# Bharat Heavy Electricals Limited Ranipet-632406, India Quality Département

BAP: QA: Mech: BONG: WP: 218

Dt. 05-08-2021

Project: BONGAIGOAN (3x250 MW) FGD Package-reg.

Item Name	Indent No.	Indent Date	PGMA	Technical specification
Process Water Pump and	RFW11266	04.08.2021	FW705	ENGG SPEC: ROS: 9080 and
Acc.	RFW11267	04.08.2021	FW997	TECI: LT Motor/04, DT: 25.08.2020

### Indent file reviewed and Quality recommendations as follows:

- 1. BHEL Approved vendors are acceptable.
- 2. Inspection and testing shall be done as per QP NO.HZ PUMP: 610/00, DT: 29.12.2019 attached herewith.
- 3. Painting shall be as per customer approved Painting schedule.
- 4. Arrange acceptance on Our MQP from vendors (QP NO.HZ PUMP: 610/00, DT: 29.12.2019) with their duly sign and acceptance.
- 5. All Pumps shall be inspected at supplier works as per approved QP/Approved Drawing/Approved datasheet and Specification by BHEL/ BHEL TPI.
- 6. Annexure 'Q' and BOI's shall be part of enquiry File. Vendor shall fill the columns as appropriate.
- 7. BHEL Authorized representatives shall have the right to witness the necessary inspection and testing of goods mentioned in the PO. The supplier shall inform BHEL in advance about the readiness of the goods for inspection and testing. Inspection / Inspection wavier / approval by BHEL does not absolve Supplier's responsibility for conformity of the specification as per the terms of PO. Material Test Certificates shall be submitted to BHEL.
- 8. Packing shall be as per Technical specification/ Engg Approved packing drawing.
- 9. General Inspection Notes:
  - a. Latest version of standards & Specification shall be applied.
  - b. Materials shall be procured in compliance to Functional Technical specification.
  - c. Gauges and measuring instruments with valid calibration only shall be used.
  - d. Inspection / Inspection wavier / approval by BHEL does not absolve Supplier's responsibility for conformity of the specification as per the terms of PO.
  - e. BHEL /BHEL Authorized representatives shall have the right to witness the necessary Inspection and testing of goods mentioned in the PO .
  - f. In case of Vendor Drawing & Datasheet, it needs approval by BHEL Engineering.
  - g. This QP shall be read along with relevant PO, BHEL Specification / Approved Drawing / Datasheet.

Prepared by. Rakesh Kr Madhu (Dy.Mgr/QA) Reviewed & Approved by. K Renjith(Mgr/QA)

396522/2	021/B	∆£P⊈@A	MÉG	HFACTURER'S NA	AME &		STANDARD Q	UALITY PL	AN							
	Ranipet RANIPET /BHEL APPD SUPPLIERS				Item/s	ubsystem: Ontal Centrifugal PUMP	QP NO: HZ Rev:00 Date:29.12. Page 1 of 4	2019	P:610	PR	OJECT: STANI	DARD				
	SL NO	COMPONI & OPERAT		CHARACTERISTICS	CLA	SS	TYPE OF CHECK	QUANTUM CHECK 6		REFER DOCUM		ACCEPTANCE NORMS	FORMAT OF RECORD	AC	GENCY 10	REMAR KS
	3		4	ŀ	3	M	B/C	7		8	9 D	M	ВС	11		

	RAW MATEI	RIAL INSPECTION										
1	CASTING	CHEMICAL COMPOSITION	MAJOR	CHEMICAL ANALYSIS	1 SAMPLE / HEAT	RELEVANT MATERIAL SPECS AS PER APPD. DRG. / DATA SHEETS	MTC	<b>V</b>	P	V	-	NO REPAIR WELDING IS
		MECHANICAL PROPERTIES	MAJOR	TENSILE TEST	1 SAMPLE / HEAT	RELEVANT MATERIAL SPECS AS PER APPD. DRG. / DATA SHEETS	MTC	<b>V</b>	P	V	-	PERMITTED ON CI AS CAST / PUNCHED HEAT NO
		SURFACE EXAMINATION	MAJOR	VISUAL INSPECTION	100%	CASTING WILL BE FREE FROM CRACKS, SHRINKAGE, COLD SHUT, INJURIES, POROSITY SAND FUSION ETC	IR	V	P	V	-	SHALL BE PROVIDED FOR CORRELATION
2	IMPELLER	CHEMICAL COMPOSITION	MAJOR	CHEMICAL ANALYSIS	1 SAMPLE / HEAT	RELEVANT MATERIAL SPECS AS PER APPD. DRG. / DATA SHEETS	MTC	1	P	V	-	
		MECHANICAL PROPERTIES	MAJOR	TENSILE TEST & HARDNESS	1 SAMPLE / HEAT	RELEVANT MATERIAL SPECS AS PER APPD. DRG. / DATA SHEETS	MTC	<b>V</b>	P	V	-	
		HEAT TREATMENT (As applicable)	CRITICAL	REVIEW OF TIME- TEMP CHART	100%	RELEVANT MATERIAL SPECS AS PER APPD. DRG. / DATA SHEETS	HT CAHRT	V	P	V	-	
		SURFACE EXAMINATION	MAJOR	VISUAL INSPECTION	100%	CASTING WILL BE FREE FROM CRACKS, SHRINKAGE, COLD SHUT, INJURIES, POROSITY SAND FUSION ETC	IR		P	V	-	
3	BRASS (ROLLED/	CHEMICAL COMPOSTION	MAJOR	CHEMICAL ANALYSIS	1 SAMPLE / HEAT	RELEVANT MATERIAL SPECS AS PER APPD. DRG. / DATA SHEETS	MTC	1	P	V	-	
	FORGED ) FOR SHAFT	MECHANICAL PROPERTIES	MAJOR	TENSILE TEST	1 SAMPLE / HEAT	RELEVANT MATERIAL SPECS AS PER APPD. DRG. / DATA SHEETS	MTC	<b>V</b>	P	V	-	
	SHAFT SLEEVES	SOUNDNESS	CRITICAL	VISUAL INSPECTION	100%	RELAVANT PROCEDURE	UT Report	√	P	V	-	FOR BAR DIA.≥50 MM.
4	WEARING RINGS	CHEMICAL PROPERTIES	MAJOR	CHEMICAL ANALYSIS	1 SAMPLE / HEAT	RELEVANT MATERIAL SPECS AS PER APPD. DRG. / DATA SHEETS	MTC	<b>V</b>	P	V	-	
		MECHANICAL PROPERTIES	MAJOR	TENSILE TEST & HARDNESS	1 SAMPLE / HEAT	RELEVANT MATERIAL SPECS AS PER APPD. DRG. / DATA SHEETS	Report	1	P	V	-	

M – Manufacturer / Subcontractor,	Prepared by	Reviewed by	Approved by
B - BHEL /BHEL Authorized Inspection Agency,			
C- End Customer , P - perform,		Δ .	parties of the same of the sam
V - Verification of reports, IR - Inspection Report.	Spondin	ation of he	
W - Witness, TC - Test certificate, DP- Dye penetrant.	Special	Carried III	
DR – Dimensional report. MTC- Material test Certificate.	Sanjib Pandit (AE/QA)	Delice by I/w Medby (Dr. Mew (OA)	
* Record, identified with "tick" (√) under column 'D' shall be	Sanjio i anuit (AE/QA)	Rakesh Kr Madhu(Dy. Mgr/QA)	K C Gandhiparimalam(DGM/QA)
submitted to customer as a QA documentation package.			

396522/2	021/B	APPO A	MÉG	HFACTURER'S NA RESS	ME &	STANDARD QUALITY PLAN										
	Ranipet  ADDRESS BHEL- RANIPET /BHEL APPD SUPPLIERS				Item/subsystem: HORIZONTAL CENTRIFUGAL PUMP		QP NO: HZ Rev:00 Date:29.12 Page 2 of 4	.2019	P:610	PR	OJECT: STANI	DARD				
	SL COMPONENT CHARACTERISTICS &		CLAS	SS	TYPE OF CHECK	QUANTUM CHECK 6		REFER DOCUM		ACCEPTANCE NORMS	FORMAT OF RECORD	AC	GENCY 10	REMAR KS		
	3		4	•	3	M	B/C	7	•	8	9 D	M	B C	11		

	IN PROCESS	INSPECTION												
5	CASING &	DIMENSIONAL	MAJOR	MEASURE	100%		MANUFACTURIN	NG DRAWING	IR	1	P	V	-	
	WEAR AREA	HYDROSTATIC TEST OF CASTING	CRITICAL	PRESSURE TEST	100%	20%	SEE NOTE 2	NO LEAKAGE	IR	<b>V</b>	P	W	-	SEE NOTE -1
6	IMPELLER	DIMENSIONAL	MAJOR	MEASURE	100%		MANUFACTURIN	NG DRAWING	IR	V	P	V	-	
		DYNAMIC BALANCING	CRITICAL	MEASURE	100%	20%	ISO 1940, GR. 6.3		IR	<b>V</b>	P	W	-	SEE NOTE-1
7	DPT OF MACHINED AREA OF CASINGS & IMPELLER	SOUNDNESS OF CASTING	MAJOR	NDT-DPT	100%		MANUFACTURE	R PROCEDURE	DPT Report	V	P	V	-	
8	SHAFT &	DIMESIONAL	MAJOR	VISUAL	100%		MANUFACTURIN	NG DRAWING	IR		P	V	-	
	SLEEVES	SOUNDNESS	CRITICAL	ULTRASONIC TEST	1005		RELAVANT PRO	CEDURE	UT Report	1	P	W	-	FOR SHAFT DIA≥50 MM ONLY (EXCEPT THREADED PORTION) SEE NOTE-1
		DP TEST ON MACHINED AREA	MAJOR	DP TEST	100%		RELAVANT PROC	CEDURE	DPT Report	1	P	V	-	
FIN	AL INSPECTION	ON	•	•	•		,		•		1	1	1	•

M – Manufacturer / Subcontractor,	Prepared by	Reviewed by	Approved by
B - BHEL /BHEL Authorized Inspection Agency,	•	•	
C- End Customer , P - perform,	. 1	Λ .	printer .
V - Verification of reports, IR – Inspection Report.	Spandir	at he	
W - Witness, TC - Test certificate, DP- Dye penetrant.	Special	Command III	
DR – Dimensional report. MTC- Material test Certificate.	Sanjib Pandit (AE/QA)	Dalcack I/a Madbu/Dv Maa/OA)	
* Record, identified with "tick" ( $$ ) under column 'D' shall be	Salijio Fallult (AL/QA)	Rakesh Kr Madhu(Dy. Mgr/QA)	K C Gandhiparimalam(DGM/QA)
submitted to customer as a QA documentation package.			

396522/2	021/B	ΔΦ <u>°</u> OA	MÉCH	LIFACTURER'S NA	ME &	& STANDARD QUALITY PLAN										
	ADDRESS BHEL- RANIPET /BHEL APPD SUPPLIERS			Item/subsystem: HORIZONTAL CENTRIFUGAL PUMP		QP NO: HZ PUMP:610 Rev:00 Date:29.12.2019 Page 3 of 4			PR	OJECT: STANI	DARD					
	SL COMPONENT CHARACTERISTICS  OPERATION		CLA	ASS TYPE OF CHECK		QUANTUM CHECK 6		REFERI DOCUM		ACCEPTANCE NORMS	OF RECORD	AG	GENCY 10	REMAR KS		
	3		4	-	3	M	B/C	7		8	9 D	M	ВС	11		

9	PUMP ASSEMBLY	DIMENSIONAL	MAJOR	MEASURE	100%	100%	APPROVED G.A. DRAWING	IR	1	P	V	-	
10	PERFORMAN CE TEST WITH JOB	Q VS H Q VS P Q VS E	CRITICAL	MEASURE	100%	100%	APPROVED PERFORMANCE TEST PROCEDURE & APPROVED DATA SHEET	IR	V	P	W	-	REFER NOTE-3
	WIIII30B	NOISE LEVEL	MAJOR	MEASURE				IR		P	W	-	REFER NOTE-4
		VIBRATION	MAJOR	MEASURE				IR		P	W	-	REFER NOTE-4
		BEARING TEMP	MAJOR	MEASURE				IR		P	W	-	
11	NPSHR TEST	NPSHR TEST	CRITICAL	MEASURE	100%	1 NO / MODEL	APPROVED NPSHR TEST PROCEDURE	IR	1	P	W	-	REFER NOTE-6
12	PAINTING AND PACKING	TYPE OF PAINT. APPERANCE. DFT CONFORMANCE TO PACKING SPECIFICATION	MAJOR	VISUAL & MEASURE	100%		TECHNICAL SPECIFICATION MANUFACTURE STANDARD PRACTICE	IR	V	P	V	-	

### NOTES:

1	For these checks. Witness (M) by Main supplier and End Customer shall be based on the following criteria
	For Pump Motor rating less than equal to 60 KW. Both Main Supplier & End Customer shall only verify the Test Reports of the check by Supplier.
	For Pump motror rating more than 60 KW Main Supplier shall witness the check & End Customer shall verify the Test Reports.
2	For Performances Test of Pumps Witness (W) by Main supplier and End Customer shall be based on the following criteria
3	For Pumps motor rating less than equal to 60KW, the performance test of 1 pump per type (min. 1) offered for inspection. Per visit shall be randomly selected for witness by main supplier.
	For pumps motor rating more than 60 KW but less than 110KW the performance test of 20% of the total no of pumps of each type (min.10 offered for inspection per visit shall be randomly selected for witness by Main
	supplier as well as End Customer.
	For pumps, motor rating more than 110 KW and pumps for firefighting applications the performance test of 50% of total no of pumps of each type offered for inspection per visit shall be randomly selected for witness by
	main supplier as well as End Customer.
4	Noise & Vibration level shall be recorded during shop test for reference purpose only. However values as per approved data sheet / technical specification to be guaranteed at site
5	In case of abnormal noise, pump shall be stripped and shall be re-offered for performance test after correction
6	For pump motor rating less than equal to 110 KW, both Main supplier & End Customer shall review the test reports of the NSPH test witnessed by Vendor / Third party Agency . During Final Evaluation
	For Pump motor rating more than 110 KW both Main supplier & End Customer shall witness NPSH test. However in case NPSH test has been carried out previously on the same model as of the certified Pump and was
	witnessed by End Customer then retest of the npsh test is not required & End Customer shall only review such NPSH Test Report during final inspection.
Not	a. All the inspection/ test reports shall be submitted to Inspection agency for review and record purpose.
es:	b. Latest revision of Drawings, specification and standard shall be used.
	c. Materials shall be procured in compliance to Functional Technical Specification.

1	M – Manufacturer / Subcontractor,	Prepared by	Reviewed by	Approved by
l E	B - BHEL /BHEL Authorized Inspection Agency,	1	,	, ,
(	C- End Customer , P - perform,	. 1	Λ .	- Parties
١	V - Verification of reports, IR - Inspection Report.	Spandir	ati. Ih.	S/1/
١	W - Witness, TC - Test certificate, DP- Dye penetrant.	Spool	Carried 1.11	
1	DR – Dimensional report. MTC- Material test Certificate.	Soniih Dondit (AE/OA)		
>	* Record, identified with "tick" ( $$ ) under column 'D' shall be	Sanjib Pandit (AE/QA)	Rakesh Kr Madhu(Dy. Mgr/QA)	K C Gandhiparimalam(DGM/QA)
	submitted to customer as a QA documentation package.			

396522/2	96522/2021 BAPPOA MERCHFACTURER'S NAME &				AME &		STANDARD Q	UALITY PL	AN							
	Ranipet  ADDRESS BHEL- RANIPET /BHEL APP SUPPLIERS			Item/subsystem: HORIZONTAL CENTRIFUGAL PUMP		QP NO: HZ Rev:00 Date:29.12 Page 4 of 4	.2019	P:610	PROJECT: STANDARD							
	SL COMPONE NO & OPERAT			CHARACTERISTICS	CLA	SS	TYPE OF CHECK	QUANTUM CHECH 6		REFERI DOCUM		ACCEPTANCE NORMS	FORMAT OF RECORD		NCY 10	REMAR KS
	$\begin{bmatrix} 1 \\ 2 \end{bmatrix}$ $\begin{bmatrix} 2 \\ 3 \end{bmatrix}$		ŀ	5	M	B/C	7		8	9 D	M	ВС	11			

- d. Gauges and measuring instruments with valid calibration only shall be used.
- e. Inspection / Inspection wavier / approval by BHEL does not absolve Supplier's responsibility for conformity of the specification as per the terms of PO.
- f.. BHEL /BHEL Authorized representatives shall have the right to witness the necessary inspection and testing of goods mentioned in the PO.
- g. In case of Vendor Drawing, it needs approval by BHEL Engineering.
- h. This QP Shall be read along with relevant PO, BHEL Specification/Drawing/Approved Datasheet.
- i. This QP is applicable for Mandatory spare supply also specific to the item/project wise.

M – Manufacturer / Subcontractor,	Prepared by	Reviewed by	Approved by
B - BHEL /BHEL Authorized Inspection Agency,			
C- End Customer , P - perform,		Λ .	prima
V - Verification of reports, IR - Inspection Report.	Spurdir	ati. The	D(1)
W - Witness, TC - Test certificate, DP- Dye penetrant.	5,000	Carried .	
DR – Dimensional report. MTC- Material test Certificate.	Sanjib Pandit (AE/QA)	Delice Is IV. Medicu(Doc Mess(OA)	
* Record, identified with "tick" (√) under column 'D' shall be	Sanjio Fandit (AE/QA)	Rakesh Kr Madhu(Dy. Mgr/QA)	K C Gandhiparimalam(DGM/QA)
submitted to customer as a OA documentation package.			

## $396522/2021/BAP\text{-}QA\_MECH$

	Annexure Q	
SI.No	Indent No: Enquiry no:  BHEL / Customer Requirements	##Specific confirmations by the manufacture(Acceptable/Not acceptable)
	Quality Plan Requirement: (If SQP is not given & Vendor QP applicable)	, , , , , , , , , , , , , , , , , , , ,
	(i) MQP (Manuafcutering Quality Plan) shall be submitted in attached format for BHEL/Customer review & approval. Our SQP/Typical MQP/ MQP Format is attached for guidance & use.	
	(ii) MQP shall invaribly cover w.r.t Inward inspection including on Raw materail Procurement, In process and Final inspection in elaborated way/details.	
	(iii) Bidder shall also to give specific confirmation that on need basis, their competent officials shall visit to BHEL/customer for finalization of Quality plan including test procedure/methodology during preaward / post award approval / detailed engineering in the event of an order.	
	(iv) No deviation on BHEL/Customer approved MQP/ SQP (In case BHEL SQP is provided) is acceptable.	
1	(v) Bidder shall agree to submit all cross referred documents other than codes/standrads to BHEL/Customer/Consultant.	
	Important Notes shall be included in MQP:  (a) Latest revision of Standard s & Specification shall apply. Only International Standards are applicable.  (b) Materials shall be procured in compliance to Functional Technical Specification.  (c) Inspection shall be in compliance with Approved Quality Control Procedure for the Product.  (d) NDT shall be carried out by Qualified Personnel with compliance to Approved NDT Procedures and Acceptance Norms, as per ASME Section V.  (e) Gauges and measuring Instruments, with valid calibration only shall be used.  (f) Cleaning and Painting of products shall be carried out as per Approved Painting Schedule.  (g) Finished Products shall be packed to comply with Approved Packing Schedule.  (h) Welding shall be carried out by Qualified Personnel with compliance to Approved NDT Procedures and Acceptance Norms, as per ASME Section V.	
2	Domastic / Inland Inspection will be carried out by BHEL/BHEL apointed Third Party Inspection Agency (TPIA) / Customer/Customer Apointed Inspection Agency/Consulatnat. This is applicable for all Stage inspection and Final Inspection identified as "W" - Witness or "CHP" - Customer Hold Point as per customer approved Quality Plan/ Technical specification / Approved Drawing/ Approved Data sheet / Scheme / PID / PFD / SLD (Process Instrumentaion Diagram / Process Flow Diagram / Single Line Diagram) etc (As applicable).	
3	Inspection Agency for Foreign Bidders and also for Indian Bidder but importing from Forgign Sources:  (1) Any one of the filowing Third Party Inspection Agency (TPIA) shall be appointed by the bidder and same shall be furnished by the bidder in techno commercial bid itself.  (2) The details of TPIA with contact details like Name of the official, Phone no, Email id shall also to be submitted during pre/post award. However cost for such inspection agency shall be borne by the bidder only. Inspection charges for such inspection agency shall be indicated separately so that if BHEL/Customer is undertaking the inspection by on their own , then these charges non claimable by the bidder.  List of TPIA  1.M/s Bureau Veritas  2.M/s TUV-Nord  3.M/s TUV-SUD  4.M/s TUV Rheinland  5.M/s Lloyds Register  6.M/s SGS  7.M/s Germanischer Lloyds  8.M/s QUEST  9.M/s Certification Engineers International  10.M/s Intertek  11.M/s IR Class Systems and Solutions  12.M/s DNV  13. M/s Fichtner  14. M/s ABS Inspection Services	

