

Certificate/Serial/Job No:

YD91

Quality Department: *John Ho*

Quantity	Size (NPS)	Class	Product	Description	Type	SONumber	Line	Sold to	Date
80	2	300	/ 103051	DSI 23XUF	GATE				4/25/2012

Pressure Test: API598	<input checked="" type="checkbox"/> Satisfactory	Shell Pressure : 1125 psi 7756.6 kPa	BackSeat : 825 psi 5688.2 kPa	Seat Pressure 825 psi 5688.17 kPa	Seat Air Pressure 80 psi 551.58 kPa
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Part	Specif.	HEAT#	Chemical Composition [%]													Mechanical Properties									
			C	Si	Mn	P	S	Ni	Cr	Mo	Cu	V	W	Nb	Al	N	Ceq	Tensile [ksi] [MPa]	Yield [ksi] [MPa]	Elong [%]	Reduc [%]	Hard [HB]	Ch.1 [J]	Ch.2 [J]	Ch.3 [J]

YD91 / 1

BODY	ASTM A216 WCB-2008	W 17019	0.203	0.42	0.89	0.026	0.01	0.051	0.04	0.006	0.037	0.018		0.053	0.38	83.38 574.88	54.38 374.9	30	58	171								N
BONNET	ASTM A216 WCB-2008	E 3118	0.21	0.43	0.84	0.020	0.009	0.028	0.09	0.030	0.028	0.005			0.38	85.26 587.65	42.05 289.9	31	42	160								N
WEDGE	ASTM A217 CA15-2007	D 3115	0.10	0.91	0.70	0.022	0.010	0.145	12.23	0.020	0.053					101.36 698.85	70.62 486.9	19	49	258							N	

YD91 / 2

BODY	ASTM A216 WCB-2008	W 17021	0.200	0.44	0.907	0.024	0.008	0.028	0.042	0.005	0.035	0.006		0.052	0.37	83.38 574.88	50.75 349.9	28	53	171								N
BONNET	ASTM A216 WCB-2008	W 16993	0.195	0.40	0.916	0.022	0.007	0.034	0.05	0.006	0.039	0.006		0.052	0.37	80.33 553.86	50.17 345.9	29	53	165								N
WEDGE	ASTM A217 CA15-2007	D 6723	0.12	0.91	0.83	0.025	0.010	0.118	12.30	0.011	0.030					105.27 725.81	75.84 522.9	20.3	53	253							N	

YD91 / 3

BODY	ASTM A216 WCB-2008	A 11970	0.200	0.45	0.89	0.026	0.015	0.023	0.053	0.005	0.038	0.004		0.004	0.36	76.13 524.9	45.10 311	27	55	159								N
BONNET	ASTM A216 WCB-2008	E 3116	0.21	0.45	0.82	0.013	0.012	0.042	0.12	0.025	0.031	0.005			0.38	85.12 586.88	41.33 285	30	43	159								N
WEDGE	ASTM A217 CA15-2007	D 1564	0.13	0.97	0.81	0.024	0.010	0.153	12.33	0.011	0.037	0.004				101.07 696.85	70.91 488.9	20.1	49	267							N	

YD91 / 4

BODY	ASTM A216 WCB-2008	W 17021	0.200	0.44	0.907	0.024	0.008	0.028	0.042	0.005	0.035	0.006		0.052	0.37	83.38 574.88	50.75 349.9	28	53	171								N
BONNET	ASTM A216 WCB-2008	W 17007	0.204	0.49	0.978	0.023	0.008	0.029	0.042	0.006	0.035	0.008		0.054	0.39	84.54 582.88	54.96 378.9	30	57	172								N
WEDGE	ASTM A217 CA15-2007	D 1715	0.12	0.88	0.82	0.030	0.018	0.153	12.46	0.046	0.031	0.008				101.79 701.82	72.21 497.9	21.1	48	272							N	

YD91 / 5

BODY	ASTM A216 WCB-2008	A 11960	0.209	0.51	0.98	0.025	0.015	0.03	0.067	0.001	0.04	0.005	0.02	0.39	76.85	46.11	26	50	159	N
															529.86	317.9				
BONNET	ASTM A216 WCB-2008	E 3117	0.22	0.43	0.84	0.020	0.010	0.026	0.06	0.009	0.032	0.004			85.41	41.91	30	40	160	N
															588.88	289				
WEDGE	ASTM A217 CA15-2007	D 3115	0.10	0.91	0.70	0.022	0.010	0.145	12.23	0.020	0.053				101.36	70.62	19	49	258	N
															698.85	486.9				

