



An ISO 9001
Company

Bharat Heavy Electricals Limited
(High Pressure Boiler Plant)
Tiruchirappalli-620 014, Tamil Nadu, India
Dept: MATERIALS MANAGEMENT/BOI

Annexure – A- Terms and Conditions

ACCEPTANCE OF TECHNO - COMMERCIAL TERMS AND CONDITIONS BY THE BIDDERS

Description of the Equipment:		Quick Erect Scaffolding(Steel)
Projects		Krishnapatnam and Vijayawada project
Enquiry No:		
Sl. No.	Terms and conditions	Vendor's confirmation
1 (a)	<u>Technical:</u> Supply of Quick Erect Scaffolding shall be as per Specification (Datasheet, Drawing, and Vendor Checklist) attached with the enquiry.	
1 (b)	Inspection by Customer/ BHEL or BHEL Approved Third Party Inspection Agencies.	
2	<u>Firm Price:</u> The quoted / finalised rates shall be Firm till execution of the supplies. Offer with Price Variation Clause (PVC) will not be considered.	
3	The tender will be operated on two part bid basis and you are requested to submit techno commercial bid and price bid through eps.	
3 (a)	<u>Delivery term (Indigenous):</u> The quote shall be on FOR respective project destination basis as indicated below, inclusive of Packing, forwarding, Freight & Transit Insurance also to yours account. <u>Total commodities rates shall include material cost, freight and insurance, packing & forward, type test charges etc.</u> <u>Ex-Works Contracts will not be entertained.</u>	
3(b)	<u>Delivery term (Import):</u> The quote shall be on CFR Chennai Port basis with freight break up details and place of delivery. - PORT OF LOADING SHOULD BE INDICATED WITHOUT FAIL. - PORT OF DISCHARGE SHOULD BE CHENNAI	
4 (a)	<u>Payment terms (Indigenous):</u> 100% direct payment after 45 days from the date of dispatch against site acknowledgement LR copy with 10% PBG <u>Payment terms (Imports):</u> BHEL Payment term is 100% payment on CAD basis after 45 days from the date of receipt of documents along with 10% PBG, specified in PO, at BHEL bank. Respective bank charges to respective account.	
4 (b)	<u>Loading Criteria (Indigenous) for arriving the L1 rate:</u> Payment Terms: Any deviation in the above BHEL payment term (as per 4(a)) will attract loading (Basic Material Value) as per below. "Base rate of SBI (As applicable on the date of bid opening. Techno-commercial bid opening in case of two part bids) + 6% shall be considered for loading for the period of relaxation sought by bidders". If the Payment term is 90% direct payment after 45 days from the date of dispatch against submission of dispatch documents and balance 10% against site acknowledgement. For this option a loading of 2% on the 90% of the offered	

	materials value shall be made. Payment through bank is not acceptable. If still demanded by vendor, loading will be 3% on the offered material value. LC will not be operated for Indigenous vendors. Offers with payment terms as LC from indigenous vendors will be rejected.	
4(c)	<u>Loading Criteria (Imports) for arriving the L1 rate :</u> Any deviation in the above payment term (as per 4(a)) will attract loading (Basic Material Value) as mentioned below. “Base rate of SBI (as applicable on the date of bid opening. Techno-commercial bid opening in case of two part bids) + 6% shall be considered for loading for the period of relaxation sought by bidders. • In the case of Usance LCs the loading will be considered @ 1.5% on the offered Value. • For LC at sight the loading will be considered @ 3.5% on the offered Value. Normally CAD at sight and Confirmed LCs are liable for rejection.	
5 (a)	<u>Liquidated damages:</u> Delivery of the goods specified in the purchase order should be made within the time prescribed. Failure to dispatch the materials in the time as per the delivery quoted in our Purchase Order would make the supplier liable to an un-conditional LD at the rate of 0.5% of the order value per week of the delay or part thereof subject to a maximum of 10% of the total order value.	
5 (b)	<u>Loading Criteria for arriving the L1 rate:</u> Any deviation on BHEL LD clause, loading (Basic material Value) will be applied to the extent to which it is not agreed by the bidder.	
6 (a)	<u>Guarantee / Warranty Period:</u> Guarantee clause 24 months from the date of supply or 18 months from the date on which the equipment/system is put in use (by the end user) whichever is later against defective design, defective material usage, defective workmanship, defective packing and forwarding.	
6 (b)	<u>Loading Criteria:</u> <u>Guarantee / Warranty Period:</u> No Deviation is permitted. If still vendor offered any deviation on the Guarantee / warranty period, it may lead to rejection of offer.	
7	<u>Risk purchase:</u> If the supplier fails to deliver the goods within the delivery specified in the Purchase Order, BHEL will be entitled to terminate the contract and to Purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or despatch within the delivery period mentioned in the Purchase Order.	
8	<u>Performance Bank Guarantee:</u> BHEL require a performance Bank Guarantee to a value of 10% of the total order value covering the guarantee period. The PBG shall be in BHEL format (Format attached) which is to be opened in any one of the first class India banks. (Bank List Attached). All banks charges shall be to vendor account only. If still vendor offered any deviation on PBG leads to rejection of offer.	
9	<u>Delivery Period:</u> 3 to 4 months from the date of document approval/ Customer approval.	

10	(Indigenous Vendor) -LR date will be considered for LD calculation. (Import Vendor) - Bill of lading date will be considered for LD Calculation	
11	<u>Document Submission:</u> <u>Along with the offer:</u> 1. Filled in Commercial terms and conditions (this document) to be submitted. 2. Duly filled in Technical Specification along with the applicable GA Drawings and QP to be submitted. 3. Any query during enquiry stage shall be replied within four days failing which offer may be rejected as non-responsive. <u>After Purchase Order:</u> 1. Technical datasheets, drawings & QP to be submitted for BHEL approval within 15 days from the PO date. 2. Any comment in the documents by BHEL/Customer to be replied / revised (as applicable) within three days. 3. Any document submitted with deviations from enquiry/PO requirements will not be treated as document submission for LD calculation purposes.	
12	<u>Enquiry as a package:</u> Total requirement will be considered single package basis (project wise) for evaluation and ordering.	
14	<u>Validity:</u> 90 days minimum from techno commercial bid opening (Part-1). Any Deviation with respect to validity of your offer will not be considered. Ensure your quoted rates will have 90 days minimum validity from techno commercial bid opening. The delay in technical clarification beyond four days will be subsequently added to the validity period, Revised Price Bids will not be encouraged.	
15	<u>O & M manuals:</u> BHEL require 1 sets of printed O & M manuals with 3 soft copies in CD-ROM at no cost to be sent to BHEL/ Trichy and 3 sets of printed O & M manuals to be sent along with ordered items directly to site.	
16	<u>Inspection and testing requirements:</u> Inspection and testing requirements are to be carried out as per the specification and BHEL /Customer approved Datasheets, Drawing &QP and all test certificates are to be submitted in complete set.	
16	<u>Repair & replacements:</u> Within the guarantee period vendor has to replace / rectify the defective/ damaged items on free of cost within a reasonable time of reporting from our end.	
17	<u>MSME Applicability as per Annexure C.</u> The vendors shall furnish valid certificates for availing the benefits with deemed validity in the offer itself.	
18	<u>Important Information for Indigenous Suppliers:</u>	
	• Kindly indicate the GST No of your Firm	
	• Kindly Indicate the HSN Code for all the line items.	
	• Please indicate the applicable GST % (IGST, SGST, CGST)	
	• Kindly Note the BHEL Trichy Unit GST NO : 33AAACB4146P2ZL	
	• Response to Tenders for Indigenous supplier will be entertained only if the vendor has a valid GST registration number which should clearly have	

