T3334	0.191	0.937	0.023	0.014	0.337	0.039	0.227	0.233	0.004	0.003	0.012	0.506	-	0.413
	527	279	33	41	158	32	31	29						
T3335	0.188	0.943	0.021	0.016	0.339	0.041	0.225	0.234	0.005	0.005	0.015	0.510	-	0.412
	530	277	31	38	160	30	31	32						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* **Quality Assurance Manager** *Terry Gonsman*
3451 Pegasus Drive
Bakersfield, CA 93308. U.S.A
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT MILL CERTIFICATE										REPORT NO.	M19112422		
											DATE	Nov/24/2019		
												PAGE	4 of 7	
CUSTOMER	CUSTOMER P.O.	VALVE TYPE				SIZE/CLASS	FIGURE NUMBER							
	5433	FLOATING BALL VALVE				6"FB 150LB	B115AF32							
MATERIAL	ASTM A352 LCC	Material Origin				P.R.C								
HEAT TREATMENT														
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)			FURNACE	COOLING PROCESS			REMARK					
Quench	910	1h/25mm, ≥2h			Gas	Water cooling to room temp.								
Temper	650	≥4h			Gas or Elec	Air cooling to room temp.								
CHEMICAL AND MECHANICAL TEST REPORT														
Have been tested good according to the material specification and purchase order requirements														
STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Al	Bal.	N	CE
	0.230	1.200	0.035	0.035	0.600	0.300	0.500	0.500	0.200	0.030	0.060	1.000	-	0.430
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-46°C) J, 10*10mm Any direction								
	485-655	275	22	35	140-237	SINGLE MIN ≥27 J								
T3336	0.018	0.948	0.022	0.015	0.328	0.045	0.226	0.216	0.003	0.006	0.012	0.496	-	0.239
	532	285	30	45	156	31	32	33						
T3337	0.187	0.950	0.020	0.017	0.333	0.049	0.229	0.229	0.005	0.007	0.014	0.519	-	0.412
	526	289	32	40	159	32	33	34						
T3338	0.191	0.943	0.023	0.014	0.328	0.049	0.226	0.217	0.005	0.004	0.015	0.501	-	0.412
	526	281	32	40	158	32	30	31						
T3339	0.195	0.944	0.023	0.014	0.328	0.043	0.236	0.225	0.006	0.004	0.013	0.514	-	0.418
	526	276	32	42	161	29	30	31						
T3340	0.194	0.951	0.021	0.016	0.339	0.051	0.231	0.229	0.005	0.003	0.015	0.519	-	0.419
	522	283	32	43	155	33	31	32						
T3341	0.189	0.949	0.023	0.014	0.342	0.042	0.230	0.230	0.004	0.003	0.010	0.509	-	0.413
	521	280	33	41	163	31	30	29						
T3342	0.188	0.957	0.022	0.015	0.347	0.051	0.235	0.223	0.003	0.005	0.011	0.517	-	0.413
	529	291	34	40	156	33	32	31						
T3343	0.192	0.951	0.021	0.016	0.332	0.050	0.225	0.234	0.005	0.007	0.015	0.521	-	0.418
	520	289	30	39	162	32	31	30						
T3344	0.187	0.946	0.020	0.017	0.323	0.048	0.228	0.233	0.004	0.005	0.012	0.518	-	0.411
	518	290	31	42	158	33	30	31						
T3345	0.186	0.949	0.022	0.015	0.337	0.043	0.231	0.219	0.005	0.003	0.014	0.501	-	0.408
	527	293	32	41	157	32	31	33						
T3346	0.188	0.943	0.023	0.014	0.324	0.049	0.228	0.228	0.006	0.004	0.015	0.515	-	0.411
	523	285	30	40	156	31	30	29						
We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.														
WITNESSED BY: <i>DHV Industries, Inc.</i> SURVEILLANCE MANAGER: <i>Terry Gonsman</i> 3451 Pegasus Drive Bakersfield, CA 93308, U.S.A Terry Gonsman Quality Assurance Manager														

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19112422
DATE	Nov/24/2019
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER	
	5433	FLOATING BALL VALVE	6"FB 150LB	B115AF32	
MATERIAL	ASTM A182 F316	Material Origin	P.R.C		
HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Solution	1040	1h/25mm, ≥1h	Elec	Water cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.080	2.000	0.045	0.030	1.000	-	10.00-14.00	16.00-18.00	2.00-3.00	-	-	-	0.100	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	(-°C) J								
28243	515	205	30	50	150-237	-								
	0.024	1.020	0.029	0.008	0.480	-	10.150	16.320	2.140	-	-	-	0.020	-
	570	290	39	60	151	-	-	-						
HH1851	0.018	0.930	0.035	0.002	0.430	-	10.020	16.310	2.050	-	-	-	0.060	-
	537	236	48	57	173	-	-	-						
LKJG104	0.058	0.120	0.029	0.012	0.410	-	11.530	17.320	2.080	-	-	-	0.061	-
	561	265	62	76	167	-	-	-						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

DHV Industries, Inc.
3451 Pegasus Drive
Bakersfield, CA 93308. U.S.A

QUALITY ASSURANCE MANAGER:
Terry Gonsman
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19112422
DATE	Nov/24/2019
PAGE	6 of 7

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5433	FLOATING BALL VALVE	6"FB 150LB	B115AF32

MATERIAL	ASTM A320 L7M	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)					IMPACT TEST (-73°C) J								
	T.S. MPa	Y.S. MPa	EL (%)	R.A (%)	HARD (HB)	AVG ≥27, MIN ≥20								
10536	690	550	18	50	200-235									
	0.430	0.890	0.028	0.031	0.290	-	-	0.880	0.190	-	-	-	-	-
	725	565	18	55	216	34	38	40						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

QUALITY ASSURANCE MANAGER:
DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308. U.S.A

Terry Gonsman
Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19112422
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5433	FLOATING BALL VALVE	6"FB 150LB	B115AF32

MATERIAL	ASTM A194 7M	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT

HEAT TREATMENT	TEMP.°C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

CHEMICAL COMPOSITION % (≤)

STD	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
		0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.8-1.10	0.15-0.25	-	-	-	-

MECHANICAL PROPERTIES (≥)


HEAT NO.	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-73°C) J	
		-	-	-	-	159-235	AVG ≥27, MIN ≥20

10537	0.430	0.780	0.030	0.029	0.260	-	-	0.890	0.210	-	-	-	-	-
	-	-	-	-	186	42	39	37						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* MANAGER: *Terry Gonsman*
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	<h2>MATERIAL TEST REPORT</h2> <h3>TEST CERTIFICATE</h3>				REPORT NO.	M19120909
					DATE	Dec/9/2019
					PAGE	1 of 6
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE	
ALTEK Industrial	5857		SO1902010	22	NA	
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.	
B130AF32	6"FB	300LB	RF Flange	6 PCS	NA	
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER		
FLOATING BALL VALVE	Two-Piece Body, A352 LCC Body, 316SS Trim, R-PTFE Seat Insert		Lever Op	19023608-19023613		
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.		
API 608-2012	<input type="checkbox"/> QSL 1	<input type="checkbox"/> QSL 2	<input type="checkbox"/> API 6FA, 4RD.Ed	<input checked="" type="checkbox"/> NACE MR-0175-2015		
	<input type="checkbox"/> QSL 3	<input type="checkbox"/> QSL 4	<input checked="" type="checkbox"/> API 607, 7TH.Ed	<input checked="" type="checkbox"/> NACE MR-0103-2015		

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	CAP	BALL	SEAT ASSEMBLY	STEM
BASE MATERIAL	A352 LCC	A352 LCC	A182 F316	R-PTFE	A182 F316
FACE MATERIAL	NA	NA	NA	R-PTFE	NA
NAME OF PART	BOLT/STUDS	NUTS	GASKET		
BASE MATERIAL	A320 L7M	A194 7M	SS+GRAPHITE		
FACE MATERIAL	NA	NA	NA		

PRESSURE TEST REPORT

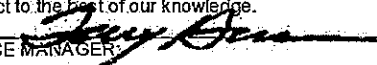
Have been tested good according to API 598, CSA Z245.15-17 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				OTHER
		H.P. CLOSURE (HYDROSTATIC) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	
PRESSURE (PSIG)	1125	792	792	80	80	NA
DURATION (Minutes)	5	5	5	5	5	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	MSS SP-55-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* 
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A
 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19120909
DATE	Dec/9/2019
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	5857	FLOATING BALL VALVE	6"FB 300LB	B130AF32
MATERIAL	ASTM A352 LCC	Material Origin	P.R.C	

HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	910	1h/25mm, ≥2h	Gas	Water cooling to room temp.	
Temper	650	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Al	Bal.	N	CE
	0.230	1.200	0.035	0.035	0.600	0.300	0.500	0.500	0.200	0.030	0.060	1.000	-	0.430
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-46°C) J, 10*10mm Any direction								
	485-655	275	22	35	140-237	SINGLE MIN ≥27 J								
T3284	0.188	0.954	0.023	0.014	0.329	0.046	0.227	0.221	0.003	0.003	0.012	0.500	-	0.411
	526	281	31	42	157	31	30	29						
T3285	0.190	0.936	0.023	0.017	0.336	0.042	0.225	0.227	0.004	0.003	0.011	0.501	-	0.411
	529	284	33	40	155	29	30	31						
T3421	0.186	0.937	0.023	0.014	0.331	0.045	0.231	0.226	0.003	0.003	0.011	0.508	-	0.407
	526	287	33	41	158	34	33	32						
T3423	0.185	0.929	0.021	0.016	0.327	0.046	0.229	0.223	0.005	0.005	0.015	0.508	-	0.405
	518	290	32	43	156	33	35	32						
T3424	0.189	0.938	0.022	0.015	0.332	0.049	0.227	0.231	0.004	0.003	0.014	0.514	-	0.411
	523	285	33	41	158	36	34	31						
T3425	0.192	0.924	0.021	0.016	0.328	0.049	0.228	0.218	0.004	0.005	0.016	0.504	-	0.410
	523	277	31	41	161	33	35	34						
T3433	0.194	0.919	0.022	0.015	0.331	0.046	0.231	0.223	0.006	0.004	0.013	0.510	-	0.412
	528	279	31	40	157	33	34	36						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.*
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A

QUALITY ASSURANCE MANAGER:

Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19120909
DATE	Dec/9/2019
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	5857	FLOATING BALL VALVE	6"FB 300LB	B130AF32

MATERIAL	ASTM A320 L7M	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-73°C) J								
	690	550	18	50	200-235	AVG ≥ 27, MIN ≥ 20								
10536	0.430	0.890	0.028	0.031	0.280	-	-	0.880	0.190	-	-	-	-	-
	725	565	18	55	216	34	38	40						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.


WITNESSED BY:

DHV Industries, Inc.
3451 Pegasus Drive
Bakersfield, CA 93308. U.S.A

QUALITY ASSURANCE MANAGER:

Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	<h2>MATERIAL TEST REPORT</h2> <h3>TEST CERTIFICATE</h3>				REPORT NO.	M19120909
					DATE	Dec/9/2019
					PAGE	1 of 6
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE	
	5857		SO1902010	22	NA	
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.	
B130AF32	6"FB	300LB	RF Flange	6 PCS	NA	
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER		
FLOATING BALL VALVE	Two-Piece Body, A352 LCC Body, 316SS Trim, R-PTFE Seat Insert		Lever Op	19023608-19023613		
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.		
API 608-2012	<input type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4		<input type="checkbox"/> API 6FA, 4RD.Ed <input checked="" type="checkbox"/> API 607, 7TH.Ed	<input checked="" type="checkbox"/> NACE MR-0175-2015 <input checked="" type="checkbox"/> NACE MR-0103-2015		

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	CAP	BALL	SEAT ASSEMBLY	STEM
BASE MATERIAL	A352 LCC	A352 LCC	A182 F316	R-PTFE	A182 F316
FACE MATERIAL	NA	NA	NA	R-PTFE	NA
NAME OF PART	BOLT/STUDS	NUTS	GASKET		
BASE MATERIAL	A320 L7M	A194 7M	SS+GRAPHITE		
FACE MATERIAL	NA	NA	NA		

PRESSURE TEST REPORT

Have been tested good according to API 598, CSA Z245.15-17 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				OTHER
		H.P. CLOSURE (HYDROSTATIC) ■ REQUIRED □ OPTIONAL		L.P. CLOSURE (AIR) ■ REQUIRED □ OPTIONAL		
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	
PRESSURE (PSIG)	1125	792	792	80	80	NA
DURATION (Minutes)	5	5	5	5	5	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	MSS SP-55-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.


WITNESSED BY:

DHV Industries, Inc
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

QUALITY ASSURANCE MANAGER

Terry Gonsman
 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE			REPORT NO.	M19100144
				DATE	Oct/1/2019
				PAGE	1 of 6
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE
	6294		SO1905015	4	NA
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.
B5153F15-DIB-1	6"FB	150LB	RF Flange	40 PCS	NA
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER	
TRUNNION BALL VALVE	Three-Piece Body, A350 LF2 Body, C.S.+ENP Trim, DEVLON Seat Insert		Lever Op	19052353~19052392	
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.	
API 6D-2014	<input checked="" type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4	<input checked="" type="checkbox"/> API 6FA, 4RD.Ed <input type="checkbox"/> API 607, 7TH.Ed	<input checked="" type="checkbox"/> NACE MR-0175-2015 <input type="checkbox"/> NACE MR-0103-2015		

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	ADAPTER	BALL	SEAT ASSEMBLY	STEM
BASE MATERIAL	A350 LF2	A350 LF2	A350 LF2	A350 LF2	A29 4140
FACE MATERIAL	NA	NA	ENP	ENP+DEVLON	ENP
NAME OF PART	BOLT/STUDS	NUTS	SPRING	GASKET	O-RING SEAL
BASE MATERIAL	A320 L7M	A194 7M	B637-UNS N07750	S.S.+GRAPHITE	HNBR
FACE MATERIAL	NA	NA	NA	NA	NA

PRESSURE TEST REPORT


Have been tested good according to API 6D, CSA Z245.15-17 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT(BI-DIRECTIONAL) CLOSURE TESTING					OPTIONAL SEAT TESTING	
		STANDARD		OPTIONAL		STANDARD		
		H.P. CLOSURE (HYDROSTATIC) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		<input checked="" type="checkbox"/> DBB	<input checked="" type="checkbox"/> DIB-1	<input type="checkbox"/> DIB-2
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	FROM BOTH VALVE ENDS	CAVITY TO BOTH DPE SEATS	CAVIT TO ONE DPE SEAT
PRESSURE (PSIG)	450	325	325	80	80	325	325	NA
DURATION (Minutes)	5	5	5	5	5	5	5	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	ASME B16.34-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:  *DHV-Industries, Inc.*
 3451 Pegasus Drive
 Bakersfield, CA 93308. U.S.A

QUALITY ASSURANCE MANAGER: *Terry Gonsman*
Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

REPORT NO. M19100144

DATE Oct/1/2019

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6294	TRUNNION BALL VALVE	6"FB 150LB	B5153F15-DIB-1

CRATE NO.:	26-35	QUANTITIES:	40 PCS
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SERIAL NO.	MATERIAL AND HEAT NUMBER							
	BODY	ADAPTER			BALL	STEM	SEAT	OTHER
	A350 LF2	A350 LF2	A350 LF2	A350 LF2	A29 4140	A350 LF2		
19052353	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052354	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052355	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052356	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052357	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052358	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052359	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052360	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052361	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052362	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052363	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052364	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052365	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052366	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052367	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052368	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052369	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052370	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052371	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052372	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052373	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052374	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052375	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052376	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052377	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052378	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052379	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052380	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052381	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052382	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052383	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052384	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052385	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052386	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052387	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052388	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052389	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052390	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	
19052391	19050497	19050497	19050497	19050497	27181	HH1858	XS1062	



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19100144
DATE	Oct/1/2019
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER	
	6294	TRUNNION BALL VALVE	6"FB 150LB	B5153F15-DIB-1	
MATERIAL	ASTM A350 LF2	MATERIAL ORIGIN	P.R.C.		
HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	930	1h/25mm, ≥2h	Elec	Water cooling to room temp.	
Temper	620	1h/25mm, ≥1h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	SI	Cu	Ni	Cr	Mo	V	Nb	Bal.	Cr+Mo	CE
	0.230	0.60-1.35	0.035	0.025	0.15-0.30	0.400	0.400	0.300	0.120	0.080	0.020	1.000	0.32	0.430
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST (-46°C) J, 10*10mm longitudinal direction							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	SINGLE MIN ≥27 J								
19050497	485-655	250	22	30	140-197									
	0.190	1.000	0.011	0.001	0.260	0.063	0.034	0.075	0.010	0.003	0.002	0.185	0.085	0.381
	515	335	39	74	156	157	179	201						
27181	0.210	0.840	0.027	0.010	0.240	0.070	0.050	0.120	0.030	0.050	0.010	0.320	0.150	0.398
	550	280	28	39	153	33	32	32						
XS1062	0.210	0.790	0.023	0.014	0.190	0.220	0.220	0.130	0.080	0.040	0.011	0.690	0.210	0.421
	585	320	59	78	181	88	83	89						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.*
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A

Terry Gonsman
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19100144
DATE	Oct/1/2019
PAGE	4 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6294	TRUNNION BALL VALVE	6"FB 150LB	B5153F15-DIB-1

MATERIAL	ASTM A29 4140	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT

HEAT TREATMENT	TEMP.°C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	930	1h/25mm, ≥2h	Elec	Water cooling to room temp.	
Temper	620	1h/25mm, ≥1h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.43	0.75-1.00	0.035	0.040	0.15-0.35	0.350	0.250	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	(-46°C) J, 10*10mm longitudinal direction								
	690	550	18	45	182-237	SINGLE MIN ≥27 J								
HH1858	0.410	0.900	0.013	0.003	0.240	0.030	0.020	1.000	0.200	-	-	-	-	-
	748	558	24	56	224	38	37	35						

We hereby certify that the material was manufactured in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308. U.S.A

Terry Gonsman
 QUALITY ASSURANCE MANAGER
 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19100144
DATE	Oct/1/2019
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6294	TRUNNION BALL VALVE	6"FB 150LB	B5153F15-DJB-1

MATERIAL	ASTM A320 L7M	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-73°C) J								
	690	550	18	50	200-235	AVG ≥27, MIN ≥20								
10536	0.430	0.890	0.028	0.031	0.290	-	-	0.880	0.190	-	-	-	-	-
	725	565	18	55	216	34	38	40						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. This information is contained in this report to be true and correct to the best of our knowledge.

WITNESSED BY:

DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A
 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO. M19100144

DATE Oct/1/2019

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6294	TRUNNION BALL VALVE	6"FB 150LB	B5153F15-DIB-1

MATERIAL	ASTM A194 7M	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT

HEAT TREATMENT	TEMP.°C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements


STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-73°C) J								
	-	-	-	-	159-235	AVG ≥27, MIN ≥20								
10537	0.430	0.780	0.030	0.029	0.260	-	-	0.890	0.210	-	-	-	-	-
	-	-	-	-	186	42	39	37						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.*
 3451 Pegasus Drive
 Bakersfield, CA 93308. U.S.A

QUALITY ASSURANCE MANAGER: *Terry Gonsman*
 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE ISO 9001:2015, API Q1: 9 TH ED				REPORT NO.	DM19010505
					DATE	Jan/9/2019
					PAGE	1 of 9
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE	
	ST4133		DS1802013-P.O. 21385	8	NA	
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.	
C120F2	6"	300LB	RF	14 PCS	NA	
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER		
CAST STEEL OS & Y GATE VALVE	A216 WCB Body, 13CR Trim, STL6/STL6 Seat Insert,		Handwheel	D1802074~D1802087		
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.		
API 600-2009 12 TH .ED.	<input type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4		<input type="checkbox"/> API 6FA, 3 RD .Ed <input type="checkbox"/> API 607, 6 TH .Ed	<input type="checkbox"/> NACE MR-0175/ISO15156-2015 <input checked="" type="checkbox"/> NACE MR-0103-2012		

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	BONNET	WEDGE	SEAT RING	STEM
BASE MATERIAL	A216 WCB	A216 WCB	A216 WCB	A105N	A182 F6A
FACE MATERIAL	NA	NA	STL6	STL6	NA
NAME OF PART	BOLT/STUDS	NUTS	GLAND	BACKSEAT	
BASE MATERIAL	A193 B7M	A194 2HM	420SS	420SS	
FACE MATERIAL	NA	NA	NA	NA	

PRESSURE TEST REPORT

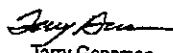
Have been tested good according to API 598 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				BACKSEAT (HYDROSTATIC)	OTHER
		H.P. CLOSURE (HYDROSTATIC) <input type="checkbox"/> REQUIRED <input checked="" type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL			
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM		
PRESSURE (PSIG)	1125	NA	NA	80	80	825	NA
DURATION (Minutes)	1	NA	NA	1	1	1	NA
RESULT	GOOD			GOOD	GOOD	GOOD	



OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	MSS SP-55-GOOD	NA


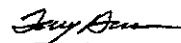
We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:	QUALITY ASSURANCE MANAGER:  Terry Gonsman Quality Assurance Manager
	DHV Industries, Inc. 3451 Pegasus Drive Bakersfield, CA 93308, U.S.A


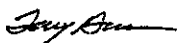
This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT MILL CERTIFICATE										REPORT NO.	DM19010505		
											DATE	Jan/9/2019		
											PAGE	3 of 9		
CUSTOMER	CUSTOMER P.O.	VALVE TYPE				SIZE/CLASS	FIGURE NUMBER							
	ST4133	CAST STEEL OS & Y GATE VALVE				6" 300LB	C120F2							
MATERIAL	ASTM A216 WCB													
HEAT TREATMENT														
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)			FURNACE	COOLING PROCESS				REMARK				
Normalize	920	1h/25mm, ≥2h			Gas	Air cooling to room temp.								
CHEMICAL AND MECHANICAL TEST REPORT														
Have been tested good according to the material specification and purchase order requirements														
STD	CHEMICAL COMPOSITION % (≤)													
	C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	V	Bal.	Ni+Cu	Other
	0.18-0.23	0.600	1.000	0.035	0.035	0.500	0.200	0.500	0.060	0.300	0.030	1.000	0.150	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (°C) J								
	485-655	250	22	35	140-237	-								
D5738	0.211	0.424	1.000	0.025	0.016	0.151	0.013	0.038	0.002	0.034	0.003	0.242	0.073	-
	527	333	36	58	145	-	-	-						
D5761	0.201	0.426	0.977	0.023	0.015	0.166	0.016	0.053	0.002	0.034	0.003	0.274	0.087	-
	526	324	36	56	146	-	-	-						
D5766	0.200	0.421	0.963	0.023	0.015	0.128	0.012	0.038	0.002	0.034	0.003	0.216	0.072	-
	508	313	35	60	144	-	-	-						
D5845	0.223	0.428	1.040	0.024	0.017	0.070	0.008	0.028	0.002	0.033	0.003	0.144	0.061	-
	523	320	30	55	159	-	-	-						
D5852	0.201	0.427	1.030	0.024	0.015	0.127	0.014	0.039	0.002	0.031	0.003	0.216	0.070	-
	522	320	37	61	157	-	-	-						
D5854	0.190	0.457	1.030	0.022	0.016	0.106	0.010	0.040	0.002	0.035	0.003	0.195	0.075	-
	523	316	30	54	158	-	-	-						
D5885	0.204	0.423	1.050	0.023	0.016	0.061	0.007	0.027	0.002	0.033	0.003	0.133	0.060	-
	502	312	37	62	150	-	-	-						
L7511	0.206	0.455	1.080	0.022	0.016	0.042	0.006	0.021	0.002	0.028	0.003	0.102	0.049	-
	547	325	45	51	148	-	-	-						
L7538	0.211	0.483	1.030	0.022	0.015	0.044	0.007	0.020	0.004	0.038	0.003	0.116	0.058	-
	498	268	34	61	141	-	-	-						
L7701	0.205	0.477	1.060	0.023	0.015	0.050	0.005	0.019	0.001	0.038	0.002	0.115	0.057	-
	507	266	30	62	140	-	-	-						
L7706	0.205	0.447	1.040	0.022	0.014	0.052	0.005	0.021	0.001	0.038	0.002	0.120	0.059	-
	506	309	33	59	141	-	-	-						
We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.														
WITNESSED BY:							QUALITY ASSURANCE MANAGER:  Terry Gonsman Quality Assurance Manager							
							DHV Industries, Inc. 3451 Pegasus Drive Bakersfield, CA 93308. U.S.A							

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT MILL CERTIFICATE										REPORT NO.	DM19010505		
											DATE	Jan/9/2019		
											PAGE	4 of 9		
CUSTOMER		CUSTOMER P.O.		VALVE TYPE			SIZE/CLASS		FIGURE NUMBER					
		ST4133		CAST STEEL OS & Y GATE VALVE			6" 300LB		C120F2					
MATERIAL		ASTM A216 WCB			HEAT TREATMENT									
HEAT TREATMENT		TEMP. °C		TIME @ TEMP. °C (HR)		FURNACE		COOLING PROCESS		REMARK				
Normalize		920		1h/25mm, ≥2h		Gas		Air cooling to room temp.						
CHEMICAL AND MECHANICAL TEST REPORT Have been tested good according to the material specification and purchase order requirements														
STD	CHEMICAL COMPOSITION % (≤)													
	C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	V	Bal.	Ni+Cu	Other
	0.18-0.23	0.600	1.000	0.035	0.035	0.500	0.200	0.500	0.060	0.300	0.030	1.000	0.150	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (°C) J								
485-655	250	22	35	140-237	-									
L7715	0.195	0.476	1.010	0.019	0.014	0.164	0.005	0.074	0.002	0.039	0.003	0.288	0.113	-
	526	314	28	51	145	-	-	-						
L7724	0.192	0.428	1.040	0.022	0.014	0.058	0.006	0.022	0.002	0.033	0.003	0.123	0.054	-
	512	319	31	59	152	-	-	-						
L7928	0.213	0.482	1.070	0.022	0.016	0.037	0.005	0.019	0.003	0.031	0.003	0.098	0.050	-
	524	320	33	58	159	-	-	-						
L8016	0.216	0.458	1.060	0.021	0.016	0.034	0.005	0.014	0.002	0.024	0.003	0.081	0.038	-
	532	332	31	62	160	-	-	-						
L8024	0.203	0.462	1.050	0.022	0.018	0.033	0.004	0.012	0.002	0.023	0.003	0.078	0.035	-
	514	315	34	55	150	-	-	-						
LH655	0.196	0.387	0.586	0.026	0.020	0.039	0.051	0.042	0.043	0.014	0.003	0.192	0.056	-
	516	251	22	40	170	-	-	-						
LH683	0.221	0.353	0.660	0.020	0.020	0.006	0.013	0.029	0.011	0.003	0.004	0.066	0.032	-
	521	273	24	43	193	-	-	-						
LH684	0.214	0.450	0.798	0.026	0.020	0.004	0.005	0.032	0.026	0.022	0.002	0.091	0.054	-
	524	285	25	36	195	-	-	-						
LH685	0.203	0.461	0.697	0.026	0.014	0.035	0.027	0.011	0.050	0.004	0.003	0.130	0.015	-
	500	289	24	40	191	-	-	-						
LH690	0.199	0.326	0.560	0.031	0.025	0.005	0.029	0.006	0.016	0.019	0.003	0.078	0.025	-
	522	255	22	36	181	-	-	-						
LH691	0.213	0.495	0.797	0.021	0.020	0.024	0.058	0.021	0.042	0.015	0.001	0.161	0.036	-
	525	290	28	41	195	-	-	-						
We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.														
WITNESSED BY:						QUALITY ASSURANCE MANAGER:								
						 DHV Industries, Inc. Terry Gonsman Quality Assurance Manager 3451 Pegasus Drive Bakersfield, CA 93308, U.S.A								

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT MILL CERTIFICATE										REPORT NO.	DM19010505		
	ISO 9001:2015, API Q1: 9 TH ED										DATE	Jan/9/2019		
											PAGE	5 of 9		
CUSTOMER	CUSTOMER P.O.	VALVE TYPE				SIZE/CLASS	FIGURE NUMBER							
	ST4133	CAST STEEL OS & Y GATE VALVE				6" 300LB	C120F2							
MATERIAL	ASTM A216 WCB													
HEAT TREATMENT														
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)			FURNACE	COOLING PROCESS			REMARK					
Normalize	920	1h/25mm, ≥2h			Gas	Air cooling to room temp.								
CHEMICAL AND MECHANICAL TEST REPORT														
Have been tested good according to the material specification and purchase order requirements														
STD	CHEMICAL COMPOSITION % (≤)													
	C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	V	Bal.	Ni+Cu	Other
	0.18-0.23	0.600	1.000	0.035	0.035	0.500	0.200	0.500	0.060	0.300	0.030	1.000	0.150	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (-°C) J								
	485-655	250	22	35	140-237	-								
LT040	0.223	0.355	0.847	0.022	0.022	0.014	0.007	0.007	0.027	0.021	0.003	0.079	0.028	-
	503	276	31	36	176	-	-	-						
LT098	0.210	0.337	0.640	0.034	0.020	0.037	0.018	0.042	0.025	0.016	0.003	0.141	0.058	-
	500	258	25	37	169	-	-	-						
LT099	0.184	0.356	0.796	0.021	0.011	0.029	0.015	0.041	0.010	0.017	0.003	0.115	0.058	-
	524	261	26	36	178	-	-	-						
LT101	0.225	0.341	0.613	0.030	0.018	0.036	0.030	0.023	0.046	0.009	0.002	0.146	0.032	-
	500	291	23	39	167	-	-	-						
LT105	0.199	0.343	0.853	0.034	0.016	0.021	0.038	0.023	0.040	0.011	0.002	0.135	0.034	-
	523	269	25	36	176	-	-	-						
LT107	0.204	0.416	0.613	0.028	0.021	0.005	0.013	0.029	0.048	0.014	0.002	0.111	0.043	-
	510	264	31	39	161	-	-	-						
LT111	0.213	0.330	0.761	0.020	0.012	0.013	0.034	0.024	0.033	0.013	0.003	0.120	0.037	-
	515	254	23	35	179	-	-	-						
LT112	0.226	0.480	0.677	0.035	0.018	0.008	0.037	0.036	0.019	0.009	0.004	0.113	0.045	-
	508	277	30	42	175	-	-	-						
LT113	0.183	0.436	0.645	0.028	0.026	0.037	0.009	0.020	0.013	0.022	0.002	0.103	0.042	-
	512	266	28	38	168	-	-	-						
We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.														
WITNESSED BY:							QUALITY ASSURANCE MANAGER:							
							 Terry Gonsman Quality Assurance Manager							
							DHV Industries, Inc. 3451 Pegasus Drive Bakersfield, CA 93308, U.S.A							

This certificate is in compliance with EN 10204 3.1.



DHW VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	DM19010505
DATE	Jan/9/2019
PAGE	8 of 9

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4133	CAST STEEL OS & Y GATE VALVE	6" 300LB	C120F2

MATERIAL	ASTM A193 B7M
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Oil cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT


Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Si	Mn	P	S	Cr	Mo	Ni	AL	Cu	V	N	Nb	Other
	0.38-0.48	0.15-0.35	0.75-1.00	0.035	0.040	0.8-1.1	0.15-0.25	-	-	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)					IMPACT TEST								
	T.S. MPa	YS. MPa	EL. (%)	R.A. (%)	HARD (HB) (≤)	(-°C) J								
	690	550	18	50	200-235	-								
J1409B33-A	0.390	0.250	0.870	0.013	0.005	0.840	0.180	-	-	-	-	-	-	-
	731	609	22	62	217	-	-	-	-	-	-	-	-	-

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:	QUALITY ASSURANCE MANAGER: Terry Gonsman Quality Assurance Manager
	DHV Industries, Inc. 3451 Pegasus Drive Bakersfield, CA 93308, U.S.A

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	<h2>MATERIAL TEST REPORT</h2> <h3>TEST CERTIFICATE</h3>			REPORT NO.	M19111218
				DATE	Nov/12/2019
				PAGE	1 of 6
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE
	6030		SO1903019	3	NA
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.
B5153F15-GO-DIB-1	8"FB	150LB	RF Flange	14 PCS	NA
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER	
TRUNNION BALL VALVE	Three-Piece Body, A350 LF2 Body, C.S.+ENP Trim, DEVLON Seat Insert		Gear Op	19031485-19031498	
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.	
API 6D-2014	<input checked="" type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4	<input checked="" type="checkbox"/> API 6FA, 4RD.Ed <input type="checkbox"/> API 607, 7TH.Ed	<input checked="" type="checkbox"/> NACE MR-0175-2015 <input type="checkbox"/> NACE MR-0103-2015		

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	ADAPTER	BALL	SEAT ASSEMBLY	STEM
BASE MATERIAL	A350 LF2	A350 LF2	A350 LF2	A350 LF2	A29 4140
FACE MATERIAL	- NA	NA	ENP	ENP+DEVLON	ENP
NAME OF PART	BOLT/STUDS	NUTS	SPRING	GASKET	O-RING SEAL
BASE MATERIAL	A320 L7M	A194 7M	B637-UNS N07750	S.S.+GRAPHITE	HNBR
FACE MATERIAL	NA	NA	NA	NA	NA

PRESSURE TEST REPORT

Have been tested good according to API 6D, CSA Z245.15-17 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT(BI-DIRECTIONAL) CLOSURE TESTING					OPTIONAL SEAT TESTING	
		STANDARD		OPTIONAL		STANDARD		
		H.P. CLOSURE (HYDROSTATIC) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		<input checked="" type="checkbox"/> DBB	<input checked="" type="checkbox"/> DIB-1	<input type="checkbox"/> DIB-2
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	FROM BOTH VALVE ENDS	CAVITY TO BOTH DPE SEATS	CAVIT TO ONE DPE SEAT
PRESSURE (PSIG)	450	325	325	80	80	325	325	NA
DURATION (Minutes)	5	5	5	5	5	5	5	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	ASME B16.34-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* QUALITY ASSURANCE MANAGER: *Terry Gonsman*

3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A

Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO. M19111218

DATE Nov/12/2019

PAGE 3 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6030	TRUNNION BALL VALVE	8"FB 150LB	B5153F15-GO-DIB-1

MATERIAL	ASTM A350 LF2	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	930	1h/25mm, ≥2h	Elec	Water cooling to room temp.	
Temper	620	1h/25mm, ≥1h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)																		
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	Bal.	Cr+Mo	CE					
	0.230	0.60-1.35	0.035	0.025	0.15-0.30	0.400	0.400	0.300	0.120	0.080	0.020	1.000	0.320	0.430					
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST (-46°C) J, 10*10mm longitudinal direction												
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	SINGLE MIN ≥27 J													
19030394	485-655	250	22	30	140-197	0.190	0.990	0.007	0.002	0.240	0.061	0.028	0.093	0.013	0.001	0.001	0.196	0.106	0.382
		516	328	36	76	145	136	142	116										
19050498		0.200	1.010	0.007	0.002	0.240	0.006	0.034	0.064	0.007	0.002	0.002	0.113	0.071	0.386				
		511	345	38	78	154	125	167	144										
27181		0.210	0.840	0.027	0.010	0.240	0.070	0.050	0.120	0.030	0.050	0.010	0.320	0.150	0.398				
		550	280	28	39	153	33	32	32										
XS1062		0.210	0.790	0.023	0.014	0.190	0.220	0.220	0.130	0.080	0.040	0.011	0.690	0.210	0.421				
		585	320	59	78	181	88	83	89										

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* Terry Gonsman
 Quality Assurance Manager
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19111218
DATE	Nov/12/2019
PAGE	4 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6030	TRUNNION BALL VALVE	8"FB 150LB	B5153F15-GO-DIB-1

MATERIAL	ASTM A29 4140	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	930	1h/25mm, ≥2h	Elec	Water cooling to room temp.	
Temper	620	1h/25mm, ≥1h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.43	0.75-1.00	0.035	0.040	0.15-0.35	0.350	0.250	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-46°C) J, 10*10mm longitudinal direction								
	690	550	18	45	182-237	SINGLE MIN ≥27 J								
HH1808	0.400	0.840	0.008	0.008	0.240	0.060	0.010	0.980	0.190	-	-	-	-	-
	746	559	23	54	226	37	36	38						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. This report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc*
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A

QUALITY ASSURANCE MANAGER: *Terry Gonsman*
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19111218
DATE	Nov/12/2019
PAGE	5 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER	
	6030	TRUNNION BALL VALVE	8"FB 150LB	B5153F15-GO-DIB-1	
MATERIAL	ASTM A320 L7M	MATERIAL ORIGIN	P.R.C.		
HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

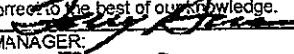
CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-73°C) J								
	690	550	18	50	200-235	AVG ≥27, MIN ≥20								
10536	0.430	0.890	0.028	0.031	0.290	-	-	0.880	0.190	-	-	-	-	-
	725	565	18	55	216	34	38	40						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:


DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19111218
DATE	Nov/12/2019
PAGE	6 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6030	TRUNNION BALL VALVE	8"FB 150LB	B5153F15-GO-DIB-1

MATERIAL	ASTM A194 7M	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements


STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	SI	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-73°C) J								
	-	-	-	-	159-235	AVG ≥27, MIN ≥20								
10537	0.430	0.780	0.030	0.029	0.260	-	-	0.890	0.210	-	-	-	-	-
	-	-	-	-	186	42	39	37						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.*
 3451 Pegasus Drive
 Bakersfield, CA 93308. U.S.A

Terry Gonsman
 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE			REPORT NO.	DM18082415
	ISO 9001:2015, API Q1: 9 TH ED			DATE	Aug/28/2018
				PAGE	1 of 9
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE
	ST4184		DS1804002-P.O.21430	14	NA
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.
C120F2	8"	300LB	RF Flange	15 PCS	NA
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER	
CAST STEEL OS & Y GATE VALVE	A216 WCB Body, 13CR Trim, STL6/STL6 Seat Insert,		Handwheel	D18041288~D18041302	
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.	
API 600-2009 12 TH ,ED.	<input type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4	<input type="checkbox"/> API 6FA, 3 RD .Ed <input type="checkbox"/> API 607, 6 TH .Ed	<input type="checkbox"/> NACE MR-0175/ISO15156-2015 <input checked="" type="checkbox"/> NACE MR-0103-2012		

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	BONNET	WEDGE	SEAT RING	STEM
BASE MATERIAL	A216 WCB	A216 WCB	A216 WCB	A105N	A182 F6A
FACE MATERIAL	NA	NA	STL6	STL6	NA
NAME OF PART	BOLT/STUDS	NUTS	GLAND	BACKSEAT	
BASE MATERIAL	A193 B7M	A194 2HM	420SS	420SS	
FACE MATERIAL	NA	NA	NA	NA	

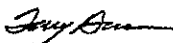
PRESSURE TEST REPORT

Have been tested good according to API 598 and the purchase order requirements


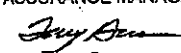
	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				BACKSEAT (HYDROSTATIC)	OTHER
		H.P. CLOSURE (HYDROSTATIC) <input type="checkbox"/> REQUIRED <input checked="" type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL			
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM		
PRESSURE (PSIG)	1125	NA	NA	80	80	825	NA
DURATION (Minutes)	2	NA	NA	2	2	1	NA
RESULT	GOOD			GOOD	GOOD	GOOD	

OTHER INSPECTION


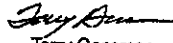
	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	MSS SP-55-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.	
WITNESSED BY:	QUALITY ASSURANCE MANAGER:  Terry Gonsman Quality Assurance Manager
	DHV Industries, Inc. 3451 Pegasus Drive Bakersfield, CA 93308, U.S.A



