FORUM ENERGY TECHNOLOGIES DSI

Inspection Certificate and Material Test Report (EN10204-1991 3.1.B / EN10204-2004 3.1)

DSI-Valve Solutions
12735 Dairy Ashford
Stafford TX 77477
281-637-2000 - Fax 281-637-2299
www.dsivalve.com

Certificate/Serial/Job No: YD99 — *Quality Department:* John Ho

Quantity	Size (NPS)	Class	Product	Description	Type	SONumber	Line	Sold to	Date
39	4	150	/ 103033	DSI 137XU	SWING				3/31/2012

Pressure Test: API598 ☑ Satisfactory	Shell Pressure : 450 psi / 3102.64 kPa	BackSeat : psi / kPa	Seat Pressure 325 psi / 2240.8 kPa	Seat Air Pressure psi / kPa

Part	Specif.	HEAT#	Chemical Composition [%] C	Si	Mn	P	S	Ni	Cr	Mo	Cu	V	W	Nb	Al	N	Ceq	Mechanical Properties Tensile [ksi] [MPa]	Yield [ksi] [MPa]	Elong [%]	Reduc [%]	Hard [HB]	Ch.1 [J]	Ch.2 [J]	Ch.3 [J]	Ch. A [J]	Temp. [F] [C]	Heat
YD99 / 5																												
BODY	ASTM A216 WCB-2008	W 16162	0.202	0.43	0.95	0.033	0.011	0.044	0.061	0.004	0.035	0.006					0.38	82.22 566.89	52.06 358.9	28	54	171						N
CLAPPER	ASTM A182F6a-2008a	C 590	0.093	0.36	0.46	0.024	0.0070	0.220	12.45		0.14							90.05 620.87	60.03 413.9	32	66	297						N
COVER	ASTM A105-2005	C 11139	0.18	0.19	0.9	0.015	0.007	0.02	0.04	0.004	0.06	0.000					0.34	73.23 504.90	53.65 369.9	33	60	151						N
YD99 / 6																												
BODY	ASTM A216 WCB-2008	W 16729	0.205	0.45	0.94	0.026	0.010	0.069	0.043	0.004	0.035	0.008					0.38	80.33 553.86	46.69 321.9	28	46	171						N
CLAPPER	ASTM A182F6a-2008a	C 590	0.093	0.36	0.46	0.024	0.0070	0.220	12.45		0.14							90.05 620.87	60.03 413.9	32	66	297						N
COVER	ASTM A105-2005	C 11139	0.18	0.19	0.9	0.015	0.007	0.02	0.04	0.004	0.06	0.000					0.34	73.23 504.90	53.65 369.9	33	60	151						N
YD99 / 7																												
BODY	ASTM A216 WCB-2008	W 16173	0.210	0.40	0.89	0.034	0.013	0.038	0.068	0.002	0.029	0.008					0.38	80.91 557.85	51.48 354.9	30	57	165						N
CLAPPER	ASTM A182F6a-2008a	C 590	0.093	0.36	0.46	0.024	0.0070	0.220	12.45		0.14							90.05 620.87	60.03 413.9	32	66	297						N
COVER	ASTM A105-2005	C 11139	0.18	0.19	0.9	0.015	0.007	0.02	0.04	0.004	0.06	0.000					0.34	73.23 504.90	53.65 369.9	33	60	151						N
YD99 / 8																												
BODY	ASTM A216 WCB-2008	W 16730	0.190	0.41	0.91	0.025	0.012	0.037	0.038	0.004	0.037	0.009					0.36	83.38 574.88	50.17 345.9	30	56	163						N
CLAPPER	ASTM A182F6a-2008a	C 590	0.093	0.36	0.46	0.024	0.0070	0.220	12.45		0.14							90.05 620.87	60.03 413.9	32	66	297						N
COVER	ASTM A105-2005	C 11139	0.18	0.19	0.9	0.015	0.007	0.02	0.04	0.004	0.06	0.000					0.34	73.23 504.90	53.65 369.9	33	60	151						N
YD99 / 9																												

BODY	ASTM A216 WCB-2008	W 16173	0.210	0.40	0.89	0.034	0.013	0.038	0.068	0.002	0.029	0.008	0.38	80.91 557.85	51.48 354.9	30	57	165		N
CLAPPER	ASTM A182F6a-2008a	C 590	0.093	0.36	0.46	0.024	0.0070	0.220	12.45		0.14			90.05 620.87	60.03 413.9	32	66	297		N
COVER	ASTM A105-2005	C 11139	0.18	0.19	0.9	0.015	0.007	0.02	0.04	0.004	0.06	0.000	0.34	73.23 504.90	53.65 369.9	33	60	151		N