	mentioned in the offer. If any specific exemption is available, a declaration with due supporting documents need to be furnished for considering the offer.	
	Supplier shall mention their GSTN registration number in all their invoices and invoices shall be in the format as specified/prescribed under GST laws. Invoices shall necessarily contain Invoice number (in case of multiple numbering system is being followed for billing like SAP invoice no, commercial invoice no etc., then the Invoice No which is linked/uploaded in GSTN network shall be clearly indicated), item description as per PO, Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST & UTGST) separately, HSN/ SAC Code, etc.	
	All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code).	
	A declaration to the effect that all invoice particulars are/were uploaded in the GSTN network/ portal & all tax liability as per GST rules and regulations have been and will be discharged, shall be mentioned in the invoice. If not mentioned in the invoice, a separate declaration shall be submitted as per the requirement of BHEL.	
	All documents like Mill Test Certificate, LR copy, Guarantee/Warranty certificate, work completion certificate, any other document mentioned in PO, shall be sent along with the vehicle/consignment. For all consignments received within the calendar month, input credit will be availed within that month in line with monthly returns filing cycle. In case of any discrepancy in the document or non-submission of documents mentioned in the PO, then BHEL will not be able to accept or account the material, in such case availing of tax credit will be deferred to next month or so.	
	In case of discrepancy in the data uploaded by supplier in the GSTN portal or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit and will notify the supplier of the same. Supplier has to rectify the data discrepancy in the GSTN portal or issue credit note (details to be uploaded in GSTN portal) for the shortages or rejections in the suppliers, within the calendar month notified by BHEL.	
	For any such delay in availing of tax credit for reasons attributable to supplier (as mentioned above), interest (calculated @ SBI Base Rate + 6%) along with penalty if any will be deducted for the delayed period i.e. from the month of receipt till the month tax credit is availed, from the running bills.	
	Under GST regime, BHEL has to discharge GST liability on LD recovered from suppliers/contractors. Hence applicable GST shall also be recoverable from suppliers/contractors on LD amount. For this Debit note will be issued by BHEL indicating the respective supply invoice	

	number	
19	<u>Important Information for Import Suppliers:</u> <u>FOR CFR INCO TERMS – CONTAINERIZED CARGO</u> - For CFR terms, moved through CONTAINERS (Suppliers should clearly specify this in their offer) it would be presumed by BHEL that the freight charges quoted is on LILO (LINER IN LINER OUT) basis including extra charges, if any, like Container Imbalance Charges, Trade Imbalance charges or any other charges payable to the Liner. No other charges other than the quoted Freight rate will be paid by BHEL excepting applicable Terminal Handling Charges, Container cleaning Charges, DO charges to Shipping Liner at Discharge Port. 14 FREE DAYS FOR Container detention shall be provided. If any deviation is taken by Tenderer, a loading of 22% on the freight rate per MT shall be considered by BHEL for arriving at the Total landed Cost. - In case of shipment through Containers on CFR basis, the BL should bear the endorsement that “14 free days for Container Detention is applicable”. <u>BREAKBULK CARGO</u> - For CFR terms, moved through BREAK BULK BASIS (Suppliers should clearly specify this in their offer) it would be presumed by BHEL that the freight charges quoted is on LILO (LINER IN LINER OUT) basis. - The materials will be Custom cleared from Port itself.	
	- The Indian Customs imposed, a penalty on late filing of Bill of Entries (Air/Sea Shipments) by the importer. The maximum free time allowed is 24 hrs from the time of arrival of cargo at final port of discharge. Rs.5000/- per day (for Initial 03 days) & Rs.10000/- per day (thereafter) - The vendor should furnish the Non-Negotiable Documents (Air Way Bill/Bill of Lading, Commercial Invoice, Packing List, and Certificate of Origin) either by email or post/courier to BHEL well before the landing of cargo at final port of discharge. - Vendor will be held responsible for the penalty arises against the late filing of Bill Of entry due to: - Non availability of Non-Negotiable Documents (NNDs) before the cargo arrival - Discrepancy in documents - Short landing of Consignments (For shipments on CFR/CPT/CIF/CIP – Chennai Port)	
	- All the shipments for the contracts (POs) finalized on CFR -Chennai Port basis (i) Delivery Orders involving multiple agencies like liners/freight forwarders are not allowed. There must be a single agency office at the final discharge Port (Chennai) for issuing the Delivery Order to BHEL. (ii) The detention/demurrage charges arise due to the delay in collection of Delivery Orders from multiple agencies of liner/freight forwarder also whose offices are not at available Chennai, the same amount will be	

	deducted from Vendor's bills only. (iii) Apart from the normal charges like Terminal Handling Charges, Container cleaning Charges, Delivery Order Charges at final port of discharge no other charges will be borne by BHEL. (iv) The liner/freight forwarders should be properly communicated by the Vendor for not to claim such charges for issuing Delivery Order. If the liner/freight forwarder claims such charges in their invoices, the same amount will be deducted from the Vendor bills without any prior intimation in order to avoid the delay in Customs clearance. The likely additional/hidden costs or charges are: a. CIC - Container Imbalance Charges/Surcharges b. EIC - Equipment Imbalance Charge/Surcharges c. CAF - Container/Currency Adjustment Factor d. BAF - Bunker adjustment Factor e. RDS - Rupee Depreciation Surcharge f. CDS - Currency Depreciation Surcharge	
	<u>Transport Conditions for Import:</u> The Original Documents (Bill of Lading, Invoice, Packing List, Certificate of Origin & Test Certificate) shall reach BHEL well in advance before the vessel arrival. The soft copies of the above shall be forwarded to BHEL immediately after shipment. • In the event of delayed submission of documents by the supplier, an amount up to 5% of the invoice value will be retained towards demurrage & other charges and the difference if any between actual charges and recovery will be settled separately through supplementary invoice. • In such cases, the Supplier shall authorize the Steamer / Shipping agent / transporter to freely release the consignment to BHEL by providing a "Surrender Bill of Lading". • Otherwise, No-objection Certificate shall be issued to the Liner, authorizing BHEL to get the Delivery Order without producing the Original Bill of Lading. • This is required to ensure avoidance of demurrage at Chennai Sea-port that may arise in case of delayed presentation of documents by the Seller.	
	Note: Any other Techno –Commercial Terms indicated by the vendor in their offer elsewhere will be ignored. BHEL will proceed with tender evaluation as per Annexure A only.	

Certificate by Chartered Accountant on letter head

This is to Certify that M/S
(hereinafter referred to as 'company') having its registered office at
is registered under MSMED Act 2006, (Entrepreneur
Memorandum No (Part-II) dtd:.....
Category: (Micro/Small)). (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as on
date..... as per MSMED Act 2006 is as follows:

1. **For Manufacturing Enterprises:** Investment in plant and machinery (i.e. original cost
excluding land and building and the items specified by the Ministry of Small Scale Industries vide its
notification No.S.O.1722(E) dated October 5, 2006 :
Rs.....Lacs
2. **For Service Enterprises:** Investment in equipment (original cost excluding land and building and
furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED
Act, 2006:
Rs.....Lacs

The above Investment of Rs.....Lacs is within permissible limit of
Rs.....Lacs forMicro / Small (Strike off which is not applicable)
Category under MSMED Act 2006.

Date:

(Signature)

Name -

Membership number -

Seal of Chartered Accountant



ANNEXURE-C

Clause: Special provisions for Micro & Small Enterprises (MSE)

1. In case MSE vendor participating in the tender quotes within the price band of L1+15%, they will be allowed to supply the complete package (project wise) requirement subject to acceptance of L1 price by MSE vendor.
2. In case of more than one such MSE, the counter offering will be to the lowest quoted MSE vendor subject to fulfillment of Point No.1
3. MSE suppliers can avail the intended benefits only if they submit along with the offer, attested copies of either EM II certificate having deemed validity (Two years from the date of issue of acknowledgement in EM II) or valid NSIC certificate or EM II certificate along with CA certificate (Format enclosed) applicable for the year, certifying quantum of investment in plant and machinery within the permissible limit as per the act for relevant status (Micro or small) where the deemed validity of EM II is over. Date to be reckoned for determining the deemed validity will be the last date of technical bid submission. Non submission of such documents will lead to consideration of their bids at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE supplier till the supplier submits these documents.

BHEL TRICHY
MM/BOI
ANNEXURE – I

SPECIAL Terms & CONDITIONS / Pre Qualification requirements (PQR)

<u>SL.NO</u>	<u>Description</u>	<u>Vendor Confirmation</u>
1	This tender is for the supply of Quick Erect Scaffolding for Krishnapatnam and Vijaywada Projects , as per technical specifications /Drawings attached and quantity mentioned in our enquiry.	
2	Offer of manufacturer only will be considered. The vendor shall have adequate experience in manufacturing and supply of these Items and shall produce credentials for the same without which their offer will not be considered.	
3	Vendor should have supplied similar QES system in the past and the same should have been in use at least in one thermal power station of capacity 210 MW or above for a period of minimum one year and should have been put to use at least once. Also, vendor shall produce the performance certificate for the same from the end user. (or) <i>“Alternatively, in the absence of above credential, vendor shall submit minimum one reference of having supplied the scaffolding system for application involving construction of access platforms at a height not less than 40m along with end user certificate for satisfactory installation and safe working on such system. Also, vendor shall demonstrate the construction of scaffolding arrangement simulating the boiler furnace application i.e. supporting from furnace hopper (hopper geometry as per the BHEL drawing). Besides, vendor shall also carry out scaffolding load test as per the applicable standards and approved procedure by BHEL, which shall be witnessed and certified by BHEL/BHEL approved agencies. These requirements shall be fulfilled as part of technical evaluation by BHEL.”</i>	
4	In addition to technical and commercial conditions, you have to submit all the documents duly filled in “Supplier Registration Forms” through online (available in http://www.bheltry.co.in/- Online Vendor Registration-Material Management). Duly filled-in Supplier Registration Forms, along with all credentials and supporting documents, Certificate of Rating from D&B (Dun & Brad) sheet or equivalent agencies (For Foreign vendors), Financial Performance / Profit & Loss Account / Balance sheet for last three years etc. (With Techno-Commercial Bid). Availability of minimum manufacturing, handling, testing and measuring facilities, to be detailed are to be mentioned clearly. All the documents to be uploaded. Apart from Qualifying the Techno- Commercial requirements of the enquiry, BHEL has the right for spot assessment of the facilities for evaluation, approval and for registration.	