This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT MILL CERTIFICATE										REPORT NO.	DM18082415		
											DATE	Aug/28/2018		
	ISO 9001:2015, API Q1: 9 TH ED										PAGE	3 of 9		
CUSTOMER	CUSTOMER P.O.	VALVE TYPE					SIZE/CLASS	FIGURE NUMBER						
	ST4184	CAST STEEL OS & Y GATE VALVE					8" 300LB	C120F2						
MATERIAL	ASTM A216 WCB													
HEAT TREATMENT														
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS				REMARK						
Normalize	920	1h/25mm, ≥2h	Gas	Air cooling to room temp.										
CHEMICAL AND MECHANICAL TEST REPORT														
Have been tested good according to the material specification and purchase order requirements														
STD	CHEMICAL COMPOSITION % (≤)													
	C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	V	Bal.	Ni+Cu	Other
	0.18-0.23	0.600	1.000	0.035	0.035	0.500	0.200	0.500	0.060	0.300	0.030	1.000	0.150	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (°C) J								
	485-655	250	22	35	140-237	-								
D5617	0.215	0.421	0.968	0.023	0.017	0.183	0.016	0.062	0.006	0.026	0.002	0.295	0.088	-
	535	330	37	54	161	-	-	-						
D5620	0.198	0.444	0.970	0.024	0.017	0.148	0.011	0.042	0.001	0.027	0.002	0.231	0.068	-
	520	335	29	45	155	-	-	-						
D5622	0.198	0.425	0.943	0.023	0.016	0.173	0.011	0.049	0.002	0.027	0.002	0.264	0.077	-
	535	335	34	59	160	-	-	-						
D5663	0.207	0.431	0.974	0.022	0.016	0.056	0.008	0.023	0.002	0.026	0.002	0.117	0.049	-
	510	314	34	56	155	-	-	-						
D5666	0.206	0.426	1.040	0.022	0.017	0.068	0.008	0.025	0.002	0.026	0.003	0.133	0.053	-
	515	315	34	48	146	-	-	-						
D5669	0.219	0.444	0.994	0.022	0.016	0.070	0.008	0.027	0.002	0.027	0.002	0.136	0.054	-
	507	323	26	53	152	-	-	-						
D5674	0.199	0.449	0.977	0.023	0.016	0.088	0.009	0.029	0.002	0.027	0.002	0.157	0.056	-
	509	310	34	50	141	-	-	-						
D5687	0.203	0.426	0.984	0.023	0.016	0.152	0.009	0.030	0.001	0.032	0.003	0.226	0.061	-
	521	332	28	52	146	-	-	-						
D5699	0.199	0.413	0.944	0.022	0.015	0.062	0.006	0.024	0.002	0.036	0.002	0.132	0.060	-
	514	333	37	64	150	-	-	-						
D5709	0.192	0.414	0.947	0.022	0.015	0.075	0.007	0.027	0.002	0.033	0.003	0.146	0.050	-
	512	307	35	65	144	-	-	-						
D5710	0.193	0.434	0.984	0.022	0.015	0.152	0.017	0.031	0.002	0.035	0.003	0.240	0.066	-
	514	314	34	62	141	-	-	-						
We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.														
WITNESSED BY:						QUALITY ASSURANCE MANAGER: <i>DHV Industries, Inc.</i>  Terry Gonsman Quality Assurance Manager						3451 Pegasus Drive Bakersfield, CA 93308, U.S.A		

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT MILL CERTIFICATE										REPORT NO.	DM18082415			
											DATE	Aug/28/2018			
	ISO 9001:2015, API Q1: 9 TH ED										PAGE	4 of 9			
CUSTOMER	CUSTOMER P.O.	VALVE TYPE					SIZE/CLASS	FIGURE NUMBER							
	ST4184	CAST STEEL OS & Y GATE VALVE					8" 300LB	C120F2							
MATERIAL	ASTM A216 WCB														
HEAT TREATMENT															
HEAT TREATMENT	TEMP.°C	TIME @ TEMP. °C (HR)			FURNACE	COOLING PROCESS			REMARK						
Normalize	920	1h/25mm, ≥2h			Gas	Air cooling to room temp.									
CHEMICAL AND MECHANICAL TEST REPORT															
Have been tested good according to the material specification and purchase order requirements															
STD	CHEMICAL COMPOSITION % (≤)														
	C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	V	Bal.	Ni+Cu	Other	
	0.18-0.23	0.600	1.000	0.035	0.035	0.500	0.200	0.500	0.060	0.300	0.030	1.000	0.150	-	
HEAT NO.	MECHANICAL PROPERTIES (≥)														
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (-°C) J									
	485-655	250	22	35	140-237	-									
D5719	0.190	0.421	0.973	0.023	0.014	0.175	0.008	0.028	0.001	0.036	0.003	0.252	0.064	-	
	517	316	33	56	156	-	-	-							
D5721	0.199	0.417	0.977	0.024	0.016	0.168	0.008	0.029	0.002	0.033	0.003	0.243	0.062	-	
	500	303	35	63	146	-	-	-							
D5724	0.192	0.406	0.978	0.024	0.015	0.109	0.007	0.025	0.002	0.033	0.003	0.180	0.058	-	
	504	310	36	66	140	-	-	-							
D5730	0.192	0.407	0.959	0.023	0.015	0.170	0.009	0.030	0.002	0.033	0.003	0.247	0.063	-	
	507	311	35	64	141	-	-	-							
D5735	0.222	0.444	0.970	0.024	0.017	0.081	0.008	0.025	0.002	0.030	0.003	0.148	0.055	-	
	500	309	37	67	140	-	-	-							
D5736	0.188	0.467	1.020	0.025	0.017	0.157	0.010	0.032	0.002	0.034	0.003	0.238	0.066	-	
	516	318	39	60	140	-	-	-							
D5740	0.192	0.441	0.966	0.024	0.015	0.170	0.031	0.031	0.001	0.032	0.003	0.268	0.063	-	
	514	315	35	57	143	-	-	-							
D5822	0.201	0.447	0.999	0.024	0.016	0.100	0.009	0.030	0.002	0.032	0.003	0.176	0.062	-	
	500	318	34	62	150	-	-	-							
L6131	0.209	0.420	0.991	0.028	0.017	0.049	0.003	0.023	0.002	0.030	0.005	0.112	0.053	-	
	520	330	32	50	158	-	-	-							
L7170	0.216	0.479	1.060	0.024	0.017	0.069	0.010	0.032	0.010	0.032	0.002	0.155	0.064	-	
	505	270	36	45	153	-	-	-							
L7413	0.201	0.502	1.090	0.021	0.014	0.046	0.006	0.025	0.001	0.024	0.004	0.105	0.048	-	
	535	300	31	62	160	-	-	-							
<p>We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.</p>															
WITNESSED BY:										QUALITY ASSURANCE MANAGER:					
										 Terry Gonsman Quality Assurance Manager					
										DHV Industries, Inc. 3451 Pegasus Drive Bakersfield, CA 93308, U.S.A					

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT MILL CERTIFICATE				REPORT NO.	DM18082415								
					DATE	Aug/28/2018								
					PAGE	7 of 9								
CUSTOMER		CUSTOMER P.O.	VALVE TYPE		SIZE/CLASS	FIGURE NUMBER								
		ST4184	CAST STEEL OS & Y GATE VALVE		8" 300LB	C120F2								
MATERIAL		ASTM A182 F6A												
HEAT TREATMENT														
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)		FURNACE	COOLING PROCESS	REMARK								
Normalize	1020	1h/25mm, ≥2h		Elec	Air cooling to room temp.									
Temper	680	1h/25mm, ≥2h		Gas or Elec	Air cooling to room temp.									
Second Temper	650	1h/25mm, ≥2h		Gas or Elec	Air cooling to room temp.									
CHEMICAL AND MECHANICAL TEST REPORT														
Have been tested good according to the material specification and purchase order requirements														
STD	CHEMICAL COMPOSITION % (≤)													
	C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	V	Nb	N	Other
	0.150	1.000	1.000	0.040	0.030	11.5 -13.5	-	0.500	-	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)		IMPACT TEST (-°C) J							
	585	380	18	35	200-229		-							
C180427	0.120	0.520	0.270	0.019	0.007	12.230	-	0.330	-	-	-	-	-	-
	716	620	24	48	213	215	-	-	-	-	-	-	-	-
<p>We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.</p>														
WITNESSED BY:							QUALITY ASSURANCE MANAGER:							
							 DHV Industries, Inc. 3451 Pegasus Drive Bakersfield, CA 93308, U.S.A Terry Gonsman Quality Assurance Manager							

This certificate is in compliance with EN 10204 3.1.



MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	DM18082415
DATE	Aug/28/2018
PAGE	9 of 9

DHV VALVE GROUP

ISO 9001:2015, API Q1: 9TH ED

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4184	CAST STEEL OS & Y GATE VALVE	8" 300LB	C120F2
MATERIAL	ASTM A194 2HM			

HEAT TREATMENT

HEAT TREATMENT	TEMP.°C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Oil cooling to room temp.	
Temper	620	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Si	Mn	P	S	Cr	Mo	Ni	AL	Cu	V	Nb	N	Other
	≥0.40	0.400	1.000	0.040	0.050	-	-	-	-	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	YS. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (°C) J								
1610-1	0.430	0.250	0.590	0.012	0.018	-	-	-	-	-	-	-	-	-
	-	-	-	-	159-235	-	-	-	-	-	-	-	-	-
	-	-	-	-	181	-	-	-	-	-	-	-	-	-

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:


QUALITY ASSURANCE MANAGER:

Terry Gonsman
 Quality Assurance Manager

DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

This certificate is in compliance with EN 10204 3.1.

LINE# 10

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE ISO 9001:2015, API Q1: 9 TH ED				REPORT NO.	DM18121404
					DATE	Dec/19/2018
					PAGE	1 of 8
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE	
	ST4133		DS1802013-P.O. 21385	9	NA	
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.	
C120F2	8"	300LB	RF	10 PCS	NA	
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER		
CAST STEEL OS & Y GATE VALVE	A216 WCB Body, 13CR Trim, STL6/STL6 Seat Insert,		Handwheel	D1802098-D1802107		
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.		
API 600-2009 12 TH .ED.	<input type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4	<input type="checkbox"/> API 6FA, 3 RD .Ed <input type="checkbox"/> API 607, 6 TH .Ed	<input type="checkbox"/> NACE MR-0175/ISO15156-2015 <input checked="" type="checkbox"/> NACE MR-0103-2012			

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	BONNET	WEDGE	SEAT RING	STEM
BASE MATERIAL	A216 WCB	A216 WCB	A216 WCB	A105N	A182 F6A
FACE MATERIAL	NA	NA	STL6	STL6	NA
NAME OF PART	BOLT/STUDS	NUTS	GLAND	BACKSEAT	
BASE MATERIAL	A193 B7M	A194 2HM	420SS	420SS	
FACE MATERIAL	NA	NA	NA	NA	

PRESSURE TEST REPORT

Have been tested good according to API 598 and the purchase order requirements

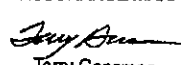
	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				BACKSEAT (HYDROSTATIC)	OTHER
		H.P. CLOSURE (HYDROSTATIC) <input type="checkbox"/> REQUIRED <input checked="" type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL			
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM		
PRESSURE (PSIG)	1125	NA	NA	80	80	825	NA
DURATION (Minutes)	2	NA	NA	2	2	1	NA
RESULT	GOOD			GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	MSS SP-55-GOOD	NA


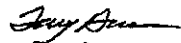
We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: _____ QUALITY ASSURANCE MANAGER:


 Terry Gonsman
 Quality Assurance Manager

DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT MILL CERTIFICATE ISO 9001:2015, API Q1: 9 TH ED										REPORT NO.	DM18121404		
											DATE	Dec/19/2018		
											PAGE	3 of 8		
CUSTOMER	CUSTOMER P.O.	VALVE TYPE				SIZE/CLASS	FIGURE NUMBER							
	ST4133	CAST STEEL OS & Y GATE VALVE				8" 300LB	C120F2							
MATERIAL	ASTM A216 WCB													
HEAT TREATMENT														
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS				REMARK						
Normalize	920	1h/25mm, ≥2h	Gas	Air cooling to room temp.										
CHEMICAL AND MECHANICAL TEST REPORT														
Have been tested good according to the material specification and purchase order requirements														
STD	CHEMICAL COMPOSITION % (≤)													
	C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	V	Bal.	Ni+Cu	Other
	0.18-0.23	0.600	1.000	0.035	0.035	0.500	0.200	0.500	0.060	0.300	0.030	1.000	0.150	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (°C) J								
	485-655	250	22	35	140-237	-								
D5620	0.198	0.444	0.970	0.024	0.017	0.148	0.011	0.042	0.001	0.027	0.002	0.231	0.068	-
	520	335	29	45	155	-	-	-						
L8154	0.221	0.483	1.060	0.020	0.015	0.050	0.006	0.020	0.003	0.030	0.003	0.111	0.050	-
	513	322	34	58	146	-	-	-						
L8164	0.211	0.449	1.020	0.022	0.016	0.041	0.007	0.020	0.002	0.033	0.003	0.105	0.052	-
	527	318	34	56	146	-	-	-						
L8168	0.207	0.440	1.070	0.020	0.014	0.052	0.006	0.018	0.002	0.031	0.003	0.112	0.049	-
	520	316	33	65	150	-	-	-						
L8175	0.193	0.477	1.040	0.021	0.015	0.032	0.004	0.016	0.002	0.028	0.003	0.084	0.043	-
	512	319	30	58	150	-	-	-						
L8184	0.210	0.450	1.050	0.022	0.017	0.061	0.008	0.015	0.002	0.029	0.003	0.118	0.044	-
	516	320	36	53	143	-	-	-						
L8298	0.218	0.458	1.060	0.021	0.015	0.039	0.007	0.014	0.009	0.025	0.003	0.097	0.039	-
	525	332	35	52	143	-	-	-						
LR0167	0.181	0.424	0.884	0.031	0.014	0.085	0.079	0.046	0.020	0.022	0.007	0.259	0.068	-
	521	320	30	51	156	-	-	-						
LR0189	0.190	0.509	0.946	0.029	0.015	0.091	0.035	0.026	0.056	0.021	0.006	0.235	0.047	-
	517	331	33	48	154	-	-	-						
LR0190	0.204	0.467	0.984	0.021	0.011	0.052	0.010	0.044	0.046	0.023	0.003	0.178	0.067	-
	500	313	32	49	152	-	-	-						
LR0191	0.187	0.564	0.978	0.030	0.009	0.084	0.038	0.044	0.045	0.018	0.006	0.235	0.062	-
	528	345	29	51	158	-	-	-						
We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.														
WITNESSED BY:						QUALITY ASSURANCE MANAGER:  Terry Gonsman Quality Assurance Manager								
						DHV Industries, Inc. 3451 Pegasus Drive Bakersfield, CA 93308. U.S.A								

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO. DM18121404

DATE Dec/19/2018

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4133	CAST STEEL OS & Y GATE VALVE	8" 300LB	C120F2
MATERIAL	ASTM A216 WCB			

HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Normalize	920	1h/25mm, ≥2h	Gas	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

HEAT NO.	STD	CHEMICAL COMPOSITION % (≤)													
		C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	V	Bal.	Ni+Cu	Other
		0.18-0.23	0.600	1.000	0.035	0.035	0.500	0.200	0.500	0.060	0.300	0.030	1.000	0.150	-
		MECHANICAL PROPERTIES (≥)													
		T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (-°C) J								
		485-655	250	22	35	140-237	-								
LR0192		0.207	0.495	0.907	0.030	0.013	0.045	0.012	0.023	0.038	0.021	0.005	0.144	0.044	-
		493	310	31	54	148	-	-	-						
LR0193		0.189	0.505	0.835	0.032	0.013	0.080	0.046	0.045	0.031	0.020	0.006	0.228	0.065	-
		505	321	26	48	151	-	-	-						
LR0194		0.189	0.328	0.775	0.032	0.013	0.059	0.010	0.052	0.026	0.027	0.003	0.177	0.079	-
		522	333	28	53	154	-	-	-						
LR0195		0.189	0.484	0.909	0.028	0.014	0.140	0.059	0.026	0.042	0.022	0.006	0.295	0.048	-
		509	333	33	52	152	-	-	-						
LR0196		0.194	0.433	0.912	0.027	0.013	0.064	0.008	0.037	0.054	0.019	0.002	0.184	0.056	-
		530	305	31	52	159	-	-	-						
LR0198		0.209	0.424	0.915	0.025	0.014	0.043	0.009	0.028	0.029	0.023	0.003	0.135	0.051	-
		506	327	30	52	156	-	-	-						
LR0199		0.188	0.529	0.895	0.024	0.011	0.088	0.040	0.057	0.037	0.019	0.008	0.249	0.076	-
		518	325	32	50	152	-	-	-						
LR0203		0.191	0.404	0.913	0.021	0.011	0.050	0.009	0.038	0.041	0.019	0.002	0.159	0.057	-
		502	328	29	45	152	-	-	-						
LR0204		0.184	0.405	0.831	0.022	0.012	0.056	0.014	0.055	0.020	0.020	0.003	0.168	0.075	-
		498	283	31	54	150	-	-	-						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:	QUALITY ASSURANCE MANAGER: <div style="text-align: right;"> Terry Gonsman Quality Assurance Manager </div> <div style="text-align: right; margin-top: 5px;"> DHV Industries, Inc. 3451 Pegasus Drive Bakersfield, CA 93308, U.S.A </div>
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This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	DM18121404
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4133	CAST STEEL OS & Y GATE VALVE	8" 300LB	C120F2
MATERIAL	ASTM A193 B7M			

HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Oil cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Si	Mn	P	S	Cr	Mo	Ni	AL	Cu	V	N	Nb	Other
	0.38-0.48	0.15-0.35	0.75-1.00	0.035	0.040	0.8-1.1	0.15-0.25	-	-	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)					IMPACT TEST (-°C) J								
	T.S. MPa	YS. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)									
J1409B32-A	690	550	18	50	200-235									
	0.390	0.250	0.870	0.013	0.005	0.840	0.180	-	-	-	-	-	-	-
	759	586	24	65	220	-	-	-	-	-	-	-	-	-

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

QUALITY ASSURANCE MANAGER:

Terry Gonsman
Terry Gonsman
Quality Assurance Manager
DHV Industries, Inc.
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	DM18121404
DATE	Dec/19/2018
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4133	CAST STEEL OS & Y GATE VALVE	8" 300LB	C120F2
MATERIAL	ASTM A194 2HM			

HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Oil cooling to room temp.	
Temper	620	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Si	Mn	P	S	Cr	Mo	NI	AL	Cu	V	Nb	N	Other
	≥0.40	0.400	1.000	0.040	0.050	-	-	-	-	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	YS. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (-°C) J								
	-	-	-	-	159-235	-								
YJ1160B51-2	0.460	0.150	0.680	0.016	0.004	-	-	-	-	-	-	-	-	-
	-	-	-	-	200	-	-	-	-	-	-	-	-	-

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

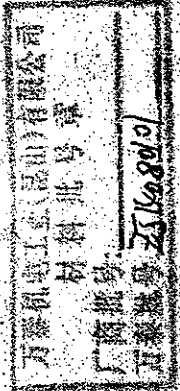
WITNESSED BY:	QUALITY ASSURANCE MANAGER: Terry Gonsman Quality Assurance Manager
---------------	--

DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

This certificate is in compliance with EN 10204 3.1.

Jiangyin Xingye Stainless Steel Co. Ltd.

Material Test Certificate



Messrs. KUNSHAN WANTAI		Date: 2014 08 01	File				
Steel grade: 316/316L	Commodity: CDA	Order No.	P.O. NO.				
Item: Heat-Lot No: XY1406261	Size(mm): H01.75	Quantity(Pcs): 9973	Weight(kg): 9973				
Condition: CDA		Workmanship					
ASTM A479/A49M-14							
Chemical Composition(WT%)							
C	Si	Mn	P	S	NI	Cr	Mo
0.023	0.07	1.02	0.041	0.010	10.11	16.73	2.08
Mechanical Properties							
Yield Strength (N/mm2)	Tensile Strength (N/mm2)	Elongation (%)	Reduction of Area (%)	Hardness (HR)			
589	441	43.3	73.2	207			
Condition: FC: Furnace Cooled; S: Solution treated; HF: Hot Forged; B: Black Bar; SR: Stress Relieved; A: Annealed; R: Reheated; QT: Quenched & Tempered; AC: Air-Cooled; HR: Hot Rolled; T: Turned or Pealed; N: Normalized; FA: Full Annealed; P: Polished; WG: Water Quenched; SA: Spheroidal Annealed; CD: Cold Drawn; CG: Centerless Grinding; RS: Re-Straight				Remark: 1. With chemical composition from newly 2. Conform to EN10204 3.1 3. Mercury free and no welding on raw material bar stock			
WE HERELY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED AND TESTED WITH SATISFACTORY RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE ABOVE MATERIAL SPECIFICATION.				(Stamp: Jiangyin Xingye Stainless Steel Co. Ltd. Quality Assurance Department)			
MANAGER OF QUALITY ASSURANCE DEPARTMENT:							

RAW MTL # 7000004603
 HEAT # XY1406261 CODE CH154
 INSP. A. M... DATE 8-18-14



TEST REPORT

No. : SHIN1408033422ML

Date : Aug 14, 2014

Page: 1 of 3

CUSTOMER NAME: WAN TAI PRECISION IND (KUNSHAN) CO.,LTD.
ADDRESS: NO.1299 ZIZHU ROAD,KUNSHAN CITY JIANGSU,CHINA

The following sample(s) was/ were submitted and identified on behalf of the client as:

Sample Name : 130303S001W1
Product Specification : 31.75
Product or Lot No. : ZJT14080101
Material and Mark : 316/316L
Heat No. : XY1406261
Test Required : Chemical Composition Analysis, Tensile Test, Hardness Test
Date of Receipt : Aug 11, 2014
Testing Start Date : Aug 11, 2014
Testing End Date : Aug 14, 2014
Test result(s) : For further details, please refer to the following page(s)

Signed for
SGS-CSTC Standards Technical
Services (Shanghai) Co., Ltd.

Kelly Shi
Authorized signatory

RAW MTL # 7000004603
HEAT # XY1406261 DATE CH154
INSP J. Menton DATE 8-18-14



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TEST REPORT

No. : SHIN1408033422ML

Date : Aug 14, 2014

Page: 2 of 3

1. Chemical Composition Analysis:

Test Method: OES

Element	C	Si	Mn	P	S	Cr	Ni	Mo
Result, %	0.018	0.48	1.01	0.035	0.005	16.84	10.22	2.13

2. Tensile Test:

Test Method: ASTM A370-14

Test item	Specimen type	Tensile strength (MPa)	Yield strength (0.2% offset) (MPa)	Elongation after fracture G=4D (%)
Result	Round specimen	624	416	50.0

3. Hardness Test:

Test Method: ASTM E10-12

Test item	Test position	Result		
HBW 10/3000	Core	189	190	180

RAW MTL # 7000004603
 HEAT # XV1406PH CH154
 INSP J. Martinez 8-18-14



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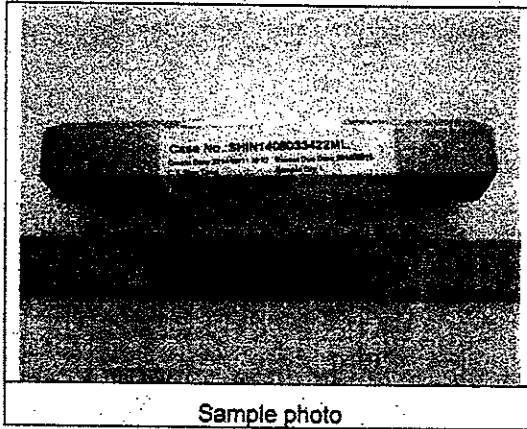
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 中国·上海·浦东康桥东路1159弄69号 邮编: 201319 (86-21) 61196300 (86-21) 68183122/68183920 e.sgs.china@sgs.com

TEST REPORT

No. : SHIN1408033422ML

Date : Aug 14, 2014

Page: 3 of 3



Sample photo

***** End of report*****

RAW FILE 7000004603


XY1406261 CH154

J. Manting 8-18-14



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No.69, Block 1159, East Kang Qiao Road, Pudong District, Shanghai, China 201319 SHIN1 560449
中国·上海·浦东康桥东路1159弄69号 邮编: 201319 ((86-21) 61196300 ((86-21) 68183122/68183620 www.sgsgroup.com.cn
((86-21) 61196300 ((86-21) 68183122/68183620 e sgs.china@sgs.com

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE			REPORT NO.	M19070110
				DATE	Ju/1/2019
				PAGE	1 of 6
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE
	ST4277		SO1807003	1	NA
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.
B5153F15-GO-SPE	10"FB	150LB	Raised Face Flanged End	16 PCS	NA
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER	
TRUNNION BALL VALVE	Three-Piece Body, A350 LF2 Body, C.S.+ENP Trim, DEVLON Seat Insert		Gear Operator	1807025-1807040	
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.	
API 6D-2014	<input checked="" type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4		<input checked="" type="checkbox"/> API 6FA, 4RD.Ed <input type="checkbox"/> API 607, 7TH.Ed	<input checked="" type="checkbox"/> NACE MR-0175-2015 <input type="checkbox"/> NACE MR-0103-2012	

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	ADAPTER	BALL	SEAT ASSEMBLY	STEM
BASE MATERIAL	A350 LF2	A350 LF2	A350 LF2	A350 LF2	A29 4140
FACE MATERIAL	NA	NA	ENP	ENP+DEVLON	ENP
NAME OF PART	BOLT/STUDS	NUTS	SPRING	GASKET	O-RING SEAL
BASE MATERIAL	A320 L7M	A194 7M	B637-UNS N07750	S.S.+GRAPHITE	HNBR
FACE MATERIAL	NA	NA	NA	NA	NA

PRESSURE TEST REPORT


Have been tested good according to API 6D, CSA Z245.15-17 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT(BI-DIRECTIONAL) CLOSURE TESTING					OPTIONAL SEAT TESTING	
		STANDARD		OPTIONAL		STANDARD		
		H.P. CLOSURE (HYDROSTATIC) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		<input checked="" type="checkbox"/> DBB	<input type="checkbox"/> DIB-1	<input type="checkbox"/> DIB-2
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	FROM BOTH VALVE ENDS	CAVITY TO BOTH DPE SEATS	CAVIT TO ONE DPE SEAT
PRESSURE (PSIG)	450	325	325	80	80	325	NA	NA
DURATION (Minutes)	5	5	5	5	5	5	NA	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD		

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	ASTM A961-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: 	QUALITY ASSURANCE MANAGER: <i>Terry Gonsman</i> Terry Gonsman Quality Assurance Manager
DHV Industries, Inc. 3451 Pegasus Drive Bakersfield, CA 93308. U.S.A	

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO. M19070110

DATE Jul/1/2019

PAGE 3 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4277	TRUNNION BALL VALVE	10"FB 150LB	B5153F15-GO-SPE

MATERIAL	ASTM A350 LF2	MATERIAL ORIGIN	P.R.C.
----------	---------------	-----------------	--------

HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	930	1h/25mm, ≥2h	Elec	Water cooling to room temp.	
Temper	620	1h/25mm, ≥1h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	SI	Cu	Ni	Cr	Mo	V	Nb	Bal.	Cr+Mo	CE
	0.230	0.60-1.35	0.035	0.025	0.15-0.30	0.400	0.400	0.300	0.120	0.080	0.020	1.000	0.320	0.430
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-46°C) J, 10*10mm longitudinal direction								
	485-655	250	22	30	140-197	SINGLE MIN ≥27 J								
18090543	0.190	1.020	0.006	0.002	0.230	0.052	0.028	0.071	0.007	0.001	0.001	0.159	0.078	0.381
	527	335	33	76	163	132	142	155						
ZC182237	0.210	0.920	0.012	0.004	0.210	0.040	0.030	0.040	0.018	0.003	0.015	0.131	0.058	0.380
	550	288	34	47	178	62	55	67						
XS1032	0.210	0.690	0.023	0.013	0.170	0.220	0.230	0.140	0.050	0.021	0.012	0.661	0.190	0.397
	575	310	57	74	180	89	81	87						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308. U.S.A

QUALITY ASSURANCE MANAGER

Terry Gonsman
 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO. M19070110

DATE Jul/1/2019

PAGE 4 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4277	TRUNNION BALL VALVE	10"FB 150LB	B5153F15-GO-SPE

MATERIAL	ASTM A29 4140	MATERIAL ORIGIN	P.R.C.
----------	---------------	-----------------	--------

HEAT TREATMENT

HEAT TREATMENT	TEMP.°C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	930	1h/25mm, ≥2h	Elec	Water cooling to room temp.	
Temper	620	1h/25mm, ≥1h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.43	0.75-1.00	0.035	0.040	0.15-0.35	0.350	0.250	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST (-46°C) J, 10*10mm longitudinal direction							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	SINGLE MIN ≥27 J								
LKIF002	690	550	18	45	182-237									
	0.400	0.800	0.030	0.030	0.250	0.310	0.220	0.900	0.200	-	-	-	-	-
	695	555	20	50	195	35	36	37						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

DHV Industries, Inc. SUPPLY MANAGER *Terry Gonsman*
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A **Terry Gonsman**
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19070110
DATE	Jul/1/2019
PAGE	5 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4277	TRUNNION BALL VALVE	10"FB 150LB	B5153F15-GO-SPE

MATERIAL	ASTM A320 L7M	MATERIAL ORIGIN	P.R.C.
----------	---------------	-----------------	--------

HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-73°C) J								
	690	550	18	50	200-235	AVG ≥27, MIN ≥20								
10536	0.430	0.890	0.028	0.031	0.290	-	-	0.880	0.190	-	-	-	-	-
	725	565	18	55	216	34	38	40						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

DHV Industries, Inc.
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A

QUALITY ASSURANCE MANAGER:

Terry Gonsman
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19070110
DATE	Jul/1/2019
PAGE	6 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4277	TRUNNION BALL VALVE	10"FB 150LB	B5153F15-GO-SPE

MATERIAL	ASTM A194 7M	MATERIAL ORIGIN	P.R.C.
----------	--------------	-----------------	--------

HEAT TREATMENT

HEAT TREATMENT	TEMP.°C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements


STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	OTHER
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.8-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	(-73°C) J								
	-	-	-	-	159-235	AVG ≥27, MIN ≥20								
10537	0.430	0.780	0.030	0.029	0.260	-	-	0.890	0.210	-	-	-	-	-
	-	-	-	-	186	42	39	37						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:


 DHV Industries, Inc. QUALITY ASSURANCE MANAGER
 3451 Pegasus Drive Terry Gonsman
 Bakersfield, CA 93308, U.S.A. Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE			REPORT NO.	M19120905
				DATE	Dec/9/2019
				PAGE	1 of 6
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE
	6276		SO1905002	16	NA
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.
B5303F15-GO-SPE	10"FB	300LB	Raised Face Flanged End	4 PCS	NA
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER	
TRUNNION BALL VALVE	Three-Piece Body, A350 LF2 Body, C.S.+ENP Trim, DEVLON Seat Insert		Gear Operator	1905831-1905834	
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.	
API 6D-2014	<input checked="" type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4		<input checked="" type="checkbox"/> API 6FA, 4RD.Ed <input type="checkbox"/> API 607, 7TH.Ed	<input checked="" type="checkbox"/> NACE MR-0175-2015 <input type="checkbox"/> NACE MR-0103-2012	

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	ADAPTER	BALL	SEAT ASSEMBLY	STEM
BASE MATERIAL	A350 LF2	A350 LF2	A350 LF2	A350 LF2	A29 4140
FACE MATERIAL	NA	NA	ENP	ENP+DEVLON	ENP
NAME OF PART	BOLT/STUDS	NUTS	SPRING	GASKET	O-RING SEAL
BASE MATERIAL	A320 L7M	A194 7M	B637-UNS N07750	S.S.+GRAPHITE	HNBR
FACE MATERIAL	NA	NA	NA	NA	NA

PRESSURE TEST REPORT


Have been tested good according to API 6D, CSA Z245.15-17 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT(BI-DIRECTIONAL) CLOSURE TESTING					OPTIONAL SEAT TESTING	
		STANDARD		OPTIONAL		STANDARD	<input type="checkbox"/> DIB-1	<input type="checkbox"/> DIB-2
		H.P. CLOSURE (HYDROSTATIC) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		<input checked="" type="checkbox"/> DBB		
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	FROM BOTH VALVE ENDS	CAVITY TO BOTH DPE SEATS	CAVITY TO ONE DPE SEAT
PRESSURE (PSIG)	1125	825	825	80	80	825	NA	NA
DURATION (Minutes)	5	5	5	5	5	5	NA	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD		

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	ASTM A961-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:  *DHV Quality Assurance Manager: Terry Gonsman*
DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308. U.S.A
Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO. M19120905

DATE Dec/9/2019

PAGE 3 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6276	TRUNNION BALL VALVE	10"FB 300LB	B5303F15-GO-SPE

MATERIAL	ASTM A350 LF2	MATERIAL ORIGIN	P.R.C.
----------	---------------	-----------------	--------

HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	930	1h/25mm, ≥2h	Elec	Water cooling to room temp.	
Temper	620	1h/25mm, ≥1h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

CHEMICAL COMPOSITION % (≤)

STD	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	Bal.	Cr+Mo	CE
		0.230	0.60-1.35	0.035	0.025	0.15-0.30	0.400	0.400	0.300	0.120	0.080	0.020	1.000	0.320

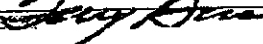
MECHANICAL PROPERTIES (≥)

HEAT NO.	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-46°C) J, 10*10mm longitudinal direction								
	485-655	250	22	30	140-197	SINGLE MIN ≥27 J								

V21600344	0.200	0.900	0.014	0.004	0.240	0.011	0.004	0.040	0.009	0.009	0.003	0.073	0.049	0.363
	560	350	31	63	159	58	65	68						
BD2718	0.200	0.750	0.026	0.005	0.280	0.070	0.060	0.100	0.020	0.020	0.020	0.270	0.120	0.362
	550	295	31	40	150	34	31	33						
17-203154	0.200	0.920	0.021	0.008	0.230	0.010	0.010	0.030	0.030	0.002	0.008	0.082	0.060	0.367
	556	315	28	39	162	36	32	38						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:


DHV Industries, INC.
 3451 Pegasus Drive Terry Gonsman
 Bakersfield, CA 93308, U.S.A. Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO. M19120905

DATE Dec/9/2019

PAGE 4 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6276	TRUNNION BALL VALVE	10"FB 300LB	B5303F15-GO-SPE

MATERIAL	ASTM A29 4140	MATERIAL ORIGIN	P.R.C.
----------	---------------	-----------------	--------

HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	930	1h/25mm, ≥2h	Elec	Water cooling to room temp.	
Temper	620	1h/25mm, ≥1h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.43	0.75-1.00	0.035	0.040	0.15-0.35	0.350	0.250	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	(-46°C) J, 10*10mm longitudinal direction								
	690	550	18	45	182-237	SINGLE MIN ≥27 J								
190610	0.410	0.890	0.014	0.004	0.250	0.030	0.020	1.010	0.200	-	-	-	-	-
	800	665	20.5	61	226	47	41	35						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *Terry Gonsman*
DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A
 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO. M19120905

DATE Dec/9/2019

PAGE 5 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6276	TRUNNION BALL VALVE	10"FB 300LB	B5303F15-GO-SPE

MATERIAL	ASTM A320 L7M	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-73°C) J								
	690	550	18	50	200-235	AVG ≥27, MIN ≥20								
10536	0.430	0.890	0.028	0.031	0.230	-	-	0.880	0.190	-	-	-	-	-
	725	565	18	55	216	34	38	40						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

DHV Industries, Inc.
3451 Pegasus Drive
Bakersfield CA 93308, U.S.A

QUALITY ASSURANCE MANAGER

Terry Gonsman
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO. M19120905

DATE Dec/9/2019

PAGE 6 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6276	TRUNNION BALL VALVE	10"FB 300LB	B5303F15-GO-SPE

MATERIAL	ASTM A194 7M	MATERIAL ORIGIN	P.R.C.
----------	--------------	-----------------	--------

HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST (-73°C) J							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	AVG ≥27, MIN ≥20								
10537	0.430	0.780	0.030	0.029	0.260	-	-	0.890	0.210	-	-	-	-	-
	-	-	-	-	186	42	39	37						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: QUALITY ASSURANCE MANAGER: *Terry Gonsman*
DHV Industries, Inc.
 3451 Regasus Drive Terry Gonsman
 Bakersfield, CA 93308. U.S.A Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



Frontier Valve International Ltd.
 5747-67 St. Edmonton, Alberta, Canada
 Ph.: (780) 469-2464 Fax.: (780) 465-3808

VALVE CERTIFICATION REPORT

Purchaser: Prism Flow Products

Order No.: 22362

Date: November 29, 2019

Sales Order No. (Batch No.): 4581 (191109, 191113)

Frontier valve pressure containing parts manufactured in accordance with Frontier Engineering Standards and NACE MR0175. Sour low temperature certified to -50°F.

DESCRIPTION	(1) 3/4" RP 3600 WOG SW x FNPT B/V SLT CONSTRUCTION (S307T36L)
SHELL WALL THICKNESS	ASME B16.34 CLASS 3600 WOG
BODY & CAP	ASTM A350 LF2 CL.1
SEAT/O-RING MATERIAL	25% CARBON FILLED TFM / HSN
VALVE TESTING	ASME B16.34

ITEM NO.	DESCRIPTION	Q'ty	Pressure Test (psig)			Test Result
			Hydrostatic			
			Shell	Seats	Seats	
1	3/4" RP 3600 WOG SW x FNPT B/V SLT CONSTRUCTION	100	5400	4000	80	GOOD

QA Acceptance: *Ronl*



Frontier Valve International Ltd.

5747-67 St. Edmonton, Alberta, Canada
 Ph.: (780) 469-2464 Fax.: (780) 465-3808

VALVE CERTIFICATION REPORT

Purchaser: Prism Flow Products

Order No.: 22362

Date: November 29, 2019

Sales Order No. (Batch No.): 4581 (191109, 191113)

CHEMICAL COMPOSITION (%)													
Body & Cap A350 LF2													
ITEM NO.	HEAT CODE/NO.	DESC.	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb
			MAX .30	.60 1.35	MAX .035	MAX .040	.15 .30	MAX .40	MAX .40	MAX .30	MAX .12	MAX .08	MAX .02
1	LF	BODY	0.2	1.05	0.006	0.022	0.2	0.01	0.01	0.04	0.003	0.003	0.011
1	18-204530	¾" CAP	0.2	0.93	0.02	0.004	0.22	0.03	0.03	0.04	0.007	0.008	0.007
1	AI216	¾" CAP	0.18	1.07	0.009	0.017	0.19	0.114	0.12	0.117	0.027	0.021	0.001
1	VA007	¾" CAP	0.168	1.207	0.012	0.003	0.29	0.061	0.054	0.155	0.025	0.016	0.016

MECHANICAL TEST						
Body & Cap A350 LF2						
ITEM NO.	HEAT CODE / NO.	T.S.	Y.S.	Elongation	Reduction	Hardness
		KSI	KSI	%	%	H.B.
		70	MIN	MIN	MIN	MAX
		95	36	22	30	197
1	LF	72.3	50.3	33	68.3	143
1	18-204530	74.259	43.801	32	68.0	171
1	AI216	75.685	51.037	32.9	68.0	149
1	VA007	75.83	52.197	28.5	73.0	149

CHARPY TEST RESULT					
HEAT CODE / NO.	Test Temp.	Energy Absorbed	Energy Absorbed	Energy Absorbed	Average
LF	-50°F	74(ft. lbf)	88(ft. lbf)	43(ft. lbf)	68(ft. lbf)
18-204530	-46°C	134 J	142 J	133 J	136.3 J
AI216	-50°F	92.3(ft. lbf)	94.5(ft. lbf)	90.8(ft. lbf)	92.5(ft. lbf)
VA007	-50°F	102.6(ft. lbf)	104.8(ft. lbf)	100.4(ft. lbf)	102.6(ft. lbf)



Frontier Valve International Ltd.
 5747-67 St. Edmonton, Alberta, Canada
 Ph.: (780) 469-2464 Fax.: (780) 465-3808

VALVE CERTIFICATION REPORT

Purchaser: Prism Flow Products

Order No.: 22362

Date: November 29, 2019

Sales Order No. (Batch No.): 4581 (191109, 191113)

CHEMICAL COMPOSITION (%)			STEM A564 630 H1150D (17-4PH)							
ITEM NO.	HEAT NO.	DESCRIPTION	C	Mn	P	S	Si	Cr	Ni	Cu
			MAX .07	MAX 1.00	MAX .040	MAX .030	MAX 1.00	15.00 17.50	3.00 5.00	3.00 5.00
1	D4	STEM	0.02	0.63	0.029	0.02	0.45	15.21	4.36	3.42

MECHANICAL TEST		STEM A564 630 H1150D (17-4PH)				
ITEM NO.	HEAT NO.	T.S.	Y.S.	Elongation	Reduction	Hardness
		KSI	KSI	%	%	HRC
		MIN 125	MIN 105	MIN 16	MIN 50	24 - 33
1	D4	138	124	22	68	31

CHEMICAL COMPOSITION (%)			BALL A351 CF8M							
ITEM NO.	HEAT CODE/NO.	DESCRIPTION	C	Mn	Si	S	P	Cr	Ni	Mo
			MAX .08	MAX 1.50	MAX 1.50	MAX .040	MAX .040	18.0 21.0	9.00 12.00	2.00 3.00
1	D4381	BALL	0.03	0.6	0.68	0.009	0.031	18.79	9.29	2.17

MECHANICAL TEST		BALL A351 CF8M				
ITEM NO.	HEAT CODE/NO.	T.S.	Y.S.	Elongation	Reduction	Hardness
		KSI	KSI	%	%	H.B.
		MIN 70	MIN 30	MIN 30	N/R	N/R
1	D4381	79.335	36.549	48	N/A	148



An ISO 9001 Registered Company


LETTER OF COMPLIANCE

Frontier Valve International Ltd. confirms that all Frontier's S3 RP ball valves, including 3/4", 1" and 2" regular port valves are designed and manufactured in accordance with ANSI B16.34. The detail sizes of the valve bodies and Caps are as listed in the form below.

