

Certificate/Serial/Job No:

XH21

Quality Department: *John Ho*

Quantity	Size (NPS)	Class	Product	Description	Type	SONumber	Line	Sold to	Date
60	4	150	/ 103039	DSI 37XUF	GATE				8/27/2011

Pressure Test: API598 <input checked="" type="checkbox"/> Satisfactory	Shell Pressure : 450 <i>psi</i> 3102.64 <i>kPa</i>	BackSeat : 325 <i>psi</i> 2240.8 <i>kPa</i>	Seat Pressure 325 <i>psi</i> 2240.8 <i>kPa</i>	Seat Air Pressure 80 <i>psi</i> 551.58 <i>kPa</i>
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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]

XH21 / 1

BODY	ASTM A216 WCB-2008	W 15018	0.212	0.42	0.92	0.021	0.011	0.013	0.021	0.001	0.035	0.006					0.36	74.10	43.50	29	57	154						N
BONNET	ASTM A216 WCB-2008	A 9756	0.210	0.42	0.81	0.024	0.014	0.031	0.088	0.003	0.014	0.005		0.034	0.37		510.90	299.9									N	
WEDGE	ASTM A217 CA15-2007	D 2925	0.10	0.88	0.83	0.017	0.010	0.118	12.40	0.025	0.036					76.42	45.24	26	53	155						N		
																526.9	311.9									N		
																101.94	71.92	18.6	49	264						N		
																702.85	495.9									N		

XH21 / 2

BODY	ASTM A216 WCB-2008	W 14808	0.211	0.49	0.86	0.035	0.012	0.016	0.014	0.001	0.026	0.005				0.36	80.33	51.48	31	60	152						N
BONNET	ASTM A216 WCB-2008	W 15062	0.214	0.41	0.91	0.023	0.013	0.059	0.056	0.003	0.032	0.005				0.36	553.86	354.9									N
WEDGE	ASTM A217 CA15-2007	D 3338	0.09	0.99	0.76	0.025	0.011	0.154	12.35	0.042	0.017					74.10	43.50	27	50	171						N	
																510.90	299.9									N	
																104.11	74.10	20	52	261						N	
																717.81	510.9									N	

XH21 / 3

BODY	ASTM A216 WCB-2008	W 15057	0.203	0.43	0.92	0.022	0.010	0.029	0.021	0.001	0.036	0.004				0.36	74.10	43.50	31	62	166						N
BONNET	ASTM A216 WCB-2008	A 9756	0.210	0.42	0.81	0.024	0.014	0.031	0.088	0.003	0.014	0.005		0.034	0.37		510.90	299.9									N
WEDGE	ASTM A217 CA15-2007	D 2922	0.09	0.84	0.77	0.030	0.012	0.112	12.45	0.021	0.051					76.42	45.24	26	53	155						N	
																526.9	311.9									N	
																103.24	72.50	18.6	50	259						N	
																711.81	499.9									N	

XH21 / 4

BODY	ASTM A216 WCB-2008	W 14856	0.207	0.46	0.98	0.021	0.010	0.041	0.023	0.002	0.043	0.006				0.38	78.01	49.01	29	54	153						N
BONNET	ASTM A216 WCB-2008	A 10536	0.220	0.47	0.88	0.029	0.019	0.024	0.038	0.003	0.038	0.005		0.06	0.38		537.86	337.9									N
WEDGE	ASTM A217 CA15-2007	D 2922	0.09	0.84	0.77	0.030	0.012	0.112	12.45	0.021	0.051					76.42	45.97	26	54	158						N	
																526.9	317									N	
																103.24	72.50	18.6	50	259						N	
																711.81	499.9									N	

XH21 / 5

BODY	ASTM A216 WCB-2008	A 9345	0.200	0.47	0.89	0.025	0.018	0.028	0.056	0.001	0.048	0.005	0.01	0.37	74.53	44.37	29	57	153		N
															513.87	305.9					
BONNET	ASTM A216 WCB-2008	A 9763	0.200	0.40	0.86	0.023	0.016	0.020	0.042	0.005	0.043	0.006	0.011	0.36	76.71	45.53	26	52	154		N
															528.9	313.9					
WEDGE	ASTM A217 CA15-2007	D 2921	0.12	0.87	0.80	0.029	0.010	0.194	12.61	0.094	0.052				101.50	70.91	18.3	49	263		N
															699.82	488.9					