5	The offers will be considered for Price Bid opening/Ordering subject to evaluation & approval as per above point 3 and 4 and also subject to approval by customer/BHEL.	
6	Risk Purchase clause: "If the supplier fails to deliver the goods within the delivery specified in the purchase order, BHEL will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or despatch within the delivery period mentioned in the purchase order".	
7	Guarantee clause 24 months from the date of supply or 18 months from the date on which the equipment/system is put in use (by the end user) whichever is later against defective design, defective material usage, defective workmanship, defective packing and forwarding.	
8	BHEL may negotiate the L1 rate, if not meeting our budget/estimated cost.	
9	BHEL may re-float the tender opened, if L1 price is not the acceptable price to BHEL.	
10	Any deviation in specified commercial terms- Annexure A will lead to rejection of offer.	
11	Supplier Registration through Online. Please indicate your application number.	

Offers are liable for rejection, if not satisfying above qualifying criteria.

e- Procurement – BHEL TRICHY

Dear Sir/Madam,

BHEL Trichy has implemented e-Procurement and it is going to be the way of working in future.

The Requirement :

1. A PC with Internet connectivity &
2. DSC (Digital Signature Certificate)(**Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION**)

The following are the benefits of e-Procurement Process.

1. Ensuring no offer is missed due to last minute submission, postal delays etc.
2. Reduced Tendering & ordering cycle time
3. Economical, smoother & speedy communication
4. Greater Transparency
5. Big step towards paperless procurement process , Minimal human error
6. No geographical barriers
7. Vendor gets alerts regarding issue of new tender enquiry, amendments, clarifications etc
8. Submission of offer from the comforts of their office from any location
9. On line clarifications
10. Direct Cost Savings such as reduced Paper costs, reduced printing costs, reduced mailing costs, reduced telephone costs and reduced fax costs.

BHEL has finalized the e-procurement service Provider

M/s m Junction services Limited, Kolkata

Godrej Water Side, 3rd Floor, Tower-1, Plot-V, Block - DP
Sector - V, Salt Lake, Kolkata-700091, West Bengal, INDIA

Please get in touch with them immediately. The contact details of the service provider is given below:

SL	NAME	e-Mail ID	Mobile No	ROLE
1	DHANARAJ.P	panneer.dhanaraj@mjunction.in	(+91) 9282403700	Customer Relationship Mgr.
2	HELP DESK	eps.customercare@mjunction.in	033 – 66106426 / 54 9163348104,9231027017	

The process of utilizing e-procurement necessitates usage of DSC (Digital Signature Certificate)(**Class 3- SHA2- 2048 BIT- SIGNING & ENCRYPTION**) and you are requested to procure the same immediately, if not presently available with you. Please note that only with DSC, you will be able to login the e-procurement secured site and take part in the tendering process.

The contact details of the DSC Certifying Authority as given below

1	e-Mudhra	http://www.e-Mudhra.com	5	NIC	www.safescrypt.com
2	GNFC	www.ncodesolutions.com	6	Safescrypt	www.safescrypt.com
3	IDRBT	www.idrbtca.org.in	7	TCS	www.tcs-ca.tcs.co.in
4	MTNLTrustline	www.mtnltrustline.com			

Your early action in this regard is highly solicited.

Regards

BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPPALLI-620 014

Fuel Systems/PE(FB)



Title Sheet

Quick Erect Scaffolding System
(Material: Steel)

Specification Number: MHS-HEQ-075

Revision No. : 02

Revision No.	Revision Date	Revision statement	Checked & Approved
02	06-02-2016	Specification updated for steel scaffolding. In cl.3.3.1, material was steel/aluminium.	DVK/MTP
01	27-04-2006	In Cl.No. 6.10.1, the floor space Elevation 2.5 to 3.5M was 3 to 4 M. In Cl.No.7.8.1, No of copies of manuals: 3 Sets + 3 CD –ROMS were 26Sets + 5CD-ROMs.	SSR/JVVA

	Name	Signature	Date
Prepared	S.Selvaraju	-Sd-	30-06-03
Checked	S.V.Sivaramulu	-Sd-	30-06-03
Reviewed	C.Palanisamy	-Sd-	30-06-03
Approved	A.Rajamohan	-Sd-	01-07-03



Specification for Quick Erect Scaffolding System

MHS-HEQ-075

Revision No.:02

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Specification for Quick Erect Scaffolding System

MHS-HEQ-075

Revision No.:02

1.0 Intent:

The quick erect scaffolding system is intended for carrying out maintenance work inside a boiler furnace which comprises water walls, Burners, Soot blowers, Super heaters, Re-heaters etc. during shut down period. As the name implies, the scaffolding shall be safely erected and dismantled in the shortest possible time with less manpower and with minimum supervision.

The scaffolding system shall be sufficient enough to cover all the water wall areas, in a single set up, including inclined area of the boiler above rear wall and furnace bottom (Bottom hopper).

The system shall be preferably of modular and interchangeable construction and easily and quickly assembled inside the furnace.

2.0 Scope:

This specification covers design, manufacture, inspection and supply of quick erect scaffolding system. The specification is for ensuring a safe and trouble free quick erect scaffolding system used during shutdowns and overhauls, for inspection and maintenance of furnace internals of steam generator like Water walls, Burners, Superheaters etc.,

3.0 Requirements of the system

3.1 Quick erect scaffolding system shall be of fast erecting with suitable connecting/coupling arrangement.

3.2 Codes & standards

All equipment parts, systems and works covered under this specification shall comply with all currently applicable statutory regulations and safety codes of the Republic of India as well as of the Company where they will be installed. The offered system shall conform to national / international standards and the same may be clearly spelt out in the offer.

3.3 Material of construction

3.3.1 The material of construction of various components shall be Steel of proven design for Scaffolding application. It is suggested that the selected material shall also be light in weight to hasten the erection of scaffold in the shortest possible time. For general requirements of materials, refer to cl.8.1 of this specification.

3.3.2 All materials used for construction of different components shall individually conform to latest revisions of National / International Standards and it shall be specified in the offer.

3.3.3 All the components of the scaffolding system shall have **appropriate colour code** for easy identification. The colour code shall be specified in the offer and will have Purchaser's approval. For special painting requirements, refer to Annexure-I to this specification.



Specification for Quick Erect Scaffolding System

MHS-HEQ-075

Revision No.:02

- 3.4 The quick erect scaffolding system shall provide flexibility in erection of vertical posts & horizontal / diagonal connecting members.
- 3.5 Vertical posts & horizontal / diagonal connecting members shall have equal spacing for easy erection. Connections of the above shall be with suitable quick connect hardware arrangement. Vertical posts / horizontal / diagonal members shall have equal and standard lengths for easy interchangeability & modular assembly and disassembly.
- 3.6 The vertical posts and horizontal members shall be so designed to fill the space of furnace configuration..
- 3.7 Vendor shall offer a system which is erectable and dismantlable at the quickest possible time. Vendor shall indicate, in the offer, the man-hours required and also manpower (skilled and unskilled) needed to carry out erection and dismantling of the system. Vendor shall also provide the total erection /assembly time of the full scaffold. **The total time required for erection shall not exceed 4 days (96 hours) and dismantling 2 days (48 hours), considering the work force deployed for 24 hrs in 3 shifts a day.**
Vendor shall submit, along with the offer, a user certificate for the time taken for assembly and dismantling of a similar system which is equivalent to or bigger than the offered system. Vendor shall undertake guarantee to demonstrate the same (manpower & man days) during the installation (both erection and dismantling) of scaffold in any one of the shutdown period as and when demanded by the end user within 2 years after commissioning of the boilers or 48 months after completion of supply. The cost incurred for this shall be totally borne by the vendor.
- 3.8 Quick erect scaffolding system shall meet the shape & configuration of the Furnace arrangement to have easy access to all parts of furnace including rear water wall arch. (Ref. Annexure-III).
- 3.9 The requirement of the system, as spelt above, is indicative only. Vendor shall offer the most appropriate system for the intended specification and duty condition. The offered system shall be clearly illustrated with sketches and elaborate details.
- 3.10 All the required materials shall be introduced into the furnace for assembly through the access door opening (Refer Annexure-I) and or furnace bottom opening and all components shall be sized accordingly.
- 3.11 Vendor shall include the required number of Initial Spares in the base offer itself. *Initial spares means the spares required during first erection/commissioning of the system to replace the items that are either damaged or lost during transit/storage. Hence, vendor shall quote for the initial spares along with the base offer. The list of initial spares shall be clearly furnished in the offer.*
The spares required for long term usage shall be quoted separately.



