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: YE94 / 37 — *Quality Department:* John Ho

Quantity	Size (NPS)	Class	Product	Description	Type	SONumber	Line	Sold to	Date
70	10	150	/ 103044	DSI 37XUF	GATE				7/17/2012

Pressure Test: API598 ☑ *Satisfactory* — *Shell Pressure :* 450 psi / 3102.64 kPa — *BackSeat :* 325 psi / 2240.8 kPa — *Seat Pressure* 325 psi / 2240.8 kPa — *Seat Air Pressure* 80 psi / 551.58 kPa

Part	Specif.	HEAT No	Chemical Composition [%] C	Si	Mn	P	S	Ni	Cr	Mo	Cu	V	Nb	Al	N	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
BODY	ASTM A216 WCB-2008	V 12166	0.202	0.36	0.68	0.026	0.014	0.031	0.029	0.001	0.028	0.006		0.028		73.23	44.23	33	57	156						N
																504.90	305									
BONNET	ASTM A216 WCB-2008	A 11932	0.220	0.46	0.89	0.027	0.014	0.025	0.049	0.001	0.041	0.004		0.034		74.53	44.23	33	56	151						N
																513.87	305									
WEDGE	ASTM A216 WCB-2008	E 3042	0.20	0.45	0.82	0.025	0.017	0.044	0.09	0.007	0.029	0.001				85.41	42.05	30	46	158						N
																588.88	289.9									

Heat Treatment Codes:

A : Annealing — *AC : Air Cooling* — *DA : Double Aged* — *FT : Furnace Treatment* — *N : Normalizing* — *OQ : OilQuenched*
Ph-3 : Precipitation Hardening — *SA : Solution Annealed* — *SQ : Solution Quenched* — *ST : Solution Treatment* — *T : Tempering* — *WC : Water Cooling*
WQ : Water Quenched — *WT : Water Quenched/ Tempered* — *NT Normalized/Tempered*

Part	Material
BACK SEAT	ASTM A276 410
BODY/BONNET	ASTM A216 WCB
BOLTING	ASTM A193 B7 / ASTM A194 2H
DISC-WEDGE-CLAPPER	ASTM A216WCB + 13%Cr Overlay
PACKING	GRAPHITE
SEAT RING	ASTM A105 + Stl.6 Faced
STEM	ASTM A182 F6A Cl. 3
STEM NUT	ASTM A439-D2

Valves Tested per API598

We hereby certify, that the material described above complies with the order requirements.

EC Declaration of Confirmity: JEV (Jiangyin Eastern Valve Co. Ltd.), Jiangsu Province, 214423, P.R. China

According to Annex VII of Pressure Equipment Directive 97/23/EC , hereby declare that the products detailed above are in compliance with PED 97/23/EC and have been manufactured in accordance with conformity assesment module B+D as approved Det Norske Veritas Inspection AB as Identification No 0575 (formally 0409). The products may cover Category I, II and III of pressure equipment. For the most specific risks of this equipment, safety and compliance with essential requirements of the Directive has been based on API 600, API598, ASME B16.34, ASME B16.5, ASME B16.10 latest edition.

Undersigned by Liu Jian Qing, representing Jianyin Eastern Valve company Ltd. :