## $396522/2021/BAP\text{-}QA\_MECH$

SI.No	BHEL / Customer Requirements	##Specific confirmations by the manufacture(Acceptable/Not acceptable)
4	Stage Inspection during manufacturing Process: Stage Inspection during manufacturing shall be carried out as per approved quality plan and all necessary documents shall be provided for review, verification and clearanace for further processing. This inspection call shall be given well in advance (atleast 2 weeks before for Indeginious and 45 days forforeign) to TPI/Bidder's own inspection agency to avoid delay in the manufacturing processes.	
5	Inspection before despatch for domestic supplier: Inspection before despatch at supplier's works shall be carried out by Bidder appointed Inspection agency(As in SI no.3.) Inspection shall be done as per approved Quality plan/ Technical specification/ Approved Drawing/ Approved Data sheet.	
6	Inspection at Forign Source/Supplier: (a) As in sl no: 3. shall be ensured without fail (b) No materail / items shall be despatched without getting the written communication from BHEL / Customer inspection carried out by Bidder apointed Third Party Inspection Agency (As per Sl no.3) / Customer/Customer Apointed Inspection Agency/Consulatnat. This is applicable for all Stage inspection and Final Inspection identified as "W" - Witness or "CHP" - Customer Hold Point as per customer approved Quality Plan/ Technical specification / Approved Drawing/ Approved Data sheet / Scheme / PID / PFD / SLD (Process Instrumentaion Diagram / Process Flow Diagram / Single Line Diagram) etc (As applicable). Inspection before despatch for Foreign supplier: Inspection before despatch at supplier's works shall be carried out by bidder appointed inspection agencies having international presence at vendors and or vendor's sub vendor works. Inspection shall be done as per approved Quality plan/ Technical specification/ Approved Drawing/ Approved Data sheet by TPIA mentioned in Sl no: 03 at supplier's cost.	
7	Painting shall be done strictely as per BHEL/Customer approved painting schedule / scheme only. Paint Thickness / Paint shade shall be ensured as per BHEL / Customer approved painting schedule / specification / data sheet etc. No deviation is acceptable unless otherwise accepted by BHEL/Customer in writing. Any conflict if any among BHEL / Customer approved painting schedule / Spec / data sheet etc shall be brought to the notice to BHEL well in adavnce before proceding including the BOI being procured for assy / skid like motors etc	
8	Specific conformation for document package in the event of an order (2 Hard copies & soft copy in PDF file) is to be given containing the following with proper linkages  (i) Index Sheet  (ii) MQP/RQP/Endorsemment Sheet (As applicable)  (iii) TCs identfied by BHEL/ Customer for record for "CHP" / "W" and Verification portion ("V") as given in approved QP.  (iv) Final inspection report + TC including Chemical + Mechnaical + HT + NDT etc  (v) Third party Inspection report + TC  (vi) Customer CHP/ MDCC  (vii) Type test / Performance Test reports conducted  (viii) Type test / Performance Test approval/ clearance obtained from BHEL/Customer  (ix) BOM with As Build Drgs with actual make / rating used with BHEL/customer approved drawings.	
9	Packing / Seaworthy Packing shall be as per BHEL Packing schedule / approved drg / sketch. This shall be ensured to take care tarnsit / handling / transhipment in Road / Sea / Air. Photographs are to be submitted for BHEL review before despatching the material as per contract conditions.	
10	Outsourcing of test facilities: Bidder shall ensure all the testing facilities in house. However If any of the test facilities are not available with successful bidder, then bidder shall ensure the same at NABL accreadted third party lab / Govt / Govt Lab for major testing such as NDT, Electrical & Mechanical testing.	
11	Important Note: No deviation on the above requirement 01 to 10 is acceptable w.r.t Quality Requirement and those offers not meeting these specific customer requirement is liable for rejection and hence the bidder shall submit all the required documentary evidances in the offer itself.	
12	## Necessorily to be filled up by the bidder at the time of offer itself otherwise the offer may not be considered w.r.t Quality Requirement being customer specific requirement.	
13	If the OEM/Principal engaging the services of an agent to participate on their behalf, Then mention OEM /vendor Name & address as well as agent details with their sign and seal.	
	VENDOR SIGN AND STAMP:	Vendor Name & Address:

# **Details of BOI's/ Sub Systems with respect to Main Items**

Item/ Sub system Name	Quantity	Supplier Name	Place of Manufacturing
GINAL EQUIPMENT MANUFACT	URER) SEAL A	ND SIGN.	
			Item/ Sub system Name Quantity Supplier Name

# W.r.t FOREIGN OEM VENDORS

SI	Description & Quality Requirements	Specific confirmation by
no		the vendor
		(Confirmed/Not
		Confirmed)
01	OEM vendor shall meet all the requirements as in Annexure-II and also OEM Vendor shall endorse (Signature and Stamp in all the pages) in attached CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW used in Process Water Pumps & Mist Eliminator Wash and Emergency Quench Pumps for FGD application (DOC.NO: BAP/QR/G305, G306 & G307/Bongaigaon/PWMEW Pump/LTM: 002 Rev.00 dt 05.08.2021) and send us the same to follow / ensure all the requirements in the event of an order.	
02	OEM vendor shall ensure Credentials of design and Manufacturing capabilities w.r.t. LT Motors by their LT Motor manufacturers.	
03	OEM Supplier shall submit other details like that they are already approved vendor by Ultimate Customer – NTPC (National Thermal Power Corporation Limited) specifically for proposed supply of LT Motors against BHEL/Ranipet. The details of PO already executed preferably through various other BHEL units for any NTPC projects with CHP/MDCC including technical catalogue, PO received so far for similar supply of LT Motors.	
04	Accordingly OEM vendor shall be suitably informed that If Ultimate Customer – NTPC (National Thermal Power Corporation Limited) vendor approvals is not there /not available, then their offer will not be considered for further processing / ordering for the supply of LT Motors to take care of overall equipment/system requirements.	
05	No material shall be dispatched without BHEL/ Ultimate Customer – NTPC (National Thermal Power Corporation Limited) inspection - CHP/MDCC clearances.	

### **Annexure-II**

### CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW

## (For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)

PROJECT: NTPC Bongaigaon 3 x 250MW (BHEL W.O no: G305, G306 and G307)  NTPC CONTRACT NO: CS-4610-101-2-FC-COA-5066-AMDT-04 for Bongaigaon FGD 3 x 250 MW  PACKAGE: FGD PACKAGE MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OEM) & ADDRESS:  (To be filled by OEM VENDOR)		06 and G307) 066-AMDT-04 00 MW GE M) & VENDOR)	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Process Water Pumps & Mist Eliminator Wash and Emergency Quench Pumps  NTPC Bongaigaon 3 x 250MW (BHEL W.O no: G305, G306 and G307)	DOC.NO: BAP/QR/G305, G306 & G307/Bongaigaon/PWMEW Pump/LTM: 002 Rev NO.: 00 PAGE: Page 1 of 6 DATE: 05.08.2021	##Enquiry No:  ## OEM Supplier Name & Address:  ##Offer reference:  ##Date:  Contact Official Name:  Mobile no: Email id:			
SI. NO.	DESCRIPTION	nal Thermal Power irements	##Specific confirmations by the vendor					
01	Type Test Requirements	SL NO: 0 ultimate reports s Motors to either sh should h Inspection	A. Vendor shall submit the type test reports of all the type tests as listed in SL NO: 01 (D) below and carried out within 10 years from the date of ultimate Customer NTPC COA Amendment 04 dt 11.11.2019. These reports should be for the test conducted on the identical/similar LT Motors to those proposed to be supplied under this enquiry and test (s) either should have been conducted at an independent laboratory (or) should have been witnessed by BHEL/BHEL AIA (BHEL Appointed Inspection Agency) (or) Ultimate customer NTPC (National Thermal Power Corporation) at respective LT Motor Manufacture of OEM vendor.					
		report as are not acceptabl vendor sh	per above condition in 01 (A) (or) in the found to be meeting the specification to BHEL/BHEL AIA/ Ultimate Chall conduct all these tests at no additional teputed third party lab (or) Government	the case of type test reports ion requirement and not customer – NTPC,, the ional cost if any to BHEL				

lab in the presence of BHEL AIA (BHEL Appointed Inspection Agency)  $^{\prime}$  BHEL  $^{\prime}$  Ultimate client NTPC and submit the reports for BHEL  $^{\prime}$ 

Type Test reports review and approval by BHEL AIA (BHEL Appointed Inspection Agency) / BHEL / Ultimate client NTPC is must in line with NTPC approved data sheet / BOM (Bill of Material) /GA

Ultimate Customer – NTPC review & approval.

(General Arrangement) Drawing etc.