Specification for Quick Erect Scaffolding System

MHS-HEQ-075

Revision No.:02

4.0 Safety

- 4.1 The locking arrangement shall not call for any welding.
- 4.2 Quick erect scaffolding system shall be arranged in such a manner to remove / erect individually without affecting other components.
- 4.3 Safety accessories like safety belt etc. shall also form part of the offer.
- 4.4 Scaffolds, as per ANSI A10.8-1988 / Section 4.6, shall be capable of supporting, without failure, their own weight and at-least four times the maximum intended load. In line with this, Scaffolding, which includes work platforms, bracings, and supporting members, shall be designed for a minimum safety factor of '4' which is applied to the design load.

5.0 Load Transfer

Vendor shall clearly spell out in his offer the load that is likely to be transferred to the furnace walls. This load shall include the dead weight of the scaffolding including the platforms and the safe working load that can be loaded on to the platform. With respect to the Load transfer, the following details shall be furnished in the offer.

- The no.of support points
- The location of support points
- The load per vertical post at the support points
- The load transfer points shall be clearly marked up in the drawing
- Vendor shall indicate the type of supports proposed with an aid of sketch/drawing. (Load transfer through all supports shall be at the fins zone only and not on the tubes)

6.0 Scaffolding system :

The scaffolding system shall be provided with :

- 6.1 Close access to inspection / maintenance of boiler tubes / water wall & other components.
- 6.2 Stair case with a width of minimum 600mm and not more than 45° inclination. Staircase shall be provided with hand rails.
- 6.3 System shall have upper / mid guard rail without any special components.
- 6.4 Access to Panel and Platen super heater and rear wall upper arch portion.
- 6.5 Arrangement for stable floor.
- 6.6 Suitable arrangement for supporting at furnace bottom without additional attachment with boiler tubes.
- 6.7 In total, the assembly shall have amongst other things vertical posts, horizontal members, vertical / horizontal / diagonal bracings, trusses and other fastening arrangements etc...



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- 6.8 Load per square metre (not less than 150 kg/sq.m) on the scaffolding system shall be furnished by vendor. Vendor shall indicate the overall permissible load at any given instant on the scaffolding system offered. (Refer clause 4.4 also)
- 6.9 Handrails shall be with a height between 900 mm to 1000mm.

6.10 Floors

- 6.10.1 Floors are to be provided peripherally at all elevations except at the levels specified in clause 6.10.2 where full planking is required. The elevation levels shall be determined by the vendor. However, the space between two floors shall be preferably 2.5 m below the top of wind box and shall not exceed 3.5 m there after (above windbox). However to provide access to all the areas with in the floor space, suitable ladders shall be provided which can be safely fixed on to the floors. Minimum 6 nos. of such ladders shall be provided.
- 6.10.2 Full platforms/floors (not just peripheral) shall be provided at just below the upper rear arch and below the access door opening in the furnace hopper. The full floor elevation details shall be furnished by the vendor.
- 6.10.3 Floors shall be provided with guard rails, mid rails and toe boards installed on all open sides and ends. Mid-rails and shall be of dismountable type. All rails and posts shall be suitable for easy assembly & disassembly.
- 6.10.4 Toe boards/guards shall extend to a minimum of 150mm above the working surface.
- 6.10.5 Vendor to specify the type of flooring offered. The flooring material offered shall be of non-flammable/ non-combustible material.
- 6.10.6 The width of the floor and gap between the furnace wall and floor shall be clearly specified by the vendor and the same shall be clearly shown in the drawing. Floor width (peripheral) shall be minimum 700mm.
- 6.10.7 The number of floors offered with “elevation” details shall be clearly mentioned in the drawing.
- 6.10.8 The floor elevations and no. of floors shall be decided in such a way that access is available to all parts (especially burner area) of the water walls. (For burner level elevations refer to Annexure-III).

6.11 Tools and tackles

- The Vendor shall supply with the main equipment one complete set of special tools and tackles required for erection, assembly, dismantling and proper maintenance of the equipment and system. These special tools will also include special material handling equipment, jigs and fixtures if applicable. The list of such tools and tackles shall be submitted by the vendor along with the offer.



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- The price of each tool/tackle shall be deemed to have been included in the total bid price. These tools and tackles shall be packed and sent to site. All the tools and tackles shall be of reputed make acceptable to the Purchaser.

6.12 Any other items though not specifically mentioned in this specification but needed to complete the equipment and system [unless specifically mentioned under exclusions] shall form part of the offer.

6.13 Vendor shall specify the storage space requirement of the system components and shall furnish suggested storage layout with special instructions, if any, for proper storage of the material.

6.14 Vendor shall furnish reference list for having supplied similar equipment for a boiler capacity of 500 MW or bigger units at least for two different power stations. Vendor shall submit certificates from at least two users for the satisfactory performance of the system supplied.

6.15 Vendor may also submit necessary documents for justifying the design aspects of the scaffold offered both for stability and safety

7.0 General requirements

7.1 All materials, components used in the design, construction and installation of scaffolds shall meet the requirements of its specified application in accordance with good engineering practice.

7.2 The material of construction and its duty class shall be clearly spelt out in the offer and the same shall conform to specified National / International Standards. All materials used for the construction of the equipment shall be new and shall be in accordance with the requirements of this specification. Materials utilised for various components shall be those which have established themselves for use in such applications for atleast a period in excess of 2 years.

7.3 All fasteners used, if applicable, shall be of Metric threads only. (No British / American threads in the inch system is permitted)

7.4 Vendor shall follow International colour Code wherever applicable for various components, assembly and sub-assembly for easy identification of components of the system.

7.5 All assemblies /sub-assemblies and individual components shall bear proper identification numbers. The methodology followed shall be clearly spelt out in the base offer.



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7.6 Training:

- The Vendor shall extend all possible assistance and co-operation to the purchaser regarding the development of expertise in the area of assembly, disassembly, identification, storage & retrieval and safety aspects of the system offered.
- Vendor shall also impart the necessary training - training of personnel for the required days at the vendor's engineering/ manufacturing facility - training at the job site for the required period by the vendor's representative. This shall be an integral part of the offer.

7.7 Drawing and Documents:

- All documents/text information shall be in MSWord 2000 or latest version
- All drawings shall be made in AutoCAD- Release 2000 or latest Version.
- All drawings submitted by the Vendor including those submitted at the time of bid shall be in sufficient detail indicating the type, size, arrangement, weight of each component for packing and shipment, the external connection, fixing arrangement required, the dimensions required for installation and interconnections with other equipment and materials, clearance and spaces required between various portions of equipment and any other information specifically requested in the drawing schedules.
- Each drawing submitted by the Vendor (including those of sub-vendors) shall bear a title block at the right hand bottom corner with clear mention of the name of the Purchaser, the system designation, the specifications title, the specification number, the name of the Project, drawing number and revisions. If standard catalogue pages are submitted the applicable items shall be indicated therein. All titles, notes, markings and writings on the drawing shall be in English. All the dimensions should be in metric units.
- The Vendor shall also furnish a "Master Drawing List" which shall be a comprehensive list of all drawings/documents/calculations envisaged to be furnished by him during the detailed engineering to the Purchaser. Such list should clearly indicate the purpose of submission of these drawings i.e., "FOR APPROVAL" or "FOR INFORMATION ONLY". Similarly, all the drawings/documents submitted by the Vendor during detailed engineering stage shall be stamped "FOR APPROVAL" or "FOR INFORMATION" prior to submission.
- The furnishing of detailed engineering data and drawings by the Vendor shall be in accordance with the time schedule for the project. The review of these documents / data /drawings by the Purchaser will cover only general conformance of the data/drawings/documents to the specifications



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and contract, interfaces with the equipment provided by others. The review by the Purchaser should not be construed to be a thorough review of all dimensions, quantities and details of the equipment, materials, any devices or items indicated or the accuracy of the information submitted. The review and/or approval by the Purchaser shall not relieve the Vendor of any of his responsibilities and liabilities under this contract.

