

Ref No.: PE/PG/NB2/E-6828/2021 /CORRIGENDA/01

Date: 23.12.2021

**CORRIGENDA - 01**

**PROJECT: 3X660 MW NPGCPL NABINAGAR STAGE-II -FGD SYSTEM**

**PACKAGE: AGITATOR OF FGD SLURRY TANKS**

**TENDER ENQUIRY NO: PE/PG/NB2/E-6828/2021 dated 07.12.2021**

**TENDER DUE DATE: 04.01.2022 (2.00M)**

Bidders to note following amendments w.r.t subject tender:

- 1) Pls refer enclosed Annexure-1 for Technical Pre-Bid Clarification pertaining to subject tender.

**Bidders to ensure the submission of bid within the tender due date and time.**

With Regards,  
For & on behalf of BHEL

Isha Rawat  
Dy Mgr/PG-III/BHEL-PEM

TENDER ENQUIRY NO: PE/PG/NB2/E-6828/2021 dated 07.12.2021				
AGITATOR OF FGD SLURRY TANK: 3x660 MW NPGCPL NABINAGAR - STAGE-II- FGD SYSTEM Project.				
Pre-Bid Clarification				
S.No.	Section/Clause/ Page No.	Statement of the referred clause	Pre-bid Query United Burgmann	BHEL Reply
1	Section C, Sub-Section-C1 3.2 - viii Page 40 of 323	Material of Construction - viii Flush Pipe for Startup with flanges FRP or Alloy926 or Alloy59 (Material has to be.....)	Same to be excluded from Bidder supply scope, please confirm	Noted. The same is in BHEL scope.
2	Section C, Sub-Section-C1 4.0 - A) - 1 - xii Page 232	Scope of Supply & Services Foundation plate with foundation bolts, vessel nozzle	1.Vessel nozzle shall be in BHEL scope, pls confirm 2. Foundation plate with foundation bolts for fixing of the External Supports of side entry agitator shall be connected by welding with rebar of Absorber or Aux Tank foundation to ensure same settlement so as to avoid the impact on agitators, those IPs shall be imbedded during foundation construction, so design can be done by bidder, but supply to be excluded from Bidder scope, please confirm.	1. Noted. Vessel nozzle is excluded from bidder's scope. 2. Bidder to note that incase of side entry agitators, if the supporting arrangement is through ground, then BHEL shall provide the foundation (civil works), however, the supporting arrangement along with bolts shall be provided by bidder. Also, in case of vertical agitators, the foundation plate along with bolts shall be in bidder's scope of supply.
3	Section C, Sub-Section-C1 4.0 - A) - 1 - iv) Page 45 of 323	Impeller should be dynamically balanced to Gr: G16: ISO-1940 after rubber lining of shaft.	Requirement here is contradicted with Clause 4.1 - IX. As per us and Gr: G16: ISO-1940, since the agitator impeller RPM is very low, Dynamic balance is not applicable and only static balance will be carried out. Further, in the NTPC Agitator Quality Plan only static balance test if required. Pls confirm.	BHEL informed that the balancing (static/dynamic) shall be decided during detail engineering based on the applicable codes and standards furnished by the bidder and subject to NTPC approval. Bidder to comply.
4	Section C, Sub-Section-C1 4.2 - B) -1 - XI) Page 46 of 323	Seal life has to be guaranteed, taking into consideration all its components for 25000 hrs. If the seals fail before the completion of guaranteed period, the same should be replaced free of cost by the bidder	As per Mechanical Seal OEM, the standard warranty given is only 8000hrs, so request to accept guarantee life as 8000hrs. However, actual working life under design condition can be expected up to or more than 25000hrs subject to strictly following up the O&M guidelines.	Noted. Same shall be discussed during engineering and shall be subjected to NTPC approval.
5	Section C, Sub-Section-C1 4.2 - B) -2 - Vertical Agitators for Other Slurry Tanks & Drain Pit tanks-1 Page 46 of 323	Agitator shall be supplied with stuffing box or any proven equivalent or superior sealing type. Construction of gland Packing shaft seal system shall be as per the below fig:	Requirement given here is applicable when there is pressure inside of Tanks, however, no pressure for slurry Tanks and drain pit, as per our current design for existing NTPC projects Skeleton Oil Seal will be used here.	Refer Sl. no. 4 of ANNEXURE-8: AGITATOR SCHEDULE for the requirement of stuffing box.
