

SL. NO.	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY			REMARKS
					M	C/N				D*	M	C	N	
1	2	3	4	5	6		7	8	9	D*	10			11
<b>1.0 RAW MATERIALS INSPECTION</b>														
1.1	Shaft & Blades, rubber composition & other material including castings & forgings	Chem. & Mech Properties Dimensions Surface Defects	Major	Review of MTC Measurement Visual	One/Heat 100%	One/Heat -	Drawing/Data Sheet	TC IR IR	√	P P P	V -	V -		For shaft Dia ≥ 40mm UT shall be done as per ASTM A 388.
2.0	Motor	Separate MQP for Electrical Motor as applicable.												
3.0	Gear box	Make, Type, Rating, vibration, noise Review of Routine/Run test Report	Major	Review of manufacturer's test report	100%	100%	Drawing/Data Sheet	TC/Report	√	P	V	V		
<b>4.0 IN PROCESS INSPECTION</b>														
4.1	Welding Qualifications	WPS, PQR, WPQ	Major	WPS, PQR & WPQ	100%	100%	ASME Sec IX/AWS D1.1	WPS/PQR	√	P	V	V		

	<b>LEGEND:</b> * RECORDS, IDENTIFIED WITH "TICK" (√) UNDER COLUMN 'D' SHALL BE SUBMITTED TO CUSTOMER AS A 'QA' DOCUMENTATION PACKAGE. M: MANUFACTURE/SUB SUPPLIER, C: MAIN CONTRACTOR(BHEL/BHEL AIA), N:NTPC P: PERFORM W: WITNESS AND V: VERIFICATION / REVIEW OF RECORDS, MTC: MATERIAL TEST CERTIFICATE, TC: TEST CERTIFICATE, MA: MAJOR, MI: MINOR, COC: CERTIFICATE OF CONFORMANCE, IR: INSPECTION REPORT, TR: TEST REPORT AIA: AUTHORISED INSPECTION AGENCY.		
MANUFACTURER SIGN & STAMP		PREPARED BY	REVIEWED BY
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4.2	Marking, cutting, Edge preparation Tacking	Dimensions	Major	Measurement	100%	-	Appd. Drawing	IR	-	P	-	-		
4.3	Shaft & Impeller	Visual & Dimension check, face out and run out of shaft (after flange welding)	Major	Measurement	100%	100%	As per Spec. & Appd. Drawing	IR	√	P	V	V		
4.4	Welds	Visual, Dimension	Major	Visual, Measurement	100%	100%	ASME Sec-VIII/ AWS D1.1	IR	√	P	V	V		
4.5	Weld surface check	Weld soundness	Major	DPT	100%	100%	ASME Sec-VIII/AWS D1 Appendix 8	IR	√	P	W	V		
4.6	Impeller	Balancing	Major	Visual, Measurement	100%	10%	ISO 1940- /Appd. Drg. & Data sheet	TR	√	P	W	V		

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4.7	Rubber Lining	Thickness of Rubber, Hardness, Spark test, Adhesion Test on Test piece	Major	Measurement	100%	10%	As per Specs./ Appd. Drg. & data sheet	Appd.Drg.& Data sheet,	TR	√	P	W	V	
<b>5.0 FINAL INSPECTION</b>														
5.1	Final Assembly Base Frame, Agitator etc.	Visual- Workmanship, Dimensional,	Major	Visual, Measurement	100%	20% of each type( Vertical/Horizantal)	Appd.Drg. & Spec,		IR	√	P	W	V	For Top Agitator with shaft length>5meter run test to be carried out with bearing Shaft only.
5.2	Free Air Run test of Complete assembly.	Current,RPM, Vibration,Noise & Temperature rise	Major	Measurement	100%		Manufacturer's procedure/ Approved Drawing/Data Sheet		IR	√	P	W	W	
5.3	Painting	Visual,DFT	Major	Paint Shade & DFT measurement	100%	10%	NTPC Approved Painting Schedule		IR	√	P	W	V	
5.4	Marking	Visual	Major	Visual	100%	10%	Appd.Drawing		IR	√	P	W	V	
5.5	Packing	Visual	Major	Visual	100%	100%	Appd.Drawing/Specification		COC	-	P	-	-	
5.6	Review of QA Documents	MQP Compliance	Major	Compliance Record	100%	100%	Completion of all documents, Test Report as per Approved MQP		IR	√	P	V	V	

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1	2	3	4	5	6		7	8	9	D*	10			11

## Notes:

1. This QP is applicable for Mandatory spare also.
2. All other minor items, which are not cover under this QP, shall be manufactured inspected as per OEM (Original equipment Manufacturer)/BHEL standard practice and relevant standard. Relevant TC/COC will be submitted for the same.

	<