# Annexure-II CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW

# (For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)

PROJECT: NTPC Bongaigaon 3 x 250MW (BHEL W.O no: G305, G306 and G307)  NTPC CONTRACT NO: CS-4610-101-2-FC-COA-5066-AMDT-04 for Bongaigaon FGD 3 x 250 MW  PACKAGE: FGD PACKAGE MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OEM) & ADDRESS: (To be filled by OEM VENDOR)		06 and G307) 066-AMDT-04 50 MW GE M) & VENDOR)	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Process Water Pumps & Mist Eliminator Wash and Emergency Quench Pumps  NTPC Bongaigaon 3 x 250MW (BHEL W.O no: G305, G306 and G307)	DOC.NO: BAP/QR/G305, G306 & G307/Bongaigaon/PWMEW Pump/LTM: 002 Rev NO.: 00 PAGE: Page 2 of 6 DATE: 05.08.2021	##Enquiry No:  ## OEM Supplier Name & Address:  ##Offer reference:  ##Date:  Contact Official Name:  Mobile no: Email id:
SI. NO.	DESCRIPTION	BHEL a	nd Ultimate Customer - NTPC (Natior Corporation)., India Quality Requi		##Specific confirmations by the
					vendor
0.1		D 771 6.11	ITEM: LT Motors(IE3) - Up to		
01	Type Test Requirement		wing Type test reports to be submitted to 50KW LT Motor as per relevant		
	(Contd)		- BIS 325 / IEC 60034 etc	Dis (Duleau of Ilidian	
		ii. No lo speed iii. Open moto iv. Full l v. Temp vi. Mom vii. High viii. Test ix. Test be lin maxi x. Over xi. Degra xii. Type proof E. The TCs/	circuit voltage ratio of wound rotor		
02	Quality Plan Requirement	b. If any of lapproved same is apobtaining	anufacturing Quality Plan) is applicable dingly Actual LT Motor Manufacture customer – NTPC format for review and Customer - NTPC.  LT Motor manufacture is having, ultimate MQP (Manufacturing Quality Plan) and applicable for these LT Motor for inspectuation of the customer NTPC formal appropriate approval route ough endorsement sheet approval route		

# Annexure-II CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW

# (For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)

PROJECT: NTPC Bongaigaon 3 x 250MW (BHEL W.O no: G305, G306 and G307)  NTPC CONTRACT NO: CS-4610-101-2-FC-COA-5066-AMDT-04 for Bongaigaon FGD 3 x 250 MW  PACKAGE: FGD PACKAGE MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OEM) & ADDRESS:  (To be filled by OEM VENDOR)  SI. DESCRIPTION BHEL ar			CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Process Water Pumps & Mist Eliminator Wash and Emergency Quench Pumps  NTPC Bongaigaon 3 x 250MW (BHEL W.O no: G305, G306 and G307)  nd Ultimate Customer - NTPC (Nation	REQUIREMENTS (CQR) for T MOTORS(IE3) - Up to 200KW used in Process Water Pumps & G307/Bongaigaon/PWMEW Pump/LTM: 002 Rev NO.: 00 PAGE: Page 3 of 6 DATE: 05.08.2021  NTPC Bongaigaon 3 x 250MW (BHEL W.O no: G305, G306 and				
NO.			Corporation)., India Quality Requi	irements	confirmations by the vendor			
		<u> </u>	ITEM: LT Motors(IE3) - Up to	200KW	2011001			
02	Quality Plan Requirement contd	filled up I approved from BHI	gly, LT Motor Manufacture & OEM su Endorsement sheet (copy attached) with MQP with signature & seal in the even EL for BHEL/Ultimate Customer – NT otor Manufacture / OEM vendor do					
		and it is n	ndicative MQP is attached for inf and of ot final and binding on BHEL / Ultima	ate Customer NTPC.				
03	Inspection Methodology to be adopted at Actual LT Motor Manufacture	inspection MQP & Indian St	<ul> <li>a. All LT Motors are to be inspected by BHEL AIA (BHEL authorized inspection Agency) at LT Motor manufacture works as per approved MQP &amp; approved data sheet/drg/spec/ as per relevant BIS (Bureau of Indian Standard) - BIS 325 / IEC 60034 etc by BHEL / Ultimate Customer-NTPC</li> </ul>					
	works by OEM vendor	inspection MQP & a	ne Tests are to be witnessed by BHE n Agency) at LT Motor manufacture approved data sheet/drg/spec / as per andard) - BIS 325 / IEC 60034 etc -NTPC	e works as per approved relevant BIS (Bureau of				
		Customer works and reports in approved	AIA (BHEL authorized inspection in-NTPC to witness / perform inspected submit all the inspection documents cluding Degree of Protection Test Rep MQP & approved data sheet / drg / soft Indian Standard) - BIS 325 / IEC 66	ion at LT Motor Supplier s and routine & Type test ports (IP 55) as per spec / as per relevant BIS				

### **Annexure-II**

#### CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW

For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY) PROJECT: CONTRACT QUALITY ##Enquiry No: DOC.NO: REOUIREMENTS (CQR) for NTPC Bongaigaon 3 x 250MW BAP/QR/G305, G306 (BHEL W.O no: G305, G306 and G307) LT MOTORS(IE3) - Up to 200KW used ## OEM Supplier Name & G307/Bongaigaon/PWMEW Address: Pump/LTM: 002 NTPC CONTRACT NO: **Process Water Pumps &** CS-4610-101-2-FC-COA-5066-AMDT-04 Rev NO.: 00 ##Offer reference: Mist Eliminator Wash and for Bongaigaon FGD 3 x 250 MW PAGE: Page 4 of 6 DATE: 05.08.2021 **Emergency Quench Pumps** ##Date: PACKAGE: FGD PACKAGE MAIN CONTRACTOR: Contact Official Name: **BHEL - RANIPET** Mobile no: SUB CONTRACTOR (OEM) & NTPC Bongaigaon 3 x 250MW Fmail id: ADDRESS: (BHEL W.O no: G305, G306 and G307) (To be filled by OEM VENDOR) **DESCRIPTION BHEL and Ultimate Customer - NTPC (National Thermal Power** ##Specific SI. NO. Corporation)., India Quality Requirements confirmations by the vendor ITEM: LT Motors(IE3) - Up to 200KW LT Motors up to 30KW – Inspection Categorization: III 03 Inspection All Routine tests on LT Motors are to be ensured by OEM Vendor & same Methodology are to be inspected & witnessed by OEM Vendor / BHEL / BHEL AIA to be adopted at Actual LT (BHEL authorized inspection Agency) at LT Motor manufacture works as Motor per approved MOP & approved data sheet /drg / spec/ as per relevant BIS Manufacture (Bureau of Indian Standard) - BIS 325 / IEC 60034 etc and all the Routine works by OEM Test Reports with Inspection report (IR) to be submitted for BHEL/Ultimate vendor...contd Customer – NTPC for review and to obtain inspection and dispatch clearance. LT Motor Manufacturer has to issue COC(Certificate of Conformance) states that the above motor/ motors was manufactured taking care of Customer specific requirements regarding ambient temp., voltage and frequency variation, hot starts, pull out torque, starting KVA/KW, temp. rise, distance between cantre of stud and gland plate, space heater and tested in accordance with approved drawing/data sheets LT Motors (30KW to 50KW) - Inspection Categorization: II All Routine Tests on LT Motors are to be ensured by OEM vendor & same are to be inspected & witnessed by BHEL / BHEL AIA (BHEL authorized inspection Agency) at LT Motor manufacture works including review of Type Test Reports and Degree of Protection Test Reports (IP 55) as per approved MQP & approved data sheet/drg/spec / as per relevant BIS (Bureau of Indian Standard) - BIS 325 / IEC 60034 etc and all the Routine Test Reports with Inspection report (IR) to be submitted for BHEL/Ultimate Customer - NTPC for review and to obtain inspection and dispatch clearance.

#### Above 50KW and up to 200KW - Inspection Categorization: I

All Routine & Type Tests if any on LT Motors are to be ensured by OEM Vendor at Actual LT Motor Manufacture Works and same shall be offered to BHEL/ BHEL AIA (BHEL authorized inspection Agency) / Ultimate Customer-NTPC for inspection & witnessing including review of Degree of Protection Test Reports as per approved MQP /RQP (Reference Quality Plan with endorsement sheet approved) / approved data sheet / drg / spec / as per relevant BIS (Bureau of Indian Standard) - BIS 325 / IEC 60034 etc and all the Routine Test Reports with Inspection report (IR) to be submitted for BHEL/Ultimate Customer – NTPC review and to obtain inspection and dispatch clearance.

### **Annexure-II**

### CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW

	<u>(For 1</u>	FOREIG	N (OUTSIDE INDIA)	OEM VENDOR	ONLY)				
PROJECT: NTPC Bongaigaon 3 x 250MW (BHEL W.O no: G305, G306 and G307)  NTPC CONTRACT NO: CS-4610-101-2-FC-COA-5066-AMDT-04 for Bongaigaon FGD 3 x 250 MW  PACKAGE: FGD PACKAGE MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OEM) & ADDRESS:  (To be filled by OEM VENDOR)			CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Process Water Pumps & Mist Eliminator Wash and Emergency Quench Pumps  NTPC Bongaigaon 3 x 250MW (BHEL W.O no: G305, G306 and G307)	DOC.NO: BAP/QR/G305, G306 & G307/Bongaigaon/PWMEW Pump/LTM: 002 Rev NO.: 00 PAGE: Page 5 of 6 DATE: 05.08.2021	##Enquiry No:  ## OEM Supplier Name & Address:  ##Offer reference:  ##Date:  Contact Official Name: Mobile no: Email id:				
SI.	DESCRIPTION	BHEL a	nd Ultimate Customer - NTPC (Nation	nal Thermal Power	##Specific				
NO.			Corporation)., India Quality Requ	irements	confirmations by the				
					vendor				
04	Inspection Methodology to be adopted at Actual LT Motor Manufacture works by OEM vendorcontd	LT Motor Ma inspection Ag scope and artests including Manufacture V Customer – N  As such No exorder and also  No material Ultimate Customer Custom	ITEM: LT Motors(IE3) - Up to s / tests /review of documents / ins nufacture by OEM /BHEL / BHEL gency) ) / Ultimate Customer-NTP ny cost implication arising out of due to for witnessing of any of the tests at A Works (or) at third party etc by BHEL TPC are in the scope of OEM Supplied tra cost if any will be admissible and during execution of the contract .  shall be dispatched without Browner – NTPC Inspection and disparement like paint shade and painting the						
	Requirements	coats if any a	Painting requirement like paint shade and painting thickness including no of coats if any are to be ensured by the OEM vendor for these LT Motors as per BHEL/ Ultimate Customer -NTPC approved data sheet/drg/spec (As applicable)						
05	Packing	Packing shall packing if any	be as per Specification / Drg. / Data s to avoid any transit & handling dama	nges					
06	For Inspection call	Motor Manuinspection witnessing if (QC-Proc)., and Mr Zees Email id: zee for immediate	Inspection call by OEM Vendor for LT Motor inspection at Actual LT Motor Manufacture works to be raised for BHEL/BHEL AIA inspection / Ultimate Customer – NTPC including for type test witnessing if any to be ensured / addressed to Mr R Kesavan., DGM (QC-Proc)., Mobile no: +91 9443006303., Email id: kesavan@bhel.in and Mr Zeeshan Ali., Sr.Engineer (QC-Proc)., Mobile no: 9443149691., Email id: zeeshan@bhel.in including for inspection related activities for immediate response / resolution.						
07	Document Package / Dossier	copies + soft of proper linkage (i) Inde	rmation for Document Package in the copies in PDf file) is to be given contes (.)  x Sheet						

(ii)

(iii)

(iv)

(v)

(vi)

MQP/RQP/Endorsement sheet

Final Inspection Report + TC

BHEL report + TC

Clearance Certificate)

TCs identified by BHEL/NTPC for record for "CHP"

BHEL AIA (BHEL Appointed Inspection Agency) /

as given in MQP / RQP / MQP (as applicable).