YD99 / 10

BODY	ASTM A216 WCB-2008	W 16140	0.209	0.52	0.98	0.031	0.011	0.038	0.057	0.004	0.035	0.006	0.39	83.38 574.88	53.22 366.9	29	54	165		N
CLAPPER	ASTM A182F6a-2008a	C 590	0.093	0.36	0.46	0.024	0.0070	0.220	12.45		0.14			90.05 620.87	60.03 413.9	32	66	297		N
COVER	ASTM A105-2005	C 11139	0.18	0.19	0.9	0.015	0.007	0.02	0.04	0.004	0.06	0.000	0.34	73.23 504.90	53.65 369.9	33	60	151		N

YD99 / 11

BODY	ASTM A216 WCB-2008	W 16174	0.192	0.47	0.87	0.028	0.008	0.035	0.037	0.003	0.031	0.006	0.35	82.80 570.89	53.80 370.9	29	54	174		N
CLAPPER	ASTM A182F6a-2008a	C 590	0.093	0.36	0.46	0.024	0.0070	0.220	12.45		0.14			90.05 620.87	60.03 413.9	32	66	297		N
COVER	ASTM A105-2005	C 11139	0.18	0.19	0.9	0.015	0.007	0.02	0.04	0.004	0.06	0.000	0.34	73.23 504.90	53.65 369.9	33	60	151		N

YD99 / 12

BODY	ASTM A216 WCB-2008	W 15602	0.195	0.45	0.94	0.023	0.012	0.040	0.049	0.002	0.056	0.008	0.37	80.91 557.85	52.06 358.9	29	54	155		N
CLAPPER	ASTM A182F6a-2008a	C 590	0.093	0.36	0.46	0.024	0.0070	0.220	12.45		0.14			90.05 620.87	60.03 413.9	32	66	297		N
COVER	ASTM A105-2005	C 11139	0.18	0.19	0.9	0.015	0.007	0.02	0.04	0.004	0.06	0.000	0.34	73.23 504.90	53.65 369.9	33	60	151		N

YD99 / 13

BODY	ASTM A216 WCB-2008	W 16124	0.196	0.41	0.94	0.025	0.010	0.025	0.039	0.004	0.036	0.005	0.37	84.54 582.88	54.96 378.9	29	53	157		N
CLAPPER	ASTM A182F6a-2008a	C 590	0.093	0.36	0.46	0.024	0.0070	0.220	12.45		0.14			90.05 620.87	60.03 413.9	32	66	297		N
COVER	ASTM A105-2005	C 11139	0.18	0.19	0.9	0.015	0.007	0.02	0.04	0.004	0.06	0.000	0.34	73.23 504.90	53.65 369.9	33	60	151		N

YD99 / 14

BODY	ASTM A216 WCB-2008	W 16725	0.206	0.47	0.95	0.024	0.008	0.047	0.050	0.006	0.045	0.008	0.38	86.86 598.88	59.74 411.9	28	50	161		N
CLAPPER	ASTM A182F6a-2008a	C 590	0.093	0.36	0.46	0.024	0.0070	0.220	12.45		0.14			90.05 620.87	60.03 413.9	32	66	297		N
COVER	ASTM A105-2005	C 11139	0.18	0.19	0.9	0.015	0.007	0.02	0.04	0.004	0.06	0.000	0.34	73.23 504.90	53.65 369.9	33	60	151		N

YD99 / 15

BODY	ASTM A216 WCB-2008	W 16710	0.199	0.43	0.97	0.022	0.009	0.040	0.044	0.004	0.037	0.007	0.38	80.33 553.86	58.44 402.9	29	53	158		N
CLAPPER	ASTM A182F6a-2008a	C 590	0.093	0.36	0.46	0.024	0.0070	0.220	12.45		0.14			90.05 620.87	60.03 413.9	32	66	297		N
COVER	ASTM A105-2005	C 11139	0.18	0.19	0.9	0.015	0.007	0.02	0.04	0.004	0.06	0.000	0.34	73.23 504.90	53.65 369.9	33	60	151		N

YD99 / 16

BODY	ASTM A216 WCB-2008	W 16273	0.200	0.41	0.98	0.035	0.012	0.033	0.050	0.004	0.036	0.007	0.38	82.22 566.89	51.48 354.9	28	50	159		N
																					N