



Bharat Heavy Electricals Limited
Product Engineering / Fossil Boilers
Handling System

Annexure - I to Specification No. MHS-HEQ/071 - Rev. 04
(For Electrically Operated Furnace Maintenance Platform - 4 wall coverage.)

PROJECT : NTPC Telangana STPP Phase I 2x800MW
CUSTOMER NO. : 1819
REFERENCE DRAWING No. : 1-99-514-40887

1.0 Supplier to supply Furnace maintenance platforms as per specification no. **MHS-HEQ/074 Rev. 04**

2.0 Top of ceiling girder elevation : 105.693 M.

3.0 Access door elevation : 15.882 M.

4.0 SCOPE OF SUPPLY

4.1.0 PLATFORMS

4.1.1 Platform with 45° LH chamfer at one end and other with flat end for a length of 9.000M.
- 2 Nos.

4.1.2 Platform with 45° RH chamfer at one end and other with flat end for a length of 9.000M.
- 2 Nos.

4.1.3 Platform with both sides flat with length of 16.000M. - 2 Nos.

4.1.3 Platform wall roller assy & bracket complete with connecting fasteners. The rollers shall be designed suitably to move on the spiral water walls.

4.1.4 Complete guard rails with connecting fasteners.

4.1.5 Connecting block and tubes with connecting fasteners.

4.1.6 Each module shall be capable of mounting STIRRUP arrangements such that any module can be used for traversing between any two cable openings.

4.2.0 STIRRUPS

4.2.1 Suitable Hot galvanised stirrups & stirrup retainer complete with fasteners.

4.3.0 HOIST (ROPE CLIMBING MACHINE)

4.3.1 Hoist for safe working load of 800 Kgs.

4.3.2 Electrically operated rope climbing machine with top limit switch.

4.3.3 Common single power control for both hoists.

4.4.0 SAFETY DEVICES

4.4.1 Safety braking system

4.4.2 Anti tilting device

4.4.3 Level switches

4.4.4 Over speed safety device

4.4.5 Top limit switches

4.4.6 Overload/Under load safety device assembly

Prepared & Checked:

Approved:

Date : 09/01/2015

(D.Vijayakumar)

(M.Thandapani)

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4.5.0 WIRE ROPE

- 4.5.1 Suitable length and quantity of steel wire rope with suitable size and construction of 6 X 36 for electrically operated hoist. Supplier to specify the size of the rope offered. Minimum length of wire rope shall be 100 M.
- 4.5.2 Secondary wire rope with cable weight.
- 4.5.3 Rope shall be of galvanised steel wire.
- 4.5.4 Rope shall have tensile strength of 240 Kg/Sq.mm. minimum.
- 4.5.5 Rope end fittings, D'shakes, thimbles, rope clamps and other required items.

4.6.0 POWER SUPPLY

- 4.6.1 Power supply cable shall be provided for 3 Phase; 415V AC; 50 Hz.
- 4.6.2 Power supply cable shall be provided for suitable length as per BHEL arrangement drawing (1-99-514-40887).
- 4.6.3 Power supply cable rating shall be furnished by vendor.
- 4.6.4 Power supply cable shall be provided with plug and cable retainer.

4.7.0 CONTROL SYSTEM : Centralised control box shall be provided for easy operation.

- 5.0 Vendor shall furnish other mechanical, electrical and control accessories required for safety, easy maintenance and easy operation.

5.0 DOCUMENTS NEEDED

- 5.1 Refer clause no 13.0 of specification.

5.2 O & M MANUALS

- 5.2.1 Operation and Maintenance manuals both as soft copy (CD) and hard copies (in A4-size) should be submitted to BHEL/Tiruchirappalli prior to despatch of the equipment. - No of copies : 4. Clause no 13.5.1 of specification MHS-HEQ-71/04.
- 5.3.0 Operation and maintenance manual should contain the following
 - 5.3.1 Data sheet for the equipment & its bought out items.
 - 5.3.2 Brief description of equipments under supply.
 - 5.3.3 Operation, and Trouble shooting
 - 5.3.4 Maintenance and service instructions including lubrication schedule wherever required.
 - 5.3.5 Recommended spare parts for 3 years for trouble free operation.
 - 5.3.6 Assembly drawing with parts list.
 - 5.3.7 The manual shall pertain to the model or type supplied for the particular contract.

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- 6.0 GUARANTEE :** The offered system shall be guaranteed for 18 months from the date of commissioning or 24 months from the date of supply.
- 7.0** All the points in specification & annexure - I to the specification should be strictly adhered to.
- 8.0** Offers without the required documents along with the offer shall not be considered.

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(D.Vijayakumar)

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NOTES -

1. REFERENCE DRAWINGS :
 - A. 0-00-0227-77114 - GENERAL ARRANGEMENT OF BOILER SECTIONAL SIDE ELEVATION
 - B. 0-00-0227-77116 - GENERAL ARRANGEMENT OF BOILER SECTIONAL PLAN
 - C. 0-00-0271-34636 -PPA - PLAN VIEW "B-B" ROOF TUBES FURNACE
 - D. 0-00-0271-34634 -PPA - PLAN VIEW "A-A" HOBBS & LAMBS (FURNACE)
 - E. 0-00-0271-34633 -PPA - SECTIONAL SIDE ELEVATION UPPER FURNACE
 - F. 0-00-0271-34630 -PPA - SECTIONAL SIDE ELEVATION LOWER FURNACE
2. CABLE OPERING WITH CAPS AND OTHER ACCESSORIES REACHED UNDER PG-MMA 19 - 001.
3. ALL THE ELEVATIONS ARE WITH RESPECT TO ELEVATION FINISHED
4. GROUND FLOOR LEVEL OF TO BUILDING AND WALL BY WHICH CORRESPONDS TO RL (1) 149.0M
5. POWER POINTS TO BE PROVIDED SUITABLY AT SITE, RATINGS- 6 KVA, 440 V, 50 HZ AT 12 POINTS.