YD91 / 6

BODY	ASTM A216 WCB-2008	A 11960	0.209	0.51	0.98	0.025	0.015	0.03	0.067	0.001	0.04	0.005	0.02	0.39	76.85	46.11	26	50	159	N
															529.86	317.9				
BONNET	ASTM A216 WCB-2008	W 17007	0.204	0.49	0.978	0.023	0.008	0.029	0.042	0.006	0.035	0.008	0.054	0.39	84.54	54.96	30	57	172	N
															582.88	378.9				
WEDGE	ASTM A217 CA15-2007	D 3116	0.12	0.93	0.72	0.022	0.013	0.151	12.13	0.024	0.053				102.23	72.79	18.6	50	260	N
															704.85	501.9				

YD91 / 7

BODY	ASTM A216 WCB-2008	A 11959	0.210	0.48	0.87	0.025	0.015	0.026	0.042	0.001	0.045	0.005	0.046	0.37	75.40	44.95	27	55	155	N
															519.86	309.9				
BONNET	ASTM A216 WCB-2008	E 3116	0.21	0.45	0.82	0.013	0.012	0.042	0.12	0.025	0.031	0.005		0.38	85.12	41.33	30	43	159	N
															586.88	285				
WEDGE	ASTM A217 CA15-2007	D 3117	0.12	0.86	0.70	0.025	0.012	0.212	12.38	0.026	0.062				99.47	71.92	18.4	49	257	N
															685.82	495.9				

YD91 / 8

BODY	ASTM A216 WCB-2008	A 11959	0.210	0.48	0.87	0.025	0.015	0.026	0.042	0.001	0.045	0.005	0.046	0.37	75.40	44.95	27	55	155	N
															519.86	309.9				
BONNET	ASTM A216 WCB-2008	W 17038	0.200	0.43	0.924	0.026	0.018	0.039	0.043	0.007	0.034	0.005	0.041	0.38	83.96	56.70	29	57	172	N
															576.88	390.9				
WEDGE	ASTM A217 CA15-2007	D 3116	0.12	0.93	0.72	0.022	0.013	0.151	12.13	0.024	0.053				102.23	72.79	18.6	50	260	N
															704.85	501.9				

YD91 / 9

BODY	ASTM A216 WCB-2008	W 17021	0.200	0.44	0.907	0.024	0.008	0.028	0.042	0.005	0.035	0.006	0.052	0.37	83.38	50.75	28	53	171	N
															574.88	349.9				
BONNET	ASTM A216 WCB-2008	W 17007	0.204	0.49	0.978	0.023	0.008	0.029	0.042	0.006	0.035	0.008	0.054	0.39	84.54	54.96	30	57	172	N
															582.88	378.9				
WEDGE	ASTM A217 CA15-2007	D 3116	0.12	0.93	0.72	0.022	0.013	0.151	12.13	0.024	0.053				102.23	72.79	18.6	50	260	N
															704.85	501.9				

YD91 / 10

BODY	ASTM A216 WCB-2008	A 11972	0.200	0.42	0.87	0.022	0.01	0.039	0.052	0.025	0.034	0.004	0.012	0.37	74.10	43.94	30	57	153	N
															510.90	303				
BONNET	ASTM A216 WCB-2008	E 3116	0.21	0.45	0.82	0.013	0.012	0.042	0.12	0.025	0.031	0.005		0.38	85.12	41.33	30	43	159	N
															586.88	285				
WEDGE	ASTM A217 CA15-2007	D 3117	0.12	0.86	0.70	0.025	0.012	0.212	12.38	0.026	0.062				99.47	71.92	18.4	49	257	N
															685.82	495.9				