(Customer Hold Point) Verification & Witness "W" portion

Ultimate customer NTPC (National Thermal Power Corporation) CHP (Customer Hold Point) / MDCC (Material Dispatch

# Annexure-II CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW

## (For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)

NTPC (BHE NTPC CS-44 for B PACI MAII BHE SUB ADD	PROJECT: NTPC Bongaigaon 3 x 250MW (BHEL W.O no: G305, G306 and G307)  NTPC CONTRACT NO: CS-4610-101-2-FC-COA-5066-AMDT-04 for Bongaigaon FGD 3 x 250 MW  PACKAGE: FGD PACKAGE MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OEM) & ADDRESS:  (To be filled by OEM VENDOR)		Process Water Pumps &  Mist Eliminator Wash and Emergency Quench Pumps  NTPC Bongaigaon 3 x 250MW (BHEL W.O no: G305, G306 and G307)		DOC.NO: BAP/QR/G305, G306 & G307/Bongaigaon/PWMEW Pump/LTM: 002 Rev NO.: 00 PAGE: Page 6 of 6 DATE: 05.08.2021		## OE Addre	er reference: e: ct Official Name: e no:	
SI. NO.	DESCRIP'	TION	BHEL a	nd Ultimate Customer - NTPC Corporation)., India Qualit	-		al Power	con	##Specific firmations by the vendor
				ITEM: IT Motors(IF3)	- Un to 20	nkw			Vendor
07	Document   (vii)   Type test reports conducted/submitted with approval with   Package /   Dossiercontd   Customer approved drgs.								
08	Importan notes	tails	Inspection Cate Inspection by M Customer – NT Inspection Cate COC by Main inspection as ir Any cost impl any of the tes AIA / Ultimat no extra cost i execution of the	BHEL/BHEL AIA and also by Ultimate Customer – NTPC based approved and as in sl no:03  egorization: II  Main contractor (BHEL) / BHEL AIA based on Ultimate CPC approved MQP/RQP & based on inspection as in sl no:03  egorization: III  contractor (BHEL) to Ultimate Customer – NTPC based on a sl no:03  ication for conducting checks / tests including for witnessing of ts at Actual LT Motor Manufacture Works by BHEL / BHEL e Customer – NTPC is in the scope of OEM Supplier only and f any will be admissible in the event of an order and also during					
				lotor details involved in Pumps	s applicable	e for th	is enquiry.		
	S. No	aigaon 3	x 250 MW – FGD Driv	Project:- en Equipment	Rating (in		LT Motor Quantity	Proposed Make	$\exists$
	1	Proces	s Water Pump					Hunc	
	2	Mist E	liminator Wash and	Emergency Quench Pump					
	3 4	1							_
	5								<del>- </del>
	6								
	7				-				
	8								
	10								
	11								
	12								
							OEM Supi	l olier signat	ure with seal

## Necessarily to be filled up & submitted by the OEM vendor at the time of offer itself otherwise the offer may not be considered w.r.t Quality Requirements against LT Motors being BHEL/ ultimate customer – NTPC (National Thermal Power **Corporation Limited)** specific requirements.

# ENDORSEMENT SHEET FOR QP REFERENCE / STANDARD / FIELD QUALITY PLAN (RQP / SQP/RFQP/SFQP)

TO BE FILLED IN BY SUPPLIER AT T	IME OF SUBMISSION	एनर्रीपीरी NTPC To be filled in by NTPC
PROJECT NAME	NTPC Bongaigaon 3 x 250 MW FGD Project (BHEL W.O no: G305, G306 and G307)	2REVIEW & ENDORSEMENT BY NTPC PROJECT SPECIFIC QP NUMBER ALLOTTED
CONTRACT NO.:	CS-4610-101-2-FC-COA-5066-AMDT-04 for Bongaigaon FGD (3 x 250MW)	
MAIN SUPPLIER	M/S.BHEL, RANIPET , TAMIL NADU., INDIA	QP NO:
MANUFACTURER WORKS & ADDRESS	(TO BE FILLED BY OEM / LT MOTOR SUPPLIER	REV. NO.: 00 DT:
ITEM /EQUIPMENT / SYSTEM/ SUB-SYSTEM DETAILS i.e. MODEL TYPE/SIZE/RATING etc. APPROVED QP NO.: RQP/SQP/RFQP/SFQP	LT MOTOR(IE3) – PROCESS WATER PUMPS & MIST ELIMINATOR WASH AND EMERGENCY QUENCH PUMPS FOR FGD APPLICATION  (TO BE FILLED BY OEM / LT MOTOR SUPPLIER	
Confirmation by Main Supplier (TICK WHICHE)		(TICK APPLICABLE)
I. That the item/ component is identical to that con II. That there are minor changes in the item/ com the same do not affect the contents of MQP/RQP/S	ponent with respect to that considered for MQP/RQP/SQP approval, however	The MQP/RQP/SQP is endorsed for this project without any change
the same affect the MQP/RQP/SQP slightly, as ind	nponent with respect to that considered for MQP/RQP/SQP approval, however licated below / in attached sheet.	The SQP is endorsed for this project with changes as indicated.  DISTRIBUTION OF ENDORSEMENT OF  A) MQP/RQP/SQP:  1. MAIN SUPPLIER (WITH A COPY OF MQP/RQP/SQP)  2. MANUFACTURER 3. RIO 4. CQA-SPL 5. CQA-O/C B) RFQP/SFQP: 1. MAIN SUPPLIER (with a copy of MQP/RQP/SQP 2. MANUFACTURER 3. NTPC FQA (with a copy of MQP/RQP/SQP 4. NTPC Erection (with a copy of MQP/RQP/SQP 5. CQA-SPL 6. CQA-O/C
	(TO BE FILLED BY OEM / LT MOTOR SUPPLIER	NTPC (Reviewed /Approved by/ Date & Seal)
SIGN.: (Main Supplier) DATE:	SIGN.: (Manufacturer ) DATE:	,

BHEL BAP/ RANIPET / TAMIL NADU INDIA		OEM SUPF To be fille OEM Sup  LT MOT Manufac	ed by plier OR	L.	MANUFACTURING QUALITY PLAN FOR					M:BONGAIG ) )4.2021	AON:FGE	D:PWMEW PUMPS:001
		To be filled b	y OEM									
S1.No.	COMPONET/A SSEMBLY/OPE RATION/TEST S	-	CLASS	TYPE OF CHECK	QUANUTM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF REC	D	AGENCY M	BHEL/ BHEL AIA	REMARKS
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	1		12.
1.1	MING INSPCI Enamelled round copper conductor(Dual coated)MM		Major Major	Mechanical  Mechanical	1 sample/lot 1 sample/lot	IS 13730 1993 Part 13 / IEC 60317-0-1-2008 (As applicable) BHEL / NTPC Spec & Apprd	IEC 60317-0-1 2008  BHEL / NTPC Spec & Apprd	Plant format		P P	V	
		diameter 3.BDV test	Major	Electrical	1 sample/lot	Datasheet do	Datasheet do	Plant format		P	V	
		4.Elongation	Major	Mechanical	1 sample/lot	do	do	Plant format		Р	٧	
		5.Continuity (insulati on)	Major	Electrical	1 sample/lot	do	do	Insp report/ Supplier TC		Р	V	
		6.Tan Delta (If applicable)	Major	Electrical	1 sample/lot	do	do	Insp report/ Supplier TC		Р	V	EC gr purity: -99.6%
1.2	Aluminum Ingots	1.Chemical composition	Major	Chemical	1 sample/lot	do	do	Supplier Tc		Р	٧	20 g. panty. 00.070
1.3	FAN	1.Diameter (ID&OD)	Major	Mechanical	1 sample/lot	do	do	Inspection Report		Р	V	
1.4	Bearings (SKF OR FAG)	1.Type & Make	Major	Visual	100%	do	do	Inspection Record		Р	V	
1.5	Torminal Plack	2.Dimensions - ID,OD&width	Major	Mechanical	1 sample/lot	do	do	Inspection Record		P P	V V	
1.5	Terminal Block	1.Dimensions     2.Proof voltage test	Major Major	Mechanical Electrical	Plant std.	do	do	Inspection Report		P	V	

	BHEL / RANIPET / MIL NADU INDIA	OEM SUP To be fille OEM Sup  LT MOT Manufact To be filled by Supplie	ed by oplier OR cture	L.	MANUFACTURING QUALITY PLAN FOR LT MOTOR ( Up to TO 200KW) - FGD Application  Pa						AIGAON:FGD	:PWMEW PUMPS:(
S1.No.	COMPONET/A SSEMBLY/OPE RATION/TEST S		CLASS	TYPE OF CHECK	QUANUTM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF REC	D	AGENC M	BHEL/ BHEL AIA	REMARKS
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.		11.	12.
NPR	OCESS INSP	CETIONS:										
2.1	Stator core	Core length dia     Core locking	Major Major	Mechanical Visual	100%	do	do	Inspection Record		P P	V	
		3.Rigidity of core	Major	Mechanical	100%	do	do	Inspection Record		Р	٧	
2.2	Die cast rotor	1.Core length	Major	Mechanical	100%	do	do	Inspection Record		Р	V	
		2.Blow holes	Major	Mechanical	100%	do	do	Inspection Record		Р	V	
2.3	Wound stator (if applicable)	1.Resistance	Major	Electrical	100%	do	do	Inspection Record		Р	V	
		2.H.V.Test	Major	Electrical	100%	do	do	Inspection Record		Р	V	
		3.Insulation resisitance	Major	Electrical	100%	do	do	Inspection Record		P	V	
2.4	Final Assembiy	1.Completeness	Major	Visual	100%	do	do	Inspection Record		Р	V	
		2.Runout in case of flanged motors	Major	Mechanical	100%	do	do	Inspection Record		Р	V	
		3.Mounting dimensions	Major	Mechanical	100%	do	do	Inspection Record		Р	V	

BHEL BAP/ RANIPET / TAMIL NADU INDIA		LT MOTOR  Manufacture  To be filled by OEM  Supplier		Lī	MANUFACTURING QUALITY PLAN FOR LT MOTOR ( Up to TO 200KW) - FGD Application					REV:NO:00  DATE: 15.04.2021  Page:			
S1.No.	COMPONET/A SSEMBLY/OPE RATION/TEST S		CLASS	TYPE OF CHECK	QUANUTM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF REC	D	AGENCY M	BHEL/ BHEL AIA	REMARKS	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.		12.	
FINA	INSPCETIO	N AND TESTING	ì:										
3.1	Routine Test	Resistance     Measurement on     winding & space     heater	Major	Electrical		BHEL / NTPC Spec, GA Drawing & Apprd Datasheet and IS/IEC 60034 (As applicable)	BHEL / NTPC Spec, GA Drawing & Apprd Datasheet and IS/IEC 60034 (As applicable)	Inspection Record		Р	W		
		2.HV Test	Major	Electrical	100%	do	do	Inspection Record		Р	W		
		3.Phase sequence & direction of rotation	Major	Electrical	100%	do	do	Inspection Record		Р	W		
		4.No load run test	Major	Electrical	100%	do	do	Inspection Record		Р	W		
		5. Vibration test	Major	Mechanical	100%	do	do	Inspection Record		Р	W		
		6.Name plate recheck	Major	Visual	100%	do	do	Inspection Record		Р	W		
		7.Paint shade thickness & adhesion	Major	Visual & Measurement	100%	do	do	Inspection Record		Р	W		
		8.Moutings & Overall dimensions	Major	Mechanical	100%	do	-do-	Inspection Record		Р	W		

	BHEL P/ RANIPET / AMIL NADU INDIA			LT MOTOR ( Up to TO 200KW) - FGD Application					MQP:E:LTM:BONGAIGAON:FGD:PWMEW PUMPS:0 REV:NO:00 DATE: 15.04.2021 Page:			
S1.No	COMPONET/A SSEMBLY/OPE RATION/TEST S	-	CLASS	TYPE OF CHECK	QUANUTM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF REC	D	AGENCY M	BHEL/ BHEL AIA	REMARKS
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.		12.
3.2	TYPE TESTS ###	•	•	•	•		•		•	•		•
3.3	Preservation and Packing	1.Completeness	Major	Review	100%	do	do	Inspection Record		Р	V	
		2.Motors covered with polythene sheets	Major	Visual	100%	do	do	Inspection Record		Р	V	
		3.Packing	Major	Visual	100%	do	do	Inspection Record		Р	٧	

### TYPE TEST REQUIREMENTS FOR LT MOTOR INCLUDING DEGREE OF PROTECTION TEST REPORT (IP 55)

BHEL/BHEL AIA (Authorised Inspection Agency) shall review the Identical design type test report during including degree of Protection Test report (IP 55) for acceptance in line with BHEL/Ultimate Customer - NTPC approved Data sheet/Drg/Spec for LT Motor rating up to 50KW and BHEL/Ultimate Customer NTPC approved type test report for LT Motor rating more than 50KW and up to 200KW. If not aviilable for Similar / Identical Design of any of the LT Motor motor, then OEM / LT Motor Manufacture shall conduct all these type tests at Third party lab / Government Approved Lab / Own lab in presence of BHEL/BHEL AIA / without any cost implication to BHEL/Ultimate Customer - NTPC within reasonable time.

- 1. Measurement of Resistence of Stator
- 2. No Load test at Rated Voltage
- 3.. Pull out test
- 4.Temperature Rise Test
- 5. Momentary Excees Torque Torque Test
- 6. High Voltage Test
- 7. Test for Vibration Severity
- 8.Test for Noise Level Measurement
- 9. Over Speed Test
- 10. Degree of Protection TC (IP 55)

LEGEND:

OEM = Orgional Equipement Supplier M = LT Motor Manufacture -

BHEL AIA = BHEL AUTHORISED INSPECTION AGENCY

**GA Drawing: General Arrangment Drawing** 

NTPC - NATIONAL THERMAL POWER CORPORATION (Ultimate Customer)

**OEM SUPPLIER:** (To be Filled up by **OEM Supplier**)

LT MOTOR Manufacture : (To be Filled up by OEM Supplier)

(TC	EM SUPPLIER WITH OEM MFGR.'s LOGO DEFILLED BY EM SUPPLIER)	NAME AN (TO BE FI	R MANUFACTURER'S D ADDRESS LLED BY OEM / R MANUFACTURE)	ITEM: LT MOTOR(IE3) UP TO 200KW FOR FGD APPLICATION  SUB-SYSTEM: FGD – PROCESS WATER PUMPS & MIST ELIMINATOR WASH AND EMERGENCY QUENCH PUMPS			QP NO.: PWMEW PUMPS: LT MOTOR:001 REV.NO.: 00 DATE: PAGE: OF			- (BHEL W.O no: G305, G306 and G307) FGD PACKAGE  NTPC CONTRACT NO: CS-4610-101-2-FC-COA-5066-AMDT-04 for Bongaigaon FGD (3 x 250 MW)  MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OEM) & ADDRESS: (TO BE FILLED BY OEM SUPPLIER)				or Bongaigaon NIPET RESS:	
SL. NO	COMPONE OPERATIO		CHARACTERISTIC	CLASS CLASS	TYPE OF CHECK	QUANT OF CHI M		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMA RECO			GENC		REMARKS
<mark>1.</mark>	2.		3.	4.	<mark>5.</mark>	6.	C/N	<mark>7.</mark>	<mark>8.</mark>	<b>9.</b>	D*	<b>M</b> ∗	C * 10	N 0.	11.
			LEG	END: * RECO	RDS, INDENTI	FIED WITH	I "TICK"	'(√) SHALL BE		DOC. NO.:				REV.	CAT
LT M		SUPPI ATURE	(BHEL) LIER  ** M P: PE CHP:	NTPC SHALL ID	CTURER/LT M BHEL/BHEL A NESS AND <b>V</b>	IOTOR SUI IA , N: N' : VERIFIC <i>I</i>	B-SUPPL TPC ATION. A	JIER AS APPROPRIATE,	FOR NTPC USE	REVIEWED	BY			VED BY	APPROVAL SEAL
FOR	MAT NO.: QS-0	01-QAI-P-(	09/F1-R1 1/1									]	ENG(	G. DIV.	/QA&I



# W.r.t INDIGENOUS OEM VENDORS

SI	Description & Quality Requirements	Specific confirmation by
no		the vendor
		(Confirmed/Not
		Confirmed)
01	OEM vendor shall meet all the requirements as in Annexure-I	
	and also OEM Vendor shall endorse (Signature and Stamp in	
	all the pages) in attached CONTRACT QUALITY	
	REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW used	
	in Process Water Pumps & Mist Eliminator Wash and	
	Emergency Quench Pumps for FGD application (DOC.NO:	
	BAP/QR/G305, G306 & G307/Bongaigaon/PWMEW	
	Pump/LTM: 001 Rev.00 dt 05.08.2021) and send us the same	
	to follow / ensure all the requirements in the event of an	
	order.	
02	OEM vendor shall ensure Credentials of design and	
	Manufacturing capabilities w.r.t. LT Motors by their LT Motor	
	manufacturers.	
03	OEM Supplier shall submit other details like that they are	
	already approved vendor by Ultimate Customer – NTPC	
	(National Thermal Power Corporation Limited) specifically	
	for proposed supply of LT Motors against BHEL/Ranipet. The	
	details of PO already executed preferably through various	
	other BHEL units for any NTPC projects with CHP/MDCC	
	including technical catalogue, PO received so far for similar	
0.4	supply of LT Motors.	
04	Accordingly OEM vendor shall be suitably informed that	
	If Ultimate Customer – NTPC (National Thermal Power Corporation Limited) vendor approvals is not there /not	
	available, then their offer will not be considered for further	
	processing / ordering for the supply of LT Motors to take care	
	of overall equipment/system requirements.	
05	No material shall be dispatched without BHEL/ Ultimate	
	Customer – NTPC (National Thermal Power Corporation	
	<b>Limited)</b> inspection - CHP/MDCC clearances.	

# Annexure-I CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW

# (For INDIGENOUS OEM VENDOR ONLY)

PRO	JECT:		CONTRACT QUALITY	DOC.NO:	##Enquiry No:
	C Bongaigaon 3 x 250N		REQUIREMENTS (CQR) for	BAP/QR/G305, G306 &	
(BHI	EL W.O no: G305, G30	06 and G307)	LT MOTORS(IE3) - Up to 200KW used	G307/Bongaigaon/PWM	## OEM Supplier Name &
NTP	C CONTRACT NO:		in Dragge Water Dumps &	EW Pump/LTM: 001	Address:
	610-101-2-FC-COA-5(	066-AMDT-04	Process Water Pumps &	Rev NO.: 00	##Offer reference:
for B	ongaigaon FGD 3 x 25	60 MW	Mist Eliminator Wash and	PAGE: Page 1 of 6	##Offer reference.
DAC	KAGE: FGD PACKA	CE	<b>Emergency Quench Pumps</b>	DATE: 05.08.2021	##Date:
	N CONTRACTOR:	GE			
	L - RANIPET				Contact Official Name:
	CONTRACTOR (OE)	M) &	NTPC Bongaigaon 3 x 250MW		Mobile no: Email id:
ADD	RESS:		(BHEL W.O no: G305, G306 and		Email Id.
(To	be filled by OEM	VENDOR)	G307)		
(20	of illied of Olivi	(21(2011)			
SI.	DESCRIPTION	BHEL and	Ultimate Customer - NTPC (Nationa	Thermal Power	##Specific confirmations
NO.			Corporation)., India Quality Require		by the vendor
					,
0.1	7D 7D 4	A \$711	ITEM: LT Motors(IE3) Up to 2		
01	Type Test		hall submit the type test reports of all	• 1	
	Requirements		: 01 (D) below and carried out within		
			te customer NTPC COA Amendme orts should be for the test conducted or		
			rs to those proposed to be supplied u		
			either should have been conducted		
		\ /	(or) should have been witnessed by		
			d Inspection Agency) / BHEL (or) Ul		
		1.1	ELT Motor Manufacture of OEM vend		
			if vendor is not able to submit the s		
			t as per above condition (or) in the ca		
			und to be meeting the specification re		
			luct all the tests at no additional cost to		
			(or) own lab in the presence of		
			d Inspection Agency) / BHEL /Ultim		
			e reports for review & approval.		
			est reports review and approval by		
		* I	d Inspection Agency) / BHEL / Ulti	,	
			ne with NTPC approved data sheet / B		
			owing Type test reports to be sub		
			for above 50KW LT Motor as per re-		
		_	andard) - BIS 325 / IEC 60034 etc	(= 0.0000 0.000	
			,		
		i. Meas	uring of resistance of winding of sta	ator and wound rotor	
			plicable)		
			oad test at rated voltage to determine	input current, power	
		and s		-	
		iii. Open	circuit voltage ratio of wound rotor n	notor (in case slip ring	
		moto			
			oad test to determine efficiency power	factor and slip	
		_	perature rise test.		
			entary excess load test		
			voltage test		
			for vibration severity of motor		
			of noise levels of motor (Noise level for		
			be limited to 85dB(A) except for BF	P motor for which	
			naximum limit shall be 90dB(A).)		
			speed test	<b>D</b>	
			ee of Protection Tests (Minimum Ingre		
			test reports for motors located in fuel		
		proof	Fenclosures as per BIS 2148/ IEC 6007	79-1	

### Annexure-I

### CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW

### (For INDIGENOUS OEM VENDOR ONLY)

	<u>(</u>	For IND	IGENOUS OEM V	ENDUR UN	LY)
NTPO (BHE NTPO CS-44 for B PACI MAII BHE SUB ADD	JECT: C Bongaigaon 3 x 250N EL W.O no: G305, G30C C CONTRACT NO: 610-101-2-FC-COA-50 congaigaon FGD 3 x 25 KAGE: FGD PACKAN C CONTRACTOR: L - RANIPET CONTRACTOR (OED RESS: be filled by OEM	06 and G307) 066-AMDT-04 00 MW GE	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Process Water Pumps & Mist Eliminator Wash and Emergency Quench Pumps  NTPC Bongaigaon 3 x 250MW (BHEL W.O no: G305, G306 and G307)	DOC.NO: BAP/QR/G305, G306 & G307/Bongaigaon/PWM EW Pump/LTM: 001 Rev NO.: 00 PAGE: Page 2 of 6 DATE: 05.08.2021	##Enquiry No:  ## OEM Supplier Name & Address:  ##Offer reference:  ##Date:  Contact Official Name: Mobile no: Email id:
SI. NO.	DESCRIPTION	BHEL and	d Ultimate Customer - NTPC (Nationa Corporation)., India Quality Require	##Specific confirmations by the vendor	
		•	ITEM: LT Motors(IE3) Up to		
01	Type Test Requirement Contd		/ Type Test reports shall also be givet & page control through Email & S9MB).		
02	Quality Plan Requirement	2. RQP these Man ultim  3. If an NTP (Refeappli obtai even	P or MQP is applicable for these LT  P/MQP (Manufacturing Quality Plate LT Motors and accordingly ufacture and OEM shall submit atte customer – NTPC format.  The objective of LT Motor manufacture is having the composition of the composition of the composition of the customer NTPC for in the composition of the customer NTPC for at of an order through endorsements as in sl no: 4 below		

**4.** Accordingly, LT Motor Manufacture & OEM supplier shall submit the filled up Endorsement sheet (copy attached) with ultimate customer approved MQP/RQP with signature

5. If LT Motor Manufacture / OEM vendor does not have MQP/RQP, they should submit a fresh MQP to BHEL/NTPC (in NTPC format) for review & approval. (copy

& seal in the event of a Purchase Order from BHEL.

attached).

### Annexure-I

### CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW

## (For INDIGENOUS OEM VENDOR ONLY)

	<u>(</u>	For IND	<u>IGENOUS OEM VI</u>	ENDOR ON	<u>LY)</u>
NTP (BHI NTP CS-4 for B PAC MAI BHE SUB ADD	JECT: C Bongaigaon 3 x 250N EL W.O no: G305, G30 C CONTRACT NO: 610-101-2-FC-COA-50 congaigaon FGD 3 x 25 KAGE: FGD PACKAN N CONTRACTOR: L - RANIPET CONTRACTOR (OE) RESS: be filled by OEM	06 and G307) 066-AMDT-04 00 MW GE	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Process Water Pumps & Mist Eliminator Wash and Emergency Quench Pumps  NTPC Bongaigaon 3 x 250MW (BHEL W.O no: G305, G306 and G307)	DOC.NO: BAP/QR/G305, G306 & G307/Bongaigaon/PWM EW Pump/LTM: 001 Rev NO.: 00 PAGE: Page 3 of 6 DATE: 05.08.2021	##Enquiry No:  ## OEM Supplier Name & Address:  ##Offer reference:  ##Date:  Contact Official Name: Mobile no: Email id:
SI.	DESCRIPTION	BHEL and	d Ultimate Customer - NTPC (Nationa		##Specific confirmations
NO.			Corporation)., India Quality Require	ements	by the vendor
03	BHEL / Ultimate Customer – NTPC approved vendors	Customer - specific requ  KEC CGL SIEN ABB 200h BBL NGE Mara Jyoth Laxin 200h	/Mumbai (Up to 200KW) EF/ Bengaluru (Up to 15KW) athon / Kolkatta (Up to 200KW) ni / Vadodara (Up to 200KW) mi Hydralics Private Limited (LHP	o deviation on this li (Up to 90KW)  Bengaluru (Up to	
04	Inspection Methodology to be adopted at Actual LT Motor Manufacture works by OEM vendor	All Routine te same are to be AIA (BHEL a works as per a relevant BIS ( all the Routine	sts on LT Motors are to be ensured by inspected & witnessed by OEM Vend uthorized inspection Agency) at LT Mapproved MQP & approved data sheet a Bureau of Indian Standard) - BIS 325 are Test Reports with Inspection report (finate Customer – NTPC for review and	OEM Vendor & lor / BHEL / BHEL Motor manufacture / drg / spec/ as per / IEC 60034 etc and IR) to be submitted	

LT Motor Manufacturer has to issue COC(Certificate of Conformance) states that the above motor/ motors was manufactured taking care of Customer specific requirements regarding ambient temp., voltage and frequency variation, hot starts,pull out torque,starting KVA/KW, temp. rise, distance between cantre of stud and gland plate, space heater and

tested in accordance with approved drawing/data sheets

and dispatch clearance.

#### Annexure-I

### CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW

CON	INACI QUAL	III REQUIREMENTS (CQR) for 1	LI MOTORS(IES) Up	10 200 X VV
<u>)</u>	For IND	IGENOUS OEM VI	ENDOR ON	<u>LY)</u>
PROJECT: NTPC Bongaigaon 3 x 250! (BHEL W.O no: G305, G3) NTPC CONTRACT NO: CS-4610-101-2-FC-COA-5 for Bongaigaon FGD 3 x 25  PACKAGE: FGD PACKA MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OE ADDRESS:  (To be filled by OEM	06 and G307) 066-AMDT-04 50 MW GE M) &	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Process Water Pumps & Mist Eliminator Wash and Emergency Quench Pumps  NTPC Bongaigaon 3 x 250MW (BHEL W.O no: G305, G306 and G307)	DOC.NO: BAP/QR/G305, G306 & G307/Bongaigaon/PWM EW Pump/LTM: 001 Rev NO.: 00 PAGE: Page 4 of 6 DATE: 05.08.2021	##Enquiry No:  ## OEM Supplier Name & Address:  ##Offer reference:  ##Date:  Contact Official Name: Mobile no: Email id:
SI. DESCRIPTION NO.	BHEL and	d Ultimate Customer - NTPC (Nationa Corporation)., India Quality Require		##Specific confirmations by the vendor
	•	ITEM: LT Motors(IE3) Up to	200KW	
04 Inspection Methodology to be adopted at Actual LT Motor Manufacture works by OEM vendor Contd	All Routine T & witnessed Agency) at L Test Reports approved MC BIS (Bureau the Routine To BHEL/Ultima and dispatch of Above 50KV  All Routine & Vendor and sa authorized ins inspection & v Reports as pe data sheet / dr BIS 325 / IEC Reports includ (IR) to be subst to obtain inspect BHEL/ BHEL Customer-N Supplier word & Type test r (IP 55) as pe	dests on LT Motors are to be ensured by BHEL/BHEL AIA (BHEL authorated and Degree of Protection Test Recapt & approved data sheet/drg/spector Indian Standard) - BIS 325 / IEC dest Reports with Inspection report (IR) the Customer – NTPC for review and to dearance.  Wand up to 200KW – Inspection (IT) and up to 200KW – Inspection (IT) approved MQP /RQP with endorseming / spec / as per relevant BIS (Bureau of 60034 etc and all the Routine Test Refling Degree of protection test report with the specific of the specific and dispatch clearance.  AIA (BHEL authorized inspection for the specific of the specific dispersion of the specific of the s	red by OEM vendor rized inspection ing review of Type ports (IP 55) as per c / as per relevant 0 60034 etc and all to be submitted for obtain inspection  Categorization: I  to be ensured by OEM AIA (BHEL -NTPC for e of Protection Test lent sheet / approved of Indian Standard) - ports , Type test ith Inspection report - NTPC for review and Agency) ) / Ultimate on at LT Motor cuments and routine ion Test Reports sheet / drg / spec /	

No material shall be dispatched without BHEL / BHEL AIA and Ultimate Customer – NTPC Inspection and dispatch clearance.

Painting requirement like paint shade and painting thickness including no

of coats if any are to be ensured by the OEM vendor for these LT Motors

Packing shall be as per Specification / Drg. / Data sheet including sea

worthy packing if any to avoid any transit & handling damages.

as per BHEL/ Ultimate Customer -NTPC approved data

sheet/drg/spec (As applicable).

IEC 60034 etc.