- After the approval of the drawings, further work by the Vendor shall be in strict accordance with these approved drawings and no deviation shall be permitted without the written approval of the Purchaser.
- The Vendor shall submit adequate points of drawing/data/document for Purchaser's review and or approval. When changes are required, drawings shall be resubmitted promptly, with revisions clearly marked, for final review. Any delays arising out of the failure of the Vendor to submit/rectify and resubmit in time shall not be accepted as a reason for delay in the contract schedule.

7.8 Operation & Maintenance (O & M) Manual

Typical O&M manual for the type of system offered shall be submitted along with the offer.

Manuals generally shall contain the following :

- Brief description
- Assembly drawings with part list, dimensional drawings and other applicable drawings.
- Manuals should pertain only to the type or model supplied for this contract.
- Drawing and catalogues
- Sequence of erection.
- Erection instructions
- Critical checks and permissible deviation/tolerances.
- List of tool, tackles,
- Bill of Materials.
- Procedure for erection and dismantling.
- Procedure for initial checking after erection.
- Procedure /Check list for commissioning of the system.

7.8.1 Format of manuals

- Manuals should be both in printed form and in electronic media with a text font size of 12.
- The size of manuals should be in correct A4 size with drawings in either A4 or A3 size. Large size drawings (greater than A3 size) should be reduced to A3 size and inserted.



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- Drawings shall be of printed or laser printed only.
- Spiral or comb bound copies should be totally avoided.
- If manuals are supplied in folders, the folder shall have 3 hole punching system.
- **No of copies of manuals: 3 Sets + 3 CD –ROMS**
- O & M manuals, should be submitted to BHEL / Tiruchirappalli prior to despatch of the equipment.

8.0 Quality

8.1 General requirements

- ◆ All materials used for equipment construction including plates, pipes, forgings, fittings etc., shall be of tested quality as per relevant codes/standards. All material shall be chosen from the fresh lots and shall be free from defects like scales, seam, lamination, pitting etc., Detail of results of the tests conducted to determine the mechanical properties, chemical analysis and the details of heat treatment procedure shall be recorded on certificates. Tests shall be carried out as per applicable material standards and or agreed details.
- ◆ All plates of thickness more than 21mm shall be ultrasonically tested.
- ◆ All bar-stock forgings above 21mm diameter shall be ultrasonically tested.
- ◆ All welding shall be carried out as per welding procedures drawn and qualified in accordance with the requirements of ASME Section IX/BS: 4870 and as per AWS D 1.1 for structures & non pressure parts. Only qualified welders shall be deployed on the job.
- ◆ All back-gauged welds shall be MPI / DPT before seal weld.
- ◆ All heat treatment shall be carried out as per applicable code
- ◆ All codes standards or specifications with latest editions shall be referred.

8.2 Quality plan

Vendor shall submit along with the offer the quality plan for Purchase's review / comments / approval to ensure that the equipment and services, under the scope of contract whether manufactured or performed, within the Vendor's works or at his sub-vendor's premises or at the Purchaser's site or at any other place of work are in accordance with the specifications, the Vendor shall adopt suitable quality assurance programme to control such activities at all points, as necessary. Such programmes shall be outlined by the Vendor and shall be finally accepted by the Purchaser/authorised representative after discussions before the award of the contract. The offer which is not complying with this requirement will not be considered for evaluation.



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8.3 Quality assurance- general requirements

- ❖ All materials, components and equipment covered under this specification shall be procured, manufactured, erected, commissioned and tested at all the stages, as per a comprehensive Quality Assurance Programme which shall be submitted along with the offer. It is the vendor's responsibility to draw up and implement such programme duly approved by the Purchaser. The detailed Quality Plans for manufacturing should be drawn up by the Vendor and will be submitted to Purchaser for approval. Schedule of finalisation of such quality plans will be finalised before award of contract.
- ❖ Manufacturing Quality Plan will detail out for all the components and equipment, various tests/inspection, to be carried out as per the requirements of this specification and standards mentioned therein and quality practices and procedures followed by the Vendor, the relevant reference documents and standards, acceptance norms, inspection documents raised, etc. during all stages of materials procurement, manufacture, assembly and final testing.
- ❖ The Vendor shall also furnish copies of the reference documents/plant standards/acceptance norms/tests and inspection procedure, etc., as referred in Quality Plans along with Quality Plans. These Quality Plans and reference documents/standards, etc. will be subject to Purchaser's approval without which manufacture shall not proceed.
- ❖ These approved documents shall form a part of the contract. In these approved Quality Plans, Purchaser shall identify customer hold points (CHP), i.e., test/checks which shall be carried out in presence of the Purchaser's engineer or his authorised representative and beyond which the work will not proceed without consent of Purchaser/Authorised representative in writing. All deviations to this specification, approved quality plans and applicable standards must be documented and referred to Purchaser along with technical justification for approval and dispositioning.
- ❖ No material shall be despatched from the manufacturer's works before the same is accepted subsequent to pre-despatch final inspection including verification of records of all previous tests/inspections by Purchaser's engineer / Authorised representative.

8.4 Site checks/tests

The Vendor shall prepare and submit detailed field quality plans in the format setting out the quality practice and procedures to be adopted for assuring quality for each equipment of material at this specification from the receipt of material at site, during storage & erection. These procedures shall necessarily include all checks/tests conducted at site for preservation, assembly, alignment, positioning



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of the equipment etc. The Vendor shall also furnish detailed quality procedure proposed by him for storage & preservation to the Purchaser.

9.0 Inspection

- 9.1 The complete System has to be offered for inspection by Purchaser / enduser and the vendor shall give 30 days advance notice for arranging the inspection after the system is fully ready. After inspection the equipment can be despatched only after obtaining the MDCC (Material Despatch Clearance Certificate) . No material shall be despatched without MDCC.
- 9.2 The word "inspector" shall mean the Purchaser and / or his authorised representative and or an outside inspection agency acting on behalf of the Purchaser to inspect and examine the materials and workmanship of the works during its manufacture or erection.
- 9.3 The Purchaser or his duly authorised representative and / or an outside inspection agency acting on behalf of the Purchaser shall inspect the materials and workmanship of the works during its manufacture or erection and its part of the works, if any, being manufactured or assembled at other premises or works. In case of inspection at other premises/ works, the Vendor shall obtain from the sub-vendor permission to inspect as if the works were manufactured or assembled at the Vendor's own premises or works.
- 9.4 The Vendor shall give the Purchaser / inspector fifteen (15) days written notice of any material being ready for testing. Such tests shall be to the Vendor's account except for the expenses of the inspectors. The Inspector, unless the witnessing of the tests is virtually waived, will attend such tests within fifteen (15) days of the date on which the equipment is noticed as being ready for test/inspection, failing which the vendor may proceed with test which shall be deemed to have been made in the inspector's presence and he shall forthwith forward to the inspector duly certified test reports in two (2) copies.
- 9.5 Scaffolds shall be inspected and tested as per approved quality plan. The certificates and documents generated during inspection of above shall be furnished.
- 9.6 The Inspector shall within fifteen (15) days from the date of inspection as defined herein give notice in writing to the Vendor of any objection to any drawings and / or any equipment and workmanship which is in his opinion not in accordance with the contract. The Vendor shall give due consideration to such objections and shall either carry out the necessary modifications as called for by the



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Purchaser/Inspector or inform in writing to the Purchaser / inspector giving reasons therein that no modifications are necessary to comply with the contract.

9.7 The inspection by Inspector and issue of inspection certificate thereon shall in no way limit the liabilities and responsibilities of the vendor in respect of the agreed quality assurance programme forming a part of the contract.

9.8 All inspection measuring and test equipment used by vendor shall be calibrated periodically depending on its use and criticality of the test / measurement to be done. The contractor shall maintain all the relevant records of periodic calibration and instrument identification and shall produce the same for inspection by Purchaser. Wherever asked specifically the vendor shall re-calibrate the measuring / test equipment in the presence of Purchaser/ Inspector.

10.0 Protection , preservation, packaging and transportation

10.1 Protection

All coated surfaces shall be protected against abrasion, impact, discoloration and any other damages. All exposed threaded portions shall be suitably protected with non-metallic protection device. The ends of all piping and conduit equipment connections shall be properly sealed with suitable devices to protect them from damage. The parts which are likely to get oxidized or corroded, due to exposure to weather, should also be properly treated and protected in a suitable manner. All primers/paints/coatings shall take into account the hot humid, corrosive & alkaline, over ground environment.