SCOPE OF EQUIPMENT.

HOST, TOP LIMIT SWITCH WITH COMMON CONTROL. - ELECTRICALLY OPERATED.

SUSPENSION SYSTEM - Suitable steel wire rope with suitable length.
Up to Access Door (Min.120 metres),
Secondary are rope with suitable length (Min.170 metres).
Hoist clamps and fittings, 7" shackle and thimbles.

PLATFORMS - Split-type platforms - suitable for 610mmx761mm access door
with guard rails, suitable stirrups with retainers.
Cable car, suitable stirrups with retainers.
Noel roller assembly with mounting bracket & fasteners.

POWER SUPPLY - All electrical items required for safe operation. Power supply cables and pokes for suitable length of platform.

SAFETY DEVICES - All safety devices.
[A sensing device (Sx lock safety device) that locks the wire as soon as it occurred before a preset speed either gradual or instantaneous shall be provided.]

Each platform is served by two hoists in tandem operation. There are 12 hoists for the six platforms common for one hoist.

	CORPORATE QUALITY ASSURANCE SUB-VENDOR QUESTIONNAIRE
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i.	Item/Scope of Sub-contracting			
ii.	Address of the registered office	Details of Contact Person (Name, Designation, Mobile, Email)		
iii.	Name and Address of the proposed Sub-vendor's works where item is being manufactured	Details of Contact Person: (Name, Designation, Mobile, Email)		
iv.	Annual Production Capacity for proposed item/scope of sub-contracting			
v.	Annual production for last 3 years for proposed item/scope of sub-contracting			
vi.	Details of proposed works			
1.	Year of establishment of present works			
2.	Year of commencement of manufacturing at above works			
3.	Details of change in Works address in past (if any)			
4.	Total Area			
	Covered Area			
5.	Factory Registration Certificate	Details attached at Annexure – F2.1		
6.	Design/ Research & development set-up (No. of manpower, their qualification, machines & tools employed etc.)	Applicable / Not applicable if manufacturing is as per Main Contractor/purchaser design) Details attached at Annexure – F2.2 (if applicable)		
7.	Overall organization Chart with Manpower Details (Design/Manufacturing/Quality etc)	Details attached at Annexure – F2.3		
8.	After sales service set up in India, in case of foreign sub-vendor (Location, Contact Person, Contact details etc.)	Applicable / Not applicable Details attached at Annexure – F2.4		
9.	Manufacturing process execution plan with flow chart indicating various stages of manufacturing from raw material to finished product including outsourced process, if any	Details attached at Annexure – F2.5		

	CORPORATE QUALITY ASSURANCE SUB-VENDOR QUESTIONNAIRE
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10.	Quality Control exercised during receipt of raw material/BOI, in-process , Final Testing, packing	Details attached at Annexure – F2.6												
11.	Manufacturing facilities (List of machines, special process facilities, material handling etc.)	Details attached at Annexure – F2.7												
12.	Testing facilities (List of testing equipment)	Details attached at Annexure – F2.8												
13.	If manufacturing process involves fabrication then-	Applicable / Not applicable												
	List of qualified Welders	Details attached at Annexure – F2.9												
	List of qualified NDT personnel with area of specialization	(if applicable)												
14.	List of out-sourced manufacturing processes with Sub-Vendors' names & addresses	Applicable / Not applicable Details attached at Annexure. –F2.10 (if applicable)												
15.	Supply reference list including recent supplies	Details attached at Annexure – F2.11 (as per format given below)												
	<table border="1" style="width: 100%;"> <tr> <th style="width: 10%;">Project/ package</th> <th style="width: 10%;">Customer Name</th> <th style="width: 30%;">Supplied Item (Type/Rating/Model /Capacity/Size etc)</th> <th style="width: 15%;">PO ref no/date</th> <th style="width: 15%;">Supplied Quantity</th> <th style="width: 20%;">Date of Supply</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	Project/ package	Customer Name	Supplied Item (Type/Rating/Model /Capacity/Size etc)	PO ref no/date	Supplied Quantity	Date of Supply							
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16.	Product satisfactory performance feedback letter/certificates/End User Feedback	Attached at annexure - F2.12												
17.	Summary of Type Test Report (Type Test Details, Report No, Agency, Date of testing) for the proposed product (similar or higher rating) Note:- Reports need not to be submitted	Applicable / Not applicable Details attached at Annexure – F2.13 (if applicable)												
18.	Statutory / mandatory certification for the proposed product	Applicable / Not applicable Details attached at Annexure – F2.14 (if applicable)												
19.	Copy of ISO 9001 certificate (if available)	Attached at Annexure – F2.15												
20.	Product technical catalogues for proposed item (if available)	Details attached at Annexure – F2.16												
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Company's Seal/Stamp:-