



BHARAT HEAVY ELECTRICALS LIMITED
PROJECT ENGINEERING MANAGEMENT, NOIDA

Date-23-Dec-19

CORRIGENDUM- 01

PROJECT	:	1X660 MW BHUSAWAL TPP UNIT 6
PACKAGE	:	MISC. TANKS(SITE FABRICATED)
ENQUIRY NO	:	E-6345/2019 Dated. 13.12.2019
SUBJECT	:	PRE-BID CLARIFICATION + DUE DATE EXTENSION

Type of Corrigendum			
Technical Corrigendum -	☒	Commercial Corrigendum -	☒

In reference to the above mentioned tender enquiry for **MISC. TANKS(SITE FABRICATED)** package.

Please note the following:

1. Bidders to ensure that Third party/customer issued certificates being submitted as proof of PQR qualification should have verifiable details of document/certificate issuing authority such as name & designation of Issuing Authority and its organisation contact number and email Id etc. In case the same found not available, Purchaser has right to reject such document from evaluation.
2. Pre-bid clarifications are attached along with this corrigendum, bidders requested to go through the same.
3. Due date for offer submission has been extended till 03/01/2020 (2:00 pm) and P1 is to be opened at 3:00 pm on 03/01/2020.

All the other terms and conditions of the tender enquiry shall remain unchanged. All the bidders are requested to quote accordingly.

Yours faithfully,

For and on behalf of BHEL

Guru Das
Dy. Manager

PRE-BID CLARIFICATION SCHEDULE

S.No.	Section/Clause/ Page No.	Statement of the referred clause	Clarification required	BHEL Reply
1	PE-TS-415-167-A001 /Section 3-D/ page no.34 of part 1	Cap:- 850 cu.m DM water tanks Required no.of tanks is 2 nos and 1000 cu.m. CST required no.of tanks is 1no.	Required number of tanks in the data sheet of the tanks are not matching with the table in Annexure-I please clarify it	Quantity and size of tanks shall be as per datasheet. 1. CST - one number of 850 cum. 2. DM water tank - two numbers of 1000 cum each. 3. Service water tank - one number of 150 cum.
	PE-TS-415-167-A001/Section-IB/ page 28 &31 of part 4	Refer the datasheet of DM water storage tank mentioned as cap :-1000 KL qty is 2 Nos & CST tanks mentioned as Cap:- 850 KL qty -1no.		
2	PE-TS-415-167-A001 /Section-IA/page no. 17 of part 1	MS plates for shell, roof and bottom of tanks, Tank foundation & associated civil works, LTs are excluded from bidder's scope of work.	Whether we have to consider the supply of Plates for shell,roof and bottom of tanks in our scope or not. please confirm	Plates required for Shell, roof and bottom of DM water & condensate storage tanks and shell & end plates of Service water storage tank shall only be free issued by BHEL. Terms and conditions of free issue of these plates are attached as Annexure I to these pre bid replies.
3	PE-TS-415-167-A001 /Sub-Section I B/page no. 29 of part 4	Internal Ladder for Tanks: Spiral staircase along the shell of tanks and two nos. Manhole i.e. one on the tank roof & other one on tank shell shall be provided.	Spiral staircase along the shell can not be provided as internal ladder, we presume that spiral staircase shall be provide on external side of tank shell for the access of roof and for internal access we will provide the internal rungs Please confirm.	Spiral staircase shall be provide on external side of tank shell for the access of roof. Rung ladder shall be provided for internal of tanks.