Valve Description	Frontier Body Size	Frontier Cap Size
3/4" RP S3 Ball Valve	1/2" Standard Body	3/4" Standard Cap
1" RP S3 Ball Valve	3/4" Standard Body	1" Standard Cap
2" RP S3 Ball Valve	1-1/2" Standard Body	2" Standard Cap

Q.A. Acceptance: Ron Liu

Date: Nov. 18, 2019

	<p>Frontier Valve International Ltd. 5747-67 St. Edmonton, Alberta, Canada Ph.: (780) 469-2464 Fax.: (780) 465-3808</p> <p style="font-size: 1.2em; font-weight: bold; text-decoration: underline;">VALVE CERTIFICATION REPORT</p>
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Purchaser: Prism Flow Products
 Order No.: 22418 Date: December 3, 2019
 Sales Order No. (Batch No.): 4637 (191201)
 Frontier valve pressure containing parts manufactured in accordance with Frontier Engineering Standards and NACE MR0175. Sour low temperature certified to -50°F.

DESCRIPTION	(1) 3/4" RP 3600 WOG SW x FNPT B/V SLT CONSTRUCTION (S307T36L)
SHELL WALL THICKNESS	ASME B16.34 CLASS 3600 WOG
BODY & CAP	ASTM A350 LF2 CL.1
SEAT/O-RING MATERIAL	25% CARBON FILLED TFM / HSN
VALVE TESTING	ASME B16.34

ITEM NO.	DESCRIPTION	Q'ty	Pressure Test (psig)			Test Result
			Hydrostatic			
			Shell	Seats	Seats	
1	3/4" RP 3600 WOG SW x FNPT B/V SLT CONSTRUCTION	50	5400	4000	80	GOOD

QA Acceptance: *Rent*



Frontier Valve International Ltd.
 5747-67 St. Edmonton, Alberta, Canada
 Ph.: (780) 469-2464 Fax.: (780) 465-3808

VALVE CERTIFICATION REPORT

Purchaser: Prism Flow Products
 Order No.: 22418 Date: December 3, 2019
 Sales Order No. (Batch No.): 4637 (191201)

CHEMICAL COMPOSITION (%)

Body & Cap A350 LF2

ITEM NO.	HEAT CODE/NO.	DESC.	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb
			MAX .30	.60 1.35	MAX .035	MAX .040	.15 .30	MAX .40	MAX .40	MAX .30	MAX .12	MAX .08	MAX .02
I	LF	BODY	0.2	1.05	0.006	0.022	0.2	0.01	0.01	0.04	0.003	0.003	0.011
1	18-204530	¾" CAP	0.2	0.93	0.02	0.004	0.22	0.03	0.03	0.04	0.007	0.008	0.007
I	AI216	¾" CAP	0.18	1.07	0.009	0.017	0.19	0.114	0.12	0.117	0.027	0.021	0.001
I	VA007	¾" CAP	0.168	1.207	0.012	0.003	0.29	0.061	0.054	0.155	0.025	0.016	0.016

MECHANICAL TEST

Body & Cap A350 LF2

ITEM NO.	HEAT CODE / NO.	T.S.	Y.S.	Elongation	Reduction	Hardness
		KSI	KSI	%	%	H.B.
		70 95	MIN 36	MIN 22	MIN 30	MAX 197
I	LF	72.3	50.3	33	68.3	143
1	18-204530	74.259	43.801	32	68.0	171
1	AI216	75.685	51.037	32.9	68.0	149
1	VA007	75.83	52.197	28.5	73.0	149

CHARPY TEST RESULT

HEAT CODE / NO.	Test Temp.	Energy Absorbed	Energy Absorbed	Energy Absorbed	Average
LF	-50°F	74(ft. lbf)	88(ft. lbf)	43(ft. lbf)	68(ft. lbf)
18-204530	-46°C	134 J	142 J	133 J	136.3 J
AI216	-50°F	92.3(ft. lbf)	94.5(ft. lbf)	90.8(ft. lbf)	92.5(ft. lbf)
VA007	-50°F	102.6(ft. lbf)	104.8(ft. lbf)	100.4(ft. lbf)	102.6(ft. lbf)



Frontier Valve International Ltd.
 5747-67 St. Edmonton, Alberta, Canada
 Ph.: (780) 469-2464 Fax.: (780) 465-3808

VALVE CERTIFICATION REPORT

Purchaser: Prism Flow Products

Order No.: 22418

Date: December 3, 2019

Sales Order No. (Batch No.): 4637 (191201)

CHEMICAL COMPOSITION (%) STEM A564 630 H1150D (17-4PH)										
ITEM NO.	HEAT NO.	DESCRIPTION	C	Mn	P	S	Si	Cr	Ni	Cu
			MAX .07	MAX 1.00	MAX .040	MAX .030	MAX 1.00	15.00 17.50	3.00 5.00	3.00 5.00
1	D4	STEM	0.02	0.63	0.029	0.02	0.45	15.21	4.36	3.42

MECHANICAL TEST STEM A564 630 H1150D (17-4PH)						
ITEM NO.	HEAT NO.	T.S.	Y.S.	Elongation	Reduction	Hardness
		KSI	KSI	%	%	HRC
		MIN 125	MIN 105	MIN 16	MIN 50	24 - 33
1	D4	138	124	22	68	31

CHEMICAL COMPOSITION (%) BALL A351 CF8M										
ITEM NO.	HEAT CODE/NO.	DESCRIPTION	C	Mn	Si	S	P	Cr	Ni	Mo
			MAX .08	MAX 1.50	MAX 1.50	MAX .040	MAX .040	18.0 21.0	9.00 12.00	2.00 3.00
1	D4381	BALL	0.03	0.6	0.68	0.009	0.031	18.79	9.29	2.17

MECHANICAL TEST BALL A351 CF8M						
ITEM NO.	HEAT CODE/NO.	T.S.	Y.S.	Elongation	Reduction	Hardness
		KSI	KSI	%	%	H.B.
		MIN 70	MIN 30	MIN 30	N/R	N/R
1	D4381	79.335	36.549	48	N/A	148

Frontier Valve**International Ltd.**

An ISO 9001 Registered Company


LETTER OF COMPLIANCE

Frontier Valve International Ltd. confirms that all Frontier's S3 RP ball valves, including 3/4", 1" and 2" regular port valves are designed and manufactured in accordance with ANSI B16.34. The detail sizes of the valve bodies and Caps are as listed in the form below.

Valve Description	Frontier Body Size	Frontier Cap Size
3/4" RP S3 Ball Valve	1/2" Standard Body	3/4" Standard Cap
1" RP S3 Ball Valve	3/4" Standard Body	1" Standard Cap
2" RP S3 Ball Valve	1-1/2" Standard Body	2" Standard Cap

Q.A. Acceptance: Ron Liu

Date: Nov. 18, 2019

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE ISO 9001:2015, API Q1: 9TH ED			REPORT NO.	M19010620
				DATE	Jan/6/2019
				PAGE	1 of 14
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE
	ST4192		SO1804024	3	NA
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.
F1800T33	3/4"RB	800LB	NPT	400 PCS	NA
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER	
FORGED STEEL OS & Y GATE VALVE	A105N-2014 Body, 13CR Trim, 13CR/STL6 Seat Face.		Handwheel	1804024003-001~1804024003-400	
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.	
API 602-2009/ISO 15761	<input type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4		<input type="checkbox"/> API 6FA, 3RD.Ed <input type="checkbox"/> API 607, 6TH.Ed	<input type="checkbox"/> NACE MR-0175/ISO15156-2015 <input checked="" type="checkbox"/> NACE MR-0103-2012	

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	BONNET	WEDGE	SEAT RING	STEM
BASE MATERIAL	A105N-2014	A105N-2014	A182 F6A	A182 F6A	A182 F6A
FACE MATERIAL	NA	NA	NA	STL6	NA
NAME OF PART	SCREW	GASKET			
BASE MATERIAL	A193 B7M	SS+Graphite			
FACE MATERIAL	NA	NA			

PRESSURE TEST REPORT

Have been tested good according to API 598 and the purchase order requirements

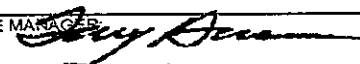
	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				BACKSEAT (HYDROSTATIC)	OTHER
		H.P. CLOSURE (HYDROSTATIC) <input type="checkbox"/> REQUIRED <input checked="" type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL			
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM		
PRESSURE (PSIG)	2975	NA	NA	80	80	2175	NA
DURATION (Minutes)	1	NA	NA	1	1	1	NA
RESULT	GOOD			GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	NA	GOOD	GOOD	ASME B16.34-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

DHV Industries, Inc. 3451 Pegasus Drive Bakersfield, CA 93308, U.S.A	QUALITY ASSURANCE MANAGER  Terry Gonsman Quality Assurance Manager
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This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

ISO 9001:2015, API Q1: 9TH ED

REPORT NO. M19010620

DATE Jan/6/2019

PAGE 2 of 14

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4192	FORGED STEEL OS & Y GATE VALVE	3/4"RB 800LB	F1800T33

CRATE NO.:	14	QUANTITIES:	400 PCS
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SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2014	A105N-2014	A182 F6A	A182 F6A	A182 F6A		
1804024003-001	B235F	B235F	BT500	BT70	BT70		
1804024003-002	B235F	B235F	BT500	BT70	BT70		
1804024003-003	B235F	B235F	BT500	BT70	BT70		
1804024003-004	B235F	B235F	BT500	BT70	BT70		
1804024003-005	B235F	B235F	BT500	BT70	BT70		
1804024003-006	B235F	B235F	BT500	BT70	BT70		
1804024003-007	B235F	B235F	BT500	BT70	BT70		
1804024003-008	B235F	B235F	BT500	BT70	BT70		
1804024003-009	B235F	B235F	BT500	BT70	BT70		
1804024003-010	B235F	B235F	BT500	BT70	BT70		
1804024003-011	B235F	B235F	BT500	BT70	BT70		
1804024003-012	B235F	B235F	BT500	BT70	BT70		
1804024003-013	B235F	B235F	BT500	BT70	BT70		
1804024003-014	B235F	B235F	BT500	BT70	BT70		
1804024003-015	B235F	B235F	BT500	BT70	BT70		
1804024003-016	B235F	B235F	BT500	BT70	BT70		
1804024003-017	B235F	B235F	BT500	BT70	BT70		
1804024003-018	B235F	B235F	BT500	BT70	BT70		
1804024003-019	B235F	B235F	BT500	BT70	BT70		
1804024003-020	B235F	B235F	BT500	BT70	BT70		
1804024003-021	B235F	B235F	BT500	BT70	BT70		
1804024003-022	B235F	B235F	BT500	BT70	BT70		
1804024003-023	B235F	B235F	BT500	BT70	BT70		
1804024003-024	B235F	B235F	BT500	BT70	BT70		
1804024003-025	B235F	B235F	BT500	BT70	BT70		
1804024003-026	B235F	B235F	BT500	BT70	BT70		
1804024003-027	B235F	B235F	BT500	BT70	BT70		
1804024003-028	B235F	B235F	BT500	BT70	BT70		
1804024003-029	B235F	B235F	BT500	BT70	BT70		
1804024003-030	B235F	B235F	BT500	BT70	BT70		
1804024003-031	B235F	B235F	BT500	BT70	BT70		
1804024003-032	B235F	B235F	BT500	BT70	BT70		
1804024003-033	B235F	B235F	BT500	BT70	BT70		
1804024003-034	B235F	B235F	BT500	BT70	BT70		
1804024003-035	B235F	B235F	BT500	BT70	BT70		
1804024003-036	B235F	B235F	BT500	BT70	BT70		
1804024003-037	B235F	B235F	BT500	BT70	BT70		
1804024003-038	B235F	B235F	BT500	BT70	BT70		
1804024003-039	B235F	B235F	BT500	BT70	BT70		
1804024003-040	B235F	B235F	BT500	BT70	BT70		




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CUSTOMER	CUSTOMER P.O.	VALVE TYPE				SIZE/CLASS	FIGURE NUMBER
	ST4192	FORGED STEEL OS & Y GATE VALVE				3/4"RB 800LB	F1800T33
CRATE NO.:		14		QUANTITIES:		400 PCS	
SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2014	A105N-2014	A182 F6A	A182 F6A	A182 F6A		
1804024003-041	B235F	B235F	BT500	BT70	BT70		
1804024003-042	B235F	B235F	BT500	BT70	BT70		
1804024003-043	B235F	B235F	BT500	BT70	BT70		
1804024003-044	B235F	B235F	BT500	BT70	BT70		
1804024003-045	B235F	B235F	BT500	BT70	BT70		
1804024003-046	B235F	B235F	BT500	BT70	BT70		
1804024003-047	B235F	B235F	BT500	BT70	BT70		
1804024003-048	B235F	B235F	BT500	BT70	BT70		
1804024003-049	B235F	B235F	BT500	BT70	BT70		
1804024003-050	B235F	B235F	BT500	BT70	BT70		
1804024003-051	B235F	B235F	BT500	BT70	BT70		
1804024003-052	B235F	B235F	BT500	BT70	BT70		
1804024003-053	B235F	B235F	BT500	BT70	BT70		
1804024003-054	B235F	B235F	BT500	BT70	BT70		
1804024003-055	B235F	B235F	BT500	BT70	BT70		
1804024003-056	B235F	B235F	BT500	BT70	BT70		
1804024003-057	B235F	B235F	BT500	BT70	BT70		
1804024003-058	B235F	B235F	BT500	BT70	BT70		
1804024003-059	B235F	B235F	BT500	BT70	BT70		
1804024003-060	B235F	B235F	BT500	BT70	BT70		
1804024003-061	B235F	B235F	BT500	BT70	BT70		
1804024003-062	B235F	B235F	BT500	BT70	BT70		
1804024003-063	B235F	B235F	BT500	BT70	BT70		
1804024003-064	B235F	B235F	BT500	BT70	BT70		
1804024003-065	B235F	B235F	BT500	BT70	BT70		
1804024003-066	B235F	B235F	BT500	BT70	BT70		
1804024003-067	B235F	B235F	BT500	BT70	BT70		
1804024003-068	B235F	B235F	BT500	BT70	BT70		
1804024003-069	B235F	B235F	BT500	BT70	BT70		
1804024003-070	B235F	B235F	BT500	BT70	BT70		
1804024003-071	B235F	B235F	BT500	BT70	BT70		
1804024003-072	B235F	B235F	BT500	BT70	BT70		
1804024003-073	B235F	B235F	BT500	BT70	BT70		
1804024003-074	B235F	B235F	BT500	BT70	BT70		
1804024003-075	B235F	B235F	BT500	BT70	BT70		
1804024003-076	B235F	B235F	BT500	BT70	BT70		
1804024003-077	B235F	B235F	BT500	BT70	BT70		
1804024003-078	B235F	B235F	BT500	BT70	BT70		
1804024003-079	B235F	B235F	BT500	BT70	BT70		
1804024003-080	B235F	B235F	BT500	BT70	BT70		

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE		SIZE/CLASS	FIGURE NUMBER		
	ST4192	FORGED STEEL OS & Y GATE VALVE		3/4"RB 800LB	F1800T33		
CRATE NO.:		14		QUANTITIES:		400 PCS	
SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2014	A105N-2014	A182 F6A	A182 F6A	A182 F6A		
1804024003-081	B235F	B235F	BT500	BT70	BT70		
1804024003-082	B235F	B235F	BT500	BT70	BT70		
1804024003-083	B235F	B235F	BT500	BT70	BT70		
1804024003-084	B235F	B235F	BT500	BT70	BT70		
1804024003-085	B235F	B235F	BT500	BT70	BT70		
1804024003-086	B235F	B235F	BT500	BT70	BT70		
1804024003-087	B235F	B235F	BT500	BT70	BT70		
1804024003-088	B235F	B235F	BT500	BT70	BT70		
1804024003-089	B235F	B235F	BT500	BT70	BT70		
1804024003-090	B235F	B235F	BT500	BT70	BT70		
1804024003-091	B235F	B235F	BT500	BT70	BT70		
1804024003-092	B235F	B235F	BT500	BT70	BT70		
1804024003-093	B235F	B235F	BT500	BT70	BT70		
1804024003-094	B235F	B235F	BT500	BT70	BT70		
1804024003-095	B235F	B235F	BT500	BT70	BT70		
1804024003-096	B235F	B235F	BT500	BT70	BT70		
1804024003-097	B235F	B235F	BT500	BT70	BT70		
1804024003-098	B235F	B235F	BT500	BT70	BT70		
1804024003-099	B235F	B235F	BT500	BT70	BT70		
1804024003-100	B235F	B235F	BT500	BT70	BT70		
1804024003-101	B235F	B235F	BT500	BT70	BT70		
1804024003-102	B235F	B235F	BT500	BT70	BT70		
1804024003-103	B235F	B235F	BT500	BT70	BT70		
1804024003-104	B235F	B235F	BT500	BT70	BT70		
1804024003-105	B235F	B235F	BT500	BT70	BT70		
1804024003-106	B235F	B235F	BT500	BT70	BT70		
1804024003-107	B235F	B235F	BT500	BT70	BT70		
1804024003-108	B235F	B235F	BT500	BT70	BT70		
1804024003-109	B235F	B235F	BT500	BT70	BT70		
1804024003-110	B235F	B235F	BT500	BT70	BT70		
1804024003-111	B235F	B235F	BT500	BT70	BT70		
1804024003-112	B235F	B235F	BT500	BT70	BT70		
1804024003-113	B235F	B235F	BT500	BT70	BT70		
1804024003-114	B235F	B235F	BT500	BT70	BT70		
1804024003-115	B235F	B235F	BT500	BT70	BT70		
1804024003-116	B235F	B235F	BT500	BT70	BT70		
1804024003-117	B235F	B235F	BT500	BT70	BT70		
1804024003-118	B235F	B235F	BT500	BT70	BT70		
1804024003-119	B235F	B235F	BT500	BT70	BT70		
1804024003-120	B235F	B235F	BT500	BT70	BT70		



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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4192	FORGED STEEL OS & Y GATE VALVE	3/4"RB 800LB	F1800T33

CRATE NO.:	14	QUANTITIES:	400 PCS
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SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2014	A105N-2014	A182 F6A	A182 F6A	A182 F6A		
1804024003-121	B235F	B235F	BT500	BT70	BT70		
1804024003-122	B235F	B235F	BT500	BT70	BT70		
1804024003-123	B235F	B235F	BT500	BT70	BT70		
1804024003-124	B235F	B235F	BT500	BT70	BT70		
1804024003-125	B235F	B235F	BT500	BT70	BT70		
1804024003-126	B235F	B235F	BT500	BT70	BT70		
1804024003-127	B235F	B235F	BT500	BT70	BT70		
1804024003-128	B235F	B235F	BT500	BT70	BT70		
1804024003-129	B235F	B235F	BT500	BT70	BT70		
1804024003-130	B235F	B235F	BT500	BT70	BT70		
1804024003-131	B235F	B235F	BT500	BT70	BT70		
1804024003-132	B235F	B235F	BT500	BT70	BT70		
1804024003-133	B235F	B235F	BT500	BT70	BT70		
1804024003-134	B235F	B235F	BT500	BT70	BT70		
1804024003-135	B235F	B235F	BT500	BT70	BT70		
1804024003-136	B235F	B235F	BT500	BT70	BT70		
1804024003-137	B235F	B235F	BT500	BT70	BT70		
1804024003-138	B235F	B235F	BT500	BT70	BT70		
1804024003-139	B235F	B235F	BT500	BT70	BT70		
1804024003-140	B235F	B235F	BT500	BT70	BT70		
1804024003-141	B235F	B235F	BT500	BT70	BT70		
1804024003-142	B235F	B235F	BT500	BT70	BT70		
1804024003-143	B235F	B235F	BT500	BT70	BT70		
1804024003-144	B235F	B235F	BT500	BT70	BT70		
1804024003-145	B235F	B235F	BT500	BT70	BT70		
1804024003-146	B235F	B235F	BT500	BT70	BT70		
1804024003-147	B235F	B235F	BT500	BT70	BT70		
1804024003-148	B235F	B235F	BT500	BT70	BT70		
1804024003-149	B235F	B235F	BT500	BT70	BT70		
1804024003-150	B235F	B235F	BT500	BT70	BT70		
1804024003-151	B235F	B235F	BT500	BT70	BT70		
1804024003-152	B235F	B235F	BT500	BT70	BT70		
1804024003-153	B235F	B235F	BT500	BT70	BT70		
1804024003-154	B235F	B235F	BT500	BT70	BT70		
1804024003-155	B235F	B235F	BT500	BT70	BT70		
1804024003-156	B235F	B235F	BT500	BT70	BT70		
1804024003-157	B235F	B235F	BT500	BT70	BT70		
1804024003-158	B235F	B235F	BT500	BT70	BT70		
1804024003-159	B235F	B235F	BT500	BT70	BT70		
1804024003-160	B235F	B235F	BT500	BT70	BT70		



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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4192	FORGED STEEL OS & Y GATE VALVE	3/4"RB 800LB	F1800T33

CRATE NO.: 14	QUANTITIES: 400 PCS
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SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2014	A105N-2014	A182 F6A	A182 F6A	A182 F6A		
1804024003-161	B235F	B235F	BT500	BT70	BT70		
1804024003-162	B235F	B235F	BT500	BT70	BT70		
1804024003-163	B235F	B235F	BT500	BT70	BT70		
1804024003-164	B235F	B235F	BT500	BT70	BT70		
1804024003-165	B235F	B235F	BT500	BT70	BT70		
1804024003-166	B235F	B235F	BT500	BT70	BT70		
1804024003-167	B235F	B235F	BT500	BT70	BT70		
1804024003-168	B235F	B235F	BT500	BT70	BT70		
1804024003-169	B235F	B235F	BT500	BT70	BT70		
1804024003-170	B235F	B235F	BT500	BT70	BT70		
1804024003-171	B235F	B235F	BT500	BT70	BT70		
1804024003-172	B235F	B235F	BT500	BT70	BT70		
1804024003-173	B235F	B235F	BT500	BT70	BT70		
1804024003-174	B235F	B235F	BT500	BT70	BT70		
1804024003-175	B235F	B235F	BT500	BT70	BT70		
1804024003-176	B235F	B235F	BT500	BT70	BT70		
1804024003-177	B235F	B235F	BT500	BT70	BT70		
1804024003-178	B235F	B235F	BT500	BT70	BT70		
1804024003-179	B235F	B235F	BT500	BT70	BT70		
1804024003-180	B235F	B235F	BT500	BT70	BT70		
1804024003-181	B235F	B235F	BT500	BT70	BT70		
1804024003-182	B235F	B235F	BT500	BT70	BT70		
1804024003-183	B235F	B235F	BT500	BT70	BT70		
1804024003-184	B235F	B235F	BT500	BT70	BT70		
1804024003-185	B235F	B235F	BT500	BT70	BT70		
1804024003-186	B235F	B235F	BT500	BT70	BT70		
1804024003-187	B235F	B235F	BT500	BT70	BT70		
1804024003-188	B235F	B235F	BT500	BT70	BT70		
1804024003-189	B235F	B235F	BT500	BT70	BT70		
1804024003-190	B235F	B235F	BT500	BT70	BT70		
1804024003-191	B235F	B235F	BT500	BT70	BT70		
1804024003-192	B235F	B235F	BT500	BT70	BT70		
1804024003-193	B235F	B235F	BT500	BT70	BT70		
1804024003-194	B235F	B235F	BT500	BT70	BT70		
1804024003-195	B235F	B235F	BT500	BT70	BT70		
1804024003-196	B235F	B235F	BT500	BT70	BT70		
1804024003-197	B235F	B235F	BT500	BT70	BT70		
1804024003-198	B235F	B235F	BT500	BT70	BT70		
1804024003-199	B235F	B235F	BT500	BT70	BT70		
1804024003-200	B235F	B235F	BT500	BT70	BT70		



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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4192	FORGED STEEL OS & Y GATE VALVE	3/4"RB 800LB	F1800T33

CRATE NO.:	14	QUANTITIES:	400 PCS
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SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2014	A105N-2014	A182 F6A	A182 F6A	A182 F6A		
1804024003-201	B235F	B235F	BT500	BT70	BT70		
1804024003-202	B235F	B235F	BT500	BT70	BT70		
1804024003-203	B235F	B235F	BT500	BT70	BT70		
1804024003-204	B235F	B235F	BT500	BT70	BT70		
1804024003-205	B235F	B235F	BT500	BT70	BT70		
1804024003-206	B235F	B235F	BT500	BT70	BT70		
1804024003-207	B235F	B235F	BT500	BT70	BT70		
1804024003-208	B235F	B235F	BT500	BT70	BT70		
1804024003-209	B235F	B235F	BT500	BT70	BT70		
1804024003-210	B235F	B235F	BT500	BT70	BT70		
1804024003-211	B235F	B235F	BT500	BT70	BT70		
1804024003-212	B235F	B235F	BT500	BT70	BT70		
1804024003-213	B235F	B235F	BT500	BT70	BT70		
1804024003-214	B235F	B235F	BT500	BT70	BT70		
1804024003-215	B235F	B235F	BT500	BT70	BT70		
1804024003-216	B235F	B235F	BT500	BT70	BT70		
1804024003-217	B235F	B235F	BT500	BT70	BT70		
1804024003-218	B235F	B235F	BT500	BT70	BT70		
1804024003-219	B235F	B235F	BT500	BT70	BT70		
1804024003-220	B235F	B235F	BT500	BT70	BT70		
1804024003-221	B235F	B235F	BT500	BT70	BT70		
1804024003-222	B235F	B235F	BT500	BT70	BT70		
1804024003-223	B235F	B235F	BT500	BT70	BT70		
1804024003-224	B235F	B235F	BT500	BT70	BT70		
1804024003-225	B235F	B235F	BT500	BT70	BT70		
1804024003-226	B235F	B235F	BT500	BT70	BT70		
1804024003-227	B235F	B235F	BT500	BT70	BT70		
1804024003-228	B235F	B235F	BT500	BT70	BT70		
1804024003-229	B235F	B235F	BT500	BT70	BT70		
1804024003-230	B235F	B235F	BT500	BT70	BT70		
1804024003-231	B235F	B235F	BT500	BT70	BT70		
1804024003-232	B235F	B235F	BT500	BT70	BT70		
1804024003-233	B235F	B235F	BT500	BT70	BT70		
1804024003-234	B235F	B235F	BT500	BT70	BT70		
1804024003-235	B235F	B235F	BT500	BT70	BT70		
1804024003-236	B235F	B235F	BT500	BT70	BT70		
1804024003-237	B235F	B235F	BT500	BT70	BT70		
1804024003-238	B235F	B235F	BT500	BT70	BT70		
1804024003-239	B235F	B235F	BT500	BT70	BT70		
1804024003-240	B235F	B235F	BT500	BT70	BT70		



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CUSTOMER	CUSTOMER P.O.	VALVE TYPE				SIZE/CLASS	FIGURE NUMBER
	ST4192	FORGED STEEL OS & Y GATE VALVE				3/4"RB 800LB	F1800T33
CRATE NO.:		14		QUANTITIES:			400 PCS
SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2014	A105N-2014	A182 F6A	A182 F6A	A182 F6A		
1804024003-241	B235F	B235F	BT500	BT70	BT70		
1804024003-242	B235F	B235F	BT500	BT70	BT70		
1804024003-243	B235F	B235F	BT500	BT70	BT70		
1804024003-244	B235F	B235F	BT500	BT70	BT70		
1804024003-245	B235F	B235F	BT500	BT70	BT70		
1804024003-246	B235F	B235F	BT500	BT70	BT70		
1804024003-247	B235F	B235F	BT500	BT70	BT70		
1804024003-248	B235F	B235F	BT500	BT70	BT70		
1804024003-249	B235F	B235F	BT500	BT70	BT70		
1804024003-250	B235F	B235F	BT500	BT70	BT70		
1804024003-251	B235F	B235F	BT500	BT70	BT70		
1804024003-252	B235F	B235F	BT500	BT70	BT70		
1804024003-253	B235F	B235F	BT500	BT70	BT70		
1804024003-254	B235F	B235F	BT500	BT70	BT70		
1804024003-255	B235F	B235F	BT500	BT70	BT70		
1804024003-256	B235F	B235F	BT500	BT70	BT70		
1804024003-257	B235F	B235F	BT500	BT70	BT70		
1804024003-258	B235F	B235F	BT500	BT70	BT70		
1804024003-259	B235F	B235F	BT500	BT70	BT70		
1804024003-260	B235F	B235F	BT500	BT70	BT70		
1804024003-261	B235F	B235F	BT500	BT70	BT70		
1804024003-262	B235F	B235F	BT500	BT70	BT70		
1804024003-263	B235F	B235F	BT500	BT70	BT70		
1804024003-264	B235F	B235F	BT500	BT70	BT70		
1804024003-265	B235F	B235F	BT500	BT70	BT70		
1804024003-266	B235F	B235F	BT500	BT70	BT70		
1804024003-267	B235F	B235F	BT500	BT70	BT70		
1804024003-268	B235F	B235F	BT500	BT70	BT70		
1804024003-269	B235F	B235F	BT500	BT70	BT70		
1804024003-270	B235F	B235F	BT500	BT70	BT70		
1804024003-271	B235F	B235F	BT500	BT70	BT70		
1804024003-272	B235F	B235F	BT500	BT70	BT70		
1804024003-273	B235F	B235F	BT500	BT70	BT70		
1804024003-274	B235F	B235F	BT500	BT70	BT70		
1804024003-275	B235F	B235F	BT500	BT70	BT70		
1804024003-276	B235F	B235F	BT500	BT70	BT70		
1804024003-277	B235F	B235F	BT500	BT70	BT70		
1804024003-278	B235F	B235F	BT500	BT70	BT70		
1804024003-279	B235F	B235F	BT500	BT70	BT70		
1804024003-280	B235F	B235F	BT500	BT70	BT70		



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	M19010620
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE				SIZE/CLASS	FIGURE NUMBER
	ST4192	FORGED STEEL OS & Y GATE VALVE				3/4"RB 800LB	F1800T33
CRATE NO.: 14						QUANTITIES:	400 PCS
SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2014	A105N-2014	A182 F6A	A182 F6A	A182 F6A		
1804024003-281	B235F	B235F	BT500	BT70	BT70		
1804024003-282	B235F	B235F	BT500	BT70	BT70		
1804024003-283	B235F	B235F	BT500	BT70	BT70		
1804024003-284	B235F	B235F	BT500	BT70	BT70		
1804024003-285	B235F	B235F	BT500	BT70	BT70		
1804024003-286	B235F	B235F	BT500	BT70	BT70		
1804024003-287	B235F	B235F	BT500	BT70	BT70		
1804024003-288	B235F	B235F	BT500	BT70	BT70		
1804024003-289	B235F	B235F	BT500	BT70	BT70		
1804024003-290	B235F	B235F	BT500	BT70	BT70		
1804024003-291	B235F	B235F	BT500	BT70	BT70		
1804024003-292	B235F	B235F	BT500	BT70	BT70		
1804024003-293	B235F	B235F	BT500	BT70	BT70		
1804024003-294	B235F	B235F	BT500	BT70	BT70		
1804024003-295	B235F	B235F	BT500	BT70	BT70		
1804024003-296	B235F	B235F	BT500	BT70	BT70		
1804024003-297	B235F	B235F	BT500	BT70	BT70		
1804024003-298	B235F	B235F	BT500	BT70	BT70		
1804024003-299	B235F	B235F	BT500	BT70	BT70		
1804024003-300	B235F	B235F	BT500	BT70	BT70		
1804024003-301	B235F	B235F	BT500	BT70	BT70		
1804024003-302	B235F	B235F	BT500	BT70	BT70		
1804024003-303	B235F	B235F	BT500	BT70	BT70		
1804024003-304	B235F	B235F	BT500	BT70	BT70		
1804024003-305	B235F	B235F	BT500	BT70	BT70		
1804024003-306	B235F	B235F	BT500	BT70	BT70		
1804024003-307	B235F	B235F	BT500	BT70	BT70		
1804024003-308	B235F	B235F	BT500	BT70	BT70		
1804024003-309	B235F	B235F	BT500	BT70	BT70		
1804024003-310	B235F	B235F	BT500	BT70	BT70		
1804024003-311	B235F	B235F	BT500	BT70	BT70		
1804024003-312	B235F	B235F	BT500	BT70	BT70		
1804024003-313	B235F	B235F	BT500	BT70	BT70		
1804024003-314	B235F	B235F	BT500	BT70	BT70		
1804024003-315	B235F	B235F	BT500	BT70	BT70		
1804024003-316	B235F	B235F	BT500	BT70	BT70		
1804024003-317	B235F	B235F	BT500	BT70	BT70		
1804024003-318	B235F	B235F	BT500	BT70	BT70		
1804024003-319	B235F	B235F	BT500	BT70	BT70		
1804024003-320	B235F	B235F	BT500	BT70	BT70		



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4192	FORGED STEEL OS & Y GATE VALVE	3/4"RB 800LB	F1800T33

CRATE NO.:	14	QUANTITIES:	400 PCS
------------	----	-------------	---------

SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2014	A105N-2014	A182 F6A	A182 F6A	A182 F6A		
1804024003-321	B235F	B235F	BT500	BT70	BT70		
1804024003-322	B235F	B235F	BT500	BT70	BT70		
1804024003-323	B235F	B235F	BT500	BT70	BT70		
1804024003-324	B235F	B235F	BT500	BT70	BT70		
1804024003-325	B235F	B235F	BT500	BT70	BT70		
1804024003-326	B235F	B235F	BT500	BT70	BT70		
1804024003-327	B235F	B235F	BT500	BT70	BT70		
1804024003-328	B235F	B235F	BT500	BT70	BT70		
1804024003-329	B235F	B235F	BT500	BT70	BT70		
1804024003-330	B235F	B235F	BT500	BT70	BT70		
1804024003-331	B235F	B235F	BT500	BT70	BT70		
1804024003-332	B235F	B235F	BT500	BT70	BT70		
1804024003-333	B235F	B235F	BT500	BT70	BT70		
1804024003-334	B235F	B235F	BT500	BT70	BT70		
1804024003-335	B235F	B235F	BT500	BT70	BT70		
1804024003-336	B235F	B235F	BT500	BT70	BT70		
1804024003-337	B235F	B235F	BT500	BT70	BT70		
1804024003-338	B235F	B235F	BT500	BT70	BT70		
1804024003-339	B235F	B235F	BT500	BT70	BT70		
1804024003-340	B235F	B235F	BT500	BT70	BT70		
1804024003-341	B235F	B235F	BT500	BT70	BT70		
1804024003-342	B235F	B235F	BT500	BT70	BT70		
1804024003-343	B235F	B235F	BT500	BT70	BT70		
1804024003-344	B235F	B235F	BT500	BT70	BT70		
1804024003-345	B235F	B235F	BT500	BT70	BT70		
1804024003-346	B235F	B235F	BT500	BT70	BT70		
1804024003-347	B235F	B235F	BT500	BT70	BT70		
1804024003-348	B235F	B235F	BT500	BT70	BT70		
1804024003-349	B235F	B235F	BT500	BT70	BT70		
1804024003-350	B235F	B235F	BT500	BT70	BT70		
1804024003-351	B235F	B235F	BT500	BT70	BT70		
1804024003-352	B235F	B235F	BT500	BT70	BT70		
1804024003-353	B235F	B235F	BT500	BT70	BT70		
1804024003-354	B235F	B235F	BT500	BT70	BT70		
1804024003-355	B235F	B235F	BT500	BT70	BT70		
1804024003-356	B235F	B235F	BT500	BT70	BT70		
1804024003-357	B235F	B235F	BT500	BT70	BT70		
1804024003-358	B235F	B235F	BT500	BT70	BT70		
1804024003-359	B235F	B235F	BT500	BT70	BT70		
1804024003-360	B235F	B235F	BT500	BT70	BT70		



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE				SIZE/CLASS	FIGURE NUMBER
	ST4192	FORGED STEEL OS & Y GATE VALVE				3/4"RB 800LB	F1800T33
CRATE NO.: 14						QUANTITIES:	400 PCS
SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2014	A105N-2014	A182 F6A	A182 F6A	A182 F6A		
1804024003-361	B235F	B235F	BT500	BT70	BT70		
1804024003-362	B235F	B235F	BT500	BT70	BT70		
1804024003-363	B235F	B235F	BT500	BT70	BT70		
1804024003-364	B235F	B235F	BT500	BT70	BT70		
1804024003-365	B235F	B235F	BT500	BT70	BT70		
1804024003-366	B235F	B235F	BT500	BT70	BT70		
1804024003-367	B235F	B235F	BT500	BT70	BT70		
1804024003-368	B235F	B235F	BT500	BT70	BT70		
1804024003-369	B235F	B235F	BT500	BT70	BT70		
1804024003-370	B235F	B235F	BT500	BT70	BT70		
1804024003-371	B235F	B235F	BT500	BT70	BT70		
1804024003-372	B235F	B235F	BT500	BT70	BT70		
1804024003-373	B235F	B235F	BT500	BT70	BT70		
1804024003-374	B235F	B235F	BT500	BT70	BT70		
1804024003-375	B235F	B235F	BT500	BT70	BT70		
1804024003-376	B235F	B235F	BT500	BT70	BT70		
1804024003-377	B235F	B235F	BT500	BT70	BT70		
1804024003-378	B235F	B235F	BT500	BT70	BT70		
1804024003-379	B235F	B235F	BT500	BT70	BT70		
1804024003-380	B235F	B235F	BT500	BT70	BT70		
1804024003-381	B235F	B235F	BT500	BT70	BT70		
1804024003-382	B235F	B235F	BT500	BT70	BT70		
1804024003-383	B235F	B235F	BT500	BT70	BT70		
1804024003-384	B235F	B235F	BT500	BT70	BT70		
1804024003-385	B235F	B235F	BT500	BT70	BT70		
1804024003-386	B235F	B235F	BT500	BT70	BT70		
1804024003-387	B235F	B235F	BT500	BT70	BT70		
1804024003-388	B235F	B235F	BT500	BT70	BT70		
1804024003-389	B235F	B235F	BT500	BT70	BT70		
1804024003-390	B235F	B235F	BT500	BT70	BT70		
1804024003-391	B235F	B235F	BT500	BT70	BT70		
1804024003-392	B235F	B235F	BT500	BT70	BT70		
1804024003-393	B235F	B235F	BT500	BT70	BT70		
1804024003-394	B235F	B235F	BT500	BT70	BT70		
1804024003-395	B235F	B235F	BT500	BT70	BT70		
1804024003-396	B235F	B235F	BT500	BT70	BT70		
1804024003-397	B235F	B235F	BT500	BT70	BT70		
1804024003-398	B235F	B235F	BT500	BT70	BT70		
1804024003-399	B235F	B235F	BT500	BT70	BT70		
1804024003-400	B235F	B235F	BT500	BT70	BT70		

Material Test Certificate (EN 10204 3.1)
材质检验证书

Certificate No.: 127918
 证书号:

Supplier: SUNFLY 供应商:	Shipment No.: SFL-1407 批号:
Purchaser: Emerson Automation Solutions GmbH 5801 East Harrison 采购商: Harlingen TX 78550 USA	Order No.: 4500400351-10 订单号:
Product: 10001090 产品名称: 02.2182.501	Material: ASTM SA479-02a 316/316L 材料:

Item 序号	Heat No. 炉号	Qty. 数量	Size 尺寸	Weight 重量	Melting Furnace 熔炉	Condition of Delivery 交货状态
1	1810102806	800	Hex 1.25		Electric Furnace	CFA

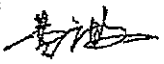
Chemical Composition / 化学成分

Item 序号	Heat No. 炉号	C %	Si %	Mn %	P %	S %	Ni %	Cr %	Mo %
		0.03 MAX	1.00 MAX	2.00 MAX	0.045 MAX	0.030 MAX	14.00 10.00	18.00 16.00	3.00 2.00
1	1810102806	0.025	0.40	1.80	0.031	0.023	10.07	16.61	2.02

Mechanical Properties / 机械性能

Item 序号	Heat No. 炉号	Yield Strength (N/mm ²) 屈服点 207 MIN	Tensile Strength (N/mm ²) 抗拉强度 517 MIN	Elongation % (L0=5D0) 延伸率 30 MIN	Reduction of Area % 断面收缩 40 MIN	Hardness HB 硬度 237 MAX
1	1810102806	519	675	45.5	71	194

We hereby certify that the material described above has been tested and complies with the terms of the order contract.
 兹证明, 上述材料已经试验并符合合同所载要求。

Date/日期: 2019-7-10
 Name/姓名: 贾广敏
 Signature/签名: 

Supplier
 供应商
SUNFLY

Factory Inspector
 工厂检验员
 王平

EMERSON
 PART # 14601690
 HEAT# 1810102806 CODE
 INSP E-10095805 DATE 7 25 19
 VERIFIED TRUE COPIES OF ORIGINAL

EMERSON

PART # 10001090

HEATH/SHI/010/000 CODE

DATE 11-15-19

JIANGYIN CITY STAINLESS STEEL MATERIAL FACTORY
QUALITY INSPECTION CERTIFICATE

Address: Lukou Bridge, Teocheng Village,
Zhouzhuang Town, Jiangyin City, Jiangsu
Post codes: 214423
Tel: 0510-86236681
Fax: 0510-86905200

江阴市不锈钢材料厂质量证明书

Customer 客户名称: 平越市三力格塞机械

Contract No. 合同号: 10127#

Customer Item No/ 客户物料号: 001

Certificate No. 质量证明书编号: PHSEL20190302

Date 日期: 2019-3-19

Commodity 产品名称	Stainless Steel Bar 不锈钢圆棒	Product Specification 产品标准	ASTM A479-02a	Supply 供货条件	Bright
Heat No. 炉号	Steel Grade 钢种	Steel making process 热处理号	Size 尺寸(mm)	Place(s) 支数	Weight 重量(kg)
1810102806	316L/316L	190311-6	H31.75	105	3725

Chemical Composition (%) 化学成分

C	Si	Mn	P	S	Cr	Mo	Ni	N	Nb	TI	Cu
≤0.030	≤1.00	≤2.00	≤0.045	≤0.030	16.0-18.0	2.00-3.00	10.0-14.0	≤0.11	-	-	-
Product analysis 成份分析	0.028	1.77	0.03	0.019	17.07	2.04	10.22	0.06	-	-	-

Tensile Test at RT (Longitudinal) 室温拉伸试验 (纵向)

Round sample 圆形试样
Size 试样尺寸: d=10mm L0=50mm Lc=55mm

Tensile strength 屈服强度 (Mpa)	718	611
Yield strength (Rp0.2) 屈服强度 (Mpa) 0.2% offset	40	71
Elongation 延伸率%	40	71
reduction of Area (%) 断面收缩率	17	71

Visual, Shape and Dimension
外观/尺寸偏差

合格

Smelting method (冶炼方式)

合格

Heat treatment 热处理方式:

1050 C Annealing/1hr

Quench Start and finish (淬火温度)

1050 C-35 C

Electric arc furnace model 电弧炉型号:

3230 型

Quench Method (淬火介质): Water (水)

Monitoring Method (监控方法): contact thermocouple (接触热电偶)

Temperature controller (温控仪表)

Inspection Representative
检验代表签字: [Signature]

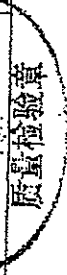
Department of Quality Inspection
质量检验部


Issued by: 制表人: 李玉霞

Batch (箱式炉一批处理)

EN 10204 3.1 (3.1.B) NACE MR0175.