XH21 / 6

BODY	ASTM A216 WCB-2008	W 15056	0.211	0.43	0.92	0.023	0.011	0.020	0.014	0.001	0.031	0.005		0.36	74.10	43.50	29	54	172		N
															510.90	299.9					
BONNET	ASTM A216 WCB-2008	A 10491	0.220	0.46	0.96	0.029	0.020	0.097	0.096	0.020	0.039	0.006	0.019	0.41	74.53	44.37	27	56	150		N
															513.87	305.9					
WEDGE	ASTM A217 CA15-2007	D 3333	0.09	0.94	0.89	0.027	0.011	0.152	12.08	0.010	0.026				105.85	74.53	18.5	49	253		N
															729.81	513.9					

XH21 / 7

BODY	ASTM A216 WCB-2008	W 15017	0.216	0.39	0.90	0.021	0.011	0.015	0.019	0.001	0.031	0.006		0.36	74.10	43.50	29	56	166		N
															510.90	299.9					
BONNET	ASTM A216 WCB-2008	A 10565	0.210	0.47	0.88	0.026	0.014	0.026	0.065	0.002	0.037	0.007	0.012	0.38	76.13	45.10	26	53	156		N
															524.9	311					
WEDGE	ASTM A217 CA15-2007	D 2922	0.09	0.84	0.77	0.030	0.012	0.112	12.45	0.021	0.051				103.24	72.50	18.6	50	259		N
															711.81	499.9					

XH21 / 8

BODY	ASTM A216 WCB-2008	W 15045	0.199	0.47	0.89	0.020	0.011	0.037	0.021	0.001	0.036	0.005		0.36	74.10	43.50	29	54	168		N
															510.90	299.9					
BONNET	ASTM A216 WCB-2008	A 10530	0.210	0.48	0.90	0.025	0.016	0.017	0.043	0.001	0.032	0.005	0.054	0.37	73.95	43.79	28	56	151		N
															509.87	301.9					
WEDGE	ASTM A217 CA15-2007	D 2922	0.09	0.84	0.77	0.030	0.012	0.112	12.45	0.021	0.051				103.24	72.50	18.6	50	259		N
															711.81	499.9					

XH21 / 9

BODY	ASTM A216 WCB-2008	A 09765	0.210	0.44	0.90	0.023	0.017	0.035	0.045	0.003	0.022	0.003		0.37	74.82	44.23	28	56	152		N
															515.87	305					
BONNET	ASTM A216 WCB-2008	A 09765	0.210	0.44	0.90	0.023	0.017	0.035	0.045	0.003	0.022	0.003		0.37	74.82	44.23	28	56	152		N
															515.87	305					
WEDGE	ASTM A217 CA15-2007	D 2847	0.11	0.99	0.74	0.025	0.010	0.129	12.06	0.053	0.058				102.81	74.10	19.6	49	261		N
															708.85	510.9					

XH21 / 10

BODY	ASTM A216 WCB-2008	W 14656	0.200	0.48	0.93	0.036	0.011	0.044	0.031	0.001	0.038	0.007		0.37	86.28	57.28	29	54	159		N
															594.88	394.9					
BONNET	ASTM A216 WCB-2008	A 10547	0.200	0.42	0.95	0.021	0.013	0.014	0.032	0.001	0.017	0.003	0.008	0.37	74.53	44.37	27	56	153		N
															513.87	305.9					
WEDGE	ASTM A217 CA15-2007	D 3301	0.11	0.91	0.84	0.022	0.010	0.149	12.74	0.019	0.038				104.11	73.66	19.1	50	261		N
															717.81	507.9					

XH21 / 11

BODY	ASTM A216 WCB-2008	A 9353	0.200	0.43	0.87	0.022	0.014	0.020	0.041	0.003	0.029	0.004	0.007	0.36	72.94	43.07	35.0	57	150		N
															502.90	297					
BONNET	ASTM A216 WCB-2008	W 14752	0.202	0.43	0.99	0.024	0.010	0.033	0.023	0.001	0.038	0.008		0.38	80.91	51.48	29	54	155		N
															557.85	354.9					
WEDGE	ASTM A217 CA15-2007	D 2920	0.12	0.85	0.81	0.026	0.010	0.169	12.76	0.049	0.082				102.23	71.92	20	46	267		N
															704.85	495.9					

