


LINE# 3

 <b>DHV VALVE GROUP</b>	<b>MATERIAL TEST REPORT TEST CERTIFICATE</b>				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 <sup>TH</sup> ,ED	<input type="checkbox"/> QSL 1	<input type="checkbox"/> QSL 2	<input type="checkbox"/> API 6FA, 3 <sup>RD</sup> .Ed	<input checked="" type="checkbox"/> NACE MR-0175/ISO15156-2015		
	<input type="checkbox"/> QSL 3	<input type="checkbox"/> QSL 4	<input type="checkbox"/> API 607, 6 <sup>TH</sup> .Ed	<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

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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:  <b>Terry Gonsman</b> Quality Assurance Manager <b>DHV Industries, Inc.</b> 3451 Pegasus Drive Bakersfield, CA 93308, U.S.A
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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* DHV Industries, Inc.  
Terry Gonsman 3451 Pegasus Drive  
Quality Assurance Manager Bakersfield, CA 93308. U.S.A

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