

Checklist (To be filled, signed & stamped by Bidder)

Sl No	Description	Bidder response	
1	Bidder status	OEM / Collaboration	
2	Document w.r.t. qualification criteria enclosed	Yes / No	
3	Material meets Technical specification requirement	Yes / No	
4	Datasheet duly filled, signed & stamped attached along with TCs in support of values of various material properties claimed	Yes / No	
5	Catalogue/leaflet attached with offer	Yes / No	
6	Deviation w.r.t. technical specification to be mentioned clearly		

Signature

Name of the authorized signatory

Date

Name & Address of the Bidder

Stamp of the Bidder

Annexure-I

Data sheet (To be filled, signed & stamped by Bidder)

Properly filled datasheet as mentioned below shall be submitted along with the offer. Test reports/certificates to be attached in support of the filled data.

Property	Unit	Value to be filled by Bidder
Compressive strength (minimum)	MPa	
Normal working strength (minimum)	MPa	
Compressive Yield strength	MPa	
Tensile strength	MPa	
Shear strength	MPa	
Density	Kg/m3	
Brinell hardness	BHN	
Water swell at operating temperature		
Coefficient of friction		
Coefficient of thermal expansion	mm / m-Deg C	
Maximum operating temperature	Deg C	

Signature

Name of the authorized signatory

Date

Name & Address of the Bidder

Stamp of the Bidder

Documents to be submitted with Bid:

1. Catalogue/leaflet introducing material, manufacturing & fitting method, chemical, physical and mechanical properties and test certificates in support of technical requirement
2. Technical requirements like length/Dia ratio, wall thickness, length of spool
3. Quality plan
4. Data sheet as per Annexure-I
5. Filled & Duly signed Check list as per Annexure-II

Documents to be submitted after award of contract:

1. Bidder shall provide calculation of tolerance for
 - a. OD tolerance considering Interference / press fit of the bush on valve body.
 - b. ID tolerance considering clearance fit of the bush with shaft of the valve boor.
2. Quality plan
3. Data sheet as per Annexure-I

Document No. CDE-20-3486, Rev-00

TECHNICAL SPECIFICATION FOR SELF-LUBRICATING TUBE FOR BEARING/BUSH (IN COMPOSITE MATERIAL) FOR BUTTERFLY VALVE IN WATER SYSTEM APPLICATION

Scope of Supply:

Scope of supply includes design, manufacturing, testing and supply of Self-lubricating tubes (of composite material) to be used for Bearing/Bush in Butterfly valves used for water system application.

Design Requirement:

The material for sleeve type self-lubricating bearing/bush in composite construction shall be suitable for water application including sea water. The material shall have the following properties:

1. Compressive strength (Minimum): 250 MPa
2. Normal working strength (Minimum): 50 MPa
3. Suitable for operating temperature up to 100 Deg C
4. Coefficient of friction: 0.08 to 0.20 (Max)
5. Surface finish: 3.2 Micron

Material:

1. Shall be non-metallic and should not have harmful effect on water and rubber
2. Shall have good machinability and can be machined easily to desired tolerance without any deformation with single point tool.
3. Shall have good dimensional stability for operating temperature range.
4. Shall have dry running capability for initial start-up condition.
5. Shall have low water swelling
6. Shall have low coefficient of friction at start-up and when run at maximum bearing pressure
7. Shall have low shaft wear characteristics
8. Shall Be free from asbestos and dust hazards
9. Shall have low coefficient of thermal expansion and high compression strength
10. Shall be supplied in rough machined condition and lengths 1000mm to 1200mm

Inspection & Testing:

Inspection & testing shall be carried out as per QP approved by BHEL. QP to include test for chemical composition, mechanical & physical properties.

Packing:

Items shall be supplied in suitable packed condition to avoid any physical damage during transit & storage. Packing to indicate special precaution notations like Fragile material and also the complete details of item and purchase order.