4	PE-TS-415-167-A001 / Section-I B / Datasheet of DM Water Storage Tank & CST tank / page no. 28 of part 4	12. Other accessories to be provided with tank (e) 2 nos of nozzle connection of 50NB for level transmitters.	Size of nozzle connection required for mounting of LTs is contradicting. Please clarify.	Bidder to consider 80Nb, 02 numbers nozzles per tank for mounting of level transmitters.
	PE-TS-415-167-A001 / Section-I B / Sketch for DM Water Storage Tank & CST tank / page no. 30 of part 4	Notes: 3. 80NB nozzle on top of the tank shall be provided by tank vendor for mounting of LTs.		
5	PE-TS-415-167-A001 / Section-I B / Datasheet of DM Water Storage Tank & CST tank / page no. 28 of part 4	12. Other accessories to be provided with tank (f) Valves shall be provided for spare connections.	As per datasheets of DM Water Storage Tank & CST tank all spare connections shall be provided with valves, where as in the referred note given in the sketches for DM Water Storage Tank & CST tank says that only spare outlet connections shall only be provided with valves. Both are contradicting, please clarify.	All spare connections (inlet and outlet both) shall be provided with valves.
	PE-TS-415-167-A001 / Section-I B / Sketch for DM Water Storage Tank & CST tank / page no. 30 of part 4	Notes: 8. Inlet spare connections shall be provided with blind flange. Spare valves shall be provided at spare outlet connections.		
6	PE-TS-415-167-A001 / Section-I B / Datasheet of CST Tank / page no. 31 of part 4	12. Other accessories to be provided with tank (f) spare connection of 150 Nb (1 nos.), 200 Nb (01 no.), 100 Nb (1 no.) spare	Datasheet of condensate storage tanks calls for 3 no. of spare connections, where as in the Sketch for CST, two no. spare connections of sizes 200NB & 150NB only being shown. Please clarify whether spare connection of 100NB shall be provided or not. If required, also confirm whether it is spare inlet or spare outlet.	Spare connection of 100 Nb with valve shall also be provided by bidder.
	PE-TS-415-167-A001 / Section-I B / Sketch for CST Tank / page no. 33 of part 4	Refer sketch for CST regarding spare connections.		
7	PE-TS-415-167-A001 / Section-I B / Sketch for DM Water Storage Tank & CST tank / page no. 30 & 33 of part 4	Regarding type of valves.	Type of valves to be used for miscellaneous tanks is not given. Hence we consider all valves shall be of gate type. Please confirm.	50Nb and below size valves shall be Globe valve and above 50Nb valves shall be gate valve.

8	PE-TS-415-167-A001 /Section- IA/ Customer specification/page no.34 of part 3	Refer specification of valve-(B) stainless steel body gate/ globe/ check / ballvalves. 4.1. Body & Bonnet cover - A351 CF8 for cast body	Grade of A351 material to be considered fo r body & bonnet cover of valves (50NB & above) is contradicting. Please clarify.	Shall be as per datasheet. Body & Bonnet - ASTM A351 Gr.CF8M (50NB & above)
	PE-TS-415-167-A001 / Section-I B / data sheet of valves/page no.37 of part 4	Refer datasheet. 1. Body & Bonnet- ASTM A351 Gr.CF8M (50 NB & above)		
9	PE-TS-415-167-A001 / Section-I B / PAINTING SPECIFICATION FOR MISCELLANEOUS TANKS /page no. 1 of part 5	Tank External, Structural steel works, pipin g, stairways & other accessories: Primer - One (1) coat (minimum DFT of 100 microns) of Synthetic red lead pri mer. Finish - One (1) coat (minimum DFT of 75 microns) of synthetic enamel paint of approved shade and color with glossy finish. Total DFT - 300 microns.	In the referred painting specification, sum o f DFT's given for primer and finish coat (10 0+75=175microns) is not matching with the total dft (300microns) of paint to be mainta ined. Please clarify.	Total dft shall be 300 microns (minimum) shall be ensured, finished and intermediate coats may be increased.
10	PE-TS-415-167-A001 /Section-- 2/page no. 13 of part 3	3. SCOPE OF WORK: 3.1 (a) Supply of all low pressure piping including bends, elbows, tees, shoe, flanges, blank flanges, Y-pieces required for piping system.	Whether we have to supply the pipes required only for tanks or else for the whole low pressure piping system. Please clarify it.	Bidder's scope of piping is within the terminal points.



TITLE:

**TECHNICAL SPECIFICATION FOR
SITE FABRICATED MISC TANKS
1X660 MW BHUSAWAL TPP UNIT 6**

SPECIFICATION NO.: PE-TS-415-167-A001

REPLIES TO PRE-BID QUERIES

ANNEXURE I

REV. NO. 01

DATE: 23.12.2019

**ANNEXURE I
REPLIES TO PRE-BID QUERIES**

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1.0 SCOPE OF SUPPLY

Bidder's Scope of work shall be as per technical specification no PE-TS-415-167-A001. MS Plates required for Shell, roof and bottom of DM water & condensate storage tanks and shell & end plates of Service water storage tank shall only be free issued by BHEL as specified in this Annexure. Any other plates required for RF pad plates, manholes, wind girder (plate fabricated), anchor chairs, saddle supports, gusset plates, stiffener plates, weir plates, interconnecting platform, etc. shall be supplied by bidder.

The bidder shall furnish quantities of MS plate, required from BHEL (free issue), along with his offer as per "Format for MS Plate" attached with this Annexure I. In case the quantities of MS plate quoted by the bidder, exceeds the base quantities as specified, the bidder's bid shall be loaded for the excess quantity at the specified evaluation rate.

During detailed engineering while furnishing the fabrication drawing for BHEL's & Customer Review/approval, Bidder shall furnish the theoretical quantities of MS Plate in Drawing/Documents.

If the total quantity of MS Plate during contract execution is found to be more than the quantities quoted at tender stage or base values, whichever is higher, the additional cost for excess quantity of MS Plate shall be deducted from the bidder's payments at penal rate. No Benefit will be given to bidders, in case of reduction in actual quantity of MS Plate with respect to the quantities considered in bid evaluation.

2.0 FREE ISSUE OF MS PLATE CONDITIONS:

A) GENERAL NOTES:

- 1) MS Plate shall be issued free of cost by BHEL as per approved fabrication drawings. The contractor shall collect these materials from BHEL stores/store yard at specified places at his own cost and store the same at the work site or in his stores as per standard norms. Materials issued will be used only for construction of Misc. Tanks as per contract requirement.
- 2) BHEL reserves the right to recover from the contractor any loss arising out of damage/ theft or any other causes or during verification/stacking or at any time under the custody of the contractor.
- 3) The contractor shall take care of material issued by BHEL and shall protect the same from damage and weathering.
- 4) The contractor shall in no case be entitled for any compensation on account of any delay in supply or non-supply thereof for all or any such materials. However, in case of non-availability of any specific section(s) which delays the completion of work, such cases shall be recorded separately in monthly planning format) and shall be considered for time extension of contract.
- 5) Contractor will have to make his own arrangement at his own cost for procurement of any other materials except as mentioned above, as required for the works and of such quality as acceptable to BHEL.
- 6) Contractor shall also carryout in complete association with BHEL, the material management functions and execution like day-to-day update of materials, issued to contractor.
- 7) The contractor shall solely be responsible for the safety & security of material after it is handed over and issued to contractor by the BHEL.
- 8) BHEL issued materials, shall not be under any circumstances whatsoever, and shall be taken out of the project site unless otherwise permitted by BHEL for outside job.

B) HANDLING OF MATERIALS ISSUED BY BHEL:

- 1) Materials shall be issued by BHEL based on the weighment basis/linear measurements & sectional weight. However, on specific request of the contractor "as a special case to expedite the job" the consignment received at BHEL stores can directly be diverted to the work site following issuance procedure of BHEL. Such direct issues shall



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be as per the Challan/dispatch document/LR received with the consignment. In such cases, Contractor shall do unloading of materials from trucks/lorry at their own cost.

- 2) All materials issued by BHEL shall be stacked, stored above ground level by use of concrete or wooden sleepers. No materials shall remain on ground at any time. All concrete or wooden sleepers required for stacking the materials shall be arranged by contractor (successful bidder of this package) at his own cost within the quoted rates. All other equipments like winches, D-Shackles, slings of various sizes, max puller, pulley blocks, jacks, trucks, trailers etc. Required for such handling of MS plates from BHEL stores/storage yard etc. Shall be arranged by contractor within quoted/accepted rates.
- 3) The contractor shall take delivery of the materials from the designated place within the project premises at his own cost and store the same at his stores as per standard norms. Open land for such purposes shall be provided by BHEL on free of cost basis. Temporary barbed wire fencing of the open storage yard is to be done by the contractor and is included under the scope of his work. Contractor shall also remove grass, bushes, trees etc. wherever required off the land provided to him and shall make proper continuous up keeping of the open yard /land by removing grass, bushes trees etc. and same is included under the scope of his work & No extra payment shall be made to the contractor in this regard. The bidder shall make complete arrangement of necessary security personnel's to safeguard all such materials in his custody. Materials issued will be used only for construction of Misc. Tanks as per the scope specified in this specification. The contractor shall take care of material issued by BHEL and shall protect the same from theft, damage and weathering. Excessive rusting of steel in custody of agency/contractor must be avoided. In case, due to any cause attributable to the contractor, such rusting of steel occurs rendering the same unusable, then such quantity of steel shall be recovered from the interim payment as per the contract conditions specified.i.e.as per the bid evaluation Price.

C) ISSUE OF MS PLATES FREE OF COST:

- 1) The MS Plates shall be issued to the contractor on the following basis:
 - i. MS Plate: Weighment basis (Unit-MT)
- 2) All the MS Plate issued by BHEL shall be properly accounted for. The total quantity of MS Plate required for the work will be calculated from the approved fabrication drawings as per contract.

In case any such sectional weights are not available in the applicable drawing/documents, the manufacturer recommendation shall be binding.

- 3) The MS Plate issued to the contractor shall be mainly in standard length as received from the supplier. However, the contractor shall be bound to accept the MS Plate in length / width as available in the project stores, no claims for extra payment because of issue of non-standard length will be entertained.
- 4) The contractor shall satisfy himself of the quality and quantity of the materials at the time of taking delivery from BHEL stores. No claims whatsoever will be entertained by BHEL because of quality or quantity after the materials are taken by the contractor from BHEL stores.
- 5) The contractor shall submit to BHEL, a statement indicating estimated quantity MS Plate required during a quarter. In addition, the contractor shall also furnish the estimated requirement of MS Plate during a month by the third week of the previous month indicating his requirement.
- 6) Following shall be limit for the maximum quantity of BHEL issue materials that would be with the contractor at any point of time when work is in progress (excluding what has already been incorporated in the works).

SL No.	ISSUE OF MATERIALS	MAX QUANTITY IN CONTRACTORS STORE
01	MS Plate	ONE MONTH

- 7) Bidders shall ensure that no lamination material is taken over by them from BHEL.
- 8) The contractor must note that MS Plate required for other parts shall be arranged by the contractor at his own cost.



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- 9) Bidder to give requirement of Material in BHEL Scope well in advance of before Three month from requirement. Any delay in raising the requirement of these item leading to delay in placement of order, will be Contractor responsibility and its attributable delay in erection will be responsibility of Bidder only.

D) RETURN OF MATERIAL:

- 1) All surplus MS steel and wastage materials will be taken back on weightment basis.
- 2) Surplus, unused and untampered MS steel shall be sorted section-wise and returned separately for a place directed by BHEL within the project area. Return of such material will not be entitled to any handling and incidental charges.
- 3) All wastages / scrap shall be promptly returned to the BHEL store and a receipt obtained for material accounting purposes. Return of such material will not be entitled to any transportation and incidental charge.

E) CONSUMPTION AND WASTAGE:

- 1) The theoretical consumption of various thickness / sections of MS plate shall be based on approved fabrication drawings. Weight shall be calculated considering the sectional weights as per Indian standards.
- 2) Actual consumption = Issue – Surplus.
- 3) Surplus = Untampered and unused quantity of MS plate returned by the contractor to BHEL store along with relevant documents.
- 4) Wastage = Actual consumption – Theoretical consumption.
- 5) Allowable wastage: Ten percent (10%) of the theoretical consumption shall be considered. Wastage shall be considered as cut pieces and scrap material, measured as per actual weightment basis. Invisible wastage, if any, shall be considered to be included in the specified 10% allowable wastage.
- 6)

S. No.	MS Plate	Basis of issue & penal recovery
S-1	Theoretical consumption (without considering any wastage, scrap or loss) as per approved fabrication drawing or Quantity mentioned in "FORMAT FOR REQUIRED MS PLATE" whichever is less.	Free
S-2	Wastage limited to plus ten percent (+10%) of the aforesaid theoretical consumption (S-1) towards allowable wastage.	Free
S-3	Wastage beyond ten percent (10%) of the aforesaid theoretical consumption (S-1)	Penal rate.

F) RECOVERY OF MATERIAL:

If wastage exceeds the specified limit, the recovery of excess wastage shall be at the Penal rate. Penal rate of MS plate shall be Rs 60,000/- per MT.



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**FORMAT FOR REQUIRED MS PLATE
(TO BE FILLED BY THE BIDDER)**

S. No	DESCRIPTION OF EQUIPMENT / ITEM		
	Description	QTY	Unit
1.0	Total Quantity of MS plates (As per IS 2062 Grade B) required for Shell, roof and bottom of DM water & condensate storage tanks and shell & end plates of Service water storage tank, free issue by BHEL.		Tonne
Notes: - 1. The base quantity of BHEL issue MS plate is 150.0 MT 2. In case the bidder's quoted quantity is higher than the base quantity of MS Plate, then the bidder's total evaluation price shall be determined after adding differential cost of MS Plate as per the following rates, a) MS plate – Rs. 60000/- per Tonne. 3. Bidder to submit duly filled up "FORMAT FOR REQUIRED MS PLATE" along with technical offer in open.			