



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.dsilvalve.com

Certificate/Serial/Job No:

YE74

Quality Department: *John Ho*

| Quantity | Size (NPS) | Class | Product | Description | Type | SONumber | Line | Sold to | Date |
|----------|------------|-------|----------|-------------|------|----------|------|---------|-----------|
| 98 | 3 | 150 | / 103035 | DSI 37XUF | GATE | | | | 4/16/2012 |

| | | | | | |
|-----------------------|--|---|----------------------------------|-------------------------------------|--|
| Pressure Test: API598 | <input checked="" type="checkbox"/> 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# | 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] |

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|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|--|-------|------|--------|-------|----|----|-----|--|--|--|--|--|--|--|---|---|
| BODY | ASTM A216 WCB-2008 | A 11654 | 0.200 | 0.45 | 0.87 | 0.028 | 0.014 | 0.031 | 0.059 | 0.003 | 0.037 | 0.012 | | 0.003 | 0.36 | 76.42 | 45.68 | 29 | 57 | 153 | | | | | | | | | N |
| BONNET | ASTM A216 WCB-2008 | A 11639 | 0.200 | 0.43 | 0.91 | 0.024 | 0.011 | 0.027 | 0.047 | 0.007 | 0.037 | 0.005 | | 0.008 | 0.37 | 526.9 | 315 | 30 | 57 | 152 | | | | | | | | | N |
| WEDGE | ASTM A217 CA15-2007 | D 5445 | 0.10 | 0.84 | 0.74 | 0.027 | 0.011 | 0.132 | 12.32 | 0.021 | 0.012 | | | | | 514.90 | 305.9 | 20 | 48 | 259 | | | | | | | | N | |
| | | | | | | | | | | | | | | | | 104.11 | 73.95 | 20 | 48 | 259 | | | | | | | | | N |

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|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|--|-------|------|--------|-------|------|----|-----|--|--|--|--|--|--|--|---|---|
| BODY | ASTM A216 WCB-2008 | A 11653 | 0.220 | 0.42 | 0.82 | 0.025 | 0.011 | 0.031 | 0.057 | 0.001 | 0.044 | 0.005 | | 0.015 | 0.37 | 74.10 | 43.50 | 34 | 56 | 150 | | | | | | | | | N |
| BONNET | ASTM A216 WCB-2008 | W 16713 | 0.195 | 0.45 | 0.96 | 0.025 | 0.012 | 0.048 | 0.050 | 0.006 | 0.039 | 0.010 | | 0.37 | | 510.90 | 299.9 | 30 | 54 | 157 | | | | | | | | | N |
| WEDGE | ASTM A217 CA15-2007 | D 5452 | 0.09 | 0.91 | 0.79 | 0.023 | 0.010 | 0.125 | 12.58 | 0.036 | 0.015 | | | | | 557.85 | 358.9 | 18.8 | 48 | 260 | | | | | | | | N | |
| | | | | | | | | | | | | | | | | 100.20 | 70.91 | 18.8 | 48 | 260 | | | | | | | | | N |

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|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|--|------|--|--------|-------|------|----|-----|--|--|--|--|--|--|--|---|---|
| BODY | ASTM A216 WCB-2008 | W 16683 | 0.199 | 0.41 | 0.94 | 0.023 | 0.009 | 0.056 | 0.050 | 0.003 | 0.035 | 0.007 | | 0.38 | | 82.65 | 50.75 | 29 | 57 | 165 | | | | | | | | | N |
| BONNET | ASTM A216 WCB-2008 | A 11635 | 0.210 | 0.53 | 0.95 | 0.029 | 0.016 | 0.031 | 0.056 | 0.005 | 0.041 | 0.005 | | 0.39 | | 569.85 | 349.9 | 27 | 55 | 152 | | | | | | | | | N |
| WEDGE | ASTM A217 CA15-2007 | D 5452 | 0.09 | 0.91 | 0.79 | 0.023 | 0.010 | 0.125 | 12.58 | 0.036 | 0.015 | | | | | 76.56 | 45.24 | 18.8 | 48 | 260 | | | | | | | | N | |
| | | | | | | | | | | | | | | | | 527.86 | 311.9 | 18.8 | 48 | 260 | | | | | | | | | N |

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|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|--|------|--|--------|-------|----|----|-----|--|--|--|--|--|--|--|---|---|
| BODY | ASTM A216 WCB-2008 | A 11640 | 0.200 | 0.40 | 0.91 | 0.026 | 0.014 | 0.031 | 0.046 | 0.001 | 0.049 | 0.005 | | 0.37 | | 76.56 | 45.97 | 26 | 54 | 157 | | | | | | | | | N |
| BONNET | ASTM A216 WCB-2008 | A 11638 | 0.210 | 0.48 | 0.84 | 0.028 | 0.014 | 0.023 | 0.048 | 0.005 | 0.039 | 0.004 | | 0.37 | | 527.86 | 317 | 27 | 54 | 158 | | | | | | | | | N |
| WEDGE | ASTM A217 CA15-2007 | D 5443 | 0.11 | 0.92 | 0.79 | 0.025 | 0.010 | 0.125 | 12.86 | 0.033 | 0.010 | | | | | 76.42 | 46.11 | 20 | 50 | 264 | | | | | | | | N | |
| | | | | | | | | | | | | | | | | 526.9 | 317.9 | 20 | 50 | 264 | | | | | | | | N | |

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|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------|-------|------|----|-----|--|---|
| BODY | ASTM A216 WCB-2008 | W 13028 | 0.210 | 0.52 | 0.94 | 0.034 | 0.018 | 0.027 | 0.039 | 0.001 | 0.036 | 0.005 | | 0.38 | 82.22 | 52.06 | 27 | 53 | 169 | | N |
| BONNET | ASTM A216 WCB-2008 | A 11647 | 0.210 | 0.44 | 0.9 | 0.025 | 0.014 | 0.027 | 0.045 | 0.001 | 0.043 | 0.005 | 0.031 | 0.37 | 566.89 | 368.9 | 27 | 53 | 158 | | N |
| WEDGE | ASTM A217 CA15-2007 | D 5452 | 0.09 | 0.91 | 0.79 | 0.023 | 0.010 | 0.125 | 12.58 | 0.036 | 0.015 | | | | 527.86 | 313.9 | 18.8 | 48 | 260 | | N |
| | | | | | | | | | | | | | | | 100.20 | 70.91 | | | | | |
| | | | | | | | | | | | | | | | 690.85 | 488.9 | | | | | |

Heat Treatment Codes:

| | | | | | |
|---------------------------------------|--------------------------------------|-------------------------------|--------------------------------|---------------------------------|---------------------------|
| <i>A</i> : Annealing | <i>AC</i> : Air Cooling | <i>DA</i> : Double Aged | <i>FT</i> : Furnace Treatment | <i>N</i> : Normalizing | <i>OQ</i> : OilQuenched |
| <i>Ph-3</i> : Precipitation Hardening | <i>SA</i> : Solution Annealed | <i>SQ</i> : Solution Quenched | <i>ST</i> : Solution Treatment | <i>T</i> : Tempering | <i>WC</i> : Water Cooling |
| <i>HQ</i> : Water Quenched | <i>WT</i> : Water Quenched/ Tempered | | | <i>NT</i> : 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 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.:

