

FRAMEWORK AGREEMENT

TECHNICAL SPECIFICATION FOR ANCILLARY MATERIAL

SPECIFICATION NO: PE-TS-20-169-M038



**BHARAT HEAVY ELECTRICALS LIMITED, POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
NOIDA, INDIA**

	TITLE: TECHNICAL SPECIFICATION ANCILIARY MATERIAL FRAMEWORK AGREEMENT	SPECIFICATION NO. PE-TS-20-169-M038
		REV. NO.: 00
		DATE: 22.03.2017
		SHEET: 1 OF 1

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1 GENERAL

This specification covers the design, materials, manufacturing and testing of ancillary materials required for application of thermal insulation on piping and equipment at Vendor's or/ and sub-Vendor's works inclusive of packing requirements. In case of contradiction between Section-I and DataSheet-A of Section-II, DataSheet-A of Section-II will prevail.

2 MATERIALS

- 2.1 All the material to be supplied under this specification shall be new, unused and free from any defects.
- 2.2 Binding wires, stitching wires and lacing wires shall be of galvanized / stainless steel conforming to IS:280 / IS:6528. All the wires shall be supplied in coil form.
- 2.3 Mild steel flats, lugs etc. shall be as per IS:2062. Flats and lugs shall be supplied in coil form.
- 2.4 Screws used for cladding sheet joints shall be self-tapping type with washers. Both screws and washers shall be cadmium/zinc coated or stainless steel as per requirement of BOM conforming to the applicable standards.
- 2.5 All other materials i.e. bolts & nuts, rivets, aluminium band & seals etc. shall be of commercial quality conforming to applicable standards.

2.6 SEALING COMPOUND

Joint sealing compound shall be used between the overlapping of the Protective Cladding Sheet of Thermal Insulation to make cladding joints vapour tight and to prevent Moisture & Water from entering into the insulation. They shall be of self-setting paste type. The sealing compounds shall be suitable for and comply with the following parameters:

- | | |
|-----------------------------|--|
| a) Service Temperature | : To Withstand 100°C |
| b) Approximate weight | : 1.5 Kg / litre |
| c) Viscosity | : Soft Paste |
| d) Drying Time | : 8 hours or as specified by the manufacturer. |
| e) Application | : Trowel or as recommended by the manufacturer |
| f) Average volatile matters | : To be specified by the manufacturer. |

The shelf-life of sealing compound being approximately 1 year, it should be dispatched only after getting clearance from site.

3 CERAMIC FIBRE PAPER

- 3.1 The ceramic fibre paper shall be suitable for and comply with the following parameters:

- | | |
|--|--|
| a) Classification Temperature (°C) | : To be Suitable for a Minimum of 600°C. |
| b) Thickness (mm) | : 3 mm |
| c) Bulk Density (Kg / m ³) | : 128 Kg / m ³ (Minimum) |
| d) Size (mm) | : 1000mm x 500mm |



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4 INSPECTION AND TESTING

- 4.1 All the materials to be supplied under this specification shall be of good quality meeting requirements of applicable standards.
- 4.2 In case of all ancillary materials, supplier shall furnish a certificate that the materials supplied complies with the requirements of applicable standards.

5 PACKING & MARKING

- 5.1 Materials like binding wires and lacing wires shall be packed in Polythene lined hessian.
- 5.2 Bolt & nuts, rivets, screws etc. shall be packed in polythene bags and further shall be packed in wooded boxes. The wooden boxes should be marked with indelible ink.
- 5.3 Sealing compound shall be packed in metallic drums/tins.
- 5.4 Mild steel lugs shall be packed in polythene lined hessian. Mild steel flats shall be wrapped with polythene lined hessian.
- 5.5 Ceramic fiber paper shall be packed in such a way that no moisture can enter even if the packing is kept in the open atmosphere (exposed to rain), by suitably providing polythene covers.
- 5.6 The following details shall be legibly and indelibly marked on all the packages:
 - a) BHEL Purchase order number
 - b) Project Name
 - c) Name of supplier
 - d) Material / Item.
 - e) Item details (Size / Thickness / Gauge / Dimension)
 - f) Weight of the package
 - g) A caution note "Always store under covered shed and on raised platform"

6 DOCUMENTS REQUIRED ON DISPATCH

Before dispatch of the equipment the vendor shall furnish the following in original for BHEL review and acceptance.