10.2 Preservation

All exposed metallic surfaces subject to corrosion shall be protected by shop application of suitable coatings. All surfaces shall be thoroughly cleaned of all mill scales, oxides and other coatings and prepared in the shop. The surfaces that are to be finish-painted after installation or require corrosion protection until installation, shall be shop painted with at least two coats of primer. *For special painting requirements refer to Annexure-I to this specification.*

10.3 Packaging and transportation

- All the equipment shall be suitably protected, coated, covered or boxed and crated to prevent damage or deterioration during transit, handling and storage at Site till the time of erection.
- The over dimensional consignment (ODC) w.r.t Indian road / rail conditions shall be mutually discussed and finalised during the execution of contract.



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11.0 Guarantee / Warranty

The offered system shall be guaranteed for 18 months from the date on which the equipment / system is put into use (by the end user) or 24 months from the date of supply whichever is later against defective design, defective material usage, defective workmanship, defective packaging and forwarding.

12.0 Deviations

Deviations to specification, if any, shall be clearly spelt out in the offer stage itself. During contract/ inspection/ final erection stages, the Purchaser reserves the right to entertain or deny such deviation.

13.0 Exclusions

Any exclusion from scope of supply shall be clearly spelt out in the offer. Exclusion of major / critical items shall make the offer liable for rejection.

14.0 Documents to be submitted by vendor

14.1 Documents to be submitted along with the offer:

- Product literature / catalogue and drawings in support of the offer shall be submitted in three copies along with the quotation to evaluate the offer.
- Sectional arrangement drawing with plan, elevation, and end view along with major dimensions and weight particulars
- Filled in check list. (Annexure-II to this specification)
- Weight and quantity of individual components as per the scope of supply shall be indicated in the drawing as bill of quantity / material.
- The quality plan for the product under supply shall be furnished along with the offer. (This will be amended in consultation with the ultimate customer/end user, if required)
- List of Special tools and tackles
- List of initial spares
- Qualification Requirement: Vendor shall submit the reference list (list shall give the information like, name of customer / power station, name of the contact person, capacity of the power station, size of the scaffolding system offered etc.,) for having supplied similar type design of equipment for boiler of equivalent or higher physical size and which have been put to use for atleast a minimum period of two years.
- User Certificate: Vendor shall submit a certificate issued by atleast two end users of the equipment under subject item for the satisfactory service and use of the system, each used for a period of 2 years minimum before the date of the certificate.



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- A certificate for the components from Safety Steward of the country of make shall be provided.
- Document for justifying the design aspects of the offered system both from stability and safety aspects.
- List of Deviations
- List of Exclusions
- Typical O&M manual of the offered system similar to the earlier job executed by the vendor.(preferably that applicable for the certificate provider)

14.2 Documents to be furnished after award of contract

- The complete arrangement drawing giving particulars like
 - Bill Of Quantity (of all individual components)
 - Weight details of all components individually
 - Identification marks / Numbers
- Packaging procedure detailing the list of components shall be despatched individually with identification and with preservation and storage.
- Test certificates shall be furnished before despatch of components.
- Material test certificate for all the major components.
- Quality control / Inspection documents generated during the stages of inspection, performance inspection and final inspection inline with the final approved quality plan.
- Guarantee certificate shall be furnished by the vendor.
- O & M manual

15.0 General

- The language used in offer, O & M manual, Labels, drawings etc. shall be “English only”
- For Equipment and other special requirements pertaining to the contract, refer **Annexure - I** to this specification.
- **Annexure - II** is the Check list to be filled in completely by the vendor and submitted **along with the offer**. Offer with incomplete Check list is liable for rejection.
- **Annexure – III (Drawing)**, Furnace arrangement for Quick Erect Scaffold, contains all details of the requirements like furnace width, depth, height, location of access / manhole doors, goose neck / furnace bottom position, elevations of burners etc.



**Annexure-I to Specification No.
MHS-HEQ-075/Rev.02**

- 1 Name of Project : Krishnapatnam 1x800MW**
- 2 Customer No. : 1816**
- 3 Quantity : 1 Set**
- 4 Material of construction : Steel**
- 5 Reference Drawing No. : 0-99-501-40334/ 00
(Furnace arrangement for Quick Erect Scaffold)**
- 6 Man Hole (Access Door)
Opening Size in mm : 610x762mm**

	Name	Signature	Date
Prepared & Checked	Shankar & R.Arul Prabhu		01-03-2017
Approved	M.Thandapani		01-03-2017



**Annexure-I to Specification No.
MHS-HEQ-075/Rev.02**

- 1 Name of Project : Vijayawada 1x800MW**
- 2 Customer No. : 1817**
- 3 Quantity : 1 Set**
- 4 Material of construction : Steel**
- 5 Reference Drawing No. : 0-99-501-40335/ 00
(Furnace arrangement for Quick Erect Scaffold)**
- 6 Man Hole (Access Door)
Opening Size in mm : 610x762mm**

	Name	Signature	Date
Prepared & Checked	Shankar & R.Arul Prabhu		01-03-2017
Approved	M.Thandapani		01-03-2017

Annexure-II to Specification No.:MHS-HEQ-075/Rev.02

CHECK LIST OF VENDOR'S OFFER-QES/KRISHNAPATNAM 1x800MW

<i>This check list is to be filled up by the vendor and submitted along with the offer. This shall form part of ordering specification and shall be approved by the purchaser incorporating all the comments if any. Vendor to completely fill up the column under "vendor's compliance/confirmation/comments". Non applicability shall be clearly spelt out. Offer with incomplete data sheet/ check list is liable for rejection.</i>					
S.No.	Description	Spec.Clause No.	As per specification	Compliance / confirmation / particulars(to be filled up by vendor)	Remarks
1	Name of the equipment	1.0	Quick Erect scaffolding system		
2	Type of sytem offered		Vendor to specify		
3	Model of the system offered		Vendor to specify		
4	Type of jointing arrangement Provided	3.1	Vendor to specify		
5	Standards / Codes followed	3.2	Vendor to specify		
6	Materials of construction:	3.3.1	Steel		
6.1	Tubes				
6.2	Coupler / Jointing				
6.3	Fastners				
6.4	Stair ways				
6.5	Decking				
6.6	Others				
6.7	Others				
6.8	Others				
7	All components shall have appropriate colour code	3.3.4	Vendor to confirm		
8.0	Quick erect / Quick dismantle	3.7			
8.1			Total Man-hours required for erecting the complete system		
8.2			No. of manpower required for erection:		
8.2.1			Skilled		
8.2.2			Unskilled		
8.3			Total Man-hours required for dismantling the complete system		
8.4			No. of manpower required for dismantling:		
8.4.1			Skilled		

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CHECK LIST OF VENDOR'S OFFER-QES/KRISHNAPATNAM 1x800MW

S.No.	Description	Spec.Clause No.	As per specification	Compliance / confirmation / particulars(to be filled up by vendor)	Remarks
8.4.2			Unskilled		
8.5			User certificate for the time taken for assembly and dismantling of a similar system shall be furnished along with the offer.		
8.6	Vendor's confirmation to demonstrate the mandays & man power requirement during the actual installation of QES at site.		Vendor to confirm		
9	Furnace configuration	3.8	The offered system shall meet the shape and configuration as shown in BHEL drawing.(Refer Annexure-I). Vendor's compliance.		
10	Provision to introduce all materials thro Access door opening	3.10	Opening size given in annexure -I		
11	Spares	3.11		—	
11.1	Initial spares		Shall be included in the base offer		
11.2	List of initial spares		Vendor to furnish the list of initial spares offered		
11.3	Long term spares		To be quoted separately		
12	Safety Accessories	4.3	Shall form part of the offer. Vendor to furnish the list of accessories supplied.		
13	Factor of safety	4.4	4 times the rated load		
13.1	Maximum intended load of 6 tons		Vendor to confirm for having taken this into the design		
14	Load transfer	5.0			
14.1	No.of support points		Vendor to specify		
14.2	Location of support points		Vendor to furnish		

Annexure-II to Specification No.:MHS-HEQ-075/Rev.02

CHECK LIST OF VENDOR'S OFFER-QES/KRISHNAPATNAM 1x800MW

S.No.	Description	Spec.Clause No.	As per specification	Compliance / confirmation / particulars(to be filled up by vendor)	Remarks
14.3	Load per vertical post at support point		Vendor to specify		
14.4	Load transfer points		To be marked up in the drawing		
14.5	Type of support at the furnace hopper		Explain with a drawing. Is the support calling for any welding? If yes, it is accommodated only at the fins and not on the water wall tubes.		
14.6	Maximum safe working load that can be loaded onto the platform		Vendor to specify		
15	Scaffolding System	6.0			
15.1	Staircase width	6.2	Min. 600mm		
15.2	Staircase inclination	6.2	Not more than 45 deg.		
15.3	Provision of upper / mid guardrail	6.3	Vendor to confirm		
15.4	Access to panel and platen superheater and upper rear arch areas	6.4	Vendor to confirm		
15.5	Permissible load on each floor	6.8	Vendor to specify. Shall not be less than 150 kg/sq.m		
15.6	Hand rails height	6.9	900 - 1000mm		
16	Floors	6.10			
16.1	Provision of floor	6.10.1	All floors/ All elevations peripherally only.		
		6.10.2	Full floor platforms shall be provided at just below the upper arch and below the access door opening in the furnace hopper		
16.2	Width of peripheral floor	6.10.6	Min. 700 mm		
16.3	Provision of dismountable midrails	6.10.3	Vendor's compliance		
16.4	Height of Toe boards	6.10.4	Min. 150 mm		
16.5	Materials of construction of floors	6.10.5	Vendor to specify		
16.6	Arrangement drawing of floor	6.10.7	Vendor to enclose		
16.7	No.of floors offered	6.10.7	Vendor to specify		

