

# Annexure-7C

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Control valves & On/off Valves Accessories

**PROJECT:** 1X370 MW YELAHANKA COMBINED CYCLE  
POWER PLANT

## **Accessories Requirement for Control Valve/Pneumatic On-Off Ball Valves**

### **Pneumatic Actuator**

Make	: Rotex/As per Vendor Std.
Model Number	: Bidder to Specify
Type	: Preferably Spring Return Actuator
Sizing Pressure / Air Pressure	: 3.5 kg/cm2(g)
Ingress Protection	: IP-65 as min.
Manual Override/Handwheel	: Yes, Required
Location	: Top/Side Mounted
Air Fail	: As per P&ID
Air to	: Bidder to Specify
Shut-off Pressure	: Design pressure as per P&ID
Diaphragm Material	: nylon reinforced neoprene or Buna N rubber
Actuator Colour	: Green/Red
Stroke Time	: <15 sec for 6" Valve and Above <5 sec for upto 4" size.

### **Solenoid Valve**

Make	: ASCO/ROTEX/HERION
Model Number	: Bidder to Specify
Body Material	: SS304
Reset Type	: Auto
Supply Voltage	: 24 VDC
Design	: IS Design
Enclosure	: Ex-proof
Ex-Proof	: IIA/IIB, Temp Class T3 as min.
Ingress Protection	: IP-65 as min.
Cable Entry	: 1/2" NPT
SIL	: NA
Type of Coil	: Double coil
Insulation Type	: H class Coil
Redundancy of SOV	: NO SOV shall be energized under normal conditions and de-energized which will drive the valve to failsafe condition
Command Philosophy	: will drive the valve to failsafe condition

**Air Filter Regulator**

Make	:	SHAVO/Placka/As per Vendor Std.
Model Number	:	Bidder to Specify
Body Material	:	SS304
Enclosure	:	Weather Proof
Ingress Protection	:	IP-65
Filter Element Material	:	phosphor bronze filter element
Filter element Size	:	5 micron
Pneumatic Connection size	:	1/4" NPT(F)
Drain	:	Standard

**Pressure Gauge**

Make	:	as per Vendor List
Model No	:	Bidder to Specify
Casing material	:	as per Vendor List
Internals material	:	as per Vendor List
Pressure Gauge Dial Size	:	2" Dial size

### **Limit Switches**

Make	: As per vendor standard
Model Number	: Bidder to Specify
Type	: Proximity Design/conventional mechanical
Design	: Intrinsic Safe
Ex-Proof	: --
Switch Make	: P&F Make for Proximity & Rotex/Honeywell/Equivalent
Cable Entry	: 1/2" NPT
Cable Gland Material	: Ni/brass-plated/SS
Cable Gland Type	: Flareless Double compression
Supply Voltage	: 24VDC, 1 AMPS
Barriers	: BHEL's Scope/NA
SIL	NA

### **Junction Box**

Make	: As per Vendor Std.
Model Number	: Bidder to Specify
Material of Construction	: Die Cast Aluminium
Cable Gland Material	: Ni/brass-plated/SS
Cable Gland Type	: Flareless Double compression
Enclosure	: Exproof
Ex-Proof	: IIA/IIB, Temp Class T3 as min.
Cable Entry/Exit size	: 1/2" NPT
Number of Terminals	: Bidder to Specify

**Pneumatic Tube & Tube Fittings**

Make : Swagelok / Parker or equivalent  
Material : SS316  
Type : double ferrule type

**Positioner**

Make : METSO/FISHER/SIEMENS/DRESSER  
Type : ELECTRO-PNEUMATIC WITH SMART(IN  
BUILT POSITION TRANSMITTER)  
Diagnostic Software : to be provided  
SIL : NA  
Enclosure : Metallic  
Ingress Protection : IP-65 as min.

**Misc**

Body Stud/Nut Material : As per PMS

**Volume Booster**

Make : As per Vendor Std.  
Model : As per Vendor Std.  
Tubing size : As per Vendor Std.

**Quick Exhaust Valve**

Make : As per Vendor Std.  
Model : As per Vendor Std.  
Tubing size : As per Vendor Std.