05

06

Painting Requirements

**Packing** 

# Annexure-I CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW

## (For INDIGENOUS OEM VENDOR ONLY)

	JECT: C Bongaigaon 3 x 250N	MXX7	CONTRACT QUALITY REQUIREMENTS (CQR) for	DOC.NO:	##Enquiry No:
	EL W.O no: G305, G30		LT MOTORS(IE3) - Up to 200KW used in	BAP/QR/G305, G306 & G307/Bongaigaon/PWM	## OEM Supplier Name & Address:
	C CONTRACT NO:	0.66 A.N.EDE 0.4	Process Water Pumps &	EW Pump/LTM: 001	Address.
	610-101-2-FC-COA-50 ongaigaon FGD 3 x 25		Mist Eliminator Wash and	Rev NO.: 00 PAGE : Page 5 of 6	##Offer reference:
			<b>Emergency Quench Pumps</b>	DATE: 05.08.2021	##Date:
	KAGE: FGD PACKA N CONTRACTOR:	GE			
BHE	L - RANIPET				Contact Official Name: Mobile no:
	CONTRACTOR (OE) RESS:	M) &	NTPC Bongaigaon 3 x 250MW (BHEL W.O no: G305, G306 and		Email id:
			G307)		
(То	be filled by OEM	VENDOR)			
SI.	DESCRIPTION	BHEL and	d Ultimate Customer - NTPC (Nationa		##Specific confirmations
NO.			Corporation)., India Quality Require	ements	by the vendor
			ITEM: LT Motors(IE3) Up to 2		
07	For Inspection		all by OEM Vendor for LT Motor ins		
	call		facture works to be raised for Ultimate Customer – NTPC incl	BHEL/BHEL AIA	
			any to be ensured / addressed		
			Proc)., Mobile no: +91 94430		
			el.in and Mr Zeeshan Ali., Sr. E		
			91 9443149691 ., Email id: zeesha		
		for inspection	related activities for immediate re	sponse / resolution.	
00	<b>D</b>	C 'C' C'			
08	Document Package /		rmation for Document Package in the soft copies in PDf file) is to be		
	Dossier		proper linkages (.)	given containing the	
	2 000101		x Sheet		
			P/RQP/Endorsement sheet		
			identified by BHEL/NTPC for record		
		`	stomer Hold Point) Verification & Witiven in MQP / RQP / MQP (as application)	•	
			Inspection Report + TC		
			EL AIA (BHEL Appointed Inspection A		
			EL report + TC		
			nate customer NTPC (National Therm	<b>1</b> '	
			P (Customer Hold Point) / MDCC (Ma grance Certificate)	teriai Dispatch	
			e test reports conducted/submitted with	approval with	
		appr	oved data sheet and BOM with actual		
00	<b>T</b>		tomer approved drgs.		
09	Important notes	Inspection Cate	egorization: I		
	notes	-	BHEL/BHEL AIA and also by Ultimate	Customer – NTPC	
		based on MQP	/RQP approved and as in sl no:04		
		Inspection Cate	egorization: II		
				1 TH.	
			Main contractor (BHEL) / BHEL AIA ba FPC approved MQP/RQP & based on in		
		Inspection Cate			
				MEDC	
		inspection as in			
			application for conducting checks /		
			any of the tests at Actual LT Motor N L AIA / Ultimate Customer – NTPC is		
			and no extra cost if any will be admiss		
	<u> </u>	Supplier only	10 Chia Coot II ally Will be adillise	c.ciii oi uii	I

# <u>Annexure-I</u> CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW

# (For INDIGENOUS OEM VENDOR ONLY)

NTPO CS-4 for B PAC: MAII BHE SUB ADD	NTPC Bongaigaon 3 x 250MW (BHEL W.O no: G305, G306 and G307)  NTPC CONTRACT NO: CS-4610-101-2-FC-COA-5066-AMDT-04 for Bongaigaon FGD 3 x 250 MW  PACKAGE: FGD PACKAGE MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OEM) & ADDRESS: (To be filled by OEM VENDOR)				CONTRACT QUALIT REQUIREMENTS (CQR LT MOTORS(IE3) - Up to 200 in Process Water Pum Mist Eliminator Was Emergency Quench I  NTPC Bongaigaon 3 x 25 (BHEL W.O no: G305, G3 G307)	G307/Bo EW Pum Rev NO. PAGE:	/G305, G306 & ngaigaon/PWM p/LTM: 001	## OEM Supplier Name & Address:  ##Offer reference:  ##Date:  Contact Official Name:  Mobile no: Email id:		
SI.				BHEL and	Ultimate Customer - NTPC	•		l Power	•	c confirmations
NO.					Corporation)., India Qualit				by	the vendor
1					ITEM: LT Motors(IE		200KW		<u> </u>	
				order and also	during execution of the cont	ract.				
10	Ver		all furn	x 250 MW - FGD	otor details involved in Pum Project:- en Equipment	ps applica		nis enquiry.		ı
		5. No		Driv	en Equipment	Rating	(in kW)	Quantity	Proposed Make	
		1		s Water Pump						
	[	2	Mist E	liminator Wash and	Emergency Quench Pump		-			
		3								
	-	5				+				
		6				+				
		7				+				
		8				+				
	-	9				1				
		10								
		11								
		12								

**OEM Supplier signature with seal** 

## Necessarily to be filled up & submitted by the OEM vendor at the time of offer itself otherwise the offer may not be considered w.r.t Quality Requirements against LT Motors being BHEL/ ultimate customer - NTPC (National Thermal Power **Corporation Limited) specific requirements.** 

# ENDORSEMENT SHEET FOR QP REFERENCE / STANDARD / FIELD QUALITY PLAN (RQP / SQP/RFQP/SFQP)

TO BE FILLED IN BY SUPPLIER AT T	TIME OF SUBMISSION	एनरीपीरी To be filled in by NTPC
PROJECT NAME	NTPC Bongaigaon 3 x 250 MW FGD Project (BHEL W.O no: G305, G306 and G307)	<u>2REVIEW &amp; ENDORSEMENT BY NTPC</u>     PROJECT SPECIFIC QP NUMBER ALLOTTED
CONTRACT NO.:	CS-4610-101-2-FC-COA-5066-AMDT-04 for Bongaigaon FGD (3 x 250MW)	-
MAIN SUPPLIER	M/S.BHEL, RANIPET , TAMIL NADU., INDIA	QP NO:
MANUFACTURER WORKS & ADDRESS	(TO BE FILLED BY OEM / LT MOTOR SUPPLIER	REV. NO.: 00 DT:
ITEM /EQUIPMENT / SYSTEM/ SUB-SYSTEM DETAILS i.e. MODEL TYPE/SIZE/RATING etc. APPROVED QP NO.: RQP/SQP/RFQP/SFQP	LT MOTOR(IE3) – PROCESS WATER PUMPS & MIST ELIMINATOR WASH AND EMERGENCY QUENCH PUMPS FOR FGD APPLICATION  (TO BE FILLED BY OEM / LT MOTOR SUPPLIER	
Confirmation by Main Supplier (TICK WHICHE)		(TICK APPLICABLE)
I. That the item/ component is identical to that com II. That there are minor changes in the item/ com the same do not affect the contents of MQP/RQP/S	ponent with respect to that considered for MQP/RQP/SQP approval, however	The MQP/RQP/SQP is endorsed for this project without any change
the same affect the MQP/RQP/SQP slightly, as ind	nponent with respect to that considered for MQP/RQP/SQP approval, however licated below / in attached sheet.	The SQP is endorsed for this project with changes as indicated.  DISTRIBUTION OF ENDORSEMENT OF  A) MQP/RQP/SQP:  1. MAIN SUPPLIER (WITH A COPY OF MQP/RQP/SQP)  2. MANUFACTURER 3. RIO 4. CQA-SPL 5. CQA-O/C B) RFQP/SFQP: 1. MAIN SUPPLIER (with a copy of MQP/RQP/SQP 2. MANUFACTURER 3. NTPC FQA (with a copy of MQP/RQP/SQP 4. NTPC Erection (with a copy of MQP/RQP/SQP 5. CQA-SPL 6. CQA-O/C
	(TO BE FILLED BY OEM / LT MOTOR SUPPLIER	NTPC (Reviewed /Approved by/ Date & Seal)
SIGN.: (Main Supplier) DATE:	SIGN.: (Manufacturer ) DATE:	

OEM SUPPLIER WITH OEM MFGR.'s LOGO (TO BE FILLED BY OEM SUPPLIER)		LT MOTOR MANUFACTURER'S NAME AND ADDRESS (TO BE FILLED BY OEM / LT MOTOR MANUFACTURE)		ITT TO AP SU PR & 1 W/	MANUFACTUR  ITEM: LT MOTOR(IE3) UP TO 200KW FOR FGD APPLICATION  SUB-SYSTEM: FGD – PROCESS WATER PUMPS & MIST ELIMINATOR WASH AND EMERGENCY QUENCH PUMPS			ING QUALITY PLAN  QP NO.: PWMEW PUMPS: LT  MOTOR:001  REV.NO.: 00  DATE:  PAGE: OF			PROJECT: NTPC Bongaigaon 3 x 250MW  (BHEL W.O no: G305, G306 and G307)  FGD PACKAGE  NTPC CONTRACT NO: CS-4610-101-2-FC-COA-5066-AMDT-04 for Bongaigaon  FGD (3 x 250 MW)  MAIN CONTRACTOR: BHEL - RANIPET  SUB CONTRACTOR (OEM) & ADDRESS: (TO BE FILLED BY OEM SUPPLIER)					
SL. NO	COMPONEN OPERATIO		CHARACTERISTICS		CLASS	TYPE OF CHECK		NTUM CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY			REMARKS
1. 2.			2	3.		5.	M	C/N 6.		8.		9. D*		C * 10	N	<b>11.</b>
				<b>LEGEND:</b> * RECORDS, INDENTIFIED WITH "TICK" ( $\sqrt{}$ ) SHALL BE							DOC. NO.: REV CAT					
OEM MANUFACTURER/ LT MOTOR SUPPLIER  SIGNATURE			(BHEL)	ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION.  ** M: OEM MANUFACTURER/LT MOTOR SUB-SUPPLIER  C: MAIN SUPPLIER – BHEL/BHEL AIA, N: NTPC  P: PERFORM W: WITNESS AND V: VERIFICATION. AS APPROPRIATE,  CHP: NTPC SHALL IDENTIFIED IN COLUM "N" AS 'W"						FOR NTPC USE	REVIEWED BY APPROVED BY				VED BY	APPROVAL

FORMAT NO.: QS-01-QAI-P-09/F1-R1

1/1