We hereby certify that the materials described herein have been manufactured, inspected and tested in accordance with the customer's specification(s), and that they satisfy the requirements. We hereby certify that the above material test report is in accordance with inspection certificate EN 10204 3.1 (3.1.B) NACE MR0175.



 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE ISO 9001:2015, API Q1: 9 TH ED				REPORT NO	DM19051111
					DATE	Apr/15/2019
					PAGE	1 of 7
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE	
	5586		DS1811048	24	NA	
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.	
C123F6	12"	300LB	RF	2 PCS	DHC123F615	
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER		
CAST STEEL OS & Y GATE VALVE	A352 LCC Body, 316SS Trim, 316SS/STL6 Seat Insert		Handwheel	D1811975, D1811976		
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.		
API 600-2009 12 TH ED.	<input type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4		<input type="checkbox"/> API 6FA, 3 RD Ed <input type="checkbox"/> API 607, 6 TH Ed	<input checked="" type="checkbox"/> NACE MR-0175/ISO15156-2015 <input checked="" type="checkbox"/> NACE MR-0103-2012		

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	BONNET	WEDGE	SEAT RING	STEM
BASE MATERIAL	A352 LCC	A352 LCC	A352 LCC	A350 LF2	A182 F316
FACE MATERIAL	NA	NA	316SS	STL6	NA
NAME OF PART	BOLT/STUDS	NUTS	GLAND	BACKSEAT	
BASE MATERIAL	A320 L7M	A194 7M	316SS	316SS	
FACE MATERIAL	NA	NA	NA	NA	

PRESSURE TEST REPORT

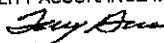
Have been tested good according to API 598 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				BACKSEAT (HYDROSTATIC)	OTHER
		H.P. CLOSURE (HYDROSTATIC) <input type="checkbox"/> REQUIRED <input checked="" type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL			
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM		
PRESSURE (PSIG)	1125	NA	NA	80	80	825	NA
DURATION (Minutes)	2	NA	NA	2	2	1	NA
RESULT	GOOD			GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	MSS SP-55-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:	QUALITY ASSURANCE MANAGER:  Terry Gonsman Quality Assurance Manager
	DHV Industries, Inc. 3451 Pegasus Drive Bakersfield, CA 93308. U.S.A

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	DM19051111
DATE	Apr/15/2019
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5586	CAST STEEL OS & Y GATE VALVE	12" 300LB	C123F6
MATERIAL	ASTM A352 LCC			

HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	920	1h/25mm, ≥2h	Gas	Water cooling to room temp.	
Temper	650	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	V	Bal.	N	Other
	0.230	0.600	1.200	0.035	0.035	0.500	0.200	0.500	0.060	0.300	0.030	1.000	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (-46°C) J								
	485-655	275	22	35	140-237	AVG ≥20, MIN ≥16								
D6286	0.194	0.401	1.030	0.022	0.017	0.053	0.006	0.020	0.002	0.031	0.003	0.113	-	-
	536	351	35	71	152	41	48	36						
L8525	0.197	0.484	1.080	0.024	0.016	0.040	0.004	0.018	0.003	0.035	0.003	0.100	-	-
	558	379	28	58	166	27	32	38						
L9101	0.200	0.431	1.030	0.022	0.017	0.051	0.005	0.024	0.019	0.029	0.004	0.112	-	-
	543	377	32	68	156	42	46	42						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

QUALITY ASSURANCE MANAGER:
Terry Gonsman - DHV Industries, Inc.
 Terry Gonsman 3451 Pegasus Drive
 Quality Assurance Manager Bakersfield, CA 93308. U.S.A

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	DM19051111
DATE	Apr/15/2019
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5586	CAST STEEL OS & Y GATE VALVE	12" 300LB	C123F6
MATERIAL	ASTM A350 LF2			

HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	930	1h/25mm, ≥2h	Elec	Water cooling to room temp.	
Temper	620	1h/25mm, ≥1h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Si	Mn	P	S	Cr	Mo	Ni	Cr+Mo	Cu	V	Nb	Bal.	Other
	0.230	0.15-0.30	0.60-1.35	0.035	0.025	0.300	0.120	0.400	0.320	0.400	0.080	0.020	1.000	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)		IMPACT TEST (-46°C) J							
	485-655	250	22	30	140-197		AVG. ≥20, MIN. ≥16							
1042023	0.120	0.200	0.960	0.013	0.014	0.050	0.009	0.040	0.090	0.110	0.007	0.003	0.216	-
	540	355	30	65	146	148	34	26	36					

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

QUALITY ASSURANCE MANAGER:

Terry Gonsman
 Quality Assurance Manager
DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	DM19051111
DATE	Apr/15/2019
PAGE	5 of 7

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5586	CAST STEEL OS & Y GATE VALVE	12" 300LB	C123F6
MATERIAL	ASTM A182 F316			

HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Solution	1080	1h/25mm, ≥1h	Elec	Water cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	V	N	Nb	Other
	0.080	1.000	2.000	0.045	0.030	16.0-18.0	2.0-3.0	10.0-14.0	-	-	-	0.100	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)		(-°C) J							
	515	205	30	50	150-237		-							
A181118	0.033	0.580	1.140	0.019	0.020	16.280	2.270	10.250	-	-	-	0.020	-	-
	627	353	46	66	154	156	-	-	-					

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

QUALITY ASSURANCE MANAGER:

Terry Gonsman — DHV Industries, Inc.
Terry Gonsman 3451 Pegasus Drive
Quality Assurance Manager Bakersfield, CA 93308. U.S.A

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	DM19051111
DATE	Apr/15/2019
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5586	CAST STEEL OS & Y GATE VALVE	12" 300LB	C123F8

MATERIAL	ASTM A320 L7M
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Oil cooling to room temp.	
Temper	620	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)																		
	C	Si	Mn	P	S	Cr	Mo	Ni	AL	Cu	V	Nb	N	Other					
	0.38-0.48	0.15-0.35	0.75-1.00	0.035	0.040	0.80-1.10	0.15-0.25	-	-	-	-	-	-	-					
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST (-101°C) J												
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	AVG ≥ 27, MIN ≥ 20													
JH1815-1	690	550	18	50	200-235	0.420	0.280	0.810	0.012	0.008	0.680	0.190	-	-	-	-	-	-	-
	761	589	25	64	219	45	46	46											

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:	QUALITY ASSURANCE MANAGER: Terry Gonsman Quality Assurance Manager
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DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	DM19051111
DATE	Apr/15/2019
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5586	CAST STEEL OS & Y GATE VALVE	12" 300LB	C123F6

MATERIAL	ASTM A194 7M
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HEAT TREATMENT

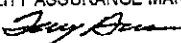
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Oil cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements


STD	CHEMICAL COMPOSITION % (±)													
	C	Si	Mn	P	S	Cr	Mo	Ni	AL	Cu	V	Nb	N	Other
	0.38-0.48	0.15-0.35	0.75-1.00	0.035	0.040	0.8-1.10	0.15-0.25	-	-	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	(°C) J								
JH10-5	0.430	0.200	0.810	0.013	0.012	0.910	0.180	-	-	-	-	-	-	-
	-	-	-	-	183	-	-	-	-	-	-	-	-	-

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:	QUALITY ASSURANCE MANAGER:  Terry Gonsman Quality Assurance Manager DHV Industries, Inc. 3451 Pegasus Drive Bakersfield, CA 93308, U.S.A
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This certificate is in compliance with EN 10204 3.1.

LINE# 20

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE ISO 9001:2015, API Q1: 9 TH ED				REPORT NO.	DM19011923
					DATE	Jan/23/2019
					PAGE	1 of 7
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE	
	ST4233		DS1806006-P.O. 21483-1	18	NA	
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.	
C123F6	12"	300LB	RF	2 PCS	NA	
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER		
CAST STEEL OS & Y GATE VALVE	A352 LCC Body, 316SS Trim, 316SS/STL6 Seat Insert,		Handwheel	D1806427,D1806428		
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.		
API 600-2009 12 TH ,ED.	<input type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4	<input type="checkbox"/> API 6FA, 3 RD .Ed <input type="checkbox"/> API 607, 6 TH .Ed	<input type="checkbox"/> NACE MR-0175//ISO15156-2015 <input checked="" type="checkbox"/> NACE MR-0103-2012			

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	BONNET	WEDGE	SEAT RING	STEM
BASE MATERIAL	A352 LCC	A352 LCC	A352 LCC	A350 LF2	A182 F316
FACE MATERIAL	NA	NA	316SS	STL6	NA
NAME OF PART	BOLT/STUDS	NUTS	GLAND	BACKSEAT	
BASE MATERIAL	A320 L7M	A194 7M	316SS	316SS	
FACE MATERIAL	NA	NA	NA	NA	

PRESSURE TEST REPORT

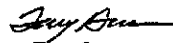
Have been tested good according to API 598 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				BACKSEAT (HYDROSTATIC)	OTHER
		H.P. CLOSURE (HYDROSTATIC) <input type="checkbox"/> REQUIRED <input checked="" type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL			
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM		
PRESSURE (PSIG)	1125	NA	NA	80	80	825	NA
DURATION (Minutes)	2	NA	NA	2	2	1	NA
RESULT	GOOD			GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	MSS SP-55-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:	QUALITY ASSURANCE MANAGER:
	 Terry Gonsman Quality Assurance Manager
	DHV Industries, Inc. 3451 Pegasus Drive Bakersfield, CA 93308. U.S.A

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	DM19011923
DATE	Jan/23/2019
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4233	CAST STEEL OS & Y GATE VALVE	12" 300LB	C123F6
MATERIAL	ASTM A352 LCC			

HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	920	1h/25mm, ≥2h	Gas	Water cooling to room temp.	
Temper	650	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

CHEMICAL COMPOSITION % (≤)

STD	C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	V	Bal.	N	Other
		0.230	0.600	1.200	0.035	0.035	0.500	0.200	0.500	0.060	0.300	0.030	1.000	-

MECHANICAL PROPERTIES (≥)

HEAT NO.	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (-46°C) J								
	485-655	275	22	35	140-237	AVG ≥ 20, MIN ≥ 16								

D2140	0.198	0.396	1.090	0.024	0.016	0.094	0.008	0.031	0.002	0.031	0.004	0.167	-	-
	601	368	26	42	179	45	27	22						
D3316	0.199	0.402	1.040	0.022	0.017	0.204	0.016	0.059	0.004	0.030	0.003	0.312	-	-
	580	414	27	66	176	39	35	34						
D6037	0.194	0.439	1.050	0.025	0.016	0.058	0.006	0.022	0.003	0.031	0.003	0.119	-	-
	506	326	35	69	158	37	32	27						
L8525	0.197	0.484	1.080	0.024	0.016	0.040	0.004	0.018	0.003	0.035	0.003	0.100	-	-
	558	379	28	58	166	27	32	38						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

QUALITY ASSURANCE MANAGER: *Terry Gonsman*
Terry Gonsman
 Quality Assurance Manager
DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	DM19011923
DATE	Jan/23/2019
PAGE	5 of 7

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4233	CAST STEEL OS & Y GATE VALVE	12" 300LB	C123F6
MATERIAL	ASTM A182 F316			

HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Solution	1080	1h/25mm, ≥2h	Elec	Water cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	V	N	Nb	Other
	0.080	1.000	2.000	0.045	0.030	16.0-18.0	2.0-3.0	10.0-14.0	-	-	-	0.100	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB) (≤)		(-°C) J							
LK1E187	515	205	30	50	150-237		-							
	0.060	0.900	1.900	0.040	0.028	17.500	2.500	11.200	-	-	-	0.080	-	-
	590	285	60	70	205	190	-	-	-					

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:	QUALITY ASSURANCE MANAGER: <i>Terry Gonsman</i> Terry Gonsman Quality Assurance Manager	DHV Industries, Inc. 3451 Pegasus Drive Bakersfield, CA 93308, U.S.A
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This certificate is in compliance with EN 10204 3.1.



DHY VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	DM19011923
DATE	Jan/23/2019
PAGE	6 of 7

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4233	CAST STEEL OS & Y GATE VALVE	12" 300LB	C123F6
MATERIAL	ASTM A320 L7M			

HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Oil cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

HEAT NO.	CHEMICAL COMPOSITION % (≤)													
	C	SI	Mn	P	S	Cr	Mo	Ni	AL	Cu	V	Nb	N	Other
	0.38-0.48	0.15-0.35	0.75-1.00	0.035	0.040	0.80-1.10	0.15-0.25	-	-	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST (-73°C) J							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	AVG ≥27, MIN ≥20								
JH1409A0B33	690	550	18	50	200-235									
	0.390	0.250	0.870	0.013	0.005	0.840	0.180	-	-	-	-	-	-	-
	754	595	25	64	221	45	46	46						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:	QUALITY ASSURANCE MANAGER: <i>DHY Industries, Inc.</i> <i>Terry Gonsman</i> Terry Gonsman Quality Assurance Manager 3451 Pegasus Drive Bakersfield, CA 93308. U.S.A
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DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	DM19011923
DATE	Jan/23/2019
PAGE	7 of 7

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4233	CAST STEEL OS & Y GATE VALVE	12" 300LB	C123F6

MATERIAL	ASTM A194 7M
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HEAT TREATMENT

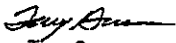
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Oil cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT


Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	SI	Mn	P	S	Cr	Mo	NI	AL	Cu	V	Nb	N	Other
	0.38-0.48	0.15-0.35	0.75-1.00	0.035	0.040	0.8-1.10	0.15-0.25	-	-	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)					IMPACT TEST								
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	(-°C) J								
JH10-5	0.430	0.200	0.810	0.013	0.012	0.910	0.180	-	-	-	-	-	-	-
	-	-	-	-	183	-	-	-	-	-	-	-	-	-

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:	QUALITY ASSURANCE MANAGER:  Terry Gonsman Quality Assurance Manager
	DHV Industries, Inc. 3451 Pegasus Drive Bakersfield, CA 93308, U.S.A

This certificate is in compliance with EN 10204 3.1.

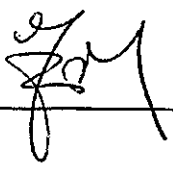
	<p>Frontier Valve International Ltd. 5747-67 St. Edmonton, Alberta, Canada Ph.: (780) 469-2464 Fax.: (780) 465-3808</p> <p style="font-size: 1.2em; font-weight: bold; text-decoration: underline;">VALVE CERTIFICATION REPORT</p>
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Customer: PRISM FLOW PRODUCTS
 Purchase Order No.: 22260 Date: 30 October 2019
 Sales Order No (Batch No.): 4413 (190909, 190911)

Frontier valve pressure containing parts manufactured in accordance with Frontier Engineering Standards and NACE MR0175.

DESCRIPTION	(1) 1" RP 3600 WOG FNPT B/V SOUR CONSTRUCTION (S310S36S)
SHELL WALL THICKNESS	ASME B16.34 CLASS 3600 WOG
BODY & CAP	ASTM A105N
SEAT MATERIAL	25% CARBON FILLED TFM
VALVE TESTING	ASME B16.34

ITEM NO.	DESCRIPTION	Q'ty	Pressure Test (psig)			Test Result
			Hydrostatic			
			Shell	Seats	Seats	
1	1" RP 3600 WOG FNPT B/V SOUR CONSTRUCTION	300	5400	4000	80	GOOD

QA Acceptance: _____ 



Frontier Valve International Ltd.
 5747-67 St. Edmonton, Alberta, Canada
 Ph.: (780) 469-2464 Fax.: (780) 465-3808

VALVE CERTIFICATION REPORT

Customer: PRISM FLOW PRODUCTS

Purchase Order No.: 22260

Date: 30 October 2019

Sales Order No (Batch No.): 4413 (190909, 190911)

CHEMICAL COMPOSITION (%)

Body & Cap A105N

ITEM No.	HEAT CODE/NO.	DESC.	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb
			MAX .35	.60 1.05	MAX .035	MAX .040	.10 .35	MAX .40	MAX .40	MAX .30	MAX .12	MAX .05	MAX .02
1	OA	3/4" BODY	0.21	1.03	0.006	0.022	0.23	0.04	0.02	0.03	0.005	0.003	0.014
1	NZ	3/4" BODY	0.21	1.05	0.006	0.023	0.25	0.04	0.02	0.03	0.008	0.003	0.013
1	LF	1" CAP	0.2	1.05	0.006	0.022	0.2	0.01	0.01	0.04	0.003	0.003	0.011

*Note: As per ASTM A105 – For each reduction of 0.01% below the specified carbon maximum (0.35%), an increase of 0.06% manganese above the specified maximum (1.05%) will be permitted up to a maximum of 1.35%.

MECHANICAL TEST

Body & Cap A105N

ITEM NO.	HEAT CODE / NO.	T.S.	Y.S.	Elongation	Reduction	Hardness
		KSI	KSI	%	%	H.B.
		MIN 70	MIN 36	MIN 22	MIN 30	MAX 187
1	OA	78.4	55.5	32	75.8	160
1	NZ	78.4	56.7	32.5	76.1	178
1	LF	72.3	50.3	33	68.3	143

CHEMICAL COMPOSITION (%) STEM A564 630 H1150D (17-4PH)

ITEM NO.	HEAT CODE/NO.	DESCRIPTION	C	Mn	P	S	Si	Cr	Ni	Cu
			MAX .07	MAX 1.00	MAX .040	MAX .030	MAX 1.00	15.00 17.50	3.00 5.00	3.00 5.00
1	D3	3/4" STEM	0.02	0.64	0.028	0.024	0.47	15.14	4.31	3.42

MECHANICAL TEST STEM A564 630 H1150D (17-4PH)

ITEM NO.	HEAT CODE/NO.	T.S.	Y.S.	Elongation	Reduction	Hardness
		KSI	KSI	%	%	HRC
		MIN 125	MIN 105	MIN 16	MIN 50	24-33
1	D3	143	134	21	67	32



Frontier Valve International Ltd.
 5747-67 St. Edmonton, Alberta, Canada
 Ph.: (780) 469-2464 Fax.: (780) 465-3808

VALVE CERTIFICATION REPORT

Customer: PRISM FLOW PRODUCTS

Purchase Order No.: 22260

Date: 30 October 2019

Sales Order No (Batch No.): 4413 (190909, 190911)

CHEMICAL COMPOSITION (%) BALL A351 CF8M

ITEM NO.	HEAT CODE/NO.	DESCRIPTION	C	Mn	Si	S	P	Cr	Ni	Mo
			MAX	MAX	MAX	MAX	MAX.	18.0	9.00	2.00
			.08	1.50	1.50	.040	040	21.0	12.00	3.00
1	U2381	3/4" BALL	0.051	0.81	0.75	0.010	0.027	18.81	9.38	2.18

MECHANICAL TEST BALL A351 CF8M

ITEM NO.	HEAT CODE/NO.	T.S.	Y.S.	Elongation	Reduction	Hardness
		KSI	KSI	%	%	H.B.
		MIN	MIN	MIN	N/R	N/R
		70	30	30		
1	U2381	79.625	36.114	48	N/A	149



An ISO 9001 Registered Company

LETTER OF COMPLIANCE

Frontier Valve International Ltd. confirms that all Frontier's S3 RP ball valves, including 3/4", 1" and 2" regular port valves are designed and manufactured in accordance with ANSI B16.34. The detail sizes of the valve bodies and Caps are as listed in the form below.

Valve Description	Frontier Body Size	Frontier Cap Size
3/4" RP S3 Ball Valve	1/2" Standard Body	3/4" Standard Cap
1" RP S3 Ball Valve	3/4" Standard Body	1" Standard Cap
2" RP S3 Ball Valve	1-1/2" Standard Body	2" Standard Cap

Q.A. Acceptance: Ron Liu

Date: Nov. 18, 2019



Frontier Valve International Ltd.
 5747-67 St. Edmonton, Alberta, Canada
 Ph.: (780) 469-2464 Fax.: (780) 465-3808

VALVE CERTIFICATION REPORT

Purchaser: Prism Flow Products
 Purchase Order No.: 22110 Date: August 2, 2019
 Sales Order No. (Batch No.): 4265B/O (190707)
 Frontier valve pressure containing parts manufactured in accordance with Frontier Engineering Standards and NACE MR0175. Sour low temperature certified to -50°F.

DESCRIPTION	(1) 1" RP 3600 WOG SW x FNPT B/V SLT CONSTRUCTION (S310T36L)
SHELL WALL THICKNESS	ASME B16.34 CLASS 3600 WOG
BODY & CAP	ASTM A350 LF2, CL. 1
SEAT MATERIAL	25% CARBON FILLED TFM
VALVE TESTING	ASME B16.34

ITEM NO.	DESCRIPTION	QTY	Pressure Test (psig)			Test Result
			Hydrostatic			
			Shell	Seats	Seats	
1	1" RP 3600 WOG SW x FNPT B/V SLT CONSTRUCTION	100	5400	4000	80	GOOD

QA Acceptance: Ronli



Frontier Valve International Ltd.

5747-67 St. Edmonton, Alberta, Canada
 Ph.: (780) 469-2464 Fax.: (780) 465-3808

VALVE CERTIFICATION REPORT

Purchaser: Prism Flow Products

Purchase Order No.: 22110 Date: August 2, 2019

Sales Order No. (Batch No.): 4265B/O (190707)

CHEMICAL COMPOSITION (%)													
Body & Cap A350 LF2													
ITEM NO.	HEAT CODE/NO.	DESC.	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb
			MAX .30	.60 1.35	MAX .035	MAX .040	.15 .30	MAX .40	MAX .40	MAX .30	MAX .12	MAX .08	MAX .02
1	NZ	3/4" BODY	0.21	1.05	0.006	0.023	0.25	0.04	0.02	0.03	0.008	0.003	0.013
1	LF	1" FNPT CAP	0.2	1.05	0.006	0.022	0.2	0.01	0.01	0.04	0.003	0.003	0.011
1	VA007	1" SW CAP	0.168	1.207	0.012	0.003	0.29	0.061	0.054	0.155	0.025	0.016	0.016

MECHANICAL TEST						
Body & Cap A350 LF2						
ITEM NO.	HEAT CODE / NO.	T.S.	Y.S.	Elongation	Reduction	Hardness
		KSI	KSI	%	%	H.B.
		70	MIN	MIN	MIN	MAX
		95	36	22	30	197
1	NZ	78.4	56.7	32.5	76.1	178
1	LF	72.3	50.3	33	68.3	143
1	VA007	74.525	51.472	33.7	70.0	163

CHARPY TEST RESULT					
HEAT CODE / NO.	Test Temp.	Energy Absorbed	Energy Absorbed	Energy Absorbed	Average
NZ	-50°F	156(ft. lbf)	124(ft. lbf)	144(ft. lbf)	141(ft. lbf)
LF	-50°F	73(ft. lbf)	103(ft. lbf)	95(ft. lbf)	90(ft. lbf)
VA007	-50°F	46.5(ft. lbf)	48(ft. lbf)	45.8(ft. lbf)	46.7(ft. lbf)



Frontier Valve International Ltd.

5747-67 St. Edmonton, Alberta, Canada
 Ph.: (780) 469-2464 Fax.: (780) 465-3808

VALVE CERTIFICATION REPORT

Purchaser: Prism Flow Products
 Purchase Order No.: 22110 Date: August 2, 2019
 Sales Order No. (Batch No.): 4265B/O (190707)

CHEMICAL COMPOSITION (%)			STEM A564 630 H1150D (17-4PH)							
ITEM NO.	HEAT NO.	DESCRIPTION	C	Mn	P	S	Si	Cr	Ni	Cu
			MAX .07	MAX 1.00	MAX .040	MAX .030	MAX 1.00	15.00 17.50	3.00 5.00	3.00 5.00
1	C7	3/4" STEM	0.02	0.63	0.029	0.02	0.47	15.31	4.3	3.42

MECHANICAL TEST		STEM A564 630 H1150D (17-4PH)				
ITEM NO.	HEAT NO.	T.S.	Y.S.	Elongation	Reduction	Hardness
		KSI	KSI	%	%	HRC
		MIN 125	MIN 105	MIN 16	MIN 50	24 - 33
1	C7	136	123	24	71	31

CHEMICAL COMPOSITION (%)			BALL A351 CF8M							
ITEM NO.	HEAT CODE/NO.	DESCRIPTION	C	Mn	Si	S	P	Cr	Ni	Mo
			MAX .08	MAX 1.50	MAX 1.50	MAX .040	MAX .040	18.0 21.0	9.00 12.00	2.00 3.00
1	U2381	3/4" BALL	0.051	0.81	0.75	0.010	0.027	18.81	9.38	2.18

MECHANICAL TEST		BALL A351 CF8M				
ITEM NO.	HEAT CODE/NO.	T.S.	Y.S.	Elongation	Reduction	Hardness
		KSI	KSI	%	%	H.B.
		MIN 70	MIN 30	MIN 30	N/R	N/R
1	U2381	79.625	36.114	48	N/A	149



An ISO 9001 Registered Company

LETTER OF COMPLIANCE

Frontier Valve International Ltd. confirms that all Frontier's S3 RP ball valves, including 3/4", 1" and 2" regular port valves are designed and manufactured in accordance with ANSI B16.34. The detail sizes of the valve bodies and Caps are as listed in the form below.

Valve Description	Frontier Body Size	Frontier Cap Size
3/4" RP S3 Ball Valve	1/2" Standard Body	3/4" Standard Cap
1" RP S3 Ball Valve	3/4" Standard Body	1" Standard Cap
2" RP S3 Ball Valve	1-1/2" Standard Body	2" Standard Cap

Q.A. Acceptance: Ron Liu

Date: Nov. 18, 2019



Frontier Valve International Ltd.

5747-67 St. Edmonton, Alberta, Canada
 Ph.: (780) 469-2464 Fax.: (780) 465-3808

VALVE CERTIFICATION REPORT

Purchaser: Prism Flow Products

Purchase Order No.: 22110 Date: July 2, 2019

Sales Order No. (Batch No.): 4265B/O (190510)

Frontier valve pressure containing parts manufactured in accordance with Frontier Engineering Standards and NACE MR0175. Sour low temperature certified to -50°F.

DESCRIPTION	(1) 1" RP 3600 WOG SW x FNPT B/V SLT CONSTRUCTION (S310T36L)
SHELL WALL THICKNESS	ASME B16.34 CLASS 3600 WOG
BODY & CAP	ASTM A350 LF2, CL. 1
SEAT MATERIAL	25% CARBON FILLED TFM
VALVE TESTING	ASME B16.34

ITEM NO.	DESCRIPTION	QTY	Pressure Test (psig)			Test Result
			Hydrostatic			
			Shell	Seats	Seats	
1	1" RP 3600 WOG SW x FNPT B/V SLT CONSTRUCTION	100	5400	4000	80	GOOD

QA Acceptance: *Ron*



Frontier Valve International Ltd.

5747-67 St. Edmonton, Alberta, Canada

Ph.: (780) 469-2464 Fax.: (780) 465-3808

VALVE CERTIFICATION REPORT

Purchaser: Prism Flow Products

Purchase Order No.: 22110 Date: July 2, 2019

Sales Order No. (Batch No.): 4265B/O (190510)

CHEMICAL COMPOSITION (%)													
Body & Cap A350 LF2													
ITEM NO.	HEAT CODE/NO.	DESC.	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Cb
			MAX .30	.60 1.35	MAX .035	MAX .040	.15 .30	MAX .40	MAX .40	MAX .30	MAX .12	MAX .08	MAX .02
1	NZ	3/4" BODY	0.21	1.05	0.006	0.023	0.25	0.04	0.02	0.03	0.008	0.003	0.013
	OA	3/4" BODY	0.21	1.03	0.006	0.022	0.23	0.04	0.02	0.03	0.005	0.003	0.014
1	VA007	1" SW CAP	0.168	1.207	0.012	0.003	0.29	0.061	0.054	0.155	0.025	0.016	0.016
1	LF	1" FNPT CAP	0.2	1.05	0.006	0.022	0.2	0.01	0.01	0.04	0.003	0.003	0.011

MECHANICAL TEST						
Body & Cap A350 LF2						
ITEM NO.	HEAT CODE / NO.	T.S.	Y.S.	Elongation	Reduction	Hardness
		KSI	KSI	%	%	H.B.
		70 95	MIN 36	MIN 22	MIN 30	MAX 197
1	NZ	78.4	56.7	32.5	76.1	178
	OA	78.4	55.5	32	75.8	160
1	VA007	74.525	51.472	33.7	70.0	163
1	LF	72.3	50.3	33	68.3	143

CHARPY TEST RESULT					
HEAT CODE / NO.	Test Temp.	Energy Absorbed	Energy Absorbed	Energy Absorbed	Average
NZ	-50°F	156(ft. lbf)	124(ft. lbf)	144(ft. lbf)	141(ft. lbf)
OA	-50°F	132(ft. lbf)	133(ft. lbf)	93(ft. lbf)	119(ft. lbf)
VA007	-50°F	46.5(ft. lbf)	48(ft. lbf)	45.8(ft. lbf)	46.7(ft. lbf)
LF	-50°F	73(ft. lbf)	103(ft. lbf)	95(ft. lbf)	90(ft. lbf)



Frontier Valve International Ltd.

5747-67 St. Edmonton, Alberta, Canada
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VALVE CERTIFICATION REPORT

Purchaser: Prism Flow Products
 Purchase Order No.: 22110 Date: July 2, 2019
 Sales Order No. (Batch No.): 4265B/O (190510)

CHEMICAL COMPOSITION (%)			STEM A564 630 H1150D (17-4PH)							
ITEM NO.	HEAT NO.	DESCRIPTION	C	Mn	P	S	Si	Cr	Ni	Cu
			MAX	MAX	MAX	MAX	MAX	15.00	3.00	3.00
			.07	1.00	.040	.030	1.00	17.50	5.00	5.00
1	C7	3/4" STEM	0.02	0.63	0.029	0.02	0.47	15.31	4.3	3.42

MECHANICAL TEST		STEM A564 630 H1150D (17-4PH)				
ITEM NO.	HEAT NO.	T.S.	Y.S.	Elongation	Reduction	Hardness
		KSI	KSI	%	%	HRC
		MIN	MIN	MIN	MIN	24 - 33
		125	105	16	50	
1	C7	136	123	24	71	31

CHEMICAL COMPOSITION (%)			BALL A351 CF8M							
ITEM NO.	HEAT CODE/NO.	DESCRIPTION	C	Mn	Si	S	P	Cr	Ni	Mo
			MAX	MAX	MAX	MAX	MAX	18.0	9.00	2.00
			.08	1.50	1.50	.040	.040	21.0	12.00	3.00
1	U2381	3/4" BALL	0.051	0.81	0.75	0.010	0.027	18.81	9.38	2.18

MECHANICAL TEST		BALL A351 CF8M				
ITEM NO.	HEAT CODE/NO.	T.S.	Y.S.	Elongation	Reduction	Hardness
		KSI	KSI	%	%	H.B.
		MIN	MIN	MIN	N/R	N/R
		70	30	30		
1	U2381	79.625	36.114	48	N/A	149



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LETTER OF COMPLIANCE

Frontier Valve International Ltd. confirms that all Frontier's S3 RP ball valves, including 3/4", 1" and 2" regular port valves are designed and manufactured in accordance with ANSI B16.34. The detail sizes of the valve bodies and Caps are as listed in the form below.