XH21 / 12

BODY	ASTM A216 WCB-2008	W 14856	0.207	0.46	0.98	0.021	0.010	0.041	0.023	0.002	0.043	0.006		0.38	78.01	49.01	29	54	153		N
															537.86	337.9					
BONNET	ASTM A216 WCB-2008	A 10512	0.210	0.41	0.88	0.025	0.017	0.031	0.033	0.005	0.045	0.003		0.37	73.23	43.21	31	58	150		N
															504.90	297.9					

BODY	ASTM A216 WCB-2008	W 15061	0.206	0.49	0.93	0.021	0.012	0.015	0.018	0.001	0.029	0.004	0.36	74.10	43.50	29	54	164		N
														510.90	299.9					
BONNET	ASTM A216 WCB-2008	A 09791	0.210	0.45	0.89	0.029	0.015	0.022	0.051	0.001	0.035	0.005	0.37	74.68	44.37	27	54	155		N
														514.90	305.9					
WEDGE	ASTM A217 CA15-2007	D 3300	0.11	0.87	0.80	0.029	0.010	0.116	12.30	0.012	0.021			100.05	71.49	20	47	258		N
														689.82	492.9					

XH21 / 21

BODY	ASTM A216 WCB-2008	E 3049	0.20	0.51	0.87	0.022	0.014	0.014	0.03	0.001	0.017	0.001	0.35	84.25	41.91	29	47	160		N
														580.88	289					
BONNET	ASTM A216 WCB-2008	A 09792	0.210	0.44	0.87	0.023	0.015	0.021	0.041	0.001	0.033	0.005	0.37	76.42	45.24	26	55	153		N
														526.9	311.9					
WEDGE	ASTM A217 CA15-2007	D 2924	0.11	0.82	0.90	0.017	0.014	0.152	12.50	0.019	0.043			101.07	70.76	19	48	256		N
														696.85	487.9					

XH21 / 22

BODY	ASTM A216 WCB-2008	W 14751	0.198	0.46	0.97	0.021	0.010	0.023	0.023	0.001	0.035	0.005	0.37	83.38	54.38	29	53	158		N
														574.88	374.9					
BONNET	ASTM A216 WCB-2008	A 09770	0.220	0.42	0.84	0.025	0.017	0.030	0.150	0.018	0.031	0.005	0.40	75.26	43.79	29	56	158		N
														518.9	301.9					
WEDGE	ASTM A217 CA15-2007	D 3337	0.12	0.87	0.76	0.023	0.010	0.131	12.09	0.037	0.075			103.53	73.52	19	51	258		N
														713.81	506.9					

XH21 / 23

BODY	ASTM A216 WCB-2008	W 14880	0.207	0.48	0.95	0.022	0.011	0.025	0.024	0.001	0.033	0.005	0.38	82.22	52.06	29	54	163		N
														566.89	358.9					
BONNET	ASTM A216 WCB-2008	A 9748	0.230	0.41	0.88	0.024	0.015	0.022	0.045	0.001	0.040	0.005	0.39	76.42	45.24	26	53	154		N
										0.016				526.9	311.9					
WEDGE	ASTM A217 CA15-2007	D 2927	0.11	0.89	0.79	0.011	0.010	0.104	12.07	0.016	0.035			100.34	71.20	19	47	259		N
														691.82	490.9					

XH21 / 24

BODY	ASTM A216 WCB-2008	W 14900	0.197	0.43	0.99	0.021	0.009	0.014	0.018	0.001	0.038	0.005	0.37	82.80	53.80	29	54	172		N
														570.89	370.9					
BONNET	ASTM A216 WCB-2008	A 9754	0.200	0.46	0.91	0.027	0.018	0.037	0.036	0.022	0.025	0.003	0.37	76.42	45.53	26	55	154		N
										0.048				526.9	313.9					
WEDGE	ASTM A217 CA15-2007	D 3333	0.09	0.94	0.89	0.027	0.011	0.152	12.08	0.010	0.026			105.85	74.53	18.5	49	253		N
														729.81	513.9					

XH21 / 25

BODY	ASTM A216 WCB-2008	W 14688	0.208	0.47	0.99	0.034	0.011	0.065	0.043	0.001	0.040	0.007	0.39	83.38	55.54	29	54	175		N
														574.88	382.9					
BONNET	ASTM A216 WCB-2008	A 9763	0.200	0.40	0.86	0.023	0.016	0.020	0.042	0.005	0.043	0.006	0.36	76.71	45.53	26	52	154		N
										0.011				528.9	313.9					
WEDGE	ASTM A217 CA15-2007	D 2928	0.10	0.89	0.77	0.026	0.011	0.115	12.72	0.021	0.053			103.68	73.52	18.3	50	268		N
														714.85	506.9					