Annexure-II to Specification No.:MHS-HEQ-075/Rev.02

CHECK LIST OF VENDOR'S OFFER-QES/KRISHNAPATNAM 1x800MW

S.No.	Description	Spec.Clause No.	As per specification	Compliance / confirmation / particulars(to be filled up by vendor)	Remarks
16.8	Elevation details	6.10.7	Vendor to indicate in the drawing. Spacing between two successive floors shall be prefereably 2.5 m shall not exceed 3.5m		
16.9	Access to all parts	6.10.8	Vendor to confirm		
17	List of Tools & Tackles	6.11	List to be attached with the offer. If vendor states that special tools are required for the offered system, then the same has to be listed in detail		
18	Storage of scaffold	6.12	Storage volume required and the suggested storage layout		
19	Reference list	6.14	Vendor to submit		
19.1	User certificate	6.14	Vendor to submit		
20	Design justification document	6.15	Vendor to submit		
21	Fasteners with Metric threads	7.3	Vendor to confirm		
22	Applicable colour code	7.4	Vendor to specify		
23	Methodology followed for marking up identification number	7.5	Vendor to specify		
24	Training of purchaser's engineers	7.6	Vendor's compliance		
25	Drawing & documents	7.7	Vendor's compliance		
26	O & M manual	7.8	Vendor to furnish a typical O&M manual of the offered system. Vendor's compliance		
27	Quality plan	8.2	Vendor's compliance		
27.1	Site checks / tests	8.4	Field quality plan - vendor's compliance		
27.2	Inspection	9.0	Vendor's compliance		
28	Packaging and Transportation	10.3	Vendor's compliance		
29	Painting	Annexure-I	Vendor's compliance		
30	Guarantee / Warranty	11.0	Vendor's compliance		

Annexure-II to Specification No.:MHS-HEQ-075/Rev.02

CHECK LIST OF VENDOR'S OFFER-QES/KRISHNAPATNAM 1x800MW

S.No.	Description	Spec.Clause No.	As per specification	Compliance / confirmation / particulars(to be filled up by vendor)	Remarks
31	Deviations	12.0	Shall be spelt out in the offer. If there are no deviations, the same shall be confirmed by the vendor		
32	Exclusions	13.0	Shall be spelt out in the offer. If there are no deviations, the same shall be confirmed by the vendor		
33	Documents along with offer	14.1	Vendor to furnish all the documents along with the offer		
33.1	Product literature / catalogue				
33.2	Drawing --- covering:		Specify vendor drawing No.		
33.2.1	General Arrangement		Vendor's compliance		
33.2.2	Sectional arrangement		Vendor's compliance		
33.2.3	Plan view		Vendor's compliance		
33.2.4	Elevation		Vendor's compliance		
33.2.5	Illustrated sketch of coupler / jointing arrangement		Vendor's compliance		
33.2.6	Marking up of load transfer points		Vendor's compliance		
33.2.7	Elevation details of all floor levels		Vendor's compliance		
33.2.8	Weight details		Vendor's compliance		
33.2.9	BOQ covering all components		Vendor's compliance		
33.7	Reference list		Vendor's compliance		
33.8	User certificate		Vendor's compliance		
33.9	Typical O&M manual		Vendor's compliance		
33.3	Deviations		Vendor's compliance		
33.4	Exclusions		Vendor's compliance		
33.5	Quality plan		Vendor's compliance		
33.6	List of special tools & tackles		Vendor's compliance		
34	Documents after placement of Purchase Order	14.2	Vendor's confirmation to furnish all the documents enlisted in Cl.14.2 of specification.		

Annexure-II to Specification No.:MHS-HEQ-075/Rev.02

CHECK LIST OF VENDOR'S OFFER-QES/VIJAYAWADA 1x800MW

<i>This check list is to be filled up by the vendor and submitted along with the offer. This shall form part of ordering specification and shall be approved by the purchaser incorporating all the comments if any. Vendor to completely fill up the column under "vendor's compliance/confirmation/comments". Non applicability shall be clearly spelt out. Offer with incomplete data sheet/ check list is liable for rejection.</i>					
S.No.	Description	Spec.Clause No.	As per specification	Compliance / confirmation / particulars(to be filled up by vendor)	Remarks
1	Name of the equipment	1.0	Quick Erect scaffolding system		
2	Type of sytem offered		Vendor to specify		
3	Model of the system offered		Vendor to specify		
4	Type of jointing arrangement Provided	3.1	Vendor to specify		
5	Standards / Codes followed	3.2	Vendor to specify		
6	Materials of construction:	3.3.1	Steel		
6.1	Tubes				
6.2	Coupler / Jointing				
6.3	Fastners				
6.4	Stair ways				
6.5	Decking				
6.6	Others				
6.7	Others				
6.8	Others				
7	All components shall have appropriate colour code	3.3.4	Vendor to confirm		
8.0	Quick erect / Quick dismantle	3.7			
8.1			Total Man-hours required for erecting the complete system		
8.2			No. of manpower required for erection:		
8.2.1			Skilled		
8.2.2			Unskilled		
8.3			Total Man-hours required for dismantling the complete system		
8.4			No. of manpower required for dismantling:		
8.4.1			Skilled		

Annexure-II to Specification No.:MHS-HEQ-075/Rev.02

CHECK LIST OF VENDOR'S OFFER-QES/VIJAYAWADA 1x800MW

S.No.	Description	Spec.Clause No.	As per specification	Compliance / confirmation / particulars(to be filled up by vendor)	Remarks
8.4.2			Unskilled		
8.5			User certificate for the time taken for assembly and dismantling of a similar system shall be furnished along with the offer.		
8.6	Vendor's confirmation to demonstrate the mandays & man power requirement during the actual installation of QES at site.		Vendor to confirm		
9	Furnace configuration	3.8	The offered system shall meet the shape and configuration as shown in BHEL drawing.(Refer Annexure-I). Vendor's compliance.		
10	Provision to introduce all materials thro Access door opening	3.10	Opening size given in annexure -I		
11	Spares	3.11		—	
11.1	Initial spares		Shall be included in the base offer		
11.2	List of initial spares		Vendor to furnish the list of initial spares offered		
11.3	Long term spares		To be quoted separately		
12	Safety Accessories	4.3	Shall form part of the offer. Vendor to furnish the list of accessories supplied.		
13	Factor of safety	4.4	4 times the rated load		
13.1	Maximum intended load of 6 tons		Vendor to confirm for having taken this into the design		
14	Load transfer	5.0			
14.1	No.of support points		Vendor to specify		
14.2	Location of support points		Vendor to furnish		

Annexure-II to Specification No.:MHS-HEQ-075/Rev.02

CHECK LIST OF VENDOR'S OFFER-QES/VIJAYAWADA 1x800MW

S.No.	Description	Spec.Clause No.	As per specification	Compliance / confirmation / particulars(to be filled up by vendor)	Remarks
14.3	Load per vertical post at support point		Vendor to specify		
14.4	Load tranfer points		To be marked up in the drawing		
14.5	Type of support at the furnace hopper		Explain with a drawing. Is the support calling for any welding? If yes, it is accommodated only at the fins and not on the water wall tubes.		
14.6	Maximum safe working load that can be loaded onto the platform		Vendor to specify		
15	Scaffolding System	6.0			
15.1	Staircase width	6.2	Min. 600mm		
15.2	Staircase inclination	6.2	Not more than 45 deg.		
15.3	Provision of upper / mid guardrail	6.3	Vendor to confirm		
15.4	Access to panel and platen superheater and upper rear arch areas	6.4	Vendor to confirm		
15.5	Permissible load on each floor	6.8	Vendor to specify. Shall not be less than 150 kg/sq.m		
15.6	Hand rails height	6.9	900 - 1000mm		
16	Floors	6.10			
16.1	Provision of floor	6.10.1	All floors/ All elevations peripherally only.		
		6.10.2	Full floor platforms shall be provided at just below the upper arch and below the access door opening in the furnace hopper		
16.2	Width of peripheral floor	6.10.6	Min. 700 mm		
16.3	Provision of dismountable midrails	6.10.3	Vendor's compliance		
16.4	Height of Toe boards	6.10.4	Min. 150 mm		
16.5	Materials of construction of floors	6.10.5	Vendor to specify		
16.6	Arrangement drawing of floor	6.10.7	Vendor to enclose		
16.7	No.of floors offered	6.10.7	Vendor to specify		