Valve Description	Frontier Body Size	Frontier Cap Size
3/4" RP S3 Ball Valve	1/2" Standard Body	3/4" Standard Cap
1" RP S3 Ball Valve	3/4" Standard Body	1" Standard Cap
2" RP S3 Ball Valve	1-1/2" Standard Body	2" Standard Cap

Q.A. Acceptance: Ron Liu

Date: Nov. 18, 2019

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE				REPORT NO.	M18032817
	ISO 9001:2015, API Q1: 9TH ED				DATE	Mar/28/2018
					PAGE	1 of 12
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE	
	ST4016		SO1710010	5	NA	
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.	
F1800T33	1"RB	800LB	NPT	300 PCS	NA	
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER		
FORGED STEEL OS & Y GATE VALVE	A105N-2014 Body, 13CR Trim, 13CR/STL6 Seat Face.		Handwheel	TZ18030771-TZ18031070		
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.		
API 602-2009/ISO 15761	<input type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4		<input type="checkbox"/> API 6FA, 3RD.Ed <input type="checkbox"/> API 607, 6TH.Ed	<input type="checkbox"/> NACE MR-0175/ISO15156-2015 <input checked="" type="checkbox"/> NACE MR-0103-2012		

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	BONNET	WEDGE	SEAT RING	STEM
BASE MATERIAL	A105N-2014	A105N-2014	A182 F6A	A182 F6A	A182 F6A
FACE MATERIAL	NA	NA	NA	STL6	NA
NAME OF PART	SCREW	GASKET			
BASE MATERIAL	A193 B7M	SS+Graphite			
FACE MATERIAL	NA	NA			

PRESSURE TEST REPORT

Have been tested good according to API 598 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				BACKSEAT (HYDROSTATIC)	OTHER
		H.P. CLOSURE (HYDROSTATIC) <input type="checkbox"/> REQUIRED <input checked="" type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL			
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM		
PRESSURE (PSIG)	2975	NA	NA	80	80	2175	NA
DURATION (Minutes)	1	NA	NA	1	1	1	NA
RESULT	GOOD			GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	ASME B16.34-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

QUALITY ASSURANCE MANAGER:


 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4016	FORGED STEEL OS & Y GATE VALVE	1"RB 800LB	F1800T33

CRATE NO.: 5 QUANTITIES: 300 PCS

SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2014	A105N-2014	A182 F6A	A182 F6A	A182 F6A		
TZ18030771	P2182	P2182	Z407	V407	B130		
TZ18030772	P2182	P2182	Z407	V407	B130		
TZ18030773	P2182	P2182	Z407	V407	B130		
TZ18030774	P2182	P2182	Z407	V407	B130		
TZ18030775	P2182	P2182	Z407	V407	B130		
TZ18030776	P2182	P2182	Z407	V407	B130		
TZ18030777	P2182	P2182	Z407	V407	B130		
TZ18030778	P2182	P2182	Z407	V407	B130		
TZ18030779	P2182	P2182	Z407	V407	B130		
TZ18030780	P2182	P2182	Z407	V407	B130		
TZ18030781	P2182	P2182	Z407	V407	B130		
TZ18030782	P2182	P2182	Z407	V407	B130		
TZ18030783	P2182	P2182	Z407	V407	B130		
TZ18030784	P2182	P2182	Z407	V407	B130		
TZ18030785	P2182	P2182	Z407	V407	B130		
TZ18030786	P2182	P2182	Z407	V407	B130		
TZ18030787	P2182	P2182	Z407	V407	B130		
TZ18030788	P2182	P2182	Z407	V407	B130		
TZ18030789	P2182	P2182	Z407	V407	B130		
TZ18030790	P2182	P2182	Z407	V407	B130		
TZ18030791	P2182	P2182	Z407	V407	B130		
TZ18030792	P2182	P2182	Z407	V407	B130		
TZ18030793	P2182	P2182	Z407	V407	B130		
TZ18030794	P2182	P2182	Z407	V407	B130		
TZ18030795	P2182	P2182	Z407	V407	B130		
TZ18030796	P2182	P2182	Z407	V407	B130		
TZ18030797	P2182	P2182	Z407	V407	B130		
TZ18030798	P2182	P2182	Z407	V407	B130		
TZ18030799	P2182	P2182	Z407	V407	B130		
TZ18030800	P2182	P2182	Z407	V407	B130		
TZ18030801	P2182	P2182	Z407	V407	B130		
TZ18030802	P2182	P2182	Z407	V407	B130		
TZ18030803	P2182	P2182	Z407	V407	B130		
TZ18030804	P2182	P2182	Z407	V407	B130		
TZ18030805	P2182	P2182	Z407	V407	B130		
TZ18030806	P2182	P2182	Z407	V407	B130		
TZ18030807	P2182	P2182	Z407	V407	B130		
TZ18030808	P2182	P2182	Z407	V407	B130		
TZ18030809	P2182	P2182	Z407	V407	B130		
TZ18030810	P2182	P2182	Z407	V407	B130		



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

ISO 9001:2015, API Q1: 9TH ED

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4016	FORGED STEEL OS & Y GATE VALVE	1"RB 800LB	F1800T33

CRATE NO.: 5 QUANTITIES: 300 PCS

SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2014	A105N-2014	A182 F6A	A182 F6A	A182 F6A		
TZ18030811	P2182	P2182	Z407	V407	B130		
TZ18030812	P2182	P2182	Z407	V407	B130		
TZ18030813	P2182	P2182	Z407	V407	B130		
TZ18030814	P2182	P2182	Z407	V407	B130		
TZ18030815	P2182	P2182	Z407	V407	B130		
TZ18030816	P2182	P2182	Z407	V407	B130		
TZ18030817	P2182	P2182	Z407	V407	B130		
TZ18030818	P2182	P2182	Z407	V407	B130		
TZ18030819	P2182	P2182	Z407	V407	B130		
TZ18030820	P2182	P2182	Z407	V407	B130		
TZ18030821	P2182	P2182	Z407	V407	B130		
TZ18030822	P2182	P2182	Z407	V407	B130		
TZ18030823	P2182	P2182	Z407	V407	B130		
TZ18030824	P2182	P2182	Z407	V407	B130		
TZ18030825	P2182	P2182	Z407	V407	B130		
TZ18030826	P2182	P2182	Z407	V407	B130		
TZ18030827	P2182	P2182	Z407	V407	B130		
TZ18030828	P2182	P2182	Z407	V407	B130		
TZ18030829	P2182	P2182	Z407	V407	B130		
TZ18030830	P2182	P2182	Z407	V407	B130		
TZ18030831	P2182	P2182	Z407	V407	B130		
TZ18030832	P2182	P2182	Z407	V407	B130		
TZ18030833	P2182	P2182	Z407	V407	B130		
TZ18030834	P2182	P2182	Z407	V407	B130		
TZ18030835	P2182	P2182	Z407	V407	B130		
TZ18030836	P2182	P2182	Z407	V407	B130		
TZ18030837	P2182	P2182	Z407	V407	B130		
TZ18030838	P2182	P2182	Z407	V407	B130		
TZ18030839	P2182	P2182	Z407	V407	B130		
TZ18030840	P2182	P2182	Z407	V407	B130		
TZ18030841	P2182	P2182	Z407	V407	B130		
TZ18030842	P2182	P2182	Z407	V407	B130		
TZ18030843	P2182	P2182	Z407	V407	B130		
TZ18030844	P2182	P2182	Z407	V407	B130		
TZ18030845	P2182	P2182	Z407	V407	B130		
TZ18030846	P2182	P2182	Z407	V407	B130		
TZ18030847	P2182	P2182	Z407	V407	B130		
TZ18030848	P2182	P2182	Z407	V407	B130		
TZ18030849	P2182	P2182	Z407	V407	B130		
TZ18030850	P2182	P2182	Z407	V407	B130		



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4016	FORGED STEEL OS & Y GATE VALVE	1"RB 800LB	F1800T33

CRATE NO.: 5 QUANTITIES: 300 PCS

SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2014	A105N-2014	A182 F6A	A182 F6A	A182 F6A		
TZ18030851	P2182	P2182	Z407	V407	B130		
TZ18030852	P2182	P2182	Z407	V407	B130		
TZ18030853	P2182	P2182	Z407	V407	B130		
TZ18030854	P2182	P2182	Z407	V407	B130		
TZ18030855	P2182	P2182	Z407	V407	B130		
TZ18030856	P2182	P2182	Z407	V407	B130		
TZ18030857	P2182	P2182	Z407	V407	B130		
TZ18030858	P2182	P2182	Z407	V407	B130		
TZ18030859	P2182	P2182	Z407	V407	B130		
TZ18030860	P2182	P2182	Z407	V407	B130		
TZ18030861	P2182	P2182	Z407	V407	B130		
TZ18030862	P2182	P2182	Z407	V407	B130		
TZ18030863	P2182	P2182	Z407	V407	B130		
TZ18030864	P2182	P2182	Z407	V407	B130		
TZ18030865	P2182	P2182	Z407	V407	B130		
TZ18030866	P2182	P2182	Z407	V407	B130		
TZ18030867	P2182	P2182	Z407	V407	B130		
TZ18030868	P2182	P2182	Z407	V407	B130		
TZ18030869	P2182	P2182	Z407	V407	B130		
TZ18030870	P2182	P2182	Z407	V407	B130		
TZ18030871	P2182	P2182	Z407	V407	B130		
TZ18030872	P2182	P2182	Z407	V407	B130		
TZ18030873	P2182	P2182	Z407	V407	B130		
TZ18030874	P2182	P2182	Z407	V407	B130		
TZ18030875	P2182	P2182	Z407	V407	B130		
TZ18030876	P2182	P2182	Z407	V407	B130		
TZ18030877	P2182	P2182	Z407	V407	B130		
TZ18030878	P2182	P2182	Z407	V407	B130		
TZ18030879	P2182	P2182	Z407	V407	B130		
TZ18030880	P2182	P2182	Z407	V407	B130		
TZ18030881	P2182	P2182	Z407	V407	B130		
TZ18030882	P2182	P2182	Z407	V407	B130		
TZ18030883	P2182	P2182	Z407	V407	B130		
TZ18030884	P2182	P2182	Z407	V407	B130		
TZ18030885	P2182	P2182	Z407	V407	B130		
TZ18030886	P2182	P2182	Z407	V407	B130		
TZ18030887	P2182	P2182	Z407	V407	B130		
TZ18030888	P2182	P2182	Z407	V407	B130		
TZ18030889	P2182	P2182	Z407	V407	B130		
TZ18030890	P2182	P2182	Z407	V407	B130		



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4016	FORGED STEEL OS & Y GATE VALVE	1"RB 800LB	F1800T33

CRATE NO.: 5 QUANTITIES: 300 PCS

SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2014	A105N-2014	A182 F6A	A182 F6A	A182 F6A		
TZ18030891	P2182	P2182	Z407	V407	B130		
TZ18030892	P2182	P2182	Z407	V407	B130		
TZ18030893	P2182	P2182	Z407	V407	B130		
TZ18030894	P2182	P2182	Z407	V407	B130		
TZ18030895	P2182	P2182	Z407	V407	B130		
TZ18030896	P2182	P2182	Z407	V407	B130		
TZ18030897	P2182	P2182	Z407	V407	B130		
TZ18030898	P2182	P2182	Z407	V407	B130		
TZ18030899	P2182	P2182	Z407	V407	B130		
TZ18030900	P2182	P2182	Z407	V407	B130		
TZ18030901	P2182	P2182	Z407	V407	B130		
TZ18030902	P2182	P2182	Z407	V407	B130		
TZ18030903	P2182	P2182	Z407	V407	B130		
TZ18030904	P2182	P2182	Z407	V407	B130		
TZ18030905	P2182	P2182	Z407	V407	B130		
TZ18030906	P2182	P2182	Z407	V407	B130		
TZ18030907	P2182	P2182	Z407	V407	B130		
TZ18030908	P2182	P2182	Z407	V407	B130		
TZ18030909	P2182	P2182	Z407	V407	B130		
TZ18030910	P2182	P2182	Z407	V407	B130		
TZ18030911	P2182	P2182	Z407	V407	B130		
TZ18030912	P2182	P2182	Z407	V407	B130		
TZ18030913	P2182	P2182	Z407	V407	B130		
TZ18030914	P2182	P2182	Z407	V407	B130		
TZ18030915	P2182	P2182	Z407	V407	B130		
TZ18030916	P2182	P2182	Z407	V407	B130		
TZ18030917	P2182	P2182	Z407	V407	B130		
TZ18030918	P2182	P2182	Z407	V407	B130		
TZ18030919	P2182	P2182	Z407	V407	B130		
TZ18030920	P2182	P2182	Z407	V407	B130		
TZ18030921	P2182	P2182	Z407	V407	B130		
TZ18030922	P2182	P2182	Z407	V407	B130		
TZ18030923	P2182	P2182	Z407	V407	B130		
TZ18030924	P2182	P2182	Z407	V407	B130		
TZ18030925	P2182	P2182	Z407	V407	B130		
TZ18030926	P2182	P2182	Z407	V407	B130		
TZ18030927	P2182	P2182	Z407	V407	B130		
TZ18030928	P2182	P2182	Z407	V407	B130		
TZ18030929	P2182	P2182	Z407	V407	B130		
TZ18030930	P2182	P2182	Z407	V407	B130		



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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4016	FORGED STEEL OS & Y GATE VALVE	1"RB 800LB	F1800T33

CRATE NO.: 5 QUANTITIES: 300 PCS

SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2014	A105N-2014	A182 F6A	A182 F6A	A182 F6A		
TZ18030931	P2182	P2182	Z407	V407	B130		
TZ18030932	P2182	P2182	Z407	V407	B130		
TZ18030933	P2182	P2182	Z407	V407	B130		
TZ18030934	P2182	P2182	Z407	V407	B130		
TZ18030935	P2182	P2182	Z407	V407	B130		
TZ18030936	P2182	P2182	Z407	V407	B130		
TZ18030937	P2182	P2182	Z407	V407	B130		
TZ18030938	P2182	P2182	Z407	V407	B130		
TZ18030939	P2182	P2182	Z407	V407	B130		
TZ18030940	P2182	P2182	Z407	V407	B130		
TZ18030941	P2182	P2182	Z407	V407	B130		
TZ18030942	P2182	P2182	Z407	V407	B130		
TZ18030943	P2182	P2182	Z407	V407	B130		
TZ18030944	P2182	P2182	Z407	V407	B130		
TZ18030945	P2182	P2182	Z407	V407	B130		
TZ18030946	P2182	P2182	Z407	V407	B130		
TZ18030947	P2182	P2182	Z407	V407	B130		
TZ18030948	P2182	P2182	Z407	V407	B130		
TZ18030949	P2182	P2182	Z407	V407	B130		
TZ18030950	P2182	P2182	Z407	V407	B130		
TZ18030951	P2182	P2182	Z407	V407	B130		
TZ18030952	P2182	P2182	Z407	V407	B130		
TZ18030953	P2182	P2182	Z407	V407	B130		
TZ18030954	P2182	P2182	Z407	V407	B130		
TZ18030955	P2182	P2182	Z407	V407	B130		
TZ18030956	P2182	P2182	Z407	V407	B130		
TZ18030957	P2182	P2182	Z407	V407	B130		
TZ18030958	P2182	P2182	Z407	V407	B130		
TZ18030959	P2182	P2182	Z407	V407	B130		
TZ18030960	P2182	P2182	Z407	V407	B130		
TZ18030961	P2182	P2182	Z407	V407	B130		
TZ18030962	P2182	P2182	Z407	V407	B130		
TZ18030963	P2182	P2182	Z407	V407	B130		
TZ18030964	P2182	P2182	Z407	V407	B130		
TZ18030965	P2182	P2182	Z407	V407	B130		
TZ18030966	P2182	P2182	Z407	V407	B130		
TZ18030967	P2182	P2182	Z407	V407	B130		
TZ18030968	P2182	P2182	Z407	V407	B130		
TZ18030969	P2182	P2182	Z407	V407	B130		
TZ18030970	P2182	P2182	Z407	V407	B130		



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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4016	FORGED STEEL OS & Y GATE VALVE	1"RB 800LB	F1800T33

CRATE NO.: 5 QUANTITIES: 300 PCS

SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2014	A105N-2014	A182 F6A	A182 F6A	A182 F6A		
TZ18030971	P2182	P2182	Z407	V407	B130		
TZ18030972	P2182	P2182	Z407	V407	B130		
TZ18030973	P2182	P2182	Z407	V407	B130		
TZ18030974	P2182	P2182	Z407	V407	B130		
TZ18030975	P2182	P2182	Z407	V407	B130		
TZ18030976	P2182	P2182	Z407	V407	B130		
TZ18030977	P2182	P2182	Z407	V407	B130		
TZ18030978	P2182	P2182	Z407	V407	B130		
TZ18030979	P2182	P2182	Z407	V407	B130		
TZ18030980	P2182	P2182	Z407	V407	B130		
TZ18030981	P2182	P2182	Z407	V407	B130		
TZ18030982	P2182	P2182	Z407	V407	B130		
TZ18030983	P2182	P2182	Z407	V407	B130		
TZ18030984	P2182	P2182	Z407	V407	B130		
TZ18030985	P2182	P2182	Z407	V407	B130		
TZ18030986	P2182	P2182	Z407	V407	B130		
TZ18030987	P2182	P2182	Z407	V407	B130		
TZ18030988	P2182	P2182	Z407	V407	B130		
TZ18030989	P2182	P2182	Z407	V407	B130		
TZ18030990	P2182	P2182	Z407	V407	B130		
TZ18030991	P2182	P2182	Z407	V407	B130		
TZ18030992	P2182	P2182	Z407	V407	B130		
TZ18030993	P2182	P2182	Z407	V407	B130		
TZ18030994	P2182	P2182	Z407	V407	B130		
TZ18030995	P2182	P2182	Z407	V407	B130		
TZ18030996	P2182	P2182	Z407	V407	B130		
TZ18030997	P2182	P2182	Z407	V407	B130		
TZ18030998	P2182	P2182	Z407	V407	B130		
TZ18030999	P2182	P2182	Z407	V407	B130		
TZ18031000	P2182	P2182	Z407	V407	B130		
TZ18031001	P2182	P2182	Z407	V407	B130		
TZ18031002	P2182	P2182	Z407	V407	B130		
TZ18031003	P2182	P2182	Z407	V407	B130		
TZ18031004	P2182	P2182	Z407	V407	B130		
TZ18031005	P2182	P2182	Z407	V407	B130		
TZ18031006	P2182	P2182	Z407	V407	B130		
TZ18031007	P2182	P2182	Z407	V407	B130		
TZ18031008	P2182	P2182	Z407	V407	B130		
TZ18031009	P2182	P2182	Z407	V407	B130		
TZ18031010	P182	P2182	Z407	V407	B130		



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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4016	FORGED STEEL OS & Y GATE VALVE	1"RB 800LB	F1800T33

CRATE NO.: 5 QUANTITIES: 300 PCS

SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2014	A105N-2014	A182 F6A	A182 F6A	A182 F6A		
TZ18031011	P2182	P2182	Z407	V407	B130		
TZ18031012	P2182	P2182	Z407	V407	B130		
TZ18031013	P2182	P2182	Z407	V407	B130		
TZ18031014	P2182	P2182	Z407	V407	B130		
TZ18031015	P2182	P2182	Z407	V407	B130		
TZ18031016	P2182	P2182	Z407	V407	B130		
TZ18031017	P2182	P2182	Z407	V407	B130		
TZ18031018	P2182	P2182	Z407	V407	B130		
TZ18031019	P2182	P2182	Z407	V407	B130		
TZ18031020	P2182	P2182	Z407	V407	B130		
TZ18031021	P2182	P2182	Z407	V407	B130		
TZ18031022	P2182	P2182	Z407	V407	B130		
TZ18031023	P2182	P2182	Z407	V407	B130		
TZ18031024	P2182	P2182	Z407	V407	B130		
TZ18031025	P2182	P2182	Z407	V407	B130		
TZ18031026	P2182	P2182	Z407	V407	B130		
TZ18031027	P2182	P2182	Z407	V407	B130		
TZ18031028	P2182	P2182	Z407	V407	B130		
TZ18031029	P2182	P2182	Z407	V407	B130		
TZ18031030	P2182	P2182	Z407	V407	B130		
TZ18031031	P2182	P2182	Z407	V407	B130		
TZ18031032	P2182	P2182	Z407	V407	B130		
TZ18031033	P2182	P2182	Z407	V407	B130		
TZ18031034	P2182	P2182	Z407	V407	B130		
TZ18031035	P2182	P2182	Z407	V407	B130		
TZ18031036	P2182	P2182	Z407	V407	B130		
TZ18031037	P2182	P2182	Z407	V407	B130		
TZ18031038	P2182	P2182	Z407	V407	B130		
TZ18031039	P2182	P2182	Z407	V407	B130		
TZ18031040	P2182	P2182	Z407	V407	B130		
TZ18031041	P2182	P2182	Z407	V407	B130		
TZ18031042	P2182	P2182	Z407	V407	B130		
TZ18031043	P2182	P2182	Z407	V407	B130		
TZ18031044	P2182	P2182	Z407	V407	B130		
TZ18031045	P2182	P2182	Z407	V407	B130		
TZ18031046	P2182	P2182	Z407	V407	B130		
TZ18031047	P2182	P2182	Z407	V407	B130		
TZ18031048	P2182	P2182	Z407	V407	B130		
TZ18031049	P2182	P2182	Z407	V407	B130		
TZ18031050	P2182	P2182	Z407	V407	B130		



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MATERIAL TEST REPORT MILL CERTIFICATE

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4016	FORGED STEEL OS & Y GATE VALVE	1"RB 800LB	F1800T33
MATERIAL	ASTM A182 F6A	MATERIAL ORIGIN	P.R.C.	

HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Normalize	1020	1h/25mm, ≥2h	Elec	Air cooling to room temp.	
Temper	680	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Second Temper	650	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	


CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.150	1.000	0.040	0.030	1.000	-	0.500	11.5-13.5	-	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)					IMPACT TEST								
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	(-°C) J								
	585	380	18	35	167-229	-								
Z407	0.100	0.310	0.024	0.016	0.220	-	0.190	12.100	-	-	-	-	-	-
	670	515	28	71	228	-								
V407	0.100	0.320	0.028	0.018	0.310	-	0.150	12.310	-	-	-	-	-	-
	690	425	21	55	218	-								
B130	0.100	0.390	0.024	0.017	0.370	-	0.110	11.770	-	-	-	-	-	-
	705	587	29	55	222	-								

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:	QUALITY ASSURANCE MANAGER: Terry Gonsman Quality Assurance Manager
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This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	<h1>MATERIAL TEST REPORT</h1> <h2>TEST CERTIFICATE</h2>				REPORT NO.	M19070813
					DATE	Jul/8/2019
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CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE	
	6184		SO1904027	2	NA	
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.	
F1800T33	1"RB	800LB	NPT	200 PCS	NA	
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER		
FORGED STEEL OS & Y GATE VALVE	A105N-2018 Body, 13CR Trim, 13CR/STL6 Seat Face.		Handwheel	TZ19070131-TZ19070330		
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.		
API 602-2009/ISO 15761	<input type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4		<input type="checkbox"/> API 6FA, 4RD.Ed <input type="checkbox"/> API 607, 7TH.Ed	<input checked="" type="checkbox"/> NACE MR-0175/ISO15156-2015 <input checked="" type="checkbox"/> NACE MR-0103-2015		

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	BONNET	WEDGE	SEAT RING	STEM
BASE MATERIAL	A105N-2018	A105N-2018	A182 F6A	A182 F6A	A182 F6A
FACE MATERIAL	NA	NA	NA	STL6	NA
NAME OF PART	SCREW	GASKET			
BASE MATERIAL	A193 B7M	SS+Graphite			
FACE MATERIAL	NA	NA			

PRESSURE TEST REPORT

Have been tested good according to API 598 and the purchase order requirements


	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				BACKSEAT (HYDROSTATIC)	OTHER
		H.P. CLOSURE (HYDROSTATIC) <input type="checkbox"/> REQUIRED <input checked="" type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL			
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM		
PRESSURE (PSIG)	2975	NA	NA	80	80	2175	NA
DURATION (Minutes)	1	NA	NA	1	1	1	NA
RESULT	GOOD			GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	NA	GOOD	GOOD	ASME B16.34-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: _____

QUALITY ASSURANCE MANAGER:
DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6184	FORGED STEEL OS & Y GATE VALVE	1"RB 800LB	F1800T33

CRATE NO.:	11	QUANTITIES:	200 PCS
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SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2018	A105N-2018	A182 F6A	A182 F6A	A182 F6A		
TZ19070131	P2182	P2182	Z407	V407	B130		
TZ19070132	P2182	P2182	Z407	V407	B130		
TZ19070133	P2182	P2182	Z407	V407	B130		
TZ19070134	P2182	P2182	Z407	V407	B130		
TZ19070135	P2182	P2182	Z407	V407	B130		
TZ19070136	P2182	P2182	Z407	V407	B130		
TZ19070137	P2182	P2182	Z407	V407	B130		
TZ19070138	P2182	P1586	Z407	V407	B130		
TZ19070139	P2182	P2182	Z407	V407	B130		
TZ19070140	P2182	P2182	Z407	V407	B130		
TZ19070141	P2182	P2182	Z407	V407	B130		
TZ19070142	P2182	P2182	Z407	V407	B130		
TZ19070143	P2182	P2182	Z407	V407	B130		
TZ19070144	P2182	P2182	Z407	V407	B130		
TZ19070145	P2182	P2182	Z407	V407	B130		
TZ19070146	P2182	P2182	Z407	V407	B130		
TZ19070147	P2182	P2182	Z407	V407	B130		
TZ19070148	P2182	P2182	Z407	V407	B130		
TZ19070149	P2182	P2182	Z407	V407	B130		
TZ19070150	P2182	P2182	Z407	V407	B130		
TZ19070151	P2182	P2182	Z407	V407	B130		
TZ19070152	P2182	P2182	Z407	V407	B130		
TZ19070153	P2182	P2182	Z407	V407	B130		
TZ19070154	P2182	P2182	Z407	V407	B130		
TZ19070155	P2182	P2182	Z407	V407	B130		
TZ19070156	P2182	P2182	Z407	V407	B130		
TZ19070157	P2182	P2182	Z407	V407	B130		
TZ19070158	P2182	P2182	Z407	V407	B130		
TZ19070159	P2182	P2182	Z407	V407	B130		
TZ19070160	P2182	P2182	Z407	V407	B130		
TZ19070161	P2182	P2182	Z407	V407	B130		
TZ19070162	P2182	P2182	Z407	V407	B130		
TZ19070163	P2182	P2182	Z407	V407	B130		
TZ19070164	P2182	P2182	Z407	V407	B130		
TZ19070165	P2182	P2182	Z407	V407	B130		
TZ19070166	P2182	P2182	Z407	V407	B130		
TZ19070167	P2182	P2182	Z407	V407	B130		
TZ19070168	P2182	P2182	Z407	V407	B130		
TZ19070169	P2182	P2182	Z407	V407	B130		
TZ19070170	P2182	P2182	Z407	V407	B130		



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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6184	FORGED STEEL OS & Y GATE VALVE	1"RB 800LB	F1800T33

CRATE NO.:	11	QUANTITIES:	200 PCS
------------	----	-------------	---------

SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2018	A105N-2018	A182 F6A	A182 F6A	A182 F6A		
TZ19070171	P2182	P2182	Z407	V407	B130		
TZ19070172	P2182	P2182	Z407	V407	B130		
TZ19070173	P2182	P2182	Z407	V407	B130		
TZ19070174	P2182	P2182	Z407	V407	B130		
TZ19070175	P2182	P2182	Z407	V407	B130		
TZ19070176	P2182	P2182	Z407	V407	B130		
TZ19070177	P2182	P2182	Z407	V407	B130		
TZ19070178	P2182	P2182	Z407	V407	B130		
TZ19070179	P2182	P2182	Z407	V407	B130		
TZ19070180	P2182	P2182	Z407	V407	B130		
TZ19070181	P2182	P2182	Z407	V407	B130		
TZ19070182	P2182	P2182	Z407	V407	B130		
TZ19070183	P2182	P2182	Z407	V407	B130		
TZ19070184	P2182	P2182	Z407	V407	B130		
TZ19070185	P2182	P2182	Z407	V407	B130		
TZ19070186	P2182	P2182	Z407	V407	B130		
TZ19070187	P2182	P2182	Z407	V407	B130		
TZ19070188	P2182	P2182	Z407	V407	B130		
TZ19070189	P2182	P2182	Z407	V407	B130		
TZ19070190	P2182	P2182	Z407	V407	B130		
TZ19070191	P2182	P2182	Z407	V407	B130		
TZ19070192	P2182	P2182	Z407	V407	B130		
TZ19070193	P2182	P2182	Z407	V407	B130		
TZ19070194	P2182	P2182	Z407	V407	B130		
TZ19070195	P2182	P2182	Z407	V407	B130		
TZ19070196	P2182	P2182	Z407	V407	B130		
TZ19070197	P2182	P2182	Z407	V407	B130		
TZ19070198	P2182	P2182	Z407	V407	B130		
TZ19070199	P2182	P2182	Z407	V407	B130		
TZ19070200	P2182	P2182	Z407	V407	B130		
TZ19070201	P2182	P2182	Z407	V407	B130		
TZ19070202	P2182	P2182	Z407	V407	B130		
TZ19070203	P2182	P2182	Z407	V407	B130		
TZ19070204	P2182	P2182	Z407	V407	B130		
TZ19070205	P2182	P2182	Z407	V407	B130		
TZ19070206	P2182	P2182	Z407	V407	B130		
TZ19070207	P2182	P2182	Z407	V407	B130		
TZ19070208	P2182	P2182	Z407	V407	B130		
TZ19070209	P2182	P2182	Z407	V407	B130		
TZ19070210	P2182	P2182	Z407	V407	B130		



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6184	FORGED STEEL OS & Y GATE VALVE	1"RB 800LB	F1800T33

CRATE NO.:	11	QUANTITIES:	200 PCS
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SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2018	A105N-2018	A182 F6A	A182 F6A	A182 F6A		
TZ19070211	P2182	P2182	Z407	V407	B130		
TZ19070212	P2182	P2182	Z407	V407	B130		
TZ19070213	P2182	P2182	Z407	V407	B130		
TZ19070214	P2182	P2182	Z407	V407	B130		
TZ19070215	P2182	P2182	Z407	V407	B130		
TZ19070216	P2182	P2182	Z407	V407	B130		
TZ19070217	P2182	P2182	Z407	V407	B130		
TZ19070218	P2182	P2182	Z407	V407	B130		
TZ19070219	P2182	P2182	Z407	V407	B130		
TZ19070220	P2182	P2182	Z407	V407	B130		
TZ19070221	P2182	P2182	Z407	V407	B130		
TZ19070222	P2182	P2182	Z407	V407	B130		
TZ19070223	P2182	P2182	Z407	V407	B130		
TZ19070224	P2182	P2182	Z407	V407	B130		
TZ19070225	P2182	P2182	Z407	V407	B130		
TZ19070226	P2182	P2182	Z407	V407	B130		
TZ19070227	P2182	P2182	Z407	V407	B130		
TZ19070228	P2182	P2182	Z407	V407	B130		
TZ19070229	P2182	P2182	Z407	V407	B130		
TZ19070230	P2182	P2182	Z407	V407	B130		
TZ19070231	P2182	P2182	Z407	V407	B130		
TZ19070232	P2182	P2182	Z407	V407	B130		
TZ19070233	P2182	P2182	Z407	V407	B130		
TZ19070234	P2182	P2182	Z407	V407	B130		
TZ19070235	P2182	P2182	Z407	V407	B130		
TZ19070236	P182	P2182	Z407	V407	B130		
TZ19070237	P182	P2182	Z407	V407	B130		
TZ19070238	P182	P2182	Z407	V407	B130		
TZ19070239	P182	P2182	Z407	V407	B130		
TZ19070240	P182	P2182	Z407	V407	B130		
TZ19070241	P182	P2182	Z407	V407	B130		
TZ19070242	P246	P2182	Z407	V407	B130		
TZ19070243	P182	P2182	Z407	V407	B130		
TZ19070244	P182	P2182	Z407	V407	B130		
TZ19070245	P182	P2182	Z407	V407	B130		
TZ19070246	P182	P2182	Z407	V407	B130		
TZ19070247	P182	P2182	Z407	V407	B130		
TZ19070248	P182	P2182	Z407	V407	B130		
TZ19070249	P182	P2182	Z407	V407	B130		
TZ19070250	P182	P2182	Z407	V407	B130		



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6184	FORGED STEEL OS & Y GATE VALVE	1"RB 800LB	F1800T33

CRATE NO.:	11	QUANTITIES:	200 PCS
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SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2018	A105N-2018	A182 F6A	A182 F6A	A182 F6A		
TZ19070251	P182	P2182	Z407	V407	B130		
TZ19070252	P182	P2182	Z407	V407	B130		
TZ19070253	P182	P2182	Z407	V407	B130		
TZ19070254	P182	P2182	Z407	V407	B130		
TZ19070255	P182	P2182	Z407	V407	B130		
TZ19070256	P182	P2182	Z407	V407	B130		
TZ19070257	P182	P2182	Z407	V407	B130		
TZ19070258	P182	P2182	Z407	V407	B130		
TZ19070259	P182	P2182	Z407	V407	B130		
TZ19070260	P182	P2182	Z407	V407	B130		
TZ19070261	P182	P2182	Z407	V407	B130		
TZ19070262	P182	P2182	Z407	V407	B130		
TZ19070263	P182	P2182	Z407	V407	B130		
TZ19070264	P182	P2182	Z407	V407	B130		
TZ19070265	P182	P2182	Z407	V407	B130		
TZ19070266	P182	P2182	Z407	V407	B130		
TZ19070267	P182	P2182	Z407	V407	B130		
TZ19070268	P182	P2182	Z407	V407	B130		
TZ19070269	P182	P2182	Z407	V407	B130		
TZ19070270	P182	P2182	Z407	V407	B130		
TZ19070271	P182	P2182	Z407	V407	B130		
TZ19070272	P182	P2182	Z407	V407	B130		
TZ19070273	P182	P2182	Z407	V407	B130		
TZ19070274	P182	P2182	Z407	V407	B130		
TZ19070275	P182	P2182	Z407	V407	B130		
TZ19070276	P182	P2182	Z407	V407	B130		
TZ19070277	P182	P2182	Z407	V407	B130		
TZ19070278	P182	P2182	Z407	V407	B130		
TZ19070279	P182	P2182	Z407	V407	B130		
TZ19070280	P182	P2182	Z407	V407	B130		
TZ19070281	P182	P2182	Z407	V407	B130		
TZ19070282	P182	P2182	Z407	V407	B130		
TZ19070283	P182	P2182	Z407	V407	B130		
TZ19070284	P182	P2182	Z407	V407	B130		
TZ19070285	P182	P2182	Z407	V407	B130		
TZ19070286	P182	P2182	Z407	V407	B130		
TZ19070287	P182	P2182	Z407	V407	B130		
TZ19070288	P182	P2182	Z407	V407	B130		
TZ19070289	P182	P2182	Z407	V407	B130		
TZ19070290	P182	P2182	Z407	V407	B130		



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

REPORT NO.	M19070813
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6184	FORGED STEEL OS & Y GATE VALVE	1"RB 800LB	F1800T33

CRATE NO.:	11	QUANTITIES:	200 PCS
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SERIAL NO.	MATERIAL AND HEAT NUMBER						REMARKS
	BODY	BONNET	WEDGE	STEM	SEAT	OTHER	
	A105N-2018	A105N-2018	A182 F6A	A182 F6A	A182 F6A		
TZ19070291	P182	P2182	Z407	V407	B130		
TZ19070292	P182	P2182	Z407	V407	B130		
TZ19070293	P182	P2182	Z407	V407	B130		
TZ19070294	P182	P2182	Z407	V407	B130		
TZ19070295	P182	P2182	Z407	V407	B130		
TZ19070296	P182	P2182	Z407	V407	B130		
TZ19070297	P182	P2182	Z407	V407	B130		
TZ19070298	P182	P2182	Z407	V407	B130		
TZ19070299	P182	P2182	Z407	V407	B130		
TZ19070300	P182	P2182	Z407	V407	B130		
TZ19070301	P182	P2182	Z407	V407	B130		
TZ19070302	P182	P2182	Z407	V407	B130		
TZ19070303	P182	P2182	Z407	V407	B130		
TZ19070304	P182	P2182	Z407	V407	B130		
TZ19070305	P182	P2182	Z407	V407	B130		
TZ19070306	P182	P2182	Z407	V407	B130		
TZ19070307	P182	P2182	Z407	V407	B130		
TZ19070308	P182	P2182	Z407	V407	B130		
TZ19070309	P182	P2182	Z407	V407	B130		
TZ19070310	P182	P2182	Z407	V407	B130		
TZ19070311	P182	P2182	Z407	V407	B130		
TZ19070312	P182	P2182	Z407	V407	B130		
TZ19070313	P182	P2182	Z407	V407	B130		
TZ19070314	P182	P2182	Z407	V407	B130		
TZ19070315	P182	P2182	Z407	V407	B130		
TZ19070316	P182	P2182	Z407	V407	B130		
TZ19070317	P182	P2182	Z407	V407	B130		
TZ19070318	P182	P2182	Z407	V407	B130		
TZ19070319	P182	P2182	Z407	V407	B130		
TZ19070320	P182	P2182	Z407	V407	B130		
TZ19070321	P182	P2182	Z407	V407	B130		
TZ19070322	P182	P2182	Z407	V407	B130		
TZ19070323	P182	P2182	Z407	V407	B130		
TZ19070324	P182	P2182	Z407	V407	B130		
TZ19070325	P182	P2182	Z407	V407	B130		
TZ19070326	P182	P2182	Z407	V407	B130		
TZ19070327	P182	P2182	Z407	V407	B130		
TZ19070328	P182	P2182	Z407	V407	B130		
TZ19070329	P182	P2182	Z407	V407	B130		
TZ19070330	P2182	P2182	Z407	V407	B130		



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6184	FORGED STEEL OS & Y GATE VALVE	1"RB 800LB	F1800T33

MATERIAL	ASTM A182 F6A	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Normalize	1020	1h/25mm, ≥2h	Elec	Air cooling to room temp.	
Temper	680	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Second Temper	650	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
		0.150	1.000	0.040	0.030	1.000	-	0.500	11.5 -13.5	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (°C) J								
	585	380	18	35	167-229	-								
Z407	0.100	0.310	0.024	0.016	0.220	-	0.190	12.100	-	-	-	-	-	-
	670	515	28	71	228	-	-	-	-	-	-	-	-	-
V407	0.100	0.320	0.028	0.018	0.310	-	0.150	12.310	-	-	-	-	-	-
	690	425	21	66	218	-	-	-	-	-	-	-	-	-
B130	0.100	0.390	0.024	0.017	0.370	-	0.110	11.770	-	-	-	-	-	-
	705	587	29	56	222	-	-	-	-	-	-	-	-	-


We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

DHV Industries, Inc.
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A

Terry Gonsman
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE ISO 9001:2015, API Q1: 9 TH ED			REPORT NO.	M18061818
				DATE	Jun/18/2018
				PAGE	1 of 5
CUSTOMER	CUSTOMER P.O.	DHV CONTROL NO.	ITEM NO.	LINE NO./CODE	
	ST4032	SO1711003	21	NA	
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.
F2151F73	1"RB	150LB	RF Flange	30 PCS	NA
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER	
FORGED STEEL GLOBE VALVE	A350 LF2 Body, 316SS Trim, 316SS/STL6 Seat Face		Handwheel	TJ18060193-TJ18060222	
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.	
API 602-2009/ISO 15761	<input type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4		<input type="checkbox"/> API 6FA, 3RD.Ed <input type="checkbox"/> API 607, 6TH.Ed	<input type="checkbox"/> NACE MR-0175/ISO15156-2015 <input checked="" type="checkbox"/> NACE MR-0103-2012	

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	BONNET	DISC	SEAT RING	STEM
BASE MATERIAL	A350 LF2	A350 LF2	A182 F316	-	A182 F316
FACE MATERIAL	NA	NA	NA	STL6	NA
NAME OF PART	SCREW	GASKET			
BASE MATERIAL	A320 L7M	SS+Graphite			
FACE MATERIAL	NA	NA			

PRESSURE TEST REPORT

Have been tested good according to API 598 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				BACKSEAT (HYDROSTATIC)	OTHER
		H.P. CLOSURE (HYDROSTATIC) ■ REQUIRED □ OPTIONAL		L.P. CLOSURE (AIR) □ REQUIRED ■ OPTIONAL			
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM		
PRESSURE (PSIG)	450	325	NA	NA	NA	325	NA
DURATION (Minutes)	1	1	NA	NA	NA	1	NA
RESULT	GOOD	GOOD				GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	ASME B16.34-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* MANAGER: *Terry Gonsman*
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A
 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	M18061818
DATE	Jun/18/2018
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4032	FORGED STEEL GLOBE VALVE	1"RB 150LB	F2151F73
MATERIAL	ASTM A350 LF2	MATERIAL ORIGIN	P.R.C.	

HEAT TREATMENT					
HEAT TREATMENT	TEMP.°C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	930	1h/25mm, ≥2h	Elec	Water cooling to room temp.	
Temper	620	1h/25mm, ≥1h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.300	0.60-1.35	0.035	0.040	0.15-0.30	0.400	0.400	0.300	0.120	0.080	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (-46°C) J								
	485-655	250	22	30	197	AVG ≥20, MIN ≥16								
P03721	0.220	0.830	0.022	0.017	0.270	0.130	0.140	0.090	0.080	0.070	-	-	-	-
	524	355	33	69	168	65	42	77						
P0871	0.210	0.950	0.017	0.002	0.250	0.130	0.120	0.200	0.080	0.020	-	-	-	-
	541	357	35	54	175	43	52	60						
P2481	0.210	0.750	0.020	0.021	0.230	0.030	0.010	0.020	0.020	0.015	-	-	-	-
	505	310	28	56	168	55	58	72						
P5411	0.180	0.650	0.021	0.011	0.230	0.030	0.030	0.090	0.020	0.003	-	-	-	-
	543	313	32	61	155	65	48	72						
P5471	0.190	0.740	0.015	0.014	0.190	0.050	0.020	0.060	0.030	0.002	-	-	-	-
	520	380	32	64	159	65	42	77						
P8371	0.190	0.790	0.022	0.006	0.250	0.050	0.050	0.110	0.050	0.001	-	-	-	-
	545	350	29	61	158	60	46	55						
P9651	0.190	0.690	0.029	0.007	0.220	0.030	0.020	0.050	0.050	0.001	-	-	-	-
	555	362	32	61	160	57	45	72						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* MANAGER: *Terry Gonsman*
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A
 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	M18061818
DATE	Jun/18/2018
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER	
	ST4032	FORGED STEEL GLOBE VALVE	1"RB 150LB	F2151F73	
MATERIAL	ASTM A182 F316	MATERIAL ORIGIN	P.R.C.		
HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Solution	1080	1h/25mm, ≥2h	Elec	Water cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.080	2.000	0.045	0.030	1.000	-	10.00-14.00	16.00-18.00	2.00-3.00	-	-	-	0.100	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (°C) J								
F208	515	205	30	50	-									
	0.020	0.950	0.036	0.002	0.430	-	10.600	16.600	2.070	-	-	-	0.010	-
V499	535	222	58	68	180	-	-	-	-	-	-	-	0.010	-
	0.018	1.050	0.039	0.006	0.420	-	10.060	16.280	2.060	-	-	-	0.010	-
	625	290	46	62	175	-	-	-	-	-	-	-	-	-

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

QUALITY ASSURANCE MANAGER

Terry Gonsman
 Quality Assurance Manager

DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	M18061818
DATE	Jun/18/2018
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	ST4032	FORGED STEEL GLOBE VALVE	1"RB 150LB	F2151F73
MATERIAL	ASTM A320 L7M	MATERIAL ORIGIN	P.R.C.	

HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	


CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	OTHER
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST (-73°C) J							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	AVG ≥27, MIN ≥20								
10536	690	550	18	50	235	-	-	0.880	0.190	-	-	-	-	-
	0.430	0.890	0.028	0.031	0.290	-	-	0.880	0.190	-	-	-	-	-
	725	565	18	55	216	34	38	40						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* QUALITY ASSURANCE MANAGER *Terry Gonsman*
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A **Terry Gonsman**
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE				REPORT NO.	M19111813
					DATE	Nov/18/2019
					PAGE	1 of 9
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE	
	5506		SO1811010	17	NA	
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.	
B2150F32	2"X1-1/2"RB	150LB	Raised Face Flanged End	100 PCS	NA	
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER		
FLOATING BALL VALVE	Two-Piece Body, A216 WCB Body, 316SS Trim, R-PTFE Seat Insert		Lever Operator	18113891-18113990		
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.		
API 608-2012	<input type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4		<input type="checkbox"/> API 6FA, 4RD.Ed <input checked="" type="checkbox"/> API 607, 7TH.Ed	<input checked="" type="checkbox"/> NACE MR-0175-2015 <input checked="" type="checkbox"/> NACE MR-0103-2015		

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	CAP	BALL	SEAT ASSEMBLY	STEM
BASE MATERIAL	A216 WCB	A216 WCB	A182 F316	R-PTFE	A182 F316
FACE MATERIAL	NA	NA	NA	R-PTFE	NA
NAME OF PART	BOLT/STUDS	NUTS	GASKET		
BASE MATERIAL	A193 B7M	A194 2HM	SS+GRAPHITE		
FACE MATERIAL	NA	NA	NA		

PRESSURE TEST REPORT

Have been tested good according to API 598, CSA Z245.15-17 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				OTHER
		H.P. CLOSURE (HYDROSTATIC)		L.P. CLOSURE (AIR)		
		■ REQUIRED □ OPTIONAL		■ REQUIRED □ OPTIONAL		
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	
PRESSURE (PSIG)	450	303	303	80	80	NA
DURATION (Minutes)	2	2	2	2	2	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	MSS SP-55-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:



QUALITY ASSURANCE MANAGER
 DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

Terry Gonsman
 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

REPORT NO.	M19111813
DATE	Nov/18/2019
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5506	FLOATING BALL VALVE	2"X1-1/2"RB 150LB	B2150F32

CRATE NO.:	84-86	QUANTITIES:	100 PCS
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SERIAL NO.	MATERIAL AND HEAT NUMBER					REMARKS
	BODY	CAP	BALL	STEM	OTHER	
	A216 WCB	A216 WCB	A182 F316	A182 F316		
18113891	T2686	T2685	ZC191301	JG104		
18113892	T2689	T2685	ZC191301	JG104		
18113893	T2686	T2686	ZC191301	JG104		
18113894	T2685	T2686	ZC191301	JG104		
18113895	T2688	T2685	ZC191301	JG104		
18113896	T2686	T2686	ZC191301	JG104		
18113897	T2685	T2686	ZC191301	JG104		
18113898	T2686	T2685	ZC191301	JG104		
18113899	T2689	T2686	ZC191301	JG104		
18113900	T2685	T2685	ZC191301	JG104		
18113901	T2685	T2686	ZC191301	JG104		
18113902	T2685	T2686	ZC191301	JG104		
18113903	T2686	L6223	ZC191301	JG104		
18113904	T2686	T2686	ZC191301	JG104		
18113905	T2686	T2686	ZC191301	JG104		
18113906	T2685	T2685	ZC191301	JG104		
18113907	T2686	T2462	ZC191301	JG104		
18113908	T2686	T2686	ZC191301	JG104		
18113909	T2686	T2685	ZC191301	JG104		
18113910	T2686	T2314	ZC191301	JG104		
18113911	T2686	T2686	ZC191301	JG104		
18113912	T2393	T2686	ZC191301	JG104		
18113913	T2686	T2685	ZC191301	JG104		
18113914	T2682	T2689	ZC191301	JG104		
18113915	T2686	T2686	ZC191301	JG104		
18113916	T2686	T2686	ZC191301	JG104		
18113917	T2685	T2686	ZC191301	JG104		
18113918	T2686	T2685	ZC191301	JG104		
18113919	T2686	T2683	ZC191301	JG104		
18113920	T2688	T2686	ZC191301	JG104		
18113921	T2686	T2685	ZC191301	JG104		
18113922	T2686	T2686	ZC191301	JG104		
18113923	T2685	T2686	ZC191301	JG104		
18113924	T2686	T2686	ZC191301	JG104		
18113925	T2686	T2313	ZC191301	JG104		
18113926	T2685	T2685	ZC191301	JG104		
18113927	T2686	T2686	ZC191301	JG104		
18113928	T2686	T2686	ZC191301	JG104		
18113929	T2689	T2686	ZC191301	JG104		
18113930	T2686	T2459	ZC191301	JG104		



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

REPORT NO. M1911813


DATE Nov/18/2019

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5506	FLOATING BALL VALVE	2"X1-1/2"RB 150LB	B2150F32

CRATE NO.: 84-86 QUANTITIES: 100 PCS

SERIAL NO.	MATERIAL AND HEAT NUMBER					REMARKS
	BODY	CAP	BALL	STEM	OTHER	
	A216 WCB	A216 WCB	A182 F316	A182 F316		
18113931	T2686	T2313	ZC191301	JG104		
18113932	T2686	T2685	ZC191301	JG104		
18113933	T2685	T2688	ZC191301	JG104		
18113934	T2686	T2686	ZC191301	JG104		
18113935	T2686	T2315	ZC191301	JG104		
18113936	T2685	T2686	ZC191301	JG104		
18113937	T2686	T2301	ZC191301	JG104		
18113938	T2685	T2685	ZC191301	JG104		
18113939	T2686	T2685	ZC191301	JG104		
18113940	T2685	T2686	ZC191301	JG104		
18113941	T2686	T2688	ZC191301	JG104		
18113942	T2685	T2686	ZC191301	JG104		
18113943	T2686	T2685	ZC191301	JG104		
18113944	T2685	T2483	ZC191301	JG104		
18113945	T2563	T2983	ZC191301	JG104		
18113946	T2685	T2685	ZC191301	JG104		
18113947	T2685	T2562	ZC191301	JG104		
18113948	T2686	T2685	ZC191301	JG104		
18113949	T2564	T2314	ZC191301	JG104		
18113950	T2685	T2685	ZC191301	JG104		
18113951	T2685	T2685	ZC191301	JG104		
18113952	T2686	T2685	ZC191301	JG104		
18113953	T2685	T2685	ZC191301	JG104		
18113954	T2686	T2686	ZC191301	JG104		
18113955	T2686	T2686	ZC191301	JG104		
18113956	T2685	T2685	ZC191301	JG104		
18113957	T2562	T2686	ZC191301	JG104		
18113958	T2686	T2685	ZC191301	JG104		
18113959	T2685	T2688	ZC191301	JG104		
18113960	T2685	T2686	ZC191301	JG104		
18113961	T2686	T2686	ZC191301	JG104		
18113962	T2686	T2686	ZC191301	JG104		
18113963	T2685	T2685	ZC191301	JG104		
18113964	T2685	T2685	ZC191301	JG104		
18113965	T2685	T2686	ZC191301	JG104		
18113966	T2685	T2686	ZC191301	JG104		
18113967	T2686	T2686	ZC191301	JG104		
18113968	T2686	T2686	ZC191301	JG104		
18113969	T2686	T2685	ZC191301	JG104		
18113970	T2686	T2683	ZC191301	JG104		

 DHV VALVE GROUP	<h1>MATERIAL TEST REPORT</h1> <h2>MILL CERTIFICATE</h2>					REPORT NO.	M19111813							
						DATE	Nov/18/2019							
						PAGE	5 of 9							
CUSTOMER	CUSTOMER P.O.	VALVE TYPE			SIZE/CLASS	FIGURE NUMBER								
	5506	FLOATING BALL VALVE			2"X1-1/2"RB 150LB	B2150F32								
MATERIAL	ASTM A216 WCB	MATERIAL ORIGIN			P.R.C									
HEAT TREATMENT														
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS		REMARK								
Normalize	920	1h/25mm, ≥2h	Gas	Air cooling to room temp.										
CHEMICAL AND MECHANICAL TEST REPORT														
Have been tested good according to the material specification and purchase order requirements														
STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Al	Bal.	Ni+Cu	CE
	0.18-0.23	1.000	0.035	0.035	0.600	0.300	0.500	0.500	0.200	0.030	0.060	1.000	0.150	0.430
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-°C) J								
	485-655	250	22	35	140-237	-								
L6223	0.217	0.978	0.028	0.017	0.451	0.029	0.021	0.057	0.004	0.003	0.003	0.114	0.050	0.396
	520	330	34	56	155	-	-	-						
T2301	0.193	0.889	0.022	0.015	0.438	0.023	0.087	0.034	0.004	0.003	0.005	0.151	0.110	0.357
	540	355	30	53	160	-	-	-						
T2312	0.195	0.930	0.024	0.015	0.521	0.032	0.023	0.130	0.006	0.003	0.001	0.194	0.055	0.381
	520	331	31	53	159	-	-	-						
T2313	0.188	0.930	0.029	0.018	0.537	0.032	0.035	0.073	0.009	0.003	0.001	0.152	0.067	0.364
	504	320	34	56	150	-	-	-						
T2314	0.204	0.920	0.027	0.019	0.498	0.030	0.020	0.065	0.005	0.003	0.001	0.123	0.050	0.375
	532	333	32	40	153	-	-	-						
T2315	0.183	0.950	0.031	0.015	0.425	0.037	0.024	0.077	0.006	0.003	0.001	0.147	0.061	0.363
	538	318	31	53	148	-	-	-						
T2391	0.197	0.951	0.024	0.015	0.520	0.057	0.043	0.224	0.035	0.007	0.009	0.366	0.100	0.415
	570	322	32	65	180	-	-	-						
T2393	0.197	0.976	0.022	0.017	0.396	0.037	0.091	0.039	0.003	0.003	0.002	0.173	0.128	0.377
	520	330	28	50	153	-	-	-						
T2459	0.189	0.821	0.020	0.017	0.425	0.048	0.054	0.099	0.004	0.004	0.014	0.209	0.102	0.354
	527	285	32	42	157	-	-	-						
T2462	0.191	0.821	0.020	0.016	0.431	0.048	0.067	0.112	0.004	0.003	0.017	0.234	0.115	0.359
	529	290	30	42	155	-	-	-						
T2483	0.187	0.818	0.021	0.017	0.425	0.015	0.019	0.014	0.008	0.003	0.015	0.059	0.034	0.331
	524	294	30	40	152	-	-	-						
<p>We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.</p>														
<p>WITNESSED BY: <i>DHV Industries, Inc.</i> 3451 Pegasus Drive Bakersfield, CA 93308. U.S.A</p> <p style="text-align: right;">Terry Gonsman Quality Assurance Manager</p>														

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	<h1>MATERIAL TEST REPORT</h1> <h2>MILL CERTIFICATE</h2>										REPORT NO.	M19111813		
											DATE	Nov/18/2019		
											PAGE	6 of 9		
CUSTOMER	CUSTOMER P.O.	VALVE TYPE				SIZE/CLASS	FIGURE NUMBER							
	5506	FLOATING BALL VALVE				2"X1-1/2"RB 150LB	B2150F32							
MATERIAL	ASTM A216 WCB	MATERIAL ORIGIN				P.R.C								
HEAT TREATMENT														
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK									
Normalize	920	1h/25mm, ≥2h	Gas	Air cooling to room temp.										
CHEMICAL AND MECHANICAL TEST REPORT														
Have been tested good according to the material specification and purchase order requirements														
STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Al	Bal.	Ni+Cu	CE
	0.18-0.23	1.000	0.035	0.035	0.600	0.300	0.500	0.500	0.200	0.030	0.060	1.000	0.150	0.430
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-°C) J								
	485-655	250	22	35	140-237	-								
T2562	0.190	0.807	0.021	0.016	0.423	0.049	0.016	0.013	0.003	0.003	0.013	0.084	0.065	0.333
	524	280	30	42	156	-	-	-						
T2563	0.184	0.821	0.023	0.014	0.441	0.045	0.021	0.015	0.004	0.005	0.015	0.090	0.066	0.330
	526	285	31	40	157	-	-	-						
T2564	0.186	0.813	0.020	0.017	0.435	0.044	0.020	0.016	0.006	0.004	0.016	0.090	0.064	0.331
	519	291	32	41	158	-	-	-						
T2586	0.191	0.815	0.022	0.016	0.441	0.011	0.021	0.017	0.005	0.003	0.015	0.057	0.032	0.334
	527	291	30	43	155	-	-	-						
T2682	0.209	0.930	0.024	0.017	0.409	0.017	0.031	0.060	0.010	0.007	0.006	0.125	0.048	0.383
	530	342	30	48	163	-	-	-						
T2683	0.183	0.818	0.020	0.017	0.436	0.045	0.014	0.021	0.006	0.003	0.012	0.089	0.059	0.329
	531	281	30	42	158	-	-	-						
T2685	0.185	0.822	0.022	0.015	0.435	0.048	0.019	0.017	0.004	0.004	0.011	0.092	0.067	0.331
	526	284	31	40	156	-	-	-						
T2686	0.183	0.817	0.022	0.015	0.435	0.048	0.019	0.017	0.004	0.004	0.011	0.092	0.067	0.329
	522	280	32	42	158	-	-	-						
T2688	0.190	0.821	0.022	0.016	0.432	0.044	0.016	0.020	0.005	0.003	0.016	0.088	0.060	0.336
	519	281	30	42	157	-	-	-						
T2689	0.187	0.824	0.020	0.017	0.425	0.043	0.019	0.018	0.004	0.006	0.013	0.090	0.062	0.334
	527	289	32	41	155	-	-	-						
T2983	0.190	0.809	0.020	0.017	0.422	0.043	0.017	0.019	0.003	0.005	0.014	0.087	0.060	0.334
	528	289	30	41	154	-	-	-						
<p>We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.</p> <p>WITNESSED BY: <i>DHV Industries, Inc.</i> <small>QUALITY ASSURANCE MANAGER</small>  Terry Gonsman Quality Assurance Manager 3451 Pegasus Drive Bakersfield, CA 93308, U.S.A</p>														

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19111813
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5506	FLOATING BALL VALVE	2"X1-1/2"RB 150LB	B2150F32

MATERIAL	ASTM A182 F316	MATERIAL ORIGIN	P.R.C
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Solution	1040	1h/25mm, ≥1h	Elec	Water cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)														
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other	
	0.080	2.000	0.045	0.030	1.000	-	10.00-14.00	16.00-18.00	2.00-3.00	-	-	-	0.100	-	
HEAT NO.	MECHANICAL PROPERTIES (≥)														
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (°C) J									
ZC191301	515	205	30	50	150-237	-									
	0.050	0.940	0.034	0.010	0.410	-	10.070	16.920	2.060	-	-	-	0.070	-	
	537	235	35	62	170	-	-	-	-	-	-	-	-	-	
JG104	0.053	0.120	0.029	0.012	0.310	-	11.530	17.320	2.080	-	-	-	0.061	-	
	561	265	62	76	167	-	-	-	-	-	-	-	-	-	

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

QUALITY ASSURANCE MANAGER

DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308. U.S.A.

Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19111813
DATE	Nov/18/2019
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5506	FLOATING BALL VALVE	2"X1-1/2"RB 150LB	B2150F32

MATERIAL	ASTM A193 B7M	MATERIAL ORIGIN	P.R.C
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Oil cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT


Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	OTHER
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	(-°C) J								
032803	690	550	18	50	200-235	-	-	0.890	0.170	-	-	-	-	-
	721	582	21	53	204	-	-	-	-	-	-	-	-	-

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

QUALITY ASSURANCE MANAGER:

DHV Industries, Inc. 
 3451 Pegasus Drive Terry Gonsman
 Bakersfield, CA 93308, U.S.A Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19111813
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5506	FLOATING BALL VALVE	2"X1-1/2"RB 150LB	B2150F32

MATERIAL	ASTM A194 2HM	MATERIAL ORIGIN	P.R.C
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HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Oil cooling to room temp.	
Temper	620	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	OTHER
	≥0.40	1.000	0.040	0.050	0.400	-	-	-	-	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST (-°C) J							
	T.S. MPa	YS. MPa	EL. (%)	R.A. (%)	HARD (HB)									
032804	0.410	0.760	0.025	0.036	0.250	-	-	-	-	-	-	-	-	-
					219	-	-	-	-	-	-	-	-	-

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

QUALITY ASSURANCE MANAGER:


DHV Industries, Inc.
3451 Pegasus Drive
Bakersfield, CA 93308. U.S.A

Terry Gonsman
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

101734

LINE # 26

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE				REPORT NO.	M19012241
					DATE	Jan/22/2019
					PAGE	1 of 6
CUSTOMER ALTEK Industrial		CUSTOMER P.O. ST4114		DHV CONTROL NO. SO1801017	ITEM NO. 6	LINE NO./CODE NA
FIGURE NUMBER B115AF32	SIZE 2"FB	CLASS 150LB	END TYPE RF Flange	QTY. 37 PCS	TAG NO. NA	
VALVE TYPE FLOATING BALL VALVE	VALVE DESCRIPTION Two-Piece Body, A352 LCC Body, 316SS Trim, R-PTFE Seat Insert		OPERATE OP Lever Op	SERIAL NUMBER 18012413-18012446, 18022253- 18022255		
DESIGN STANDARD API 608-2012	QSL <input type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4		FIRE SAFE <input type="checkbox"/> API 6FA, 3RD.Ed <input checked="" type="checkbox"/> API 607, 6TH.Ed	I.A.W. N.A.C.E. <input type="checkbox"/> NACE MR-0175-2002 <input checked="" type="checkbox"/> NACE MR-0103-2012		

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	CAP	BALL	SEAT ASSEMBLY	STEM
BASE MATERIAL	A352 LCC	A352 LCC	A182 F316	R-PTFE	A182 F316
FACE MATERIAL	NA	NA	NA	R-PTFE	NA
NAME OF PART	BOLT/STUDS	NUTS	GASKET		
BASE MATERIAL	A320 L7M	A194 7M	SS+GRAPHITE		
FACE MATERIAL	NA	NA	NA		

PRESSURE TEST REPORT

Have been tested good according to API 598, CSA Z245.15-17 and the purchase order requirements

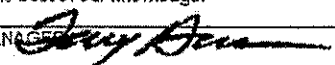
	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				OTHER
		H.P. CLOSURE (HYDROSTATIC) ■ REQUIRED □ OPTIONAL		L.P. CLOSURE (AIR) ■ REQUIRED □ OPTIONAL		
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	
PRESSURE (PSIG)	450	325	325	80	80	NA
DURATION (Minutes)	2	2	2	2	2	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	MSS SP-55-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.*
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A


Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	ST4114	FLOATING BALL VALVE	2"FB 150LB	B115AF32
MATERIAL	ASTM A352 LCC	Material Origin	P.R.C	

HEAT TREATMENT

HEAT TREATMENT	TEMP.°C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	910	1h/25mm, ≥2h	Gas	Water cooling to room temp.	
Temper	650	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	SI	Cu	Ni	Cr	Mo	V	Nb	AL	N	CE
	0.250	1.200	0.040	0.045	0.600	0.300	0.500	0.500	0.200	0.030	-	-	-	0.430
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST (-46°C) J, 10*10mm Any direction							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	SINGLE MIN ≥27J								
T3081	0.195	0.968	0.020	0.016	0.336	0.051	0.218	0.207	0.003	0.006	-	-	-	0.417
	527	286	32	41	152	29	30	31						
T3160	0.188	0.971	0.023	0.014	0.324	0.041	0.223	0.217	0.004	0.006	-	-	-	0.413
	516	278	33	43	157	29	30	31						
T3161	0.191	0.958	0.020	0.017	0.329	0.039	0.218	0.221	0.006	0.005	-	-	-	0.414
	528	281	30	40	153	31	32	33						
T3162	0.182	0.966	0.024	0.016	0.332	0.045	0.221	0.209	0.004	0.003	-	-	-	0.404
	519	288	31	41	156	30	29	31						
T3163	0.186	0.959	0.022	0.015	0.327	0.047	0.219	0.218	0.003	0.004	-	-	-	0.409
	522	283	32	42	155	33	32	31						
T3169	0.192	0.969	0.022	0.015	0.334	0.047	0.206	0.209	0.006	0.004	-	-	-	0.414
	525	287	32	41	153	30	32	31						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

DHV Industries, Inc.
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A

Terry Gonsman
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	ST4114	FLOATING BALL VALVE	2"FB 150LB	B115AF32
MATERIAL	ASTM A182 F316	Material Origin	P.R.C	

HEAT TREATMENT

HEAT TREATMENT	TEMP.°C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Solution	1040	1h/25mm, ≥1h	Elec	Water cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (±)													
	C	Mn	P	S	Si	Cu	NI	Cr	Mo	V	Nb	AL	N	Other
	0.080	2.000	0.045	0.030	1.000	-	10.00-14.00	16.00-18.00	2.00-3.00	-	-	-	0.100	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	YS. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (°C) J								
ZC181298	515	205	30	50	-									
	0.042	0.820	0.039	0.005	0.300	-	10.070	16.350	2.060	-	-	-	0.040	-
	535	235	37	62	168									
ZC1298	0.044	0.810	0.039	0.002	0.360	-	10.070	16.380	2.050	-	-	-	0.070	-
	532	232	45	65	170									
NLY8303	0.025	1.090	0.039	0.002	0.450	-	10.060	16.120	2.060	-	-	-	0.010	-
	540	225	38	65	167									
HH1801	0.021	1.130	0.023	0.002	0.610	-	10.090	16.320	2.070	-	-	-	0.010	-
	535	234	49	59	172									

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* *Terry Gonsman*
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A **Terry Gonsman**
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	ST4114	FLOATING BALL VALVE	2"FB 150LB	B115AF32
MATERIAL	ASTM A320 L7M	MATERIAL ORIGIN	P.R.C.	

HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (-73°C) J								
	680	550	18	50	235	AVG ≥ 27, MIN ≥ 20								
10536	0.430	0.890	0.028	0.031	0.290	-	-	0.860	0.190	-	-	-	-	-
	725	565	18	55	218	34	35	40						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* QUALITY ASSURANCE MANAGER 
3451 Pegasus Drive
Bakersfield, CA 93308. U.S.A **Terry Gonsman**
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	ST4114	FLOATING BALL VALVE	2"FB 150LB	B115AF32

MATERIAL	ASTM A194 7M	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT


Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (±)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.040	0.040	0.15-0.35	-	-	0.8-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	(°C) J								
10537	0.430	0.780	0.030	0.029	0.260	-	-	0.890	0.210	-	-	-	-	-
					186									

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* Terry Gonsman
 3451 Pegasus Drive
 Bakersfield, CA 93308. U.S.A
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE				REPORT NO.	M19101117
					DATE	Oct/11/2019
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CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE	
	5857		SO1902010	35	NA	
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.	
B2153F32	2"X1-1/2"RB	150LB	RF Flange	160 PCS	NA	
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER		
FLOATING BALL VALVE	Two-Piece Body, A350 LF2 Body, 316SS Trim, R-PTFE Seat Insert		Lever Op	19024481-19024640		
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.		
API 608-2012	<input type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4		<input type="checkbox"/> API 6FA, 4RD.Ed <input checked="" type="checkbox"/> API 607, 7TH.Ed	<input checked="" type="checkbox"/> NACE MR-0175-2015 <input checked="" type="checkbox"/> NACE MR-0103-2015		

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	CAP	BALL	SEAT ASSEMBLY	STEM
BASE MATERIAL	A350 LF2	A350 LF2	A182 F316	R-PTFE	A182 F316
FACE MATERIAL	NA	NA	NA	R-PTFE	NA
NAME OF PART	BOLT/STUDS	NUTS	GASKET		
BASE MATERIAL	A320 L7M	A194 7M	SS+GRAPHITE		
FACE MATERIAL	NA	NA	NA		

PRESSURE TEST REPORT

Have been tested good according to API 598, CSA Z245.15-17 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				OTHER
		H.P. CLOSURE (HYDROSTATIC)		L.P. CLOSURE (AIR)		
		<input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		<input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	
PRESSURE (PSIG)	450	303	303	80	80	NA
DURATION (Minutes)	2	2	2	2	2	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	


OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	ASME B16.34-GOOD	NA


We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: _____ QUALITY ASSURANCE MANAGER:

DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308. U.S.A


Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT VALVE TRACEABILITY				REPORT NO.	M19101117
					DATE	Oct/11/2019
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER		
	5857	FLOATING BALL VALVE	2"X1-1/2"RB150LB	B2153F32		
CRATE NO.:		14-15, 37-38	QUANTITIES:		160 PCS	
SERIAL NO.	MATERIAL AND HEAT NUMBER					REMARKS
	BODY	CAP	BALL	STEM	OTHER	
	A350 LF2	A350 LF2	A182 F316	A182 F316		
19024481	18110257-1	18060037-1	ZC191301	LKJ6104		
19024482	18110257-1	18060037-1	ZC191301	LKJ6104		
19024483	18110257-1	18060037-1	ZC191301	LKJ6104		
19024484	18110257-1	18060037-1	ZC191301	LKJ6104		
19024485	18110257-1	18060037-1	ZC191301	LKJ6104		
19024486	18110257-1	18060037-1	ZC191301	LKJ6104		
19024487	18110257-1	18060037-1	ZC191301	LKJ6104		
19024488	18110257-1	18060037-1	ZC191301	LKJ6104		
19024489	18110257-1	18060037-1	ZC191301	LKJ6104		
19024490	18110257-1	18060037-1	ZC191301	LKJ6104		
19024491	18110257-1	18060037-1	ZC191301	LKJ6104		
19024492	18110257-1	18060037-1	ZC191301	LKJ6104		
19024493	18110257-1	18060037-1	ZC191301	LKJ6104		
19024494	18110257-1	18060037-1	ZC191301	LKJ6104		
19024495	18110257-1	18060037-1	ZC191301	LKJ6104		
19024496	18110257-1	18060037-1	ZC191301	LKJ6104		
19024497	18110257-1	18060037-1	ZC191301	LKJ6104		
19024498	18110257-1	18060037-1	ZC191301	LKJ6104		
19024499	18110257-1	18060037-1	ZC191301	LKJ6104		
19024500	18110257-1	18060037-1	ZC191301	LKJ6104		
19024501	18110257-1	18060037-1	ZC191301	LKJ6104		
19024502	18110257-1	18060037-1	ZC191301	LKJ6104		
19024503	18110257-1	18060037-1	ZC191301	LKJ6104		
19024504	18110257-1	18060037-1	ZC191301	LKJ6104		
19024505	18110257-1	18060037-1	ZC191301	LKJ6104		
19024506	18110257-1	18060037-1	ZC191301	LKJ6104		
19024507	18110257-1	18060037-1	ZC191301	LKJ6104		
19024508	18110257-1	18060037-1	ZC191301	LKJ6104		
19024509	18110257-1	18060037-1	ZC191301	LKJ6104		
19024510	18110257-1	18060037-1	ZC191301	LKJ6104		
19024511	18110257-1	18060037-1	ZC191301	LKJ6104		
19024512	18110257-1	18060037-1	ZC191301	LKJ6104		
19024513	18110257-1	18060037-1	ZC191301	LKJ6104		
19024514	18110257-1	18060037-1	ZC191301	LKJ6104		
19024515	18110257-1	18060037-1	ZC191301	LKJ6104		
19024516	18110257-1	18060037-1	ZC191301	LKJ6104		
19024517	18110257-1	18060037-1	ZC191301	LKJ6104		
19024518	18110257-1	18060037-1	ZC191301	LKJ6104		
19024519	18110257-1	18060037-1	ZC191301	LKJ6104		
19024520	18110257-1	18060037-1	ZC191301	LKJ6104		



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5857	FLOATING BALL VALVE	2"X1-1/2"RB150LB	B2153F32

CRATE NO.: 14-15, 37-38 QUANTITIES: 160 PCS

SERIAL NO.	MATERIAL AND HEAT NUMBER					REMARKS
	BODY	CAP	BALL	STEM	OTHER	
	A350 LF2	A350 LF2	A182 F316	A182 F316		
19024521	18110257-1	18060037-1	ZC191301	LKJ6104		
19024522	18110257-1	18060037-1	ZC191301	LKJ6104		
19024523	18110257-1	18060037-1	ZC191301	LKJ6104		
19024524	18110257-1	18060037-1	ZC191301	LKJ6104		
19024525	18110257-1	18060037-1	ZC191301	LKJ6104		
19024526	18110257-1	18060037-1	ZC191301	LKJ6104		
19024527	18110257-1	18060037-1	ZC191301	LKJ6104		
19024528	18110257-1	18060037-1	ZC191301	LKJ6104		
19024529	18110257-1	18060037-1	ZC191301	LKJ6104		
19024530	18110257-1	18060037-1	ZC191301	LKJ6104		
19024531	18110257-1	18060037-1	ZC191301	LKJ6104		
19024532	18110257-1	18060037-1	ZC191301	LKJ6104		
19024533	18110257-1	18060037-1	ZC191301	LKJ6104		
19024534	18110257-1	18060037-1	ZC191301	LKJ6104		
19024535	18110257-1	18060037-1	ZC191301	LKJ6104		
19024536	18110257-1	18060037-1	ZC191301	LKJ6104		
19024537	18110257-1	18060037-1	ZC191301	LKJ6104		
19024538	18110257-1	18060037-1	ZC191301	LKJ6104		
19024539	18110257-1	18060037-1	ZC191301	LKJ6104		
19024540	18110257-1	18060037-1	ZC191301	LKJ6104		
19024541	18110257-1	18060037-1	ZC191301	LKJ6104		
19024542	18110257-1	18060037-1	ZC191301	LKJ6104		
19024543	18110257-1	18060037-1	ZC191301	LKJ6104		
19024544	18110257-1	18060037-1	ZC191301	LKJ6104		
19024545	18110257-1	18060037-1	ZC191301	LKJ6104		
19024546	18110257-1	18060037-1	ZC191301	LKJ6104		
19024547	18110257-1	18060037-1	ZC191301	LKJ6104		
19024548	18110257-1	18060037-1	ZC191301	LKJ6104		
19024549	18110257-1	18060037-1	ZC191301	LKJ6104		
19024550	18110257-1	18060037-1	ZC191301	LKJ6104		
19024551	18110257-1	18060037-1	ZC191301	LKJ6104		
19024552	18110257-1	18060037-1	ZC191301	LKJ6104		
19024553	18110257-1	18060037-1	ZC191301	LKJ6104		
19024554	18110257-1	18060037-1	ZC191301	LKJ6104		
19024555	18110257-1	18060037-1	ZC191301	LKJ6104		
19024556	18110257-1	18060037-1	ZC191301	LKJ6104		
19024557	18110257-1	18060037-1	ZC191301	LKJ6104		
19024558	18110257-1	18060037-1	ZC191301	LKJ6104		
19024559	18110257-1	18060037-1	ZC191301	LKJ6104		
19024560	18110257-1	18060037-1	ZC191301	LKJ6104		



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5857	FLOATING BALL VALVE	2"X1-1/2"RB150LB	B2153F32

CRATE NO.: 14-15, 37-38 QUANTITIES: 160 PCS

SERIAL NO.	MATERIAL AND HEAT NUMBER					REMARKS
	BODY	CAP	BALL	STEM	OTHER	
	A350 LF2	A350 LF2	A182 F316	A182 F316		
19024561	18110257-1	18060037-1	ZC191301	LKJ6104		
19024562	18110257-1	18060037-1	ZC191301	LKJ6104		
19024563	18110257-1	18060037-1	ZC191301	LKJ6104		
19024564	18110257-1	18060037-1	ZC191301	LKJ6104		
19024565	18110257-1	18060037-1	ZC191301	LKJ6104		
19024566	18110257-1	18060037-1	ZC191301	LKJ6104		
19024567	18110257-1	18060037-1	ZC191301	LKJ6104		
19024568	18110257-1	18060037-1	ZC191301	LKJ6104		
19024569	18110257-1	18060037-1	ZC191301	LKJ6104		
19024570	18110257-1	18060037-1	ZC191301	LKJ6104		
19024571	18110257-1	18060037-1	ZC191301	LKJ6104		
19024572	18110257-1	18060037-1	ZC191301	LKJ6104		
19024573	18110257-1	18060037-1	ZC191301	LKJ6104		
19024574	18110257-1	18060037-1	ZC191301	LKJ6104		
19024575	18110257-1	18060037-1	ZC191301	LKJ6104		
19024576	18110257-1	18060037-1	ZC191301	LKJ6104		
19024577	18110257-1	18060037-1	ZC191301	LKJ6104		
19024578	18110257-1	18060037-1	ZC191301	LKJ6104		
19024579	18110257-1	18060037-1	ZC191301	LKJ6104		
19024580	18110257-1	18060037-1	ZC191301	LKJ6104		
19024581	18110257-1	18060037-1	ZC191301	LKJ6104		
19024582	18110257-1	18060037-1	ZC191301	LKJ6104		
19024583	18110257-1	18060037-1	ZC191301	LKJ6104		
19024584	18110257-1	18060037-1	ZC191301	LKJ6104		
19024585	18110257-1	18060037-1	ZC191301	LKJ6104		
19024586	18110257-1	18060037-1	ZC191301	LKJ6104		
19024587	18110257-1	18060037-1	ZC191301	LKJ6104		
19024588	18110257-1	18060037-1	ZC191301	LKJ6104		
19024589	18110257-1	18060037-1	ZC191301	LKJ6104		
19024590	18110257-1	18060037-1	ZC191301	LKJ6104		
19024591	18110257-1	18060037-1	ZC191301	LKJ6104		
19024592	18110257-1	18060037-1	ZC191301	LKJ6104		
19024593	18110257-1	18060037-1	ZC191301	LKJ6104		
19024594	18110257-1	18060037-1	ZC191301	LKJ6104		
19024595	18110257-1	18060037-1	ZC191301	LKJ6104		
19024596	18110257-1	18060037-1	ZC191301	LKJ6104		
19024597	18110257-1	18060037-1	ZC191301	LKJ6104		
19024598	18110257-1	18060037-1	ZC191301	LKJ6104		
19024599	18110257-1	18060037-1	ZC191301	LKJ6104		
19024600	18110257-1	18060037-1	ZC191301	LKJ6104		



DHV VALVE GROUP

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5857	FLOATING BALL VALVE	2"X1-1/2"RB150LB	B2153F32

CRATE NO.: 14-15, 37-38 **QUANTITIES:** 160 PCS

SERIAL NO.	MATERIAL AND HEAT NUMBER					REMARKS
	BODY	CAP	BALL	STEM	OTHER	
	A350 LF2	A350 LF2	A182 F316	A182 F316		
19024601	18110257-1	18060037-1	ZC191301	LKJ6104		
19024602	18110257-1	18060037-1	ZC191301	LKJ6104		
19024603	18110257-1	18060037-1	ZC191301	LKJ6104		
19024604	18110257-1	18060037-1	ZC191301	LKJ6104		
19024605	18110257-1	18060037-1	ZC191301	LKJ6104		
19024606	18110257-1	18060037-1	ZC191301	LKJ6104		
19024607	18110257-1	18060037-1	ZC191301	LKJ6104		
19024608	18110257-1	18060037-1	ZC191301	LKJ6104		
19024609	18110257-1	18060037-1	ZC191301	LKJ6104		
19024610	18110257-1	18060037-1	ZC191301	LKJ6104		
19024611	18110257-1	18060037-1	ZC191301	LKJ6104		
19024612	18110257-1	18060037-1	ZC191301	LKJ6104		
19024613	18110257-1	18060037-1	ZC191301	LKJ6104		
19024614	18110257-1	18060037-1	ZC191301	LKJ6104		
19024615	18110257-1	18060037-1	ZC191301	LKJ6104		
19024616	18110257-1	18060037-1	ZC191301	LKJ6104		
19024617	18110257-1	18060037-1	ZC191301	LKJ6104		
19024618	18110257-1	18060037-1	ZC191301	LKJ6104		
19024619	18110257-1	18060037-1	ZC191301	LKJ6104		
19024620	18110257-1	18060037-1	ZC191301	LKJ6104		
19024621	18110257-1	18060037-1	ZC191301	LKJ6104		
19024622	18110257-1	18060037-1	ZC191301	LKJ6104		
19024623	18110257-1	18060037-1	ZC191301	LKJ6104		
19024624	18110257-1	18060037-1	ZC191301	LKJ6104		
19024625	18110257-1	18060037-1	ZC191301	LKJ6104		
19024626	18110257-1	18060037-1	ZC191301	LKJ6104		
19024627	18110257-1	18060037-1	ZC191301	LKJ6104		
19024628	18110257-1	18060037-1	ZC191301	LKJ6104		
19024629	18110257-1	18060037-1	ZC191301	LKJ6104		
19024630	18110257-1	18060037-1	ZC191301	LKJ6104		
19024631	18110257-1	18060037-1	ZC191301	LKJ6104		
19024632	18110257-1	18060037-1	ZC191301	LKJ6104		
19024633	18110257-1	18060037-1	ZC191301	LKJ6104		
19024634	18110257-1	18060037-1	ZC191301	LKJ6104		
19024635	18110257-1	18060037-1	ZC191301	LKJ6104		
19024636	18110257-1	18060037-1	ZC191301	LKJ6104		
19024637	18110257-1	18060037-1	ZC191301	LKJ6104		
19024638	18110257-1	18060037-1	ZC191301	LKJ6104		
19024639	18110257-1	18060037-1	ZC191301	LKJ6104		
19024640	18110257-1	18060037-1	ZC191301	LKJ6104		



DHV VALVE GROUP

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5857	FLOATING BALL VALVE	2"X1-1/2"RB150LB	B2153F32

MATERIAL	ASTM A194 7M	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	SI	Cu	NI	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	(-°C) J								
10537	0.430	0.780	0.030	0.029	0.260	-	-	0.890	0.210	-	-	-	-	-
					186	-	-							

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.