XH21 / 26

BODY	ASTM A216 WCB-2008	W 14643	0.192	0.41	0.99	0.038	0.016	0.034	0.050	0.001	0.034	0.006	0.37	75.69	45.53	30	56	154		N
														521.86	313.9					
BONNET	ASTM A216 WCB-2008	A 09768	0.220	0.47	0.90	0.026	0.019	0.035	0.033	0.003	0.055	0.003	0.38	75.40	44.95	27	54	157		N
														519.86	309.9					
WEDGE	ASTM A217 CA15-2007	D 3332	0.10	0.88	0.85	0.027	0.010	0.114	12.33	0.011	0.029			102.52	71.78	19	50	262		N
														706.85	494.9					

XH21 / 27

BODY	ASTM A216 WCB-2008	W 14898	0.215	0.42	0.91	0.020	0.010	0.014	0.021	0.001	0.030	0.003	0.37	89.32	61.48	29	55	153		N
														615.84	423.9					
BONNET	ASTM A216 WCB-2008	A 9746	0.220	0.41	0.84	0.023	0.015	0.025	0.076	0.001	0.035	0.004	0.38	74.24	43.50	30	57	150		N
										0.029				511.87	299.9					

BODY	ASTM A216 WCB-2008	W 14856	0.207	0.46	0.98	0.021	0.010	0.041	0.023	0.002	0.043	0.006	0.38	78.01	49.01	29	54	153		N	
														537.86	337.9						
BONNET	ASTM A216 WCB-2008	A 9742	0.220	0.47	0.92	0.027	0.015	0.025	0.053	0.002	0.028	0.005	0.053	0.39	73.95	43.50	30	58	150		N
														509.87	299.9						
WEDGE	ASTM A217 CA15-2007	D 2927	0.11	0.89	0.79	0.011	0.010	0.104	12.07	0.016	0.035			100.34	71.20	19	47	259		N	
														691.82	490.9						

XH21 / 36

BODY	ASTM A216 WCB-2008	W 14671	0.216	0.48	0.97	0.032	0.011	0.029	0.035	0.001	0.036	0.005	0.39	80.33	51.48	29	54	165		N	
														553.86	354.9						
BONNET	ASTM A216 WCB-2008	A 10493	0.210	0.47	0.85	0.026	0.015	0.027	0.048	0.001	0.029	0.005	0.02	0.37	74.53	44.37	29	57	153		N
														513.87	305.9						
WEDGE	ASTM A217 CA15-2007	D 2925	0.10	0.88	0.83	0.017	0.010	0.118	12.40	0.025	0.036			101.94	71.92	18.6	49	264		N	
														702.85	495.9						

XH21 / 37

BODY	ASTM A216 WCB-2008	W 15029	0.191	0.49	0.95	0.027	0.013	0.036	0.058	0.001	0.039	0.006	0.36	74.10	43.50	30	57	169		N
														510.90	299.9					
BONNET	ASTM A216 WCB-2008	W 15062	0.214	0.41	0.91	0.023	0.013	0.059	0.056	0.003	0.032	0.005	0.36	74.10	43.50	27	50	171		N
														510.90	299.9					
WEDGE	ASTM A217 CA15-2007	D 2920	0.12	0.85	0.81	0.026	0.010	0.169	12.76	0.049	0.082			102.23	71.92	20	46	267		N
														704.85	495.9					

XH21 / 38

BODY	ASTM A216 WCB-2008	W 14408	0.209	0.41	0.86	0.026	0.014	0.030	0.057	0.001	0.029	0.007	0.37	80.33	49.59	31	60	166		N	
														553.86	341.9						
BONNET	ASTM A216 WCB-2008	A 10565	0.210	0.47	0.88	0.026	0.014	0.026	0.065	0.002	0.037	0.007	0.012	0.38	76.13	45.10	26	53	156		N
														524.9	311						
WEDGE	ASTM A217 CA15-2007	D 2922	0.09	0.84	0.77	0.030	0.012	0.112	12.45	0.021	0.051			103.24	72.50	18.6	50	259		N	
														711.81	499.9						