Annexure-II to Specification No.:MHS-HEQ-075/Rev.02

CHECK LIST OF VENDOR'S OFFER-QES/VIJAYAWADA 1x800MW

S.No.	Description	Spec.Clause No.	As per specification	Compliance / confirmation / particulars(to be filled up by vendor)	Remarks
16.8	Elevation details	6.10.7	Vendor to indicate in the drawing. Spacing between two successive floors shall be preferably 2.5 m shall not exceed 3.5m		
16.9	Access to all parts	6.10.8	Vendor to confirm		
17	List of Tools & Tackles	6.11	List to be attached with the offer. If vendor states that special tools are required for the offered system, then the same has to be listed in detail		
18	Storage of scaffold	6.12	Storage volume required and the suggested storage layout		
19	Reference list	6.14	Vendor to submit		
19.1	User certificate	6.14	Vendor to submit		
20	Design justification document	6.15	Vendor to submit		
21	Fasteners with Metric threads	7.3	Vendor to confirm		
22	Applicable colour code	7.4	Vendor to specify		
23	Methodology followed for marking up identification number	7.5	Vendor to specify		
24	Training of purchaser's engineers	7.6	Vendor's compliance		
25	Drawing & documents	7.7	Vendor's compliance		
26	O & M manual	7.8	Vendor to furnish a typical O&M manual of the offered system. Vendor's compliance		
27	Quality plan	8.2	Vendor's compliance		
27.1	Site checks / tests	8.4	Field quality plan - vendor's compliance		
27.2	Inspection	9.0	Vendor's compliance		
28	Packaging and Transportation	10.3	Vendor's compliance		
29	Painting	Annexure-I	Vendor's compliance		
30	Guarantee / Warranty	11.0	Vendor's compliance		

Annexure-II to Specification No.:MHS-HEQ-075/Rev.02

CHECK LIST OF VENDOR'S OFFER-QES/VIJAYAWADA 1x800MW

S.No.	Description	Spec.Clause No.	As per specification	Compliance / confirmation / particulars(to be filled up by vendor)	Remarks
31	Deviations	12.0	Shall be spelt out in the offer. If there are no deviations, the same shall be confirmed by the vendor		
32	Exclusions	13.0	Shall be spelt out in the offer. If there are no deviations, the same shall be confirmed by the vendor		
33	Documents along with offer	14.1	Vendor to furnish all the documents along with the offer		
33.1	Product literature / catalogue				
33.2	Drawing --- covering:		Specify vendor drawing No.		
33.2.1	General Arrangement		Vendor's compliance		
33.2.2	Sectional arrangement		Vendor's compliance		
33.2.3	Plan view		Vendor's compliance		
33.2.4	Elevation		Vendor's compliance		
33.2.5	Illustrated sketch of coupler / jointing arrangement		Vendor's compliance		
33.2.6	Marking up of load transfer points		Vendor's compliance		
33.2.7	Elevation details of all floor levels		Vendor's compliance		
33.2.8	Weight details		Vendor's compliance		
33.2.9	BOQ covering all components		Vendor's compliance		
33.7	Reference list		Vendor's compliance		
33.8	User certificate		Vendor's compliance		
33.9	Typical O&M manual		Vendor's compliance		
33.3	Deviations		Vendor's compliance		
33.4	Exclusions		Vendor's compliance		
33.5	Quality plan		Vendor's compliance		
33.6	List of special tools & tackles		Vendor's compliance		
34	Documents after placement of Purchase Order	14.2	Vendor's confirmation to furnish all the documents enlisted in Cl.14.2 of specification.		

List of Consortium Banks (As on 22.02.2017)			
	Nationalised Banks		Nationalised Banks
1	Allahabad bank	19	Vijaya Bank
2	Andhra bank		Public Sector Banks
3	Bank of Baroda	20	IDBI
4	Canara Bank		Foreign banks
5	Corporation bank	21	CITI Bank N.A
6	Central bank	22	Deutsche Bank AG
7	Indian Bank	23	The Hongkong and Shanghai Banking Corporation Limited
8	Indian Oversea Bank	24	Standard Chartered Bank
9	Oriental bank of Commerce	25	J P Morgan
10	Punjab National Bank		
11	Punjab & Sindh Bank		Private banks
12	State Bank of India	26	Axis Bank
13	State Bank of Hyderabad	27	The Federal Bank Limited
14	Syndicate Bank	28	HDFC
15	State Bank of Travancore	29	Kotak Mahindra Bank
16	UCO Bank	30	ICICI
17	Union Bank of India	31	Indusind Bank
18	United Bank of India	32	Yes Bank

BANK GUARANTEE FOR PERFORMANCE SECURITY

(Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s))

Bank Guarantee No:

Date:

NAME OF ISSUING BANK

& ADDRESS

BANK EMAIL ID:

BANK PHONE NO:

SFMS Serial No *:

AUTHORISED SIGNATORIES CELL PHONE NO:

BANK FAX NO:

IFSC AND MICR CODE

Dear Sirs,

1. In consideration of Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at _____¹ through its Unit at.....(name of the Unit) having awarded to (Name of the Vendor / Contractor / Supplier) (VENDOR CODE) with its registered office at _____² hereinafter referred to as the ' Vendor / Contractor / Supplier ', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated³ valued at Rs.....⁴ (Rupees -----)/FC.....(in words.....) for⁵ (hereinafter called the 'Contract') and the Vendor / Contractor / Supplier having agreed to provide a Contract Performance Bank Guarantee, equivalent to% (.... Percent) of the said value of the Contract to the Employer for the faithful performance of the Contract,

2. we,, (hereinafter referred to as the Bank), having registered/Head office at and inter alia a branch at being the Guarantor under this Guarantee, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer any sum or sums upto a maximum amount of Rs -- -----⁶ (Rupees -----) without any demur, immediately on first demand from the Employer and without any reservation, protest, and recourse and without the Employer needing to prove or demonstrate reasons for its such demand.

3. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____.

4. We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Vendor / Contractor / Supplier in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.
5. The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder and the Vendor / Contractor / Supplier shall have no claim against us for making such payment.
6. We thebank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract/satisfactory completion of the performance guarantee period as per the terms of the Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.
7. We.....BANK further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Vendor / Contractor / Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Vendor / Contractor / Supplier and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Vendor / Contractor / Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Vendor / Contractor / Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.
8. The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Vendor / Contractor / Supplier and notwithstanding any security or other guarantee that the Employer may have in relation to the Vendor / Contractor / Supplier's liabilities.
9. This Guarantee shall remain in force upto and including.....⁷ and shall be extended from time to time for such period as may be desired by Employer.
10. This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Vendor / Contractor / Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.
11. Unless a demand or claim under this guarantee is made on us in writing on or before the **claim period last date**⁸ we shall be discharged from all liabilities under this guarantee thereafter.
12. Any claim or dispute arising under the terms of this document shall only be enforced or settled in the Courts at Tiruchirappalli.

13. We..... BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....⁶
- b) This Guarantee shall be valid up to⁷
- c) Unless the Bank is served a written claim or demand on or before (minimum 3 to 6 months from the expiry date)⁸ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

14. We, _____ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of
(Name of the Bank)

Dated.....

Place of Issue.....

¹ NAME AND ADDRESS OF EMPLOYER I.e Bharat Heavy Electricals Limited

² NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER AND VENDOR CODE ASSIGNED BY BHEL .

³ DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

⁴ CONTRACT VALUE

⁵ PROJECT/SUPPLY DETAILS

⁶ BG AMOUNT IN FIGURES AND WORDS

⁷ VALIDITY DATE (**dd /mmm /yyyy**)

⁸ DATE OF EXPIRY OF CLAIM PERIOD (**dd /mmm /yyyy**)

***Structured Financial Messaging System (SFMS)** has been/ is being implemented by the Banks as per the Ministry of Finance's instructions for Sending and receiving Bank Guarantee and also Inland Letter of Credit Instruments. The SFMS provides a platform for secure communication within the Bank and between Banks. As such, SFMS can prove to be an excellent IT enabled platform for getting secure confirmations from the Banks in respect of Bank Guarantees issued in favor of BHEL.