

## Ball valve specification – Pipeline service

### VALVE MODELS -

- W-K-M – DynaSeal Series 370D5
- SPX -M&J Trunnion mounted Ball valve
- Other models are allowed provided they are equivalent to the models in this specification and meet the minimum threshold condition of the tender
- In any case the manufacture of the valve shall be only OECD country (including manufacturing processing, assembly & testing).

### General Features -

- Size – 4"-24" / CLASS 150-600 / R.F - **acc to bill of quantity**
- Type – **Three Piece - Trunnion mounted Ball valve, DB&B**
- Design Standard – API 6D , API Monogram required.
- End connection –Flange to ASME B 16.5 #150 - #600 R.F - **acc to bill of quantity**
- Testing – in acc to API 6D, including functional test (all tests shall be done at the manufacturer factory with actuator assembled and calibrated on the valve)
- Port – full bore
- Valve operation shall be bi-directional
- Operation – Rotork + Gear or Hand operated + Gear - **acc to bill of quantity**
- Valve shall be equipped With Lift lugs
- Documentation –
  - hydro test report
  - MTRs (include trim materials)
  - Certificate of compliance
  - IOM



## Engineering Department

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- Operation data (open/close time& torque required)
- Valve drawings – for approval before manufacture & As-Made after manufacture
- **Service –**
  - **Liquid** - Different types of distillate fuel : gas oil, kerosene, gasoline, diesel oil acc, Temp. max. 60°C
  - **Installation** – valve will be installed next to sea (environment with high corrosion)
- **TRIM –**
  - Suitable for service conditions **(to be advice by manufacturer)**
  - Ball/seats– 3 MIL ENP
- **Name plate –**

SS 316 (2 mm thickness) – Details acc to API 6D
- **Valve Painting –**
  - ❖ Surface preparation – sa 2.5
  - ❖ Primer - Zinc rich epoxy 70 micron thick SSPC. Primer will contain over 80% zinc by weight of the dry film.
  - ❖ Intermediate - tolerant epoxy mastic surface thick at 150 microns minimum, two layers as needed.
  - ❖ Upper - polyurethane oval white 80 micron thick single layer or two separate layers of 40 microns each Ready Made. Hue of upper layers will be white matte, reflective level of about 84%
  - ❖ Total dry thickness – at least 300 microns
- **Valve Body Pressure Relief**

Valve shall be equipped with a self-relieving mechanism to relief excess pressure from body cavity due to thermal expansion.



- **FITTINGS –**

- Secondary grease fitting for upstream& downstream seats - NPT
- Body drain valve – Ball NPT
- Body vent valve – Ball NPT
- Stem packing - NPT

- **OPERATION – acc to bill of quantity**

- Option 1 -**

- Valves shall be equipped with gear box & "ROTORK" electric actuator latest model, series IQ 3 (**IQT type shall not be acceptable**), FM explosion proof IP - 68, included WD100000/2000 for connection to "PAKSCAN" including board, **including cable glands**, suitable for valve operation under max differential pressure with 25% over sizing of torque, opening/closure time of valve 60 sec min., 80 sec max. ,400V, 50Hz. Valve shall be supplied with gear & rotork installed and calibrated at the **valve manufacturer factory .**

- Option 2 –**

Valve shall be hand operated + gear box