YD91 / 11

BODY	ASTM A216 WCB-2004	W 17005	0.210	0.467	0.835	0.022	0.019	0.001	0.010	0.011	0.020	0.001		0.35	78.01	48.43	23.8	44.2	168	N
															537.86	333.9				
BONNET	ASTM A216 WCB-2008	E 3118	0.21	0.43	0.84	0.020	0.009	0.028	0.09	0.030	0.028	0.005		0.38	85.26	42.05	31	42	160	N
															587.85	289.9				
WEDGE	ASTM A217 CA15-2007	D 3119	0.09	0.88	0.83	0.011	0.010	0.129	12.31	0.018	0.062				100.78	71.20	19.8	49	259	N
															694.85	490.9				

YD91 / 12

BODY	ASTM A216 WCB-2004	W 17005	0.210	0.467	0.835	0.022	0.019	0.001	0.010	0.011	0.020	0.001		0.35	78.01	48.43	23.8	44.2	168	N
															537.86	333.9				
BONNET	ASTM A216 WCB-2008	E 3117	0.22	0.43	0.84	0.020	0.010	0.026	0.06	0.009	0.032	0.004			85.41	41.91	30	40	160	N
															588.88	289				

BODY	ASTM A216 WCB-2008	W 17019	0.203	0.42	0.89	0.026	0.01	0.051	0.04	0.006	0.037	0.018		0.053	0.38	83.38	54.38	30	58	171		N
																574.88	374.9					
BONNET	ASTM A216 WCB-2008	W 16993	0.195	0.40	0.916	0.022	0.007	0.034	0.05	0.006	0.039	0.006		0.052	0.37	80.33	50.17	29	53	165		N
																553.86	345.9					
WEDGE	ASTM A217 CA15-2007	D 3117	0.12	0.86	0.70	0.025	0.012	0.212	12.38	0.026	0.062					99.47	71.92	18.4	49	257		N
																685.82	495.9					

YD91 / 21

BODY	ASTM A216 WCB-2008	A 11965	0.210	0.40	0.89	0.029	0.013	0.031	0.128	0.041	0.023	0.006		0.01	0.40	76.56	45.97	26	53	159		N
																527.86	317					
BONNET	ASTM A216 WCB-2008	E 3117	0.22	0.43	0.84	0.020	0.010	0.026	0.06	0.009	0.032	0.004				85.41	41.91	30	40	160		N
																568.88	289					
WEDGE	ASTM A217 CA15-2007	D 3115	0.10	0.91	0.70	0.022	0.010	0.145	12.23	0.020	0.053					101.36	70.62	19	49	258		N
																698.85	486.9					

YD91 / 22

BODY	ASTM A216 WCB-2008	A 11965	0.210	0.40	0.89	0.029	0.013	0.031	0.128	0.041	0.023	0.006		0.01	0.40	76.56	45.97	26	53	159		N
																527.86	317					
BONNET	ASTM A216 WCB-2008	E 3118	0.21	0.43	0.84	0.020	0.009	0.028	0.09	0.030	0.028	0.005			0.38	85.26	42.05	31	42	160		N
																587.85	289.9					
WEDGE	ASTM A217 CA15-2007	D 3115	0.10	0.91	0.70	0.022	0.010	0.145	12.23	0.020	0.053					101.36	70.62	19	49	258		N
																698.85	486.9					

YD91 / 23

BODY	ASTM A216 WCB-2008	A 11871	0.220	0.43	0.89	0.027	0.014	0.031	0.073	0.008	0.039	0.004		0.051	0.39	76.42	45.82	28	54	156		N
																526.9	315.9					
BONNET	ASTM A216 WCB-2008	W 17020	0.192	0.47	0.98	0.024	0.008	0.027	0.04	0.007	0.033	0.004		0.053	0.38	82.07	51.48	29	58	165		N
																565.85	354.9					
WEDGE	ASTM A217 CA15-2007	D 3115	0.10	0.91	0.70	0.022	0.010	0.145	12.23	0.020	0.053					101.36	70.62	19	49	258		N
																698.85	486.9					

YD91 / 24

BODY	ASTM A216 WCB-2008	A 11956	0.200	0.47	0.94	0.025	0.012	0.023	0.046	0.008	0.038	0.004		0.049	0.37	73.95	43.50	31	58	150		N
																509.87	299.9					
BONNET	ASTM A216 WCB-2008	W 17020	0.192	0.47	0.98	0.024	0.008	0.027	0.04	0.007	0.033	0.004		0.053	0.38	82.07	51.48	29	58	165		N
																565.85	354.9					
WEDGE	ASTM A217 CA15-2007	D 6723	0.12	0.91	0.83	0.025	0.010	0.118	12.30	0.011	0.030					105.27	75.84	20.3	53	253		N
																725.81	522.9					