XH21 / 39

BODY	ASTM A216 WCB-2008	W 15046	0.191	0.44	0.98	0.017	0.008	0.013	0.015	0.001	0.032	0.005	0.36	74.10	43.50	28	54	167		N
														510.90	299.9					
BONNET	ASTM A216 WCB-2008	A 10542	0.210	0.46	0.91	0.023	0.018	0.032	0.034	0.005	0.041	0.004	0.38	76.42	45.82	26	53	156		N
														526.9	315.9					
WEDGE	ASTM A217 CA15-2007	D 3336	0.10	0.92	0.83	0.025	0.010	0.110	12.65	0.012	0.026			102.52	72.21	19.1	49	266		N
														706.85	497.9					

XH21 / 40

BODY	ASTM A216 WCB-2008	W 14856	0.207	0.46	0.98	0.021	0.010	0.041	0.023	0.002	0.043	0.006	0.38	78.01	49.01	29	54	153		N
														537.86	337.9					
BONNET	ASTM A216 WCB-2008	A 10512	0.210	0.41	0.88	0.025	0.017	0.031	0.033	0.005	0.045	0.003	0.37	73.23	43.21	31	58	150		N
														504.90	297.9					
WEDGE	ASTM A217 CA15-2007	D 2921	0.12	0.87	0.80	0.029	0.010	0.194	12.61	0.094	0.052			101.50	70.91	18.3	49	263		N
														699.82	488.9					

XH21 / 41

BODY	ASTM A216 WCB-2008	W 14869	0.195	0.45	0.93	0.024	0.010	0.017	0.021	0.001	0.030	0.006	0.36	80.91	52.06	28	53	153		N
														557.85	358.9					
BONNET	ASTM A216 WCB-2008	W 14673	0.197	0.40	0.93	0.030	0.013	0.054	0.027	0.001	0.036	0.005	0.37	86.86	57.28	28	53	154		N
														598.88	394.9					
WEDGE	ASTM A217 CA15-2007	D 2927	0.11	0.89	0.79	0.011	0.010	0.104	12.07	0.016	0.035			100.34	71.20	19	47	259		N
														691.82	490.9					

XH21 / 42

BODY	ASTM A216 WCB-2008	W 15029	0.191	0.49	0.95	0.027	0.013	0.036	0.058	0.001	0.039	0.006	0.36	74.10	43.50	30	57	169		N
														510.90	299.9					
BONNET	ASTM A216 WCB-2008	W 14624	0.205	0.50	0.99	0.020	0.017	0.033	0.052	0.001	0.034	0.005	0.39	83.38	53.80	29	53	164		N
														574.88	370.9					

BODY	ASTM A216 WCB-2008	W 14810	0.202	0.46	0.99	0.031	0.014	0.038	0.014	0.001	0.033	0.005	0.38	82.22	53.22	29	54	162		N
														566.89	366.9					
BONNET	ASTM A216 WCB-2008	W 14991	0.203	0.46	0.94	0.021	0.013	0.030	0.022	0.009	0.038	0.007	0.37	85.70	57.28	29	57	169		N
														590.88	394.9					
WEDGE	ASTM A217 CA15-2007	D 2920	0.12	0.85	0.81	0.026	0.010	0.169	12.76	0.049	0.082			102.23	71.92	20	46	267		N
														704.85	495.9					

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BODY	ASTM A216 WCB-2008	W 14880	0.207	0.48	0.95	0.022	0.011	0.025	0.024	0.001	0.033	0.005	0.38	82.22	52.06	29	54	163		N
														566.89	358.9					
BONNET	ASTM A216 WCB-2008	W 14691	0.205	0.44	0.95	0.024	0.011	0.048	0.023	0.003	0.040	0.008	0.38	81.64	52.64	29	54	169		N
														562.89	362.9					
WEDGE	ASTM A217 CA15-2007	D 2927	0.11	0.89	0.79	0.011	0.010	0.104	12.07	0.016	0.035			100.34	71.20	19	47	259		N
														691.82	490.9					

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BODY	ASTM A216 WCB-2008	W 15056	0.211	0.43	0.92	0.023	0.011	0.020	0.014	0.001	0.031	0.005	0.36	74.10	43.50	29	54	172		N
														510.90	299.9					
BONNET	ASTM A216 WCB-2008	W 14511	0.218	0.47	0.92	0.032	0.013	0.028	0.036	0.001	0.036	0.007	0.39	81.64	53.80	28	53	153		N
														562.89	370.9					
WEDGE	ASTM A217 CA15-2007	D 3331	0.09	0.88	0.83	0.027	0.012	0.108	12.47	0.018	0.013			99.91	70.76	19.3	51	264		N
														688.86	487.9					

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 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. : 