

Certificate/Serial/Job No: YJ128

Quality Department: John G

| Quantity | Size (NPS) | Class | Product | Description | Type | SONumber | Line | Sold to | Date |
|----------|------------|-------|----------|-------------|------|----------|------|---------|-----------|
| 98 | 4 | 150 | / 103039 | DSI 37XUF | GATE | | | | 7/21/2012 |

| | | | | | |
|------------------------------|--|---|--|---|--|
| 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] | Yield [ksi] | Elong [%] | Reduc [%] | Hard [HB] | Ch.1 [J] | Ch.2 [J] | Ch.3 [J] |

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|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|--|-------|------|--------|-------|----|----|-----|--|--|--|--|--|--|--|---|---|
| BODY | ASTM A216 WCB-2008 | A 12551 | 0.220 | 0.46 | 0.98 | 0.029 | 0.013 | 0.041 | 0.104 | 0.006 | 0.040 | 0.006 | | 0.053 | 0.41 | 75.98 | 45.39 | 27 | 55 | 156 | | | | | | | | | N |
| BONNET | ASTM A216 WCB-2008 | A 11715 | 0.230 | 0.43 | 0.85 | 0.029 | 0.014 | 0.029 | 0.054 | 0.014 | 0.042 | 0.006 | | 0.011 | 0.39 | 73.08 | 43.21 | 32 | 57 | 160 | | | | | | | | | N |
| WEDGE | ASTM A217 CA15-2007 | D 5895 | 0.11 | 0.86 | 0.77 | 0.012 | 0.010 | 0.155 | 12.48 | 0.040 | 0.018 | | | | | 105.71 | 73.81 | 21 | 51 | 261 | | | | | | | | N | |

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|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|--|-------|------|--------|-------|------|----|-----|--|--|--|--|--|--|--|---|---|
| BODY | ASTM A216 WCB-2008 | A 11848 | 0.210 | 0.40 | 0.87 | 0.028 | 0.013 | 0.025 | 0.049 | 0.001 | 0.038 | 0.005 | | 0.024 | 0.37 | 76.42 | 45.53 | 26 | 54 | 155 | | | | | | | | | N |
| BONNET | ASTM A216 WCB-2008 | A 11573 | 0.200 | 0.46 | 0.89 | 0.025 | 0.011 | 0.037 | 0.049 | 0.002 | 0.05 | 0.010 | | 0.033 | 0.37 | 74.97 | 44.66 | 32 | 57 | 150 | | | | | | | | | N |
| WEDGE | ASTM A217 CA15-2007 | D 5859 | 0.09 | 0.86 | 0.81 | 0.027 | 0.010 | 0.126 | 12.44 | 0.037 | 0.016 | | | | | 101.94 | 74.53 | 20.2 | 49 | 257 | | | | | | | | N | |

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|--------|---------------------|---------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|--|-------|------|--------|-------|------|----|-----|--|--|--|--|--|--|--|---|---|
| BODY | ASTM A216 WCB-2008 | A 12574 | 0.210 | 0.47 | 0.93 | 0.031 | 0.015 | 0.029 | 0.067 | 0.004 | 0.033 | 0.005 | | 0.03 | 0.38 | 76.42 | 45.53 | 27 | 56 | 154 | | | | | | | | | N |
| BONNET | ASTM A216 WCB-2008 | A 11715 | 0.230 | 0.43 | 0.85 | 0.029 | 0.014 | 0.029 | 0.054 | 0.014 | 0.042 | 0.006 | | 0.011 | 0.39 | 73.08 | 43.21 | 32 | 57 | 150 | | | | | | | | | N |
| WEDGE | ASTM A217 CA15-2007 | D 5872 | 0.12 | 0.938 | 0.81 | 0.025 | 0.010 | 0.173 | 12.38 | 0.034 | 0.022 | | | | | 101.50 | 71.92 | 19.4 | 49 | 263 | | | | | | | | N | |