YD91 / 25

BODY	ASTM A216 WCB-2008	A 11956	0.200	0.47	0.94	0.025	0.012	0.023	0.046	0.008	0.038	0.004		0.049	0.37	73.95	43.50	31	58	150		N
																509.87	299.9					
BONNET	ASTM A216 WCB-2008	E 3116	0.21	0.45	0.82	0.013	0.012	0.042	0.12	0.025	0.031	0.005			0.38	85.12	41.33	30	43	159		N
																586.88	285					
WEDGE	ASTM A217 CA15-2007	D 3117	0.12	0.86	0.70	0.025	0.012	0.212	12.38	0.026	0.062					99.47	71.92	18.4	49	257		N
																685.82	495.9					

YD91 / 26

BODY	ASTM A216 WCB-2004	W 17006	0.204	0.472	0.906	0.019	0.014	0.025	0.025	0.008	0.030	0.005			0.37	72.21	49.01	27	49	167		N
																497.87	337.9					
BONNET	ASTM A216 WCB-2008	E 3118	0.21	0.43	0.84	0.020	0.009	0.028	0.09	0.030	0.028	0.005			0.38	85.26	42.05	31	42	160		N
																587.85	289.9					
WEDGE	ASTM A217 CA15-2007	D 3116	0.12	0.93	0.72	0.022	0.013	0.151	12.13	0.024	0.053					102.23	72.79	18.6	50	260		N
																704.85	501.9					

YD91 / 27

BODY	ASTM A216 WCB-2008	A 11963	0.200	0.44	0.92	0.024	0.012	0.031	0.053	0.001	0.04	0.006		0.052	0.37	74.68	44.37	30	56	152		N
																514.90	305.9					
BONNET	ASTM A216 WCB-2008	E 3119	0.23	0.50	0.91	0.020	0.008	0.032	0.08	0.023	0.026	0.005				85.55	41.33	30	41	158		N
																589.85	285					

WEDGE	ASTM A217 CA15-2007	D 3116	0.12	0.93	0.72	0.022	0.013	0.151	12.13	0.024	0.053							102.23	72.79	18.6	50	260		N
																		704.85	501.9					

YD91 / 28

BODY	ASTM A216 WCB-2008	A 11871	0.220	0.43	0.89	0.027	0.014	0.031	0.073	0.008	0.039	0.004						0.051	0.39	76.42	45.82	28	54	156		N
																				526.9	315.9					
BONNET	ASTM A216 WCB-2008	E 3116	0.21	0.45	0.82	0.013	0.012	0.042	0.12	0.025	0.031	0.005							0.38	85.12	41.33	30	43	159		N
																				586.88	285					
WEDGE	ASTM A217 CA15-2007	D 3117	0.12	0.86	0.70	0.025	0.012	0.212	12.38	0.026	0.062									99.47	71.92	18.4	49	257		N
																				685.82	495.9					

YD91 / 29

BODY	ASTM A216 WCB-2008	W 17019	0.203	0.42	0.89	0.026	0.01	0.051	0.04	0.006	0.037	0.018							0.063	0.38	83.38	54.38	30	58	171		N
																				574.88	374.9						
BONNET	ASTM A216 WCB-2008	W 17007	0.204	0.49	0.978	0.023	0.008	0.029	0.042	0.006	0.035	0.008							0.054	0.39	84.54	54.96	30	57	172		N
																				582.88	378.9						
WEDGE	ASTM A217 CA15-2007	D 3116	0.12	0.93	0.72	0.022	0.013	0.151	12.13	0.024	0.053									102.23	72.79	18.6	50	260		N	
																				704.85	501.9						

YD91 / 30

BODY	ASTM A216 WCB-2008	A 11970	0.200	0.45	0.89	0.026	0.015	0.023	0.053	0.005	0.038	0.004							0.004	0.36	76.13	45.10	27	55	159		N
																				524.9	311						
BONNET	ASTM A216 WCB-2008	W 16993	0.195	0.40	0.916	0.022	0.007	0.034	0.05	0.006	0.039	0.006							0.052	0.37	80.33	50.17	29	53	165		N
																				553.86	345.9						
WEDGE	ASTM A217 CA15-2007	D 3119	0.09	0.88	0.83	0.011	0.010	0.129	12.31	0.018	0.062									100.78	71.20	19.8	49	259		N	
																				694.85	490.9						