WITNESSED BY:

DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

QUALITY ASSURANCE MANAGER

Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE				REPORT NO.	M19112417
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CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE	
	5857		SO1902010	3	NA	
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.	
B1153F32	2"FB	150LB	RF Flange	60 PCS	NA	
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER		
FLOATING BALL VALVE	Two-Piece Body, A350 LF2 Body, 316SS Trim, R-PTFE Seat Insert		Lever Op	19021038-19021097		
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.		
API 608-2012	<input type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4		<input type="checkbox"/> API 6FA, 4RD.Ed <input checked="" type="checkbox"/> API 607, 7TH.Ed	<input checked="" type="checkbox"/> NACE MR-0175-2015 <input checked="" type="checkbox"/> NACE MR-0103-2015		

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	CAP	BALL	SEAT ASSEMBLY	STEM
BASE MATERIAL	A350 LF2	A350 LF2	A182 F316	R-PTFE	A182 F316
FACE MATERIAL	NA	NA	NA	R-PTFE	NA
NAME OF PART	BOLT/STUDS	NUTS	GASKET		
BASE MATERIAL	A320 L7M	A194 7M	SS+GRAPHITE		
FACE MATERIAL	NA	NA	NA		

PRESSURE TEST REPORT

Have been tested good according to API 598, CSA Z245.15-17 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				OTHER
		H.P. CLOSURE (HYDROSTATIC)		L.P. CLOSURE (AIR)		
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	
PRESSURE (PSIG)	450	303	303	80	80	NA
DURATION (Minutes)	2	2	2	2	2	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	ASTM A961-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.*
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

QUALITY ASSURANCE MANAGER: *Terry Gonsman*
 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5857	FLOATING BALL VALVE	2"FB 150LB	B1153F32

CRATE NO.: 124-125 QUANTITIES: 60 PCS

SERIAL NO.	MATERIAL AND HEAT NUMBER					REMARKS
	BODY	CAP	BALL	STEM	OTHER	
	A350 LF2	A350 LF2	A182 F316	A182 F316		
19021038	18060039-1	18060039-1	ZC191303	LKJG104		
19021039	18060039-1	18060039-1	ZC191303	LKJG104		
19021040	18060039-1	18060039-1	ZC191303	LKJG104		
19021041	18060039-1	18060039-1	ZC191303	LKJG104		
19021042	18060039-1	18060039-1	ZC191303	LKJG104		
19021043	18060039-1	18060039-1	ZC191303	LKJG104		
19021044	18060039-1	18060039-1	ZC191303	LKJG104		
19021045	18060039-1	18060039-1	ZC191303	LKJG104		
19021046	18060039-1	18060039-1	ZC191303	LKJG104		
19021047	18060039-1	18060039-1	ZC191303	LKJG104		
19021048	18060039-1	18060039-1	ZC191303	LKJG104		
19021049	18060039-1	18060039-1	ZC191303	LKJG104		
19021050	18060039-1	18060039-1	ZC191303	LKJG104		
19021051	18060039-1	18060039-1	ZC191303	LKJG104		
19021052	18060039-1	18060039-1	ZC191303	LKJG104		
19021053	18060039-1	18060039-1	ZC191303	LKJG104		
19021054	18060039-1	18060039-1	ZC191303	LKJG104		
19021055	18060039-1	18060039-1	ZC191303	LKJG104		
19021056	18060039-1	18060039-1	ZC191303	LKJG104		
19021057	18060039-1	18060039-1	ZC191303	LKJG104		
19021058	18060039-1	18060039-1	ZC191303	LKJG104		
19021059	18060039-1	18060039-1	ZC191303	LKJG104		
19021060	18060039-1	18060039-1	ZC191303	LKJG104		
19021061	18060039-1	18060039-1	ZC191303	LKJG104		
19021062	18060039-1	18060039-1	ZC191303	LKJG104		
19021063	18060039-1	18060039-1	ZC191303	LKJG104		
19021064	18060039-1	18060039-1	ZC191303	LKJG104		
19021065	18060039-1	18060039-1	ZC191303	LKJG104		
19021066	18060039-1	18060039-1	ZC191303	LKJG104		
19021067	18060039-1	18060039-1	ZC191303	LKJG104		
19021068	18060039-1	18060039-1	ZC191303	LKJG104		
19021069	18060039-1	18060039-1	ZC191303	LKJG104		
19021070	18060039-1	18060039-1	ZC191303	LKJG104		
19021071	18060039-1	18060039-1	ZC191303	LKJG104		
19021072	18060039-1	18060039-1	ZC191303	LKJG104		
19021073	18060039-1	18060039-1	ZC191303	LKJG104		
19021074	18060039-1	18060039-1	ZC191303	LKJG104		
19021075	18060039-1	18060039-1	ZC191303	LKJG104		
19021076	18060039-1	18060039-1	ZC191303	LKJG104		
19021077	18060039-1	18060039-1	ZC191303	LKJG104		



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5857	FLOATING BALL VALVE	2"FB 150LB	B1153F32

MATERIAL	ASTM A320 L7M	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT

HEAT TREATMENT	TEMP.°C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-73°C) J								
	690	550	18	50	200-235	AVG ≥ 27, MIN ≥ 20								
10536	0.430	0.890	0.028	0.031	0.290	-	-	0.880	0.190	-	-	-	-	-
	725	565	20	55	216	34	38	40						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.


WITNESSED BY:

DHV Industries Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308. U.S.A

QUALITY ASSURANCE MANAGER:

 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE				REPORT NO.	M19112417
					DATE	Nov/24/2019
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CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE	
	5857		SO1902010	3	NA	
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.	
B1153F32	2"FB	150LB	RF Flange	60 PCS	NA	
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER		
FLOATING BALL VALVE	Two-Piece Body, A350 LF2 Body, 316SS Trim, R-PTFE Seat Insert		Lever Op	19021038-19021097		
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.		
API 608-2012	<input type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4		<input type="checkbox"/> API 6FA, 4RD.Ed <input checked="" type="checkbox"/> API 607, 7TH.Ed	<input checked="" type="checkbox"/> NACE MR-0175-2015 <input checked="" type="checkbox"/> NACE MR-0103-2015		

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	CAP	BALL	SEAT ASSEMBLY	STEM
BASE MATERIAL	A350 LF2	A350 LF2	A182 F316	R-PTFE	A182 F316
FACE MATERIAL	NA	NA	NA	R-PTFE	NA
NAME OF PART	BOLT/STUDS	NUTS	GASKET		
BASE MATERIAL	A320 L7M	A194 7M	SS+GRAPHITE		
FACE MATERIAL	NA	NA	NA		

PRESSURE TEST REPORT

Have been tested good according to API 598, CSA Z245.15-17 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				OTHER
		H.P. CLOSURE (HYDROSTATIC) <input type="checkbox"/> REQUIRED <input checked="" type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	
PRESSURE (PSIG)	450	303	303	80	80	NA
DURATION (Minutes)	2	2	2	2	2	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	ASTM A961-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A


Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

REPORT NO.	M19112417
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5857	FLOATING BALL VALVE	2"FB 150LB	B1153F32

CRATE NO.:		124-125				QUANTITIES:	60 PCS
SERIAL NO.	MATERIAL AND HEAT NUMBER					REMARKS	
	BODY	CAP	BALL	STEM	OTHER		
	A350 LF2	A350 LF2	A182 F316	A182 F316			
19021038	18060039-1	18060039-1	ZC191303	LKJG104			
19021039	18060039-1	18060039-1	ZC191303	LKJG104			
19021040	18060039-1	18060039-1	ZC191303	LKJG104			
19021041	18060039-1	18060039-1	ZC191303	LKJG104			
19021042	18060039-1	18060039-1	ZC191303	LKJG104			
19021043	18060039-1	18060039-1	ZC191303	LKJG104			
19021044	18060039-1	18060039-1	ZC191303	LKJG104			
19021045	18060039-1	18060039-1	ZC191303	LKJG104			
19021046	18060039-1	18060039-1	ZC191303	LKJG104			
19021047	18060039-1	18060039-1	ZC191303	LKJG104			
19021048	18060039-1	18060039-1	ZC191303	LKJG104			
19021049	18060039-1	18060039-1	ZC191303	LKJG104			
19021050	18060039-1	18060039-1	ZC191303	LKJG104			
19021051	18060039-1	18060039-1	ZC191303	LKJG104			
19021052	18060039-1	18060039-1	ZC191303	LKJG104			
19021053	18060039-1	18060039-1	ZC191303	LKJG104			
19021054	18060039-1	18060039-1	ZC191303	LKJG104			
19021055	18060039-1	18060039-1	ZC191303	LKJG104			
19021056	18060039-1	18060039-1	ZC191303	LKJG104			
19021057	18060039-1	18060039-1	ZC191303	LKJG104			
19021058	18060039-1	18060039-1	ZC191303	LKJG104			
19021059	18060039-1	18060039-1	ZC191303	LKJG104			
19021060	18060039-1	18060039-1	ZC191303	LKJG104			
19021061	18060039-1	18060039-1	ZC191303	LKJG104			
19021062	18060039-1	18060039-1	ZC191303	LKJG104			
19021063	18060039-1	18060039-1	ZC191303	LKJG104			
19021064	18060039-1	18060039-1	ZC191303	LKJG104			
19021065	18060039-1	18060039-1	ZC191303	LKJG104			
19021066	18060039-1	18060039-1	ZC191303	LKJG104			
19021067	18060039-1	18060039-1	ZC191303	LKJG104			
19021068	18060039-1	18060039-1	ZC191303	LKJG104			
19021069	18060039-1	18060039-1	ZC191303	LKJG104			
19021070	18060039-1	18060039-1	ZC191303	LKJG104			
19021071	18060039-1	18060039-1	ZC191303	LKJG104			
19021072	18060039-1	18060039-1	ZC191303	LKJG104			
19021073	18060039-1	18060039-1	ZC191303	LKJG104			
19021074	18060039-1	18060039-1	ZC191303	LKJG104			
19021075	18060039-1	18060039-1	ZC191303	LKJG104			
19021076	18060039-1	18060039-1	ZC191303	LKJG104			
19021077	18060039-1	18060039-1	ZC191303	LKJG104			



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5857	FLOATING BALL VALVE	2"FB 150LB	B1153F32

MATERIAL	ASTM A182 F316	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Solution	1040	1h/25mm, ≥1h	Elec	Water cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)														
	C	Mn	P	S	SI	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other	
	0.080	2.000	0.045	0.030	1.000	-	10.00-14.00	16.00-18.00	2.00-3.00	-	-	-	0.100	-	
HEAT NO.	MECHANICAL PROPERTIES (≥)					IMPACT TEST									
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	(-°C) J									
	515	205	30	50	150-237	-									
ZC191303	0.047	0.920	0.035	0.002	0.390	-	10.070	16.800	2.060	-	-	-	0.050	-	
	538	237	35	60	170	-	-	-	-	-	-	-	-	-	
LKJG104	0.058	0.120	0.029	0.012	0.410	-	11.530	17.320	2.080	-	-	-	0.061	-	
	561	265	62	76	167	-	-	-	-	-	-	-	-	-	

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

DHV Industries, Inc.
3451 Pegasus Drive
Bakersfield, CA 93308. U.S.A

QUALITY ASSURANCE MANAGER:

Terry Gonsman
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19112417
DATE	Nov/24/2019
PAGE	6 of 7

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5857	FLOATING BALL VALVE	2"FB 150LB	B1153F32

MATERIAL	ASTM A320 L7M	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT

HEAT TREATMENT	TEMP.°C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-73°C) J								
	690	550	18	50	200-235	AVG ≥ 27, MIN ≥ 20								
10536	0.430	0.890	0.028	0.031	0.290	-	-	0.880	0.190	-	-	-	-	-
	725	565	20	55	216	34	38	40						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.


WITNESSED BY:

DHV Industries
 3451 Pegasus Drive
 Bakersfield, CA 93308. U.S.A

QUALITY ASSURANCE MANAGER:

Terry Gonsman
 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE				REPORT NO.	M18112729
					DATE	Nov/27/2018
					PAGE	1 of 7
ISO 9001:2015, API Q1: 9 TH ED						
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE	
ALTEK Industrial	ST4114		SO1801017	11	NA	
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.	
B130AF32	2"FB	300LB	RF Flange	50 PCS	NA	
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER		
FLOATING BALL VALVE	Two-Piece Body, A352 LCC Body, 316SS Trim, R-PTFE Seat Insert		Lever Op	18013133-18013182		
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.		
API 608-2012	<input type="checkbox"/> QSL 1	<input type="checkbox"/> QSL 2	<input type="checkbox"/> API 6FA, 3RD.Ed	<input type="checkbox"/> NACE MR-0175-2002		
	<input type="checkbox"/> QSL 3	<input type="checkbox"/> QSL 4	<input checked="" type="checkbox"/> API 607, 6TH.Ed	<input checked="" type="checkbox"/> NACE MR-0103-2012		

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	CAP	BALL	SEAT ASSEMBLY	STEM
BASE MATERIAL	A352 LCC	A352 LCC	A182 F316	R-PTFE	A182 F316
FACE MATERIAL	NA	NA	NA	R-PTFE	NA
NAME OF PART	BOLT/STUDS	NUTS	GASKET		
BASE MATERIAL	A320 L7M	A194 7M	SS+GRAPHITE		
FACE MATERIAL	NA	NA	NA		

PRESSURE TEST REPORT

Have been tested good according to API 598, CSA Z245.15-17 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				OTHER
		H.P. CLOSURE (HYDROSTATIC) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	
PRESSURE (PSIG)	1125	825	825	80	80	NA
DURATION (Minutes)	2	2	2	2	2	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	MSS SP-55-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.*
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

Terry Gonsman
 QUALITY ASSURANCE MANAGER
 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	M18112729
DATE	Nov/27/2018
PAGE	2 of 7

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/GLASS	FIGURE NUMBER
ALTEK Industrial	ST4114	FLOATING BALL VALVE	2"FB 300LB	B130AF32

CRATE NO.:	65-86	QUANTITIES:	50 PCS
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SERIAL NO.	MATERIAL AND HEAT NUMBER					REMARKS
	BODY	CAP	BALL	STEM	OTHER	
	A352 LCC	A352 LCC	A182 F316	A182 F316		
18013133	L8022	L8026	ZC181298	NLY8302		
18013134	L8025	L8023	ZC181298	NLY8302		
18013135	L8022	L8023	ZC181298	NLY8302		
18013136	L8025	L8015	ZC181298	NLY8302		
18013137	L8014	L8023	ZC181298	NLY8302		
18013138	L8022	L8013	ZC181298	NLY8302		
18013139	L8022	L8015	ZC181298	NLY8302		
18013140	L8025	L8023	ZC181298	NLY8302		
18013141	L8022	L8015	ZC181298	NLY8302		
18013142	L8022	L8026	ZC181298	NLY8302		
18013143	L8025	L8023	ZC181298	NLY8302		
18013144	L8022	L8023	ZC181298	NLY8302		
18013145	L8014	L8023	ZC181298	NLY8302		
18013146	L8025	L8026	ZC181298	NLY8302		
18013147	L8022	L8028	ZC181298	NLY8302		
18013148	L8014	L8015	ZC181298	NLY8302		
18013149	L8014	L8023	ZC181298	NLY8302		
18013150	L8014	L8015	ZC181298	NLY8302		
18013151	L8025	L8023	ZC181298	NLY8302		
18013152	L8014	L8002	ZC181298	NLY8302		
18013153	L8022	L8003	ZC181298	NLY8302		
18013154	L8014	L8003	ZC181298	NLY8302		
18013155	L8022	L8026	ZC181298	NLY8302		
18013156	L8012	L8015	ZC181298	NLY8302		
18013157	L8014	L8023	ZC181298	NLY8302		
18013158	L8014	L8025	ZC181298	NLY8302		
18013159	L8022	L8015	ZC181298	NLY8302		
18013160	L8025	L8015	ZC181298	NLY8302		
18013161	L8014	L8003	ZC181298	NLY8302		
18013162	L8025	L8026	ZC181298	NLY8302		
18013163	L8025	L8023	ZC181298	NLY8302		
18013164	L8025	L8026	ZC181298	NLY8302		
18013165	L8022	L8002	ZC181298	NLY8302		
18013166	L8022	L8026	ZC181298	NLY8302		
18013167	L8014	L8018	ZC181298	NLY8302		
18013168	L8014	L8015	ZC181298	NLY8302		
18013169	L8014	L8023	ZC181298	NLY8302		
18013170	L8025	L8015	ZC181298	NLY8302		
18013171	L8025	L8026	ZC181298	NLY8302		
18013172	L8025	L8015	ZC181298	NLY8302		



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	M18112729
DATE	Nov/27/2018
PAGE	4 of 7

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER	
ALTEK Industrial	ST4114	FLOATING BALL VALVE	2"FB 300LB	B130AF32	
MATERIAL	ASTM A352 LCC	Material Origin	P.R.C		
HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	910	1h/25mm, ≥2h	Gas	Water cooling to room temp.	
Temper	650	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	CE	AL	N	Other
	0.250	1.200	0.040	0.045	0.600	0.300	0.500	0.500	0.200	0.030	0.430	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (-46°C) J, 10*10mm Any direction								
	485-655	275	22	35		SINGLE MIN ≥27 J								
L8002	0.189	0.610	0.010	0.020	0.410	0.060	0.007	0.020	0.006	0.004	0.334	-	-	-
L8003	0.190	0.620	0.010	0.020	0.420	0.060	0.007	0.020	0.006	0.020	0.340	-	-	-
L8012	0.220	0.662	0.031	0.026	0.450	0.020	0.019	0.038	0.010	0.002	0.343	-	-	-
L8013	0.202	0.695	0.017	0.016	0.350	0.035	0.032	0.072	0.008	0.005	0.389	-	-	-
L8014	0.191	0.606	0.025	0.025	0.457	0.012	0.014	0.004	0.014	0.002	0.331	-	-	-
L8015	0.220	0.673	0.031	0.013	0.422	0.014	0.039	0.023	0.047	0.003	0.350	-	-	-
L8018	0.198	1.010	0.023	0.015	0.458	0.024	0.027	0.067	0.008	0.002	0.385	-	-	-
L8022	0.190	0.644	0.030	0.022	0.338	0.006	0.041	0.021	0.030	0.002	0.311	-	-	-
L8023	0.223	0.715	0.032	0.017	0.375	0.012	0.033	0.041	0.011	0.002	0.356	-	-	-
L8025	0.219	0.583	0.032	0.014	0.292	0.009	0.030	0.040	0.036	0.001	0.334	-	-	-
L8026	0.229	0.678	0.021	0.025	0.341	0.001	0.007	0.038	0.001	0.004	0.351	-	-	-
L8028	0.190	0.712	0.028	0.022	0.326	0.006	0.016	0.013	0.020	0.002	0.307	-	-	-

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

DHV Industries, Inc.
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A

QUALITY ASSURANCE MANAGER

Terry Gonsman
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, APLQ1: 9TH ED

REPORT NO.	M19112729
DATE	Nov/27/2018
PAGE	6 of 7

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	ST4114	FLOATING BALL VALVE	2"FB 300LB	B130AF32
MATERIAL	ASTM A320 L7M	MATERIAL ORIGIN	P.R.C.	

HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	SI	Cu	NI	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST (-73°C) J							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	AVG ≥27, MIN ≥20								
10596	690	550	18	50	235									
	0.430	0.690	0.028	0.031	0.290	-	-	0.880	0.190	-	-	-	-	-
	725	665	18	65	218	34	38	40						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: <div style="text-align: center;"> DHV Industries, Inc. 3451 Pegasus Drive Bakersfield, CA 93308. U.S.A </div>	QUALITY ASSURANCE MANAGER: Terry Gonsman Quality Assurance Manager
---	---

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1:9TH ED

REPORT NO.	M18112729
DATE	Nov/27/2016
PAGE	7 of 7

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER	
ALTEK Industrial	ST4114	FLOATING BALL VALVE	2"FB 300LB	B130AF32	
MATERIAL	ASTM A194 7M	MATERIAL ORIGIN	P.F.C.		
HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	Al	N	Other
	0.38-0.48	0.75-1.00	0.040	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
MECHANICAL PROPERTIES (≥)														
HEAT NO.	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (-°C) J								
					159-235									
10537	0.430	0.780	0.030	0.029	0.260	-	-	0.890	0.210	-	-	-	-	-
					186									

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.


WITNESSED BY:

DHV Industries, Inc.
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A

QUALITY ASSURANCE MANAGER:

Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE			REPORT NO.	M19102010
				DATE	Oct/20/2019
				PAGE	1 of 6
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE
ALTEK Industrial	6030		SO1903019	1	NA
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.
B5153F12-DIB-1	2"FB	150LB	RF Flange	21 PCS	NA
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER	
TRUNNION BALL VALVE	Three-Piece Body, A350 LF2 Body, C.S.+ENP Trim, R-PTFE Seat Insert		Lever Op	SEE PAGE 2-HT	
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.	
API 6D-2014	<input checked="" type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4	<input checked="" type="checkbox"/> API 6FA, 4RD.Ed <input type="checkbox"/> API 607, 7TH.Ed	<input checked="" type="checkbox"/> NACE MR-0175-2015 <input type="checkbox"/> NACE MR-0103-2012		

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	ADAPTER	BALL/TRUNNION	SEAT ASSEMBLY	STEM
BASE MATERIAL	A350 LF2	A350 LF2	A350 LF2	A350 LF2	A29 4140
FACE MATERIAL	NA	NA	ENP	ENP+R-PTFE	ENP
NAME OF PART	BOLT/STUDS	NUTS	SPRING	GASKET	O-RING SEAL
BASE MATERIAL	A320 L7M	A194 7M	B637-UNS N07750	S.S.+GRAPHITE	HNBR
FACE MATERIAL	NA	NA	NA	NA	NA

PRESSURE TEST REPORT

Have been tested good according to API 6D, CSA Z245.15-17 and the purchase order requirements

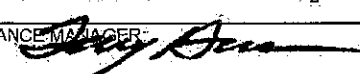
	SHELL (HYDROSTATIC)	SEAT(BI-DIRECTIONAL) CLOSURE TESTING					OPTIONAL SEAT TESTING	
		STANDARD		OPTIONAL		STANDARD		
		H.P. CLOSURE (HYDROSTATIC) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		<input checked="" type="checkbox"/> DBB	<input checked="" type="checkbox"/> DIB-1	<input type="checkbox"/> DIB-2
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	FROM BOTH VALVE ENDS	CAVITY TO BOTH DPE SEATS	CAVIT TO ONE DPE SEAT
PRESSURE (PSIG)	450	325	325	80	80	325	325	NA
DURATION (Minutes)	2	2	2	2	2	2	2	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	ASME B16.34-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge:

WITNESSED BY: **DHV Industries, Inc.**
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A

QUALITY ASSURANCE MANAGER: 
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19102010
DATE	Oct/20/2019
PAGE	3 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER	
ALTEK Industrial	6030	TRUNNION BALL VALVE	2"FB 150LB	B5153F12-DIB-1	
MATERIAL	ASTM A350 LF2	MATERIAL ORIGIN	P.R.C.		
HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	930	1h/25mm, ≥2h	Elec	Water cooling to room temp.	
Temper	620	1h/25mm, ≥1h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)																		
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	Bal.	Cr+Mo	CE					
	0.230	0.60-1.35	0.035	0.025	0.15-0.30	0.400	0.400	0.300	0.120	0.080	0.020	1.000	0.320	0.430					
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST (-46°C) J, 10*10mm longitudinal direction												
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	SINGLE MIN ≥27 J													
XP7010	485-655	250	22	30	140-197	0.200	0.970	0.012	0.005	0.260	0.094	0.026	0.033	0.005	0.001	0.003	0.159	0.038	0.377
27181	499	340	35	78	163	0.210	0.840	0.027	0.010	0.240	0.070	0.050	0.120	0.030	0.050	0.010	0.320	0.150	0.398
NLY9207	550	280	28	39	153	0.180	0.960	0.014	0.007	0.190	0.130	0.070	0.150	0.008	0.002	0.001	0.360	0.158	0.385
	495	270	25	33	162														

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* QUALITY ASSURANCE MANAGER
3451 Pegasus Drive
Bakersfield, CA 93308. U.S.A
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT MILL CERTIFICATE			REPORT NO.	M19102010
				DATE	Oct/20/2019
				PAGE	4 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	6030	TRUNNION BALL VALVE	2"FB 150LB	B5153F12-DIB-1

MATERIAL	ASTM A29 4140	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	930	1h/25mm, ≥2h	Elec	Water cooling to room temp.	
Temper	620	1h/25mm, ≥1h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
 Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.43	0.75-1.00	0.035	0.040	0.15-0.35	0.350	0.250	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-46°C) J, 10*10mm longitudinal direction								
	690	550	18	45	182-237	SINGLE MIN ≥27 J								
HH1910	0.410	0.900	0.013	0.003	0.240	0.030	0.020	1.000	0.200	-	-	-	-	-
	751	610	27	54	223	38	37	35						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc* QUALITY ASSURANCE MANAGER
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A

Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	M19102010
DATE	Oct/20/2019
PAGE	6 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER	
ALTEK Industrial	6030	TRUNNION BALL VALVE	2"FB 150LB	B5153F12-DIB-1	
MATERIAL	ASTM A194 7M	MATERIAL ORIGIN	P.R.C.		
HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements


STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	(-°C) J								
10537	0.430	0.780	0.030	0.029	0.260	-	-	0.890	0.210	-	-	-	-	-
					186									

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.*
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

QUALITY ASSURANCE MANAGER:
Terry Gonsman
 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE				REPORT NO.	DM19101938
					DATE	Oct/23/2019
					PAGE	1 of 6
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE	
	6113		DS1904049-P.O.21710	9	NA	
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.	
CE13FX/15	2"FB	150LB	RF	20 PCS	DHNCE13FX08	
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER		
CAST STEEL CHECK VALVE	A352 LCC Body,316SS Trim, 316SS Seat		NA	D19041017~D19041036		
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.		
API 6D-2014, 24 TH .ED	<input checked="" type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4	<input type="checkbox"/> API 6FA, 3 RD .Ed <input checked="" type="checkbox"/> API 6FD, REAFFIRMED	<input checked="" type="checkbox"/> NACE MR-0175/ISO15156-2015 <input checked="" type="checkbox"/> NACE MR-0103-2012			

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	BONNET	DISC	SEAT RING
BASE MATERIAL	A352 LCC	A352 LCC	A182 F316	A182 F316
FACE MATERIAL	NA	NA	HNBR	NA
NAME OF PART	BOLT/STUDS	NUTS		
BASE MATERIAL	A320 L7M	A194 7M		
FACE MATERIAL	NA	NA		

PRESSURE TEST REPORT

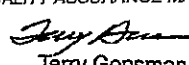
Have been tested good according to Z245.15-13 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				OTHER
		STANDARD		OPTIONAL		
		H.P. CLOSURE (HYDROSTATIC)		L.P. CLOSURE (AIR)		
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	
PRESSURE (PSIG)	450	NA	325	NA	NA	NA
DURATION (Minutes)	2	NA	2	NA	NA	NA
RESULT	GOOD		GOOD			

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	MSS SP-55-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:	QUALITY ASSURANCE MANAGER:  Terry Gonsman 3451 Pegasus Drive Quality Assurance Manager Bakersfield, CA 93308, U.S.A
---------------	--

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	DM19101938
DATE	Oct/23/2019
PAGE	3 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6113	CAST STEEL CHECK VALVE	2"FB 150LB	CE13FX/15

MATERIAL	ASTM A352 LCC
----------	---------------

HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	920	1h/25mm, ≥2h	Gas	Water cooling to room temp.	
Temper	650	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

HEAT NO.	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Ni	Cr	Mo	V	Cu	Al	Bal.	N	Other
	0.230	1.200	0.035	0.035	0.600	0.500	0.500	0.200	0.030	0.300	0.060	1.000	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB) (≤)	IMPACT TEST (-45°C) J								
	485-655	275	22	35	140-237	AVG ≥ 20, MIN ≥ 16								
LH924	0.221	0.780	0.027	0.017	0.409	0.029	0.019	0.002	0.003	0.005	0.009	0.058	-	-
	514	286	26	36	178	32	33	23						
LT823	0.208	0.845	0.032	0.012	0.383	0.004	0.012	0.040	0.002	0.020	0.036	0.078	-	-
	516	287	26	35	172	23	34	30						
LT824	0.181	0.637	0.020	0.015	0.449	0.017	0.039	0.013	0.003	0.006	0.039	0.078	-	-
	519	285	25	39	167	29	29	30						
LT825	0.201	0.622	0.025	0.024	0.357	0.007	0.033	0.020	0.001	0.017	0.038	0.078	-	-
	507	305	25	39	172	30	29	33						
LT873	0.188	0.629	0.021	0.025	0.364	0.020	0.017	0.033	0.004	0.022	0.055	0.096	-	-
	512	279	24	42	184	35	35	28						
LT874	0.205	0.745	0.028	0.011	0.367	0.028	0.034	0.013	0.004	0.019	0.016	0.098	-	-
	521	285	28	37	175	35	29	30						
LT875	0.185	0.662	0.020	0.025	0.406	0.016	0.021	0.052	0.003	0.002	0.050	0.094	-	-
	521	276	29	43	175	28	33	35						
LT924	0.212	0.727	0.020	0.011	0.327	0.033	0.041	0.008	0.003	0.006	0.044	0.091	-	-
	514	289	25	39	172	27	35	35						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

QUALITY ASSURANCE MANAGER
Terry Gonsman DHV Industries, Inc.
 Terry Gonsman 3451 Pegasus Drive
 Quality Assurance Manager Bakersfield, CA 93308, U.S.A

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	DM19101938
DATE	Oct/23/2019
PAGE	5 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	6113	CAST STEEL CHECK VALVE	2"FB 150LB	CE13FX/15
MATERIAL	ASTM A320 L7M			

HEAT TREATMENT

HEAT TREATMENT	TEMP.°C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Oil cooling to room temp.	
Temper	620	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements


STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cr	Mo	Ni	V	N	Cu	Al	Ti	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	0.80-1.10	0.15-0.25	-	-	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-101°C) J								
	690	550	18	50	200-235	AVG ≥27, MIN ≥20								
JH1815-1	0.420	0.810	0.012	0.008	0.280	0.880	0.190	-	-	-	-	-	-	-
	761	589	25	64	219	45	46	46						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

QUALITY ASSURANCE MANAGER:
Terry Gonsman DHV Industries, Inc.
 Terry Gonsman 3451 Pegasus Drive
 Quality Assurance Manager Bakersfield, CA 93308, U.S.A

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE				REPORT NO.	DM19080718
					DATE	Aug/14/2019
					PAGE	1 of 11
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE	
	5859		DS1902022-P.O.21675	2	NA	
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.	
C120F3	2"	300LB	RF	40 PCS	DHC120F308	
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER		
CAST STEEL OS & Y GATE VALVE	A216 WCB Body, 13CR Trim, STL6 Seat Face		Handwheel	D1902089-D1902128		
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.		
API 600-2009 12 TH .ED.	<input type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4	<input type="checkbox"/> API 6FA, 3 RD .Ed <input type="checkbox"/> API 607, 6 TH .Ed	<input checked="" type="checkbox"/> NACE MR-0175/ISO15156-2015 <input checked="" type="checkbox"/> NACE MR-0103-2012			

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	BONNET	WEDGE	SEAT RING	STEM
BASE MATERIAL	A216 WCB	A216 WCB	A217 CA15	A105N	A182 F6A
FACE MATERIAL	NA	NA	NA	STL6	NA
NAME OF PART	BOLT/STUDS	NUTS	GLAND	BACKSEAT	
BASE MATERIAL	A193 B7M	A194 2HM	420SS	420SS	
FACE MATERIAL	NA	NA	NA	NA	

PRESSURE TEST REPORT

Have been tested good according to API 598 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				BACKSEAT (HYDROSTATIC)	OTHER
		H.P. CLOSURE (HYDROSTATIC) <input type="checkbox"/> REQUIRED <input checked="" type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL			
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM		
PRESSURE (PSIG)	1125	NA	NA	80	80	825	NA
DURATION (Minutes)	1	NA	NA	1	1	1	NA
RESULT	GOOD			GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	MSS SP-55-GOOD	NA


We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

QUALITY ASSURANCE MANAGER:

Terry Gonsman
Terry Gonsman
 Quality Assurance Manager
DHV Industries, Inc.
 3451 Pegasus Drive
 Bakersfield, CA 93308. U.S.A

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT VALVE TRACEABILITY				REPORT NO.	DM19080718
					DATE	Aug/14/2019
					PAGE	2 of 11
CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/GLASS	FIGURE NUMBER		
	5859	CAST STEEL OS & Y GATE VALVE	2" 300LB	C120F3		
CRATE NO.:	46-47	QUANTITIES:			40 PCS	
SERIAL NO.	MATERIAL AND HEAT NUMBER					REMARKS
	BODY	BONNET	WEDGE	SEAT	STEM	
	WCB	WCB	CA15	A105N	F6A	
D1902089	L9402	L8293	W0684	17-200741	LKJG103	
D1902090	L9390	L8354	W0689	17-200741	LKJG103	
D1902091	L9376	L8330	W0689	17-200741	LKJG103	
D1902092	L9313	L8280	W0689	17-200741	LKJG103	
D1902093	L9308	L8372	W0689	17-200741	LKJG103	
D1902094	L9383	L9301	W0689	17-200741	LKJG103	
D1902095	L9413	L8293	C8792	17-200741	LKJG103	
D1902096	L9352	L8255	W0689	17-200741	LKJG103	
D1902097	L9419	L8410	W0689	17-200741	LKJG103	
D1902098	L9308	L8449	W0689	17-200741	LKJG103	
D1902099	L9187	L8255	W0689	17-200741	LKJG103	
D1902100	L9352	L8372	C8795	17-200741	LKJG103	
D1902101	L9313	L9402	C8792	17-200741	LKJG103	
D1902102	L9352	L9402	W0684	17-200741	LKJG103	
D1902103	L9358	L8280	W0689	17-200741	LKJG103	
D1902104	L9371	L9342	C8793	17-200741	LKJG103	
D1902105	L9361	L8255	W0689	17-200741	LKJG103	
D1902106	L9342	L8307	W0689	17-200741	LKJG103	
D1902107	L9352	L9352	W0689	17-200741	LKJG103	
D1902108	L9383	L9385	W0689	17-200741	LKJG103	
D1902109	L9342	L8407	C8795	17-200741	LKJG103	
D1902110	L9419	L8267	W0689	17-200741	LKJG103	
D1902111	L9403	L8362	C8793	17-200741	LKJG103	
D1902112	L9390	L8293	C8793	17-200741	LKJG103	
D1902113	L9403	L8239	W0689	17-200741	LKJG103	
D1902114	L9402	L8354	C8793	17-200741	LKJG103	
D1902115	L9403	L8395	W0689	17-200741	LKJG103	
D1902116	L9371	L8293	W0689	17-200741	LKJG103	
D1902117	L9403	L8280	W0689	17-200741	LKJG103	
D1902118	L9358	L8307	C8793	17-200741	LKJG103	
D1902119	L9403	L8280	C8793	17-200741	LKJG103	
D1902120	L9419	L8372	W0689	17-200741	LKJG103	
D1902121	L9187	L8330	C8792	17-200741	LKJG103	
D1902122	L9361	L8293	W0689	17-200741	LKJG103	
D1902123	L9402	L8346	W0689	17-200741	LKJG103	
D1902124	L9342	L8354	W0689	17-200741	LKJG103	
D1902125	L9342	L8395	W0689	17-200741	LKJG103	
D1902126	L9308	L8309	W0689	17-200741	LKJG103	
D1902127	L9358	L8261	W0689	17-200741	LKJG103	
D1902128	L9408	L8354	W0689	17-200741	LKJG103	



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO. DM19080718

DATE Aug/14/2019

PAGE 3 of 11

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5859	CAST STEEL OS & Y GATE VALVE	2" 300LB	C120F3
MATERIAL	ASTM A216 WCB			

HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Normalize	920	1h/25mm, ≥2h	Gas	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements


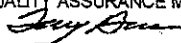
STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Al	Bal.	Ni+Cu	Other
	0.18-0.23	1.200	0.035	0.035	0.600	0.300	0.500	0.500	0.200	0.030	0.060	1.000	0.150	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-°C) J								
	485-655	250	22	35	140-237	-								
L8239	0.205	1.030	0.002	0.017	0.482	0.033	0.020	0.081	0.009	0.003	0.002	0.146	0.053	-
	520	326	31	55	150	-	-	-						
L8255	0.195	1.040	0.020	0.016	0.490	0.028	0.021	0.066	0.008	0.003	0.004	0.125	0.049	-
	533	340	28	55	152	-	-	-						
L8261	0.218	1.020	0.022	0.017	0.483	0.029	0.020	0.113	0.012	0.003	0.003	0.177	0.049	-
	532	326	34	61	150	-	-	-						
L8267	0.213	1.020	0.021	0.016	0.441	0.030	0.024	0.117	0.014	0.003	0.003	0.187	0.053	-
	544	346	29	57	153	-	-	-						
L8280	0.216	1.030	0.021	0.015	0.432	0.029	0.028	0.139	0.017	0.003	0.001	0.216	0.057	-
	524	319	34	61	152	-	-	-						
L8293	0.211	1.060	0.022	0.015	0.486	0.029	0.019	0.072	0.007	0.003	0.002	0.131	0.049	-
	510	294	30	59	148	-	-	-						
L8307	0.223	1.080	0.022	0.014	0.476	0.028	0.023	0.065	0.008	0.003	0.001	0.127	0.052	-
	533	329	30	57	152	-	-	-						
L8309	0.218	1.040	0.020	0.013	0.450	0.026	0.046	0.123	0.012	0.003	0.001	0.210	0.072	-
	533	339	33	63	154	-	-	-						
L8330	0.210	1.090	0.021	0.015	0.451	0.032	0.019	0.039	0.005	0.003	0.001	0.097	0.051	-
	523	318	32	54	152	-	-	-						
L8346	0.190	1.050	0.020	0.015	0.450	0.032	0.021	0.042	0.004	0.003	0.002	0.101	0.053	-
	513	308	31	55	152	-	-	-						
L8354	0.203	1.020	0.021	0.016	0.463	0.029	0.016	0.037	0.005	0.003	0.003	0.090	0.045	-
	526	330	31	65	156	-	-	-						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

QUALITY ASSURANCE MANAGER:
DHV Industries, Inc.
 Terry Gonsman
 Quality Assurance Manager
 3451 Pegasus Drive
 Bakersfield, CA 93308. U.S.A

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	<h1>MATERIAL TEST REPORT</h1> <h2>MILL CERTIFICATE</h2>										REPORT NO.	DM19080718		
											DATE	Aug/14/2019		
											PAGE	4 of 11		
CUSTOMER	CUSTOMER P.O.	VALVE TYPE			SIZE/CLASS	FIGURE NUMBER								
	5859	CAST STEEL OS & Y GATE VALVE			2' 300LB	C120F3								
MATERIAL	ASTM A216 WCB													
HEAT TREATMENT														
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS			REMARK							
Normalize	920	1h/25mm, ≥2h	Gas	Air cooling to room temp.										
CHEMICAL AND MECHANICAL TEST REPORT														
Have been tested good according to the material specification and purchase order requirements														
STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Al	Bal.	Ni+Cu	Other
	0.18-0.23	1.200	0.035	0.035	0.600	0.300	0.500	0.500	0.200	0.030	0.060	1.000	0.150	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-°C) J								
	485-655	250	22	35	140-237	-								
L8362	0.194	1.030	0.022	0.017	0.493	0.027	0.021	0.063	0.006	0.002	0.002	0.119	0.048	-
	518	316	32	53	147	-	-	-						
L8372	0.226	1.010	0.026	0.018	0.473	0.030	0.017	0.037	0.005	0.003	0.002	0.092	0.047	-
	531	317	31	52	154	-	-	-						
L8395	0.209	1.090	0.023	0.016	0.494	0.031	0.020	0.045	0.004	0.002	0.002	0.103	0.051	-
	502	316	31	62	148	-	-	-						
L8407	0.214	1.010	0.022	0.016	0.439	0.032	0.018	0.041	0.005	0.002	0.001	0.098	0.050	-
	535	280	32	49	157	-	-	-						
L8410	0.204	1.040	0.023	0.016	0.435	0.031	0.016	0.042	0.005	0.002	0.001	0.096	0.047	-
	503	274	34	59	142	-	-	-						
L8449	0.199	1.030	0.023	0.017	0.481	0.034	0.021	0.033	0.004	0.003	0.003	0.094	0.055	-
	508	282	31	61	141	-	-	-						
L9187	0.207	1.050	0.022	0.017	0.419	0.028	0.017	0.038	0.004	0.003	0.003	0.090	0.045	-
	522	325	34	65	149	-	-	-						
L9301	0.215	1.040	0.023	0.017	0.451	0.030	0.020	0.061	0.007	0.003	0.002	0.120	0.049	-
	530	328	37	63	152	-	-	-						
L9308	0.207	1.050	0.022	0.017	0.472	0.029	0.017	0.035	0.004	0.002	0.002	0.087	0.045	-
	519	317	31	64	147	-	-	-						
L9313	0.207	1.060	0.023	0.018	0.452	0.031	0.017	0.038	0.005	0.002	0.028	0.094	0.048	-
	527	328	33	61	152	-	-	-						
L9342	0.195	1.030	0.022	0.018	0.454	0.035	0.021	0.042	0.005	0.002	0.002	0.105	0.055	-
	500	328	35	59	153	-	-	-						
<p>We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.</p>														
WITNESSED BY:						QUALITY ASSURANCE MANAGER:  Terry Gonsman Quality Assurance Manager								
						3451 Pegasus Drive Bakersfield, CA 93308. U.S.A								

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	DM19080718
DATE	Aug/14/2019
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5859	CAST STEEL OS & Y GATE VALVE	2" 300LB	C120F3
MATERIAL	ASTM A216 WCB			

HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Normalize	920	1h/25mm, ≥2h	Gas	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

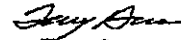
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Al	Bal.	Ni+Cu	Other
	0.18-0.23	1.200	0.035	0.035	0.600	0.300	0.500	0.500	0.200	0.030	0.060	1.000	0.150	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (°C) J								
	485-655	250	22	35	140-237	-								
L9352	0.201	1.040	0.022	0.018	0.442	0.029	0.018	0.041	0.005	0.003	0.002	0.096	0.047	-
	506	330	32	58	150	-	-	-						
L9358	0.198	1.040	0.021	0.017	0.448	0.030	0.020	0.048	0.006	0.002	0.002	0.106	0.050	-
	523	290	33	60	151	-	-	-						
L9361	0.201	1.010	0.023	0.018	0.453	0.030	0.017	0.034	0.005	0.002	0.002	0.089	0.048	-
	494	334	31	53	146	-	-	-						
L9371	0.202	1.040	0.022	0.019	0.455	0.031	0.019	0.050	0.005	0.003	0.004	0.107	0.049	-
	500	322	31	47	149	-	-	-						
L9376	0.202	1.060	0.022	0.018	0.447	0.028	0.018	0.068	0.006	0.003	0.002	0.123	0.047	-
	512	349	31	58	152	-	-	-						
L9383	0.205	1.080	0.022	0.016	0.456	0.032	0.017	0.035	0.005	0.002	0.002	0.092	0.049	-
	515	334	30	60	152	-	-	-						
L9385	0.210	1.050	0.022	0.018	0.461	0.031	0.025	0.182	0.009	0.003	0.003	0.250	0.055	-
	529	318	33	54	161	-	-	-						
L9390	0.208	1.040	0.022	0.017	0.458	0.032	0.021	0.040	0.005	0.003	0.002	0.101	0.053	-
	515	335	30	59	147	-	-	-						
L9402	0.212	1.050	0.023	0.019	0.477	0.033	0.021	0.066	0.006	0.003	0.002	0.129	0.053	-
	508	328	27	44	164	-	-	-						
L9403	0.200	1.050	0.021	0.017	0.457	0.030	0.019	0.050	0.005	0.003	0.003	0.107	0.049	-
	518	336	33	59	154	-	-	-						
L9408	0.200	1.060	0.021	0.016	0.469	0.032	0.025	0.107	0.010	0.003	0.003	0.177	0.057	-
	525	342	34	60	152	-	-	-						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

QUALITY ASSURANCE MANAGER:


DHV Industries, Inc.
 Terry Gonsman
 Quality Assurance Manager
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	DM19080718
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5859	CAST STEEL OS & Y GATE VALVE	2" 300LB	C120F3
MATERIAL	ASTM A217 CA15			

HEAT TREATMENT

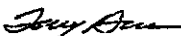
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Austenitizing	1050	1h/25mm, ≥1h	Elec	Air cooling to below 205°C.	
Temper	700	1h/25mm, ≥1h	Gas or Elec	Air cooling to room temp.	
Second Temper	680	1h/25mm, ≥1h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Mo	Ni	Cr	Al	W	Cu	Nb	N	Other
	0.150	1.000	0.040	0.025	1.500	0.500	1.000	11.5-14.0	0.060	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-°C) J								
	620-795	450	18	30	174-237	-								
C8792	0.090	0.770	0.029	0.010	0.960	0.018	0.166	12.470	0.015	-	-	-	-	-
	726	530	22	55	229	-	-	-	-	-	-	-	-	-
C8793	0.090	0.800	0.029	0.011	0.920	0.017	0.134	12.840	0.022	-	-	-	-	-
	738	542	19	48	224	-	-	-	-	-	-	-	-	-
C8795	0.140	0.800	0.038	0.013	0.880	0.041	0.143	12.760	0.017	-	-	-	-	-
	749	532	22	49	225	-	-	-	-	-	-	-	-	-
W0684	0.100	0.370	0.021	0.001	0.620	0.029	0.650	12.360	0.044	-	-	-	-	-
	654	476	28	37	197	-	-	-	-	-	-	-	-	-
W0689	0.120	0.310	0.021	0.002	0.630	0.050	0.650	12.470	0.007	-	-	-	-	-
	690	471	20	35	187	-	-	-	-	-	-	-	-	-

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:	QUALITY ASSURANCE MANAGER:  Terry Gonsman Quality Assurance Manager DHV Industries, Inc. 3451 Pegasus Drive Bakersfield, CA 93308, U.S.A
---------------	--

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	DM19080718
DATE	Aug/14/2019
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
	5859	CAST STEEL OS & Y GATE VALVE	2" 300LB	C120F3

MATERIAL	ASTM A182 F6A
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Normalize	1020	1h/25mm, ≥2h	Elec	Air cooling to room temp.	
Temper	680	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Second Temper	650	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Ni	Cr	Mo	V	Al	Cu	Nb	N	Other
	0.150	1.000	0.040	0.030	1.000	0.500	11.5 -13.5	-	-	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST (-°C) J							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)									
	585	380	18	35	167-229									
LKJG103	0.110	0.780	0.027	0.019	0.710	0.380	11.900	-	-	-	-	-	-	-
	655	436	32	46	218	222	-	-	-	-	-	-	-	-

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

QUALITY ASSURANCE MANAGER:
Terry Gonsman - DHV Industries, Inc.
 Terry Gonsman 3451 Pegasus Drive
 Quality Assurance Manager Bakersfield, CA 93308, U.S.A

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DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

REPORT NO.	DM19080718
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER	
	5859	CAST STEEL OS & Y GATE VALVE	2" 300LB	C120F3	
MATERIAL	ASTM A193 B7M				
HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Oil cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements


STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cr	Mo	Ni	V	N	Cu	Al	Ti	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	0.8-1.1	0.15-0.25	-	-	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)	IMPACT TEST (-°C) J								
	690	550	18	50	200-235	-								
Y60607B31-1	0.400	0.840	0.011	0.006	0.240	0.990	0.196	-	-	-	-	-	-	-
	742	634	25	63	220	-	-	-	-	-	-	-	-	-

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

QUALITY ASSURANCE MANAGER:
Terry Gonsman - DHV Industries, Inc.
 Terry Gonsman
 Quality Assurance Manager 3451 Pegasus Drive
 Bakersfield, CA 93308. U.S.A

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE ISO 9001:2015, API Q1: 9 TH ED			REPORT NO.	M18121117
				DATE	Dec/11/2018
					PAGE
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE
ALTEK Industrial	ST4083		SO1712009	9	NA
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.
B115AF32	3"FB	150LB	RF Flange	29 PCS	NA
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER	
FLOATING BALL VALVE	Two-Piece Body, A352 LCC Body, 316SS Trim, R-PTFE Seat Insert		Lever Op	17121365-17121393	
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.	
API 608-2012	<input type="checkbox"/> QSL 1	<input type="checkbox"/> QSL 2	<input type="checkbox"/> API 6FA, 3RD.Ed	<input type="checkbox"/> NACE MR-0175-2002	
	<input type="checkbox"/> QSL 3	<input type="checkbox"/> QSL 4	<input checked="" type="checkbox"/> API 607, 6TH.Ed	<input checked="" type="checkbox"/> NACE MR-0103-2012	

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	CAP	BALL	SEAT ASSEMBLY	STEM
BASE MATERIAL	A352 LCC	A352 LCC	A182 F316	R-PTFE	A182 F316
FACE MATERIAL	NA	NA	NA	R-PTFE	NA
NAME OF PART	BOLT/STUDS	NUTS	GASKET		
BASE MATERIAL	A320 L7M	A194 7M	SS+GRAPHITE		
FACE MATERIAL	NA	NA	NA		

PRESSURE TEST REPORT

Have been tested good according to API 598, CSA Z245.15-17 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				OTHER
		H.P. CLOSURE (HYDROSTATIC) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		L.P. CLOSURE (AIR) <input checked="" type="checkbox"/> REQUIRED <input type="checkbox"/> OPTIONAL		
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	
PRESSURE (PSIG)	450	325	325	80	80	NA
DURATION (Minutes)	2	2	2	2	2	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	MSS SP-55-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.*
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

Terry Gonsman
 QUALITY ASSURANCE MANAGER
 Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	M18121117
DATE	Dec/11/2018
PAGE	3 of 6

CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER	
ALTEK Industrial	ST4083	FLOATING BALL VALVE	3"FB 150LB	B115AF32	
MATERIAL	ASTM A352 LCC	Material Origin	P.R.C		
HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	910	1h/25mm, ≥2h	Gas	Water cooling to room temp.	
Temper	650	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	CE
	0.250	1.200	0.040	0.045	0.600	0.300	0.500	0.500	0.200	0.030	-	-	-	0.430
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST (-46°C) J, 10*10mm Any direction							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	SINGLE MIN ≥27 J								
485-655	275	22	35											
T3059	0.108	1.020	0.019	0.016	0.444	0.062	0.030	0.056	0.009	0.003	-	-	-	0.298
	577	419	38	50	170	36	41	34						
T3086	0.181	0.931	0.022	0.014	0.327	0.042	0.238	0.216	0.004	0.003	-	-	-	0.399
	527	279	32	41	151	30	31	32						
T3155	0.188	0.973	0.020	0.016	0.326	0.036	0.219	0.219	0.006	0.005	-	-	-	0.413
	516	285	31	40	154	29	30	31						
T3156	0.187	0.985	0.022	0.014	0.327	0.037	0.215	0.211	0.007	0.003	-	-	-	0.412
	529	298	30	42	151	33	32	31						
T3157	0.192	0.964	0.021	0.015	0.325	0.035	0.211	0.215	0.005	0.004	-	-	-	0.414
	523	290	32	41	152	30	31	29						
T3158	0.185	0.983	0.020	0.017	0.334	0.042	0.210	0.209	0.004	0.005	-	-	-	0.409
	527	279	30	40	157	32	30	31						
T3159	0.184	0.971	0.021	0.016	0.328	0.040	0.208	0.217	0.003	0.003	-	-	-	0.407
	518	284	31	42	154	29	31	32						
T3166	0.191	0.957	0.021	0.016	0.341	0.048	0.209	0.208	0.004	0.004	-	-	-	0.411
	524	284	32	41	152	29	30	31						
T3855	0.192	0.974	0.020	0.016	0.334	0.035	0.219	0.221	0.004	0.005	-	-	-	0.417
	531	283	33	39	156	31	30	32						
T3857	0.206	0.954	0.020	0.017	0.347	0.050	0.224	0.209	0.003	0.005	-	-	-	0.427
	525	281	34	40	154	30	29	31						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* *Terry Gonsman*
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A
Terry Gonsman
Quality Assurance Manager

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DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	M18121117
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	ST4083	FLOATING BALL VALVE	3"FB 150LB	B115AF32
MATERIAL	ASTM A320 L7M	MATERIAL ORIGIN	P.R.C.	

HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)					IMPACT TEST (-73°C) J								
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	AVG ≥27, MIN ≥20								
10536	690	550	18	50	235	-	-	0.880	0.190	-	-	-	-	-
	725	565	18	55	216	34	38	40						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* *Terry Gonsman*
3451 Pegasus Drive
Bakersfield, CA 93308. U.S.A
Terry Gonsman
Quality Assurance Manager

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DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	M18121117
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER	
ALTEK Industrial	ST4083	FLOATING BALL VALVE	3"FB 150LB	B115AF32	
MATERIAL	ASTM A194 7M	MATERIAL ORIGIN	P.R.C.		
HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements


STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.040	0.040	0.15-0.35	-	-	0.8-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (-°C) J								
10537	0.430	0.780	0.030	0.029	0.260	-	-	0.890	0.210	-	-	-	-	-
					159-235									
					186									

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* *Terry Gonsman*
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

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 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE			REPORT NO. M18052823	LINE # 35
				DATE May/28/2018	
				PAGE 1 of 7	
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE
ALTEK Industrial	ST3940		SO1708020	14	NA
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.
B130AF32	3"FB	300LB	RF Flange	40 PCS	NA
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER	
FLOATING BALL VALVE	Two-Piece Body, A352 LCC Body, 316SS Trim, R-PTFE Seat Insert		Lever Op	17081978-17082017	
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.	
API 608-2012	<input type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4		<input type="checkbox"/> API 6FA, 3RD.Ed <input checked="" type="checkbox"/> API 607, 6TH.Ed	<input type="checkbox"/> NACE MR-0175-2002 <input checked="" type="checkbox"/> NACE MR-0103-2012	

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	CAP	BALL	SEAT ASSEMBLY	STEM
BASE MATERIAL	A352 LCC	A352 LCC	A182 F316	R-PTFE	A182 F316
FACE MATERIAL	NA	NA	NA	R-PTFE	NA
NAME OF PART	BOLT/STUDS	NUTS	GASKET		
BASE MATERIAL	A320 L7M	A194 7M	SS+GRAPHITE		
FACE MATERIAL	NA	NA	NA		

PRESSURE TEST REPORT

Have been tested good according to API 598, CSA Z245.15-13 and the purchase order requirements

	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				OTHER
		H.P. CLOSURE (HYDROSTATIC) ■ REQUIRED □ OPTIONAL		L.P. CLOSURE (AIR) ■ REQUIRED □ OPTIONAL		
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	
PRESSURE (PSIG)	1125	825	825	80	80	NA
DURATION (Minutes)	2	2	2	2	2	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	MSS SP-55-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.*
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A

Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	M18052823
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	ST3940	FLOATING BALL VALVE	3"FB 300LB	B130AF32

CRATE NO.:	44-45	QUANTITIES:	40 PCS
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SERIAL NO.	MATERIAL AND HEAT NUMBER					REMARKS
	BODY	CAP	BALL	STEM	OTHER	
	A352 LCC	A352 LCC	A182 F316	A182 F316		
17081978	T3053	T3056	MY6365	XS16-3X06		
17081979	T3060	T3057	MY6365	XS16-3X06		
17081980	T3056	L3039	MY6365	XS16-3X06		
17081981	T3056	L3010	MY6365	XS16-3X06		
17081982	T3060	T3059	MY6365	XS16-3X06		
17081983	T3053	T3054	MY6365	XS16-3X06		
17081984	T3059	T3060	MY6365	XS16-3X06		
17081985	T3056	T3053	MY6365	XS16-3X06		
17081986	T3059	T3055	MY6365	XS16-3X06		
17081987	T3058	T3059	MY6365	XS16-3X06		
17081988	T3055	T3059	MY6365	XS16-3X06		
17081989	T3054	T3054	MY6365	XS16-3X06		
17081990	T3054	T3854	MY6365	XS16-3X06		
17081991	T3057	T3054	MY6365	XS16-3X06		
17081992	T3055	T3058	MY6365	XS16-3X06		
17081993	T3054	T3054	MY6365	XS16-3X06		
17081994	T3054	L3044	MY6365	XS16-3X06		
17081995	T3056	T3054	MY6365	XS16-3X06		
17081996	T3053	T3059	MY6365	XS16-3X06		
17081997	T3060	T3060	MY6365	XS16-3X06		
17081998	T3060	T3059	MY6365	XS16-3X06		
17081999	T3060	T3053	MY6365	XS16-3X06		
17082000	T3059	T3058	MY6365	XS16-3X06		
17082001	T3058	T3056	MY6365	XS16-3X06		
17082002	T3056	T3059	MY6365	XS16-3X06		
17082003	T3055	T3058	MY6365	XS16-3X06		
17082004	T3055	T3853	MY6365	XS16-3X06		
17082005	T3058	T3053	MY6365	XS16-3X06		
17082006	T3054	T3058	MY6365	XS16-3X06		
17082007	T3059	L3009	MY6365	XS16-3X06		
17082008	T3056	L3007	MY6365	XS16-3X06		
17082009	T3003	T3059	MY6365	XS16-3X06		
17082010	T3059	T3058	MY6365	XS16-3X06		
17082011	T3058	T3055	MY6365	XS16-3X06		
17082012	T3053	T3853	MY6365	XS16-3X06		
17082013	T3057	T3058	MY6365	XS16-3X06		
17082014	T3055	T3054	MY6365	XS16-3X06		
17082015	T3058	L3040	MY6365	XS16-3X06		
17082016	T3057	T3054	MY6365	XS16-3X06		
17082017	T3054	L3017	MY6365	XS16-3X06		



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	ST3940	FLOATING BALL VALVE	3"FB 300LB	B130AF32

MATERIAL	ASTM A352 LCC	Material Origin	P.R.C
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	920	1h/25mm, ≥2h	Gas	Water cooling to room temp.	
Temper	650	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.250	1.200	0.040	0.045	0.600	0.300	0.500	0.500	0.200	0.030	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (-46°C) J								
	485-655	275	22	35	-	AVG ≥ 20, MIN ≥ 16								
L3007	0.193	0.939	0.013	0.017	0.348	0.040	0.238	0.249	0.014	0.005	-	-	-	-
	525	284	31	39	155	33	31	30						
L3009	0.190	0.991	0.014	0.015	0.352	0.053	0.236	0.260	0.012	0.004	-	-	-	-
	517	290	27	38	152	31	30	29						
L3010	0.188	0.965	0.017	0.017	0.369	0.049	0.241	0.239	0.008	0.003	-	-	-	-
	526	285	31	42	151	34	32	31						
L3017	0.181	0.991	0.016	0.016	0.346	0.044	0.228	0.186	0.005	0.004	-	-	-	-
	526	293	30	40	148	30	31	32						
L3039	0.183	0.975	0.019	0.017	0.357	0.053	0.215	0.198	0.006	0.003	-	-	-	-
	532	284	30	41	155	29	30	31						
L3040	0.184	0.986	0.018	0.015	0.362	0.051	0.228	0.201	0.005	0.005	-	-	-	-
	526	288	31	42	152	30	31	32						
L3044	0.188	0.992	0.019	0.014	0.344	0.048	0.235	0.202	0.007	0.008	-	-	-	-
	525	296	31	42	152	31	32	33						
T3003	0.202	1.100	0.022	0.014	0.448	0.031	0.026	0.110	0.008	0.003	-	-	-	-
	556	395	30	55	166	35	40	45						
T3053	0.200	0.994	0.016	0.016	0.349	0.047	0.236	0.196	0.004	0.007	-	-	-	-
	539	300	33	40	163	31	30	29						
T3054	0.207	1.020	0.019	0.016	0.444	0.024	0.030	0.060	0.009	0.003	-	-	-	-
	576	417	37	57	179	36	41	34						
T3055	0.185	0.996	0.020	0.015	0.339	0.043	0.225	0.204	0.004	0.006	-	-	-	-
	524	283	30	41	151	33	31	30						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* Quality Assurance Manager
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	ST3940	FLOATING BALL VALVE	3"FB 300LB	B130AF32

MATERIAL	ASTM A352 LCC	Material Origin	P.R.C
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HEAT TREATMENT

HEAT TREATMENT	TEMP.°C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	920	1h/25mm, ≥2h	Gas	Water cooling to room temp.	
Temper	650	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.250	1.200	0.040	0.045	0.600	0.300	0.500	0.500	0.200	0.030	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (-46°C) J								
	485-655	275	22	35	-	AVG ≥ 20, MIN ≥ 16								
T3056	0.202	1.020	0.028	0.016	0.468	0.024	0.041	0.056	0.008	0.002	-	-	-	-
	576	400	31	64	174	37	28	30						
T3057	0.195	1.020	0.030	0.016	0.484	0.021	0.023	0.044	0.008	0.002	-	-	-	-
	564	376	31	61	169	38	40	34						
T3058	0.201	0.994	0.016	0.016	0.450	0.047	0.236	0.195	0.004	0.007	-	-	-	-
	540	326	33	48	154	31	30	29						
T3059	0.108	1.020	0.019	0.016	0.444	0.062	0.030	0.056	0.009	0.003	-	-	-	-
	577	419	38	50	170	36	41	34						
T3060	0.204	1.020	0.028	0.016	0.468	0.024	0.089	0.087	0.008	0.002	-	-	-	-
	579	421	39	69	179	37	28	30						
T3853	0.189	0.720	0.010	0.012	0.400	0.070	0.002	0.003	0.004	0.010	-	-	-	-
	520	279	22	35	180	29	29	30						
T3854	0.180	0.630	0.015	0.020	0.550	0.006	0.160	0.008	0.007	0.025	-	-	-	-
	510	290	28	36	195	29	30	30						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. *DHV Industries, Inc*

WITNESSED BY: *Terry Gonsman*
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO.	M18052823
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	ST3940	FLOATING BALL VALVE	3"FB 300LB	B130AF32
MATERIAL	ASTM A320 L7M	MATERIAL ORIGIN	P.R.C.	

HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	


CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)														
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other	
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-	
HEAT NO.	MECHANICAL PROPERTIES (≥)														
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (-73°C) J									
	690	550	18	50	235	AVG > 27, MIN > 20									
10536	0.430	0.890	0.028	0.031	0.290	-	-	0.880	0.190	-	-	-	-	-	
	725	565	18	55	216	34	38	40							

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: <div style="text-align: center;"> <p><i>DHV Industries, Inc.</i> 3451 Pegasus Drive Bakersfield, CA 93308. U.S.A</p> </div>	QUALITY ASSURANCE MANAGER: <div style="text-align: center;"> <p>Terry Gonsman Quality Assurance Manager</p> </div>
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This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP	MATERIAL TEST REPORT TEST CERTIFICATE ISO 9001:2015, API Q1: 9 TH ED				REPORT NO.	M18042824
					DATE	Apr/28/2018
					PAGE	1 of 9
CUSTOMER	CUSTOMER P.O.		DHV CONTROL NO.	ITEM NO.	LINE NO./CODE	
ALTEK Industrial	ST3972		SO1709019	5	NA	
FIGURE NUMBER	SIZE	CLASS	END TYPE	QTY.	TAG NO.	
B130AF32	3"FB	300LB	RF Flange	60 PCS	NA	
VALVE TYPE	VALVE DESCRIPTION		OPERATE OP	SERIAL NUMBER		
FLOATING BALL VALVE	Two-Piece Body, A352 LCC Body, 316SS Trim, R-PTFE Seat Insert		Lever Op	17091604-17091663		
DESIGN STANDARD	QSL		FIRE SAFE	I.A.W. N.A.C.E.		
API 608-2012	<input type="checkbox"/> QSL 1 <input type="checkbox"/> QSL 2 <input type="checkbox"/> QSL 3 <input type="checkbox"/> QSL 4		<input type="checkbox"/> API 6FA, 3RD.Ed <input checked="" type="checkbox"/> API 607, 6TH.Ed	<input type="checkbox"/> NACE MR-0175-2002 <input checked="" type="checkbox"/> NACE MR-0103-2012		

SEALING SURFACE AND BASE MATERIAL

NAME OF PART	BODY	CAP	BALL	SEAT ASSEMBLY	STEM
BASE MATERIAL	A352 LCC	A352 LCC	A182 F316	R-PTFE	A182 F316
FACE MATERIAL	NA	NA	NA	R-PTFE	NA
NAME OF PART	BOLT/STUDS	NUTS	GASKET		
BASE MATERIAL	A320 L7M	A194 7M	SS+GRAPHITE		
FACE MATERIAL	NA	NA	NA		

PRESSURE TEST REPORT

Have been tested good according to API 598, CSA Z245.15-13 and the purchase order requirements


	SHELL (HYDROSTATIC)	SEAT CLOSURE TESTING				OTHER
		H.P. CLOSURE (HYDROSTATIC) ■ REQUIRED □ OPTIONAL		L.P. CLOSURE (AIR) ■ REQUIRED □ OPTIONAL		
		UP STREAM	DOWN STREAM	UP STREAM	DOWN STREAM	
PRESSURE (PSIG)	1125	825	825	80	80	NA
DURATION (Minutes)	2	2	2	2	2	NA
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	

OTHER INSPECTION

	DIMENSION	MARKING	PAINTING	PACKAGE	FUNCTIONAL	VISUAL	OTHER
RESULT	GOOD	GOOD	GOOD	GOOD	GOOD	MSS SP-55-GOOD	NA

We hereby certify that valves listed above were manufactured, tested and inspected in accordance with the applicable valve standards and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.*
 3451 Pegasus Drive
 Bakersfield, CA 93308, U.S.A


Terry Gonsman
 Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT VALVE TRACEABILITY


ISO 9001:2015, API Q1: 9TH ED

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	ST3972	FLOATING BALL VALVE	3"FB 300LB	B130AF32

CRATE NO.:	48-50	QUANTITIES:	60 PCS
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SERIAL NO.	MATERIAL AND HEAT NUMBER					REMARKS
	BODY	CAP	BALL	STEM	OTHER	
	A352 LCC	A352 LCC	A182 F316	A182 F316		
17091604	T3058	L3009	ZC1297	XS16-3X06		
17091605	T3053	T3059	ZC1297	XS16-3X06		
17091606	T3060	T3056	ZC1297	XS16-3X06		
17091607	T3057	T3857	ZC1297	XS16-3X06		
17091608	T3056	T3058	ZC1297	XS16-3X06		
17091609	T3059	T3058	ZC1297	XS16-3X06		
17091610	T3053	T3854	ZC1297	XS16-3X06		
17091611	T3058	T3853	ZC1297	XS16-3X06		
17091612	T3058	T3057	ZC1297	XS16-3X06		
17091613	T3055	T3056	ZC1297	XS16-3X06		
17091614	T3053	T3057	ZC1297	XS16-3X06		
17091615	L3039	L3014	ZC1297	XS16-3X06		
17091616	T3053	T3056	ZC1297	XS16-3X06		
17091617	T3059	T3056	ZC1297	XS16-3X06		
17091618	T3057	T3053	ZC1297	XS16-3X06		
17091619	L3020	T3057	ZC1297	XS16-3X06		
17091620	T3053	T3055	ZC1297	XS16-3X06		
17091621	T3058	T3058	ZC1297	XS16-3X06		
17091622	T3060	T3058	ZC1297	XS16-3X06		
17091623	L3040	T3058	ZC1297	XS16-3X06		
17091624	L3041	T3058	ZC1297	XS16-3X06		
17091625	T3053	L3048	ZC1297	XS16-3X06		
17091626	T3056	T3055	ZC1297	XS16-3X06		
17091627	T3055	L3041	ZC1297	XS16-3X06		
17091628	L3044	L3041	ZC1297	XS16-3X06		
17091629	L3019	T3058	ZC1297	XS16-3X06		
17091630	T3060	L3005	ZC1297	XS16-3X06		
17091631	T3055	T3056	ZC1297	XS16-3X06		
17091632	T3054	T3060	ZC1297	XS16-3X06		
17091633	T3060	T3058	ZC1297	XS16-3X06		
17091634	T3053	T3059	ZC1297	XS16-3X06		
17091635	T3054	T3060	ZC1297	XS16-3X06		
17091636	T3055	T3056	ZC1297	XS16-3X06		
17091637	T3056	T3060	ZC1297	XS16-3X06		
17091638	T3057	T3057	ZC1297	XS16-3X06		
17091639	T3058	T3057	ZC1297	XS16-3X06		
17091640	T3055	T3060	ZC1297	XS16-3X06		
17091641	L3013	T3057	ZC1297	XS16-3X06		
17091642	T3057	T3060	ZC1297	XS16-3X06		
17091643	T3056	L3007	ZC1297	XS16-3X06		

 DHV VALVE GROUP	MATERIAL TEST REPORT MILL CERTIFICATE			REPORT NO.	M18042824
				DATE	Apr/28/2018
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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	ST3972	FLOATING BALL VALVE	3"FB 300LB	B130AF32


MATERIAL	ASTM A352 LCC	Material Origin	P.R.C
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HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	920	1h/25mm, ≥2h	Gas	Water cooling to room temp.	
Temper	650	≥4h	Gas or Elec	Air cooling to room temp.	


CHEMICAL AND MECHANICAL TEST REPORT
 Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.250	1.200	0.040	0.045	0.600	0.300	0.500	0.500	0.200	0.030	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	(-46°C) J								
	485-655	275	22	35	-	AVG ≥20, MIN ≥16								
L3002	0.187	0.943	0.016	0.017	0.369	0.049	0.257	0.241	0.006	0.006	-	-	-	-
	514	298	29	42	152	30	29	31						
L3005	0.192	0.947	0.018	0.016	0.369	0.042	0.258	0.243	0.006	0.004	-	-	-	-
	524	294	30	37	149	35	32	30						
L3007	0.193	0.939	0.013	0.017	0.348	0.040	0.238	0.249	0.014	0.005	-	-	-	-
	525	284	31	39	155	33	31	30						
L3008	0.184	0.970	0.016	0.014	0.326	0.045	0.227	0.217	0.008	0.007	-	-	-	-
	528	287	29	41	157	32	29	34						
L3009	0.190	0.991	0.014	0.015	0.352	0.053	0.236	0.260	0.012	0.004	-	-	-	-
	517	290	27	38	152	31	30	29						
L3013	0.190	0.958	0.017	0.014	0.310	0.045	0.251	0.228	0.005	0.008	-	-	-	-
	527	286	28	39	147	30	31	33						
L3014	0.183	0.971	0.015	0.016	0.335	0.041	0.263	0.211	0.004	0.005	-	-	-	-
	509	293	27	40	152	29	30	31						
L3019	0.187	0.930	0.014	0.015	0.327	0.044	0.247	0.204	0.003	0.006	-	-	-	-
	519	295	29	42	155	30	31	32						
L3020	0.191	0.958	0.017	0.019	0.338	0.043	0.210	0.205	0.004	0.006	-	-	-	-
	513	294	30	40	150	32	30	29						
L3039	0.183	0.975	0.019	0.017	0.357	0.053	0.215	0.198	0.006	0.003	-	-	-	-
	532	284	30	41	155	29	30	31						
L3040	0.184	0.986	0.018	0.015	0.362	0.051	0.228	0.201	0.005	0.005	-	-	-	-
	526	288	31	42	152	30	31	32						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries Inc.* 
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.

 DHV VALVE GROUP		<h1 style="text-align: center;">MATERIAL TEST REPORT</h1> <h2 style="text-align: center;">MILL CERTIFICATE</h2>										REPORT NO.	M18042824	
												DATE	Apr/28/2018	
		ISO 9001:2015, API Q1: 9 TH ED										PAGE	5 of 9	
CUSTOMER	ALTEK Industrial	CUSTOMER P.O.	ST3972	VALVE TYPE	FLOATING BALL VALVE	SIZE/CLASS	3"FB 300LB	FIGURE NUMBER	B130AF32					
MATERIAL	ASTM A352 LCC	Material Origin			P.R.C									
HEAT TREATMENT														
HEAT TREATMENT	Quench	TEMP. °C	920	TIME @ TEMP. °C (HR)	1h/25mm, ≥2h	FURNACE	Gas	COOLING PROCESS	Water cooling to room temp.	REMARK				
Temper	650	≥4h	Gas or Elec	Air cooling to room temp.										
CHEMICAL AND MECHANICAL TEST REPORT														
Have been tested good according to the material specification and purchase order requirements														
STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.250	1.200	0.040	0.045	0.600	0.300	0.500	0.500	0.200	0.030	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (-46°C) J								
	485-655	275	22	35	-	AVG ≥ 20, MIN ≥ 16								
L3041	0.187	0.984	0.016	0.016	0.349	0.047	0.236	0.196	0.004	0.007	-	-	-	-
	529	293	33	40	153	31	30	29						
L3043	0.185	0.978	0.018	0.015	0.351	0.054	0.219	0.197	0.003	0.005	-	-	-	-
	527	289	32	40	156	32	30	29						
L3044	0.188	0.992	0.019	0.014	0.344	0.048	0.235	0.202	0.007	0.008	-	-	-	-
	525	296	31	42	152	31	32	33						
L3048	0.170	0.700	0.013	0.011	0.490	0.017	0.280	0.014	0.005	0.015	-	-	-	-
	520	285	26	38	195	29	30	30						
T3053	0.200	0.994	0.016	0.016	0.349	0.047	0.236	0.196	0.004	0.007	-	-	-	-
	539	300	33	40	153	31	30	29						
T3054	0.207	1.020	0.019	0.016	0.444	0.024	0.030	0.060	0.009	0.003	-	-	-	-
	576	417	37	57	173	36	41	34						
T3055	0.185	0.996	0.020	0.015	0.339	0.043	0.225	0.204	0.004	0.006	-	-	-	-
	524	283	30	41	151	33	31	30						
T3056	0.202	1.020	0.028	0.016	0.468	0.024	0.041	0.056	0.008	0.002	-	-	-	-
	576	400	31	64	174	37	28	30						
T3057	0.195	1.020	0.030	0.016	0.484	0.021	0.023	0.044	0.008	0.002	-	-	-	-
	564	376	31	61	169	38	40	34						
T3058	0.201	0.994	0.016	0.016	0.450	0.047	0.236	0.195	0.004	0.007	-	-	-	-
	540	325	33	48	154	31	30	29						
T3059	0.108	1.020	0.019	0.016	0.444	0.062	0.030	0.056	0.009	0.003	-	-	-	-
	577	419	36	50	170	36	41	34						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* Quality Assurance Manager

3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A

Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

REPORT NO. M18042824

DATE Apr/28/2018

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER	
ALTEK Industrial	ST3972	FLOATING BALL VALVE	3"FB 300LB	B130AF32	
MATERIAL	ASTM A352 LCC	Material Origin	P.R.C		
HEAT TREATMENT					
HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	920	1h/25mm, ≥2h	Gas	Water cooling to room temp.	
Temper	650	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT
Have been tested good according to the material specification and purchase order requirements

	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
STD	0.250	1.200	0.040	0.045	0.600	0.300	0.500	0.500	0.200	0.030	-	-	-	-
	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (-46°C) J								
HEAT NO.	485-655	275	22	35	-	AVG ≥ 20, MIN ≥ 16								
T3060	0.204	1.020	0.028	0.016	0.468	0.024	0.089	0.087	0.008	0.002	-	-	-	-
T3853	0.189	0.720	0.010	0.012	0.400	0.070	0.002	0.003	0.004	0.010	-	-	-	-
T3854	0.180	0.630	0.015	0.020	0.550	0.006	0.160	0.008	0.007	0.025	-	-	-	-
T3857	0.206	0.954	0.020	0.017	0.347	0.050	0.224	0.209	0.003	0.005	-	-	-	-

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: *DHV Industries, Inc.* *Terry Gonsman*
Terry Gonsman
Quality Assurance Manager

**3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A**

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	ST3972	FLOATING BALL VALVE	3"FB 300LB	B130AF32

MATERIAL	ASTM A320 L7M	MATERIAL ORIGIN	P.R.C.
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HEAT TREATMENT

HEAT TREATMENT	TEMP. °C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.035	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)													
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	IMPACT TEST (-73°C) J								
	690	550	18	50	235	AVG ≥ 27, MIN ≥ 20								
10536	0.430	0.890	0.028	0.031	0.290	-	-	0.880	0.190	-	-	-	-	-
	725	565	18	55	216	34	38	40						

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY:

QUALITY ASSURANCE MANAGER:

DHV Industries, Inc.
3451 Pegasus Drive
Bakersfield, CA 93308, U.S.A

Terry Gonsman
Terry Gonsman
Quality Assurance Manager

This certificate is in compliance with EN 10204 3.1.



DHV VALVE GROUP

MATERIAL TEST REPORT MILL CERTIFICATE

ISO 9001:2015, API Q1: 9TH ED

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CUSTOMER	CUSTOMER P.O.	VALVE TYPE	SIZE/CLASS	FIGURE NUMBER
ALTEK Industrial	ST3972	FLOATING BALL VALVE	3"FB 300LB	B130AF32
MATERIAL	ASTM A194 7M	MATERIAL ORIGIN	P.R.C.	

HEAT TREATMENT

HEAT TREATMENT	TEMP.°C	TIME @ TEMP. °C (HR)	FURNACE	COOLING PROCESS	REMARK
Quench	850	1h/25mm, ≥2h	Gas or Elec	Air cooling to room temp.	
Temper	680	≥4h	Gas or Elec	Air cooling to room temp.	

CHEMICAL AND MECHANICAL TEST REPORT

Have been tested good according to the material specification and purchase order requirements

STD	CHEMICAL COMPOSITION % (≤)													
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	V	Nb	AL	N	Other
	0.38-0.48	0.75-1.00	0.040	0.040	0.15-0.35	-	-	0.80-1.10	0.15-0.25	-	-	-	-	-
HEAT NO.	MECHANICAL PROPERTIES (≥)						IMPACT TEST							
	T.S. MPa	Y.S. MPa	EL. (%)	R.A. (%)	HARD (HB)(≤)	(-°C) J								
	10537	0.430	0.780	0.030	0.029	0.260	-	-	0.890	0.210	-	-	-	-

We hereby certify that the material was manufactured, sampled, tested and inspected in accordance with the applicable material specifications and other requirements designated in the purchase order. The information contained in this report is true and correct to the best of our knowledge.

WITNESSED BY: <div style="text-align: center;"> DHV Industries, Inc. 3451 Pegasus Drive Bakersfield, CA 93308, U.S.A </div>	QUALITY ASSURANCE MANAGER: Terry Gonsman Quality Assurance Manager
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This certificate is in compliance with EN 10204 3.1.

Bill of Lading

Ship From:
 ALLIANCE SUPPLY LTD
 8515 MCINTYRE ROAD NW
 EDMONTON, AB
 T6E 6G3
 SID#: FOB

Date: 2-April-2020
Bill of Lading No: PS9074
BARCODE SPACE

Ship To: Location No:
 BIRCHCLIFF C/O PUREFAB
 35005 HWY 64A
 2 MILES WEST OF FAIRVIEW ON HWY 64A
 FAIRVIEW, AB
 CID#: FOB

Carrier Name: DRYDAN TRANSPORT
Trailer No:
Seal Number(s):
SCAC:
Pro No:
BARCODE SPACE

Third Party Freight Charges - Bill To:

Freight Charge Terms (prepaid unless marked otherwise)
 Prepaid Collect 3rd Party
 Master BOL: w/attached underlying BOLs

Special Instructions:

Customer Order Information						
Customer Order No.	# Pkgs.	Weight	Pallet/Slip (Y/N)	Additional Shipper Info		
PO-00382	12	14346	CRATES	SO# 5143	P/S# 9074	ALL WEIGHTS IN LBS
	8	5497	SKIDS			
PO-00478	5	5792	CRATES	SO# 5420	P/S# 9075	ALL WEIGHTS IN LBS
	6	5218	SKIDS			
PO-00478	1	810	SKID	SO# 5525	P/S# 8910	ALL WEIGHTS IN LBS
PO-00478	3	1876	SKIDS	SO# 5543	P/S# 9058	ALL WEIGHTS IN LBS
Totals	35	33539.00				

Carrier Information								
Handling Unit		Package		Weight	H.M. (X)	Commodity Description	LTL Only	
QTY	TYPE	QTY	TYPE				NMFC No.	Class
						Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation with ordinary care. See Section 2(e) of MNMFC Item 360		
Totals								

Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property as follows:
 "The agreed or declared value of the property is specifically stated by the shipper to be not exceeding _____FOB_____."

COD Amt. \$ _____
Fee Terms: Collect Prepaid
 Customer Check Acceptable

NOTE: Liability Limitation for loss or damage in this shipment may be applicable. See 49 U.S.C. - 14706(c)(1)(A) and (B).

RECEIVED, subject to individually determined rates or contracts that have been agreed upon in writing between the carrier and shipper, if applicable, otherwise to the rates, classifications and rules that have been established by the carrier and are available to the shipper, on request, and to all applicable state and federal regulations.

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.
 Shipper Signature _____

This is to certify that the above named materials are properly classified, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the DOT.
 Shipper Signature: Tom Date: Apr 2/2020

Trailer Loaded
 By Shipper
 By Driver

Freight Counted
 By Shipper
 By Driver/pallets said to contain
 By Driver/Pieces

Carrier acknowledges receipt of packages and required placards. Carrier certifies emergency response information was made available and/or carrier has the DOT emergency response guidebook or equivalent documentation in the vehicle. Property described above is received in good order, except as noted.
 Carrier Signature: [Signature] Pickup Date: Apr 2/2020

DALE