- a) Material Test certificates.
- b) Shop test reports and certificates.

7 DOCUMENTS TO BE SUBMITTED ALONG WITH OFFER

Bidder shall submit the following documents duly filled, signed and stamped along with the bid:

- a) Compliance sheet
- b) Documents as per the list indicated in the NIT.

The above are the only documents which will be used for technical evaluation unless other documents are asked for during technical clarifications. Any other technical document enclosed with the bid shall be ignored for the purpose of technical evaluation. All other documents attached with the specification are for information of the vendor and no comments shall be marked on these.





TITLE: **TENTATIVE BOM
FRAMEWORK AGREEMENT**
(ANCILLARY MATERIAL-TH.INSULATION)

DOCUMENT NO. PE-DC-20-169-M001

REV. NO. 00

DATE: 22.03.17

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DATA SHEET-A

S.No	MATERIAL	SPECIFICATION	DENSITY/SIZE/ THICK	UNIT	QUANTITY
1	Binding Wire, Stainless Steel	PE-SS-999-169-M038	0.9 mm dia. (20 SWG)	Kg	5200
2	Lacing Wire, Stainless Steel	PE-SS-999-169-M038	0.9 mm dia. (20 SWG)	Kg	3900
3	Binding Wire, Galvanized Steel	PE-SS-999-169-M038	0.9 mm dia. (20 SWG)	Kg	53900
4	Lacing Wire, Galvanized Steel	PE-SS-999-169-M038	0.9 mm dia. (20 SWG)	Kg	44600
5	M.S. Straps/Flats	PE-SS-999-169-M038	20 mm x 3 mm	Kg	96600
6.	Sealing Compound	PE-SS-999-169-M038	----	Kg	11100
7.	Self-tapping screw with washers , Stainless steel	PE-SS-999-169-M038	No. 8 x 19 mm long	Set	3012000
8.	Self-tapping screw with washers , Zinc Coated	PE-SS-999-169-M038	No. 8 x 19 mm long	Set	1781895
9.	Ceramic Fiber paper	PE-SS-999-169-M038	3 mm thick	Sq.M.	12333
10.	MS rivets	PE-SS-999-169-M038	3 mm dia 12 mm long	Nos	899500
11.	Bolts & Nuts	PE-SS-999-169-M038	10 mm dia 60 mm long 10 mm dia 40 mm long 10 mm dia 25 mm long	Set	76400 76400 76400
12.	Anodized aluminium bands	PE-SS-999-169-M038	20 mm x 0.6 mm	Kg.	81000
13.	Seals for aluminium bands	PE-SS-999-169-M038	To suit Al. bands	Kg..	7900
14.	GI toggle clips	PE-SS-999-169-M038	----	Nos	16700

NOTE: -

1. Bidder to mention the basic NALCO ingot rate in this unpriced offer for item at Sl. No. 12&13 (proof of base NALCO ingot rate i.e. print out of the base rate from NALCO website to be attached)

2. Bidder is required to quote price of each item under Ex-works, Excise duty, CST & Freight separately & individually. Prices of Excise duty, CST & Freight shall not be clubbed/ included in the Ex-works prices.

	COMPLIANCE SHEET ANCILLARY MATERIAL FRAME WORK AGREEMENT		SPECIFICATION NO. PE-TS-20-169-M038
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I hereby comply/not comply (*) to all the requirements of this technical specification in totality.

* In case the bidder does not comply to the technical specification, the deviations shall be explicitly listed in the technical deviation sheet of GCC. Deviations listed in technical deviation sheet shall only be considered.

Name of Bidder / Authorized Representative :- _____

Designation :- _____

Signature :- _____

Company Seal :- _____

Date :- _____