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|--------|---------------------|---------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|--|-------|------|--------|-------|------|----|-----|--|--|--|--|--|--|--|---|---|
| BODY | ASTM A216 WCB-2008 | A 12587 | 0.200 | 0.44 | 0.85 | 0.029 | 0.017 | 0.029 | 0.054 | 0.006 | 0.038 | 0.003 | | 0.026 | 0.36 | 75.55 | 44.85 | 28 | 56 | 152 | | | | | | | | | N |
| BONNET | ASTM A216 WCB-2008 | W 18280 | 0.210 | 0.47 | 0.94 | 0.035 | 0.013 | 0.051 | 0.055 | 0.004 | 0.031 | 0.007 | | | 0.39 | 80.91 | 50.90 | 29 | 58 | 154 | | | | | | | | | N |
| WEDGE | ASTM A217 CA15-2007 | D 5872 | 0.12 | 0.938 | 0.81 | 0.025 | 0.010 | 0.173 | 12.38 | 0.034 | 0.022 | | | | | 101.50 | 71.92 | 19.4 | 49 | 263 | | | | | | | | N | |

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|--------|---------------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------|-------|----|----|-----|---|
| BODY | ASTM A216 WCB-2008 | V 14020 | 0.247 | 0.542 | 0.804 | 0.018 | 0.012 | 0.012 | 0.020 | 0.001 | 0.019 | 0.001 | 0.043 | 0.40 | 73.23 | 44.95 | 34 | 55 | 146 | N |
| | | | | | | | | | | | | | | | 504.90 | 309.9 | | | | |
| BONNET | ASTM A216 WCB-2008 | W 16306 | 0.209 | 0.43 | 0.90 | 0.031 | 0.012 | 0.037 | 0.078 | 0.004 | 0.033 | 0.006 | | 0.38 | 76.85 | 47.85 | 30 | 56 | 157 | N |
| | | | | | | | | | | | | | | | 529.86 | 329.9 | | | | |
| WEDGE | ASTM A217 CA15-2007 | D 5663 | 0.11 | 0.86 | 0.83 | 0.026 | 0.011 | 0.162 | 12.40 | 0.043 | 0.016 | | | | 104.40 | 73.37 | 21 | 49 | 258 | N |
| | | | | | | | | | | | | | | | 719.81 | 505.9 | | | | |

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|--------|---------------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------|-------|----|----|-----|---|
| BODY | ASTM A216 WCB-2008 | V 14235 | 0.199 | 0.489 | 0.825 | 0.024 | 0.011 | 0.072 | 0.038 | 0.007 | 0.031 | 0.005 | 0.032 | 0.35 | 71.78 | 47.13 | 33 | 59 | 147 | N |
| | | | | | | | | | | | | | | | 494.91 | 324.9 | | | | |
| BONNET | ASTM A216 WCB-2008 | A 11701 | 0.200 | 0.60 | 0.95 | 0.029 | 0.014 | 0.042 | 0.1 | 0.001 | 0.042 | 0.006 | 0.018 | 0.39 | 76.42 | 46.11 | 28 | 52 | 156 | N |
| | | | | | | | | | | | | | | | 526.9 | 317.9 | | | | |
| WEDGE | ASTM A217 CA15-2007 | D 5667 | 0.12 | 1.03 | 0.80 | 0.026 | 0.011 | 0.148 | 12.33 | 0.035 | 0.026 | | | | 102.81 | 72.94 | 19 | 45 | 262 | N |
| | | | | | | | | | | | | | | | 708.85 | 502.9 | | | | |

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|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------|-------|----|----|-----|---|
| BODY | ASTM A216 WCB-2008 | A 12552 | 0.200 | 0.42 | 0.87 | 0.027 | 0.015 | 0.053 | 0.122 | 0.012 | 0.034 | 0.005 | 0.013 | 0.38 | 73.08 | 43.21 | 32 | 56 | 150 | N |
| | | | | | | | | | | | | | | | 503.87 | 297.9 | | | | |
| BONNET | ASTM A216 WCB-2008 | W 16306 | 0.209 | 0.43 | 0.90 | 0.031 | 0.012 | 0.037 | 0.078 | 0.004 | 0.033 | 0.006 | | 0.38 | 76.85 | 47.85 | 30 | 56 | 157 | N |
| | | | | | | | | | | | | | | | 529.86 | 329.9 | | | | |
| WEDGE | ASTM A217 CA15-2007 | D 5693 | 0.12 | 0.91 | 0.77 | 0.013 | 0.010 | 0.167 | 12.45 | 0.041 | 0.014 | | | | 99.47 | 70.91 | 19 | 50 | 265 | N |
| | | | | | | | | | | | | | | | 685.82 | 488.9 | | | | |