YD91 / 31

BODY	ASTM A216 WCB-2004	W 17006	0.204	0.472	0.906	0.019	0.014	0.025	0.025	0.008	0.030	0.005							0.37		72.21	49.01	27	49	167		N
																				497.87	337.9						
BONNET	ASTM A216 WCB-2008	W 17007	0.204	0.49	0.978	0.023	0.008	0.029	0.042	0.006	0.035	0.008							0.054	0.39	84.54	54.96	30	57	172		N
																				582.88	378.9						
WEDGE	ASTM A217 CA15-2007	D 3707	0.10	0.86	0.71	0.024	0.010	0.106	12.29	0.011	0.020									103.10	73.81	18.6	48	260		N	
																				710.85	508.9						

YD91 / 32

BODY	ASTM A216 WCB-2008	W 17021	0.200	0.44	0.907	0.024	0.008	0.028	0.042	0.005	0.035	0.006							0.052	0.37	83.38	50.75	28	53	171		N
																				574.88	349.9						
BONNET	ASTM A216 WCB-2008	W 17020	0.192	0.47	0.98	0.024	0.008	0.027	0.04	0.007	0.033	0.004							0.053	0.38	82.07	51.48	29	58	165		N
																				565.85	354.9						
WEDGE	ASTM A217 CA15-2007	D 3119	0.09	0.88	0.83	0.011	0.010	0.129	12.31	0.018	0.062									100.78	71.20	19.8	49	259		N	
																				694.85	490.9						

YD91 / 33

BODY	ASTM A216 WCB-2008	W 17021	0.200	0.44	0.907	0.024	0.008	0.028	0.042	0.005	0.035	0.006							0.052	0.37	83.38	50.75	28	53	171		N
																				574.88	349.9						
BONNET	ASTM A216 WCB-2008	W 16993	0.195	0.40	0.916	0.022	0.007	0.034	0.05	0.006	0.039	0.006							0.052	0.37	80.33	50.17	29	53	165		N
																				553.86	345.9						
WEDGE	ASTM A217 CA15-2007	D 3116	0.12	0.93	0.72	0.022	0.013	0.151	12.13	0.024	0.053									102.23	72.79	18.6	50	260		N	
																				704.85	501.9						

YD91 / 34

BODY	ASTM A216 WCB-2004	W 17005	0.210	0.467	0.835	0.022	0.019	0.001	0.010	0.011	0.020	0.001							0.35		78.01	48.43	23.8	44.2	168		N
																				537.86	333.9						
BONNET	ASTM A216 WCB-2008	E 3118	0.21	0.43	0.84	0.020	0.009	0.028	0.09	0.030	0.028	0.005							0.38		85.26	42.05	31	42	160		N
																				587.85	289.9						
WEDGE	ASTM A217 CA15-2007	D 3708	0.11	0.84	0.87	0.025	0.010	0.102	12.19	0.012	0.020									101.94	72.50	19	50	257		N	
																				702.85	499.9						

YD91 / 35

BODY	ASTM A216 WCB-2008	A 11871	0.220	0.43	0.89	0.027	0.014	0.031	0.073	0.008	0.039	0.004	0.051	0.39	76.42	45.82	28	54	156		N
															526.9	315.9					
BONNET	ASTM A216 WCB-2008	E 3116	0.21	0.45	0.82	0.013	0.012	0.042	0.12	0.025	0.031	0.005		0.38	85.12	41.33	30	43	159		N
															586.88	285					
WEDGE	ASTM A217 CA15-2007	D 3116	0.12	0.93	0.72	0.022	0.013	0.151	12.13	0.024	0.053				102.23	72.79	18.6	50	260		N
															704.85	501.9					

Heat Treatment Codes:

A : Annealing *AC* : Air Cooling *DA* : Double Aged *FT* : Furnace Treatment *N* : Normalizing *OQ* : Oil Quenched
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 A217 CA15
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 Conformity: 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 assessment 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 Jiangyin Eastern Valve company Ltd.:

