**CONTROL VALVE SPECIFICATION**

E-TSM 103 Appendix

|  |  |  |  |
| --- | --- | --- | --- |
| 01 Plant | 02 Location, Room No | 03 System No | 04 Component No |
|       |       |       |       |
| 05 Quantity | 06 Valve Code08 09 Date |
|       |                 |
| 07 Date | 08 Revised, Date Item |
|       |       |

**OPERATING CONDITIONS**

|  |  |  |
| --- | --- | --- |
| 09 Medium | 10 Valve Function | 11 Transients |
|       |       |       |
| 12 Ambient Conditions | Pressure | Temperature | Humidity | Radiation |
| Normal |       | MPa/°C |       | °C |       | RH % |       | mSv/h |
| 13 Ambient Conditions | Pressure | Temperature | Humidity | Radiation |
| Abnormal |       | MPa/°C |       | °C |       | RH % |       | mSv/h |
|  |  |  | 14 Max | 15 Normal | 16 Min |
| Flow liquid |  | Qv m3/h |       |       |       |
|  | 17 Max | 18 Normal | 19 Min |
| Flow gas at ref cond 0 °C 0,1MPa MPA  |  | Qv m3/h |       |       |       |
|  | 20 Max | 21 Normal | 22 Min |
| Flow Steam |  | Qm kg/s |       |       |       |
|  | 23 Max | 24 Normal | 25 Min |
| Inlet Pressure |  | P1 MPa |       |       |       |
|  | 26 Max | 27 Normal | 28 Min |
| Outlet Pressure |  | P2 MPa |       |       |       |
|  | 29 Max | 30 Normal | 31 Min |
| Pressure drop |  | ΔP MPa |       |       |       |
|  | 32 Max |
| Max pressure drop closed valve |  | MPa |       |
|  | 33 Max | 34 Normal | 35 Min |
| Inlet temperature |  | t1 °C |       |       |       |
|  | 36 Max | 37 Normal | 38 Min |
| Density (if gas at 0 °C and 0,1 MPa) |  | S kg/m3 |       |       |       |
|  | 39 Max | 40 Normal | 41 Min |
| Flow coefficient | kv m3/h |       |       |       |
|  | 42 Calculated | 43 Selected |
| Flow coeff. At 100% lift | kv m3/h |       |       |

**DESIGN DATA**

|  |  |  |
| --- | --- | --- |
| 44 Valve Type | 45 Design Press | 46 Design Temp |
|       |       | MPa |       | °C |
| 47 Connection Size | 48 Connection Type | 49 Flow tending to |
|       | Weld | [ ]  | Flange | [ ]  | Thread | [ ]  | Open | [ ]  | Close | [ ]  |
| 50 Stem Sealing Arrangement |
| Single packing | [ ]  | Double packing with intermediate drain | [ ]  | Bellows with single packing | [ ]  |
| 51 Body Bonnet Sealing Arrangement |
| Single gasket |       | Provision for seal weld  |       | Pressure Seal |       |
| 52 Valve Characteristics | 53 Seat Type |
| EQ  | [ ]  | QO | [ ]  | Lin. | [ ]  | Stand. | [ ]  | Repl. | [ ]  | Seal weld | [ ]  |
| 54 Hydraulic Packing Removal | 55 Nozzle for Body Drain | 56 Insevice Inspection |
| Yes  | [ ]  | No | [ ]  | Yes | [ ]  | No | [ ]  | Yes | [ ]  | No | [ ]  |
| 57 Connecting Pipe Dimension Inlet | 58 Connecting Pipe Dimension Oulet |
|       | mm |       | mm |
| 59 Max Valve Length | 60 Max Height | 61 Max Weight |
|       | mm |       | mm |       | kg |

**MATERIAL**

|  |  |  |
| --- | --- | --- |
| 62 Restrictions to Co-based material | 63 Restrictions to PTFE | 64 Restricitons to Aluminium |
| Yes [ ]  | No [ ]  | Yes [ ]  | No [ ]  | Yes [ ]  | No [ ]  |
| 65 Connecting Pipe Inlet | 66 Connecting Pipe Outlet |
|       |       |
| 67 Body Bonnet | 68 Stem |
|       |       |
| 69 Disc | 70 Seat |
|       |       |
| 71 Gasket, Body Bonnet | 72 Stem Packing |
|       |       |
| 73 Connection flanges gasket | 74 |
|       | Seat      | Disc      |

**QUALITY**

|  |  |  |  |
| --- | --- | --- | --- |
| 75 Quality Class | 76 Design acc. to: | 77 Inspection acc. to: | 78 Seismic class |
|       |       |       |       |
| 79 Surface treatment acc. to | 80 Tightness Class (Internal Leakage)81 | 81 Tightness Class (Leakage to Atmosphere)  |
|       |       |            |

**ACTUATOR**

|  |  |
| --- | --- |
| 82 Actuator Type | 83 Actuator Acting84 Actuator Acting |
| Motor | [ ]  | Pneum | [ ]  | Hydr. | [ ]  |       | Direct | [ ]  | Reverse | [ ]  |
| 84 Electric Supply | 85 Electric Power | 86 Electric Control Signal |
|       | V |       | Hz |       | W |       | mA |
| 87 Air Supply | 88 Air Consumption (NPT) | 89 Pneumatic Control Signal |
|       | MPa |       | m3/h |       | MPa |
| 90 Positioner | 91 Positioner Type | 92 Positioner Supply |
| Yes | [ ]  | No | [ ]  |       |       |
| 93 Hand Wheel | 94 Supply Failure | 95 Control Signal Failure |
| Yes | [ ]  | No | [ ]  | Open | [ ]  | Close | [ ]  | Lock | [ ]  | Open | [ ]  | Close | [ ]  | Lock | [ ]  |
| 96 Rated Torque | 97 Stroke Time9  |
|       | Nm | Open |       | s | Close |       | s |
| 98 Req. Torque opening / closing |
| Start |      | **/** |      | Nm | During Operation |      | **/** |      | Nm | Backseating |      | **/** |      | Nm |
| 99 Max. Permitted Torque for the Valve |
| Into open pos. |       | Nm | Into Closed pos. |       | Nm | During operation |       | Nm |
| 100 Spring-Loaded Stem Nut (if actuator is motor operated) |
| Yes | [ ]  | No | [ ]  |

**ACCESSORIES**

|  |  |  |
| --- | --- | --- |
| 101 Torque Limit Switches | 102 Travel Limit Switches | 103 Position Switches |
| Open pos | [ ]  | Closed pos | [ ]  | Open | [ ]  | Close | [ ]  | Interm | [ ]  | Yes | [ ]  | No | [ ]  |
| 104 Mech Position Indicator | 105 Position Potentiometer | 106 Position Transmitter |
| Yes | [ ]  | No | [ ]  | Yes | [ ]  | No | [ ]  | Yes | [ ]  | No | [ ]  |
| 107 Tachometer | 108 Motor Brake | 109 Motor Capacitor |
| Yes | [ ]  | No | [ ]  | Yes | [ ]  | No | [ ]  | Yes | [ ]  | No | [ ]  |
| 110 Controller Type | 111 Limit Switch setting | 112 Torque setting |
|       | Open | [ ]  | Close | [ ]  | Open: |       | Nm | Close |       | Nm |

**GENERAL ACTUATOR SPECIFICATIONS**

|  |  |  |
| --- | --- | --- |
| 113 Manufacturer | 114 Actuator Type No | 115 Degree of Protection |
|       |       |       |
| 116 Weight | 117 Drawings No | 118 Wiring Diagram |
|       | Kg |       |       |

**REMARKS**

|  |
| --- |
| 119 Manufacturer to fill in item 85, 88, 91, 92, 93, 94, 98, 99, 112 |
|       |
|  |