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|--------|---------------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------|-------|------|----|-----|---|
| BODY | ASTM A216 WCB-2008 | V 14235 | 0.199 | 0.489 | 0.825 | 0.024 | 0.011 | 0.072 | 0.038 | 0.007 | 0.031 | 0.005 | 0.032 | 0.35 | 71.78 | 47.13 | 33 | 59 | 147 | N |
| | | | | | | | | | | | | | | | 494.91 | 324.9 | | | | |
| BONNET | ASTM A216 WCB-2008 | V 14026 | 0.198 | 0.478 | 0.837 | 0.018 | 0.006 | 0.011 | 0.022 | 0.001 | 0.026 | 0.002 | 0.050 | 0.35 | 73.23 | 44.95 | 32 | 56 | 146 | N |
| | | | | | | | | | | | | | | | 504.90 | 309.9 | | | | |
| WEDGE | ASTM A217 CA15-2007 | D 5846 | 0.09 | 0.91 | 0.80 | 0.025 | 0.011 | 0.131 | 12.40 | 0.034 | 0.011 | | | | 102.08 | 70.76 | 19.6 | 49 | 261 | N |
| | | | | | | | | | | | | | | | 703.82 | 487.9 | | | | |

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|--------|---------------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------|-------|----|----|-----|---|
| BODY | ASTM A216 WCB-2008 | V 14235 | 0.199 | 0.489 | 0.825 | 0.024 | 0.011 | 0.072 | 0.038 | 0.007 | 0.031 | 0.005 | 0.032 | 0.35 | 71.78 | 47.13 | 33 | 59 | 147 | N |
| | | | | | | | | | | | | | | | 494.91 | 324.9 | | | | |
| BONNET | ASTM A216 WCB-2008 | A 11588 | 0.220 | 0.48 | 0.87 | 0.023 | 0.012 | 0.02 | 0.105 | 0.009 | 0.041 | 0.004 | | 0.39 | 76.71 | 45.82 | 27 | 54 | 155 | N |
| | | | | | | | | | | | | | | | 528.9 | 315.9 | | | | |
| WEDGE | ASTM A217 CA15-2007 | D 5662 | 0.13 | 0.96 | 0.80 | 0.023 | 0.010 | 0.127 | 12.23 | 0.036 | 0.013 | | | | 104.98 | 73.81 | 19 | 48 | 260 | N |
| | | | | | | | | | | | | | | | 723.81 | 508.9 | | | | |

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|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------|-------|----|----|-----|---|
| BODY | ASTM A216 WCB-2008 | A 12571 | 0.210 | 0.43 | 0.86 | 0.028 | 0.014 | 0.042 | 0.148 | 0.012 | 0.037 | 0.005 | 0.008 | 0.39 | 73.37 | 43.36 | 32 | 57 | 149 | N |
| | | | | | | | | | | | | | | | 505.87 | 299 | | | | |
| BONNET | ASTM A216 WCB-2008 | A 11706 | 0.210 | 0.44 | 0.90 | 0.024 | 0.014 | 0.019 | 0.034 | 0.001 | 0.041 | 0.007 | 0.017 | 0.37 | 74.53 | 44.23 | 32 | 57 | 153 | N |
| | | | | | | | | | | | | | | | 513.87 | 305 | | | | |
| WEDGE | ASTM A217 CA15-2007 | D 5692 | 0.13 | 0.92 | 0.80 | 0.011 | 0.011 | 0.255 | 12.70 | 0.052 | 0.078 | | | | 103.39 | 72.79 | 20 | 48 | 262 | N |
| | | | | | | | | | | | | | | | 712.85 | 501.9 | | | | |

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|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------|-------|------|----|-----|---|
| BODY | ASTM A216 WCB-2008 | A 12560 | 0.210 | 0.41 | 0.94 | 0.025 | 0.013 | 0.043 | 0.072 | 0.008 | 0.097 | 0.005 | 0.016 | 0.39 | 76.42 | 45.82 | 26 | 54 | 156 | N |
| | | | | | | | | | | | | | | | 526.9 | 315.9 | | | | |
| BONNET | ASTM A216 WCB-2008 | A 11569 | 0.220 | 0.48 | 0.88 | 0.023 | 0.013 | 0.03 | 0.047 | 0.002 | 0.044 | 0.006 | 0.046 | 0.38 | 75.40 | 44.95 | 27 | 54 | 156 | N |
| | | | | | | | | | | | | | | | 519.86 | 309.9 | | | | |
| WEDGE | ASTM A217 CA15-2007 | D 5656 | 0.13 | 1.01 | 0.88 | 0.025 | 0.010 | 0.145 | 12.54 | 0.044 | 0.013 | | | | 103.10 | 73.66 | 19.6 | 51 | 262 | N |
| | | | | | | | | | | | | | | | 710.85 | 507.9 | | | | |

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|--------|--------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------|-------|----|----|-----|---|
| BODY | ASTM A216 WCB-2008 | A 12556 | 0.210 | 0.43 | 0.84 | 0.024 | 0.010 | 0.022 | 0.056 | 0.007 | 0.029 | 0.003 | 0.042 | 0.37 | 76.42 | 46.26 | 26 | 55 | 156 | N |
| | | | | | | | | | | | | | | | 526.9 | 319 | | | | |
| BONNET | ASTM A216 WCB-2008 | A 11707 | 0.200 | 0.39 | 0.84 | 0.024 | 0.013 | 0.020 | 0.048 | 0.001 | 0.042 | 0.005 | 0.041 | 0.35 | 72.36 | 43.50 | 34 | 58 | 149 | N |
| | | | | | | | | | | | | | | | 496.90 | 299.9 | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|---------------------|--------|------|------|------|-------|-------|-------|-------|-------|-------|--|--|--|--|--|--|--------|-------|----|----|-----|--|---|
| WEDGE | ASTM A217 CA15-2007 | D 5898 | 0.13 | 0.91 | 0.81 | 0.014 | 0.011 | 0.189 | 12.32 | 0.044 | 0.030 | | | | | | | 104.40 | 74.10 | 20 | 51 | 263 | | N |
| | | | | | | | | | | | | | | | | | | 719.81 | 510.9 | | | | | |

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|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|--|-------|------|--------|-------|----|----|-----|--|--|--|---|
| BODY | ASTM A216 WCB-2008 | A 12576 | 0.200 | 0.47 | 0.90 | 0.028 | 0.014 | 0.030 | 0.064 | 0.005 | 0.032 | 0.005 | | 0.058 | 0.37 | 76.42 | 46.11 | 26 | 51 | 159 | | | | N |
| | | | | | | | | | | | | | | | | 526.9 | 317.9 | | | | | | | |
| BONNET | ASTM A216 WCB-2008 | A 11698 | 0.210 | 0.42 | 0.9 | 0.025 | 0.014 | 0.033 | 0.063 | 0.001 | 0.046 | 0.004 | | 0.033 | 0.38 | 77.29 | 46.26 | 26 | 49 | 160 | | | | N |
| | | | | | | | | | | | | | | | | 532.9 | 319 | | | | | | | |
| WEDGE | ASTM A217 CA15-2007 | D 5395 | 0.10 | 0.89 | 0.82 | 0.026 | 0.010 | 0.136 | 12.66 | 0.022 | 0.011 | | | | | 103.97 | 73.37 | 21 | 52 | 254 | | | | N |
| | | | | | | | | | | | | | | | | 716.85 | 505.9 | | | | | | | |

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|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|--|-------|------|--------|-------|------|----|-----|--|--|--|---|
| BODY | ASTM A216 WCB-2008 | A 12574 | 0.210 | 0.47 | 0.93 | 0.031 | 0.015 | 0.029 | 0.067 | 0.004 | 0.033 | 0.005 | | 0.03 | 0.38 | 76.42 | 45.53 | 27 | 56 | 154 | | | | N |
| | | | | | | | | | | | | | | | | 526.9 | 313.9 | | | | | | | |
| BONNET | ASTM A216 WCB-2008 | A 11569 | 0.220 | 0.48 | 0.88 | 0.023 | 0.013 | 0.03 | 0.047 | 0.002 | 0.044 | 0.006 | | 0.046 | 0.38 | 75.40 | 44.95 | 27 | 54 | 156 | | | | N |
| | | | | | | | | | | | | | | | | 518.86 | 309.9 | | | | | | | |
| WEDGE | ASTM A217 CA15-2007 | D 5657 | 0.10 | 0.97 | 0.83 | 0.023 | 0.010 | 0.133 | 12.21 | 0.036 | 0.013 | | | | | 104.69 | 75.26 | 19.4 | 45 | 255 | | | | N |
| | | | | | | | | | | | | | | | | 721.81 | 518.9 | | | | | | | |

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|--------|---------------------|---------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|--|-------|------|--------|-------|------|----|-----|--|--|--|---|
| BODY | ASTM A216 WCB-2008 | W 17034 | 0.208 | 0.48 | 0.962 | 0.028 | 0.008 | 0.027 | 0.031 | 0.003 | 0.027 | 0.005 | | 0.055 | 0.39 | 82.07 | 57.28 | 29 | 52 | 159 | | | | N |
| | | | | | | | | | | | | | | | | 565.85 | 394.9 | | | | | | | |
| BONNET | ASTM A216 WCB-2008 | A 11568 | 0.220 | 0.48 | 0.87 | 0.023 | 0.012 | 0.02 | 0.105 | 0.009 | 0.041 | 0.004 | | 0.39 | | 76.71 | 45.82 | 27 | 54 | 155 | | | | N |
| | | | | | | | | | | | | | | | | 528.9 | 315.9 | | | | | | | |
| WEDGE | ASTM A217 CA15-2007 | D 5846 | 0.09 | 0.91 | 0.80 | 0.025 | 0.011 | 0.131 | 12.40 | 0.034 | 0.011 | | | | | 102.08 | 70.76 | 19.6 | 49 | 261 | | | | N |
| | | | | | | | | | | | | | | | | 703.82 | 487.9 | | | | | | | |

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|--------|--------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|--|-------|------|--------|-------|----|----|-----|--|--|--|---|
| BODY | ASTM A216 WCB-2008 | A 12557 | 0.210 | 0.49 | 0.97 | 0.023 | 0.010 | 0.032 | 0.079 | 0.011 | 0.034 | 0.004 | | 0.058 | 0.39 | 74.39 | 44.08 | 32 | 57 | 152 | | | | N |
| | | | | | | | | | | | | | | | | 512.90 | 303.9 | | | | | | | |
| BONNET | ASTM A216 WCB-2008 | A 11705 | 0.200 | 0.47 | 0.95 | 0.026 | 0.011 | 0.022 | 0.057 | 0.001 | 0.043 | 0.005 | | 0.009 | 0.38 | 77.14 | 46.11 | 26 | 52 | 158 | | | | N |
| | | | | | | | | | | | | | | | | 531.86 | 317.9 | | | | | | | |
| WEDGE | ASTM A216 WCB-2008 | X 1060 | 0.21 | 0.47 | 0.83 | 0.017 | 0.015 | 0.14 | 0.20 | 0.19 | 0.13 | 0.017 | | 0.45 | | 82.07 | 63.22 | 39 | 40 | 168 | | | | N |
| | | | | | | | | | | | | | | | | 565.85 | 366.9 | | | | | | | |

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|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|--|-------|------|--------|-------|----|----|-----|--|--|--|---|
| BODY | ASTM A216 WCB-2008 | A 12550 | 0.220 | 0.43 | 0.87 | 0.026 | 0.013 | 0.023 | 0.068 | 0.005 | 0.029 | 0.005 | | 0.008 | 0.38 | 74.68 | 44.23 | 30 | 56 | 152 | | | | N |
| | | | | | | | | | | | | | | | | 514.90 | 306 | | | | | | | |
| BONNET | ASTM A216 WCB-2008 | A 11722 | 0.210 | 0.48 | 0.93 | 0.026 | 0.016 | 0.021 | 0.044 | 0.005 | 0.034 | 0.004 | | 0.38 | | 73.23 | 43.50 | 34 | 57 | 147 | | | | N |
| | | | | | | | | | | | | | | | | 504.90 | 299.9 | | | | | | | |
| WEDGE | ASTM A217 CA15-2007 | D 5649 | 0.11 | 0.89 | 0.79 | 0.025 | 0.010 | 0.119 | 12.40 | 0.034 | 0.012 | | | | | 105.13 | 75.11 | 19 | 50 | 265 | | | | N |
| | | | | | | | | | | | | | | | | 724.85 | 517.9 | | | | | | | |

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|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|--|-------|------|--------|-------|----|----|-----|--|--|--|---|
| BODY | ASTM A216 WCB-2008 | A 12570 | 0.200 | 0.46 | 0.84 | 0.028 | 0.013 | 0.042 | 0.085 | 0.006 | 0.037 | 0.008 | | 0.024 | 0.37 | 76.56 | 45.39 | 26 | 54 | 156 | | | | N |
| | | | | | | | | | | | | | | | | 527.86 | 313 | | | | | | | |
| BONNET | ASTM A216 WCB-2008 | A 11698 | 0.210 | 0.42 | 0.9 | 0.025 | 0.014 | 0.033 | 0.063 | 0.001 | 0.046 | 0.004 | | 0.033 | 0.38 | 77.29 | 46.26 | 26 | 49 | 160 | | | | N |
| | | | | | | | | | | | | | | | | 532.9 | 319 | | | | | | | |
| WEDGE | ASTM A217 CA15-2007 | D 5398 | 0.11 | 0.96 | 0.86 | 0.027 | 0.010 | 0.137 | 12.44 | 0.023 | 0.014 | | | | | 100.78 | 71.49 | 20 | 51 | 260 | | | | N |
| | | | | | | | | | | | | | | | | 694.85 | 492.9 | | | | | | | |

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|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|--|-------|------|--------|-------|------|----|-----|--|--|--|---|
| BODY | ASTM A216 WCB-2008 | A 12585 | 0.210 | 0.46 | 0.89 | 0.027 | 0.014 | 0.030 | 0.060 | 0.002 | 0.037 | 0.004 | | 0.043 | 0.38 | 76.42 | 45.39 | 28 | 53 | 156 | | | | N |
| | | | | | | | | | | | | | | | | 526.9 | 313 | | | | | | | |
| BONNET | ASTM A216 WCB-2008 | A 11722 | 0.210 | 0.48 | 0.93 | 0.026 | 0.016 | 0.021 | 0.044 | 0.005 | 0.034 | 0.004 | | 0.38 | | 73.23 | 43.50 | 34 | 57 | 147 | | | | N |
| | | | | | | | | | | | | | | | | 504.90 | 299.9 | | | | | | | |
| WEDGE | ASTM A217 CA15-2007 | D 5394 | 0.10 | 0.86 | 0.72 | 0.025 | 0.011 | 0.136 | 12.52 | 0.023 | 0.013 | | | | | 101.79 | 73.37 | 19.8 | 48 | 258 | | | | N |
| | | | | | | | | | | | | | | | | 701.82 | 505.9 | | | | | | | |

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|--------|---------------------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------|-------|------|----|-----|---|--|
| BODY | ASTM A216 WCB-2008 | A 12564 | 0.220 | 0.58 | 0.97 | 0.028 | 0.014 | 0.041 | 0.076 | 0.006 | 0.039 | 0.005 | 0.003 | 0.40 | 74.10 | 43.94 | 30 | 57 | 151 | N | |
| BONNET | ASTM A216 WCB-2008 | V 14189 | 0.195 | 0.436 | 0.764 | 0.014 | 0.009 | 0.017 | 0.027 | 0.004 | 0.036 | 0.001 | 0.040 | 0.34 | 510.90 | 303 | | | | | |
| WEDGE | ASTM A217 CA15-2007 | D 5853 | 0.11 | 0.96 | 0.75 | 0.025 | 0.011 | 0.145 | 12.46 | 0.032 | 0.016 | | | | 489.87 | 315 | | | | | |
| | | | | | | | | | | | | | | | 99.91 | 71.63 | 19.2 | 47 | 263 | N | |
| | | | | | | | | | | | | | | | 688.86 | 493.9 | | | | | |

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| | | | | | | | | | | | | | | | | | | | | | |
|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------|-------|----|----|-----|---|--|
| BODY | ASTM A216 WCB-2008 | A 12564 | 0.220 | 0.58 | 0.97 | 0.028 | 0.014 | 0.041 | 0.076 | 0.006 | 0.039 | 0.005 | 0.003 | 0.40 | 74.10 | 43.94 | 30 | 57 | 151 | N | |
| BONNET | ASTM A216 WCB-2008 | A 11568 | 0.220 | 0.48 | 0.87 | 0.023 | 0.012 | 0.02 | 0.105 | 0.009 | 0.041 | 0.004 | | 0.39 | 510.90 | 303 | | | | | |
| WEDGE | ASTM A217 CA15-2007 | D 5868 | 0.09 | 0.88 | 0.77 | 0.025 | 0.010 | 0.137 | 12.75 | 0.034 | 0.017 | | | | 76.71 | 45.82 | 27 | 54 | 155 | N | |
| | | | | | | | | | | | | | | | 528.9 | 315.9 | | | | | |
| | | | | | | | | | | | | | | | 103.82 | 74.97 | 19 | 49 | 260 | N | |
| | | | | | | | | | | | | | | | 715.81 | 516.9 | | | | | |

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| | | | | | | | | | | | | | | | | | | | | | |
|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------|-------|----|----|-----|---|--|
| BODY | ASTM A216 WCB-2008 | A 12571 | 0.210 | 0.43 | 0.86 | 0.028 | 0.014 | 0.042 | 0.148 | 0.012 | 0.037 | 0.005 | 0.008 | 0.39 | 73.37 | 43.36 | 32 | 57 | 149 | N | |
| BONNET | ASTM A216 WCB-2008 | A 11717 | 0.210 | 0.42 | 0.89 | 0.027 | 0.016 | 0.027 | 0.082 | 0.001 | 0.047 | 0.006 | 0.012 | 0.38 | 505.87 | 299 | | | | | |
| WEDGE | ASTM A217 CA15-2007 | D 5392 | 0.11 | 0.92 | 0.80 | 0.026 | 0.011 | 0.121 | 12.47 | 0.029 | 0.018 | | | | 76.56 | 45.10 | 27 | 53 | 157 | N | |
| | | | | | | | | | | | | | | | 527.86 | 311 | | | | | |
| | | | | | | | | | | | | | | | 104.84 | 74.24 | 20 | 50 | 261 | N | |
| | | | | | | | | | | | | | | | 722.85 | 511.9 | | | | | |

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|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------|-------|----|----|-----|---|--|
| BODY | ASTM A216 WCB-2008 | A 12575 | 0.210 | 0.42 | 0.89 | 0.023 | 0.011 | 0.027 | 0.066 | 0.003 | 0.031 | 0.005 | 0.037 | 0.38 | 74.24 | 43.94 | 30 | 56 | 151 | N | |
| BONNET | ASTM A216 WCB-2008 | A 11568 | 0.220 | 0.48 | 0.87 | 0.023 | 0.012 | 0.02 | 0.105 | 0.009 | 0.041 | 0.004 | | 0.39 | 511.87 | 303 | | | | | |
| WEDGE | ASTM A217 CA15-2007 | D 5861 | 0.12 | 0.90 | 0.76 | 0.025 | 0.010 | 0.156 | 12.84 | 0.039 | 0.014 | | | | 76.71 | 45.82 | 27 | 54 | 155 | N | |
| | | | | | | | | | | | | | | | 528.9 | 315.9 | | | | | |
| | | | | | | | | | | | | | | | 103.10 | 74.68 | 20 | 52 | 263 | N | |
| | | | | | | | | | | | | | | | 710.85 | 514.9 | | | | | |

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| | | | | | | | | | | | | | | | | | | | | | |
|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------|-------|----|----|-----|---|--|
| BODY | ASTM A216 WCB-2008 | A 12575 | 0.210 | 0.42 | 0.89 | 0.023 | 0.011 | 0.027 | 0.066 | 0.003 | 0.031 | 0.005 | 0.037 | 0.38 | 74.24 | 43.94 | 30 | 56 | 151 | N | |
| BONNET | ASTM A216 WCB-2008 | A 11712 | 0.210 | 0.44 | 0.92 | 0.028 | 0.015 | 0.034 | 0.066 | 0.009 | 0.048 | 0.010 | 0.06 | 0.39 | 511.87 | 303 | | | | | |
| WEDGE | ASTM A217 CA15-2007 | D 5395 | 0.10 | 0.89 | 0.82 | 0.026 | 0.010 | 0.136 | 12.66 | 0.022 | 0.011 | | | | 76.56 | 45.53 | 26 | 52 | 154 | N | |
| | | | | | | | | | | | | | | | 527.86 | 313.9 | | | | | |
| | | | | | | | | | | | | | | | 103.97 | 73.37 | 21 | 52 | 254 | N | |
| | | | | | | | | | | | | | | | 716.85 | 505.9 | | | | | |

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| | | | | | | | | | | | | | | | | | | | | | |
|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------|-------|----|----|-----|---|--|
| BODY | ASTM A216 WCB-2008 | A 12591 | 0.210 | 0.43 | 0.89 | 0.027 | 0.013 | 0.036 | 0.089 | 0.008 | 0.032 | 0.004 | 0.004 | 0.38 | 76.27 | 45.24 | 28 | 56 | 154 | N | |
| BONNET | ASTM A216 WCB-2008 | A 11721 | 0.190 | 0.46 | 0.89 | 0.023 | 0.012 | 0.026 | 0.048 | 0.006 | 0.039 | 0.005 | | 0.35 | 525.86 | 311.9 | | | | | |
| WEDGE | ASTM A217 CA15-2007 | D 5901 | 0.10 | 0.93 | 0.79 | 0.022 | 0.011 | 0.107 | 12.63 | 0.038 | 0.013 | | | | 76.13 | 44.95 | 26 | 53 | 156 | N | |
| | | | | | | | | | | | | | | | 524.9 | 309.9 | | | | | |
| | | | | | | | | | | | | | | | 105.13 | 74.39 | 20 | 48 | 266 | N | |
| | | | | | | | | | | | | | | | 724.85 | 512.9 | | | | | |

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|--------|---------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------|-------|----|----|-----|---|--|
| BODY | ASTM A216 WCB-2008 | A 12566 | 0.210 | 0.43 | 0.84 | 0.024 | 0.010 | 0.022 | 0.056 | 0.007 | 0.029 | 0.003 | 0.042 | 0.37 | 76.42 | 46.26 | 26 | 55 | 156 | N | |
| BONNET | ASTM A216 WCB-2008 | A 11571 | 0.200 | 0.51 | 0.94 | 0.028 | 0.015 | 0.029 | 0.062 | 0.003 | 0.04 | 0.005 | 0.018 | 0.38 | 526.9 | 319 | | | | | |
| WEDGE | ASTM A217 CA15-2007 | D 5900 | 0.12 | 0.90 | 0.85 | 0.026 | 0.010 | 0.139 | 12.44 | 0.040 | 0.017 | | | | 73.08 | 43.50 | 32 | 57 | 150 | N | |
| | | | | | | | | | | | | | | | 503.87 | 299.9 | | | | | |
| | | | | | | | | | | | | | | | 103.82 | 72.07 | 21 | 49 | 281 | N | |
| | | | | | | | | | | | | | | | 715.81 | 496.9 | | | | | |

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| | | | | | | | | | | | | | | | | | | | | | |
|--------|--------------------|---------|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|----|----|-----|---|--|
| BODY | ASTM A216 WCB-2008 | A 12563 | 0.220 | 0.44 | 0.99 | 0.026 | 0.012 | 0.029 | 0.062 | 0.007 | 0.032 | 0.004 | 0.04 | 0.40 | 76.42 | 45.24 | 26 | 54 | 157 | N | |
| BONNET | ASTM A216 WCB-2008 | A 11573 | 0.200 | 0.46 | 0.89 | 0.025 | 0.011 | 0.037 | 0.049 | 0.002 | 0.05 | 0.010 | 0.033 | 0.37 | 526.9 | 311.9 | | | | | |
| | | | | | | | | | | | | | | | 74.97 | 44.66 | 32 | 57 | 150 | N | |
| | | | | | | | | | | | | | | | 516.9 | 307.9 | | | | | |

| | | | | | | | | | | | | | | | | | |
|-------|---------------------|--------|------|------|------|-------|-------|-------|-------|-------|-------|--------|-------|------|----|-----|---|
| WEDGE | ASTM A217 CA15-2007 | D 5390 | 0.11 | 0.92 | 0.78 | 0.024 | 0.011 | 0.121 | 12.59 | 0.029 | 0.010 | 104.55 | 75.55 | 19.6 | 49 | 258 | N |
| | | | | | | | | | | | | 720.85 | 520.9 | | | | |

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> : Oil Quenched |
| <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>WQ</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 | WCB OR CA15 |
| PACKING | GRAPHITE |
| SEAT RING | ASTM A105 + St.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. :