6	Section C, Sub-Section-C1 4.2 - H COUPLING & COUPLING GUARD) -VI Page 48 of 323	It is desirable that for servicing of seal, coupling half should not be removed. Coupling should be dynamically balanced to Gr: G6.3, ISO-1940.	Requirement here is contradicted with Clause 4.1 - IX. As per us and Gr: G16: ISO-1940, since the agitator impeller RPM is very low, Dynamic balance is not applicable and only static balance will be carried out. Further, in the NTPC Agitator Quality Plan only static balance test if required. Pls confirm.	Refer our reply at Sl. no. 3.
7	Section C, Sub Section-C1 4.2 - I) - viI) Page 49 of 323	Impeller should be dynamically balanced to Gr: G16: ISO-1940 after rubber lining of shaft.	As per us and Gr: G16: ISO-1940, since the agitator impeller RPM is very low, Dynamic balance is not applicable and only static balance will be carried out. Further, in the NTPC Agitator Quality Plan only static balance test if required. Pls confirm.	Refer our reply at Sl. no. 3.
8	Section C, Sub-Section-C1 9 INSPECTION AND TESTING - 7 Mechanical Run Test (in air) Page 55 of 323	Mechanical Run Test (in air) Each Agitator unit shall be given a 4-hour mechanical run test in air at vendor's shop. .....	1. The quantity of Agitator to be tested shall be as per approved MQP post order, but shall not be each agitator. 2. "4-hour mechanical run test in air" technically is not allowed.	The quantity of Agitator to be tested shall be as per approved MQP during detail engineering, subjected to NTPC approval. Further, the Mechanical run test for Agitators shall be carried out with air/water along with other test requirement in line with the QAP to be approved by customer during detailed engineering. Bidder to comply.
9	Section C, Sub-Section-C1 9 INSPECTION AND TESTING - 8 Mechanical Run Test (in slurry of similar concentration as applicable for the project) Page 55 of 323	Mechanical Run Test (in slurry of similar concentration as applicable for the project) Each agitator unit shall be given a load test in slurry at the vendor's shop. The duration of this test shall be 4 hours unless agreed otherwise.....	1. The quantity of Agitator to be tested shall be as per approved MQP post order, but shall not be each agitator. 2. Testing time will be 30 mins as per existing NTPC approved MQP, it will not be 4 hours 3. Testing slurry will be bidder's existing slurry inside the testing platforms, slurry details can be provided before testing, but it will not be in slurry of similar concentration as applicable for the project	The Mechanical run test for Agitators shall be carried out with air/water along with other test requirement in line with the QAP to be approved by customer during detailed engineering. Bidder to comply.
10	Section I, Sub-Section-D Page 266-274	List of Makes of Sub-Vendor Items	Sub-vendor given for Motors, Paints etc, please confirm Bidder can use NTPC approved vendors beyond list, or propose its own vendors during DDE post order	Bidder has to submit the sub-vendor questionnaire provided with the specification in Section I, Sub-Section-C2B along with necessary credentials in case the successful bidder wants to propose its own sub-vendors during detail engineering. Further as mentioned in the technical specification, acceptance of makes shall be subjected to BHEL/ End customer acceptance during the detail engineering. Bidder to comply.
11	Sub-Section D and Section II	Annexure I-V & Annexure 1-11	Please provide editable copy of those Annexures as well as BQO	Bidder to edit in the pdf file provided in the Technical specification.