

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: 11.08.2017

SHEET: 1 OF 1

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

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

REV. NO. 00 DATE: 11.08.2017

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DATA SHEET-A

S.No	MATERIAL	DENSITY/SIZE/ THICK	UNIT	QUANTITY
1	Binding Wire, Stainless Steel	0.9 mm dia. (20 SWG)	Kg	2800
2	Lacing Wire, Stainless Steel	0.9 mm dia. (20 SWG)	Kg	2100
3	Binding Wire, Galvanized Steel	0.9 mm dia. (20 SWG)	Kg	32900
4	Lacing Wire, Galvanized Steel	0.9 mm dia. (20 SWG)	Kg	27200
5	M.S. Straps/Flats	20 mm x 3 mm	Kg	58800
6.	Sealing Compound	----	Kg	6900
7.	Self-tapping screw with washers , Stainless steel	No. 8 x 19 mm long	Set	2108400
8.	Self-tapping screw with washers , Zinc Coated	No. 8 x 19 mm long	Set	2986695
9.	Ceramic Fiber paper	3 mm thick	Sq.M.	7667
10.	MS rivets	3 mm dia 12 mm long	Nos	560500
11.	Bolts & Nuts	10 mm dia 60 mm long 10 mm dia 40 mm long 10 mm dia 25 mm long	Set	47600 47600 47600
12.	Anodized aluminium bands	20 mm x 0.6 mm	Kg.	50400
13.	Seals for aluminium bands	To suit Al. bands	Kg..	4900
14.	GI toggle clips	----	Nos	10700

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, Taxes & Freight separately & individually. Prices of applicable taxes & Freight shall not be clubbed/ included in the Ex-works prices.



**SPECIFIC TECHNICAL
REQUIREMENT FOR
ANCILLARY MATERIAL**

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SECTION : I

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SHEET 1 OF 2

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 material the vendor shall furnish the following in original for BHEL review and acceptance.

- a) Material Test certificates.
- b) Shop test reports and certificates.
- c) Vendor to provide soft copy of photos/snaps of duly packed insulation material. The soft copies to be provided by vendor after final inspection of Insulation material. Clearance for dispatch of insulation material will be given only after satisfactory packing conditions from vendor's work.

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.



COMPLIANCE SHEET

ANCILLARY MATERIAL
FRAME WORK AGREEMENT

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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 :-

FOR INTERNAL REFERENCE OF CMM

DATE: 11.08.2017

TENTATIVE LIST OF PROJECTS FOR FRAMEWORK AGREEMENT OF ANCILIARY MATERIAL-THERMAL INSULATION

With reference to proposed execution of Framework Agreement of Anciliary material- thermal insulation, the status of projects as on date is mentioned below:

S. NO	Job No.	Project Description	Status	Remarks Final/Preliminary/ Proposal
1	419	1X800 MW VIJAYWADA APGENCO	Indent not yet raised	Preliminary
2	420	1X800 MW KRISHNAPSTNAM APPDCL	Indent not yet raised	Preliminary
3	411	4x270 MW MANUGURU TPP	Indent released on 07/09/2015	Final
4	427	1X250 MW ROURKELA THERMAL POWER STSTION	Indent not yet raised	Final
5	422	1X525 MW TUTICORIN TPS	Indent not yet raised	Preliminary
6	423	1X800MW TANGEDCO NORTH CHENNAI TPP	Indent not yet raised	Preliminary
7	412	2X660MW ENNORE SEZ STPP	Indent not yet raised	Preliminary
8	410	1x800 MW KOTHAGUDEM TPS	Indent released on 16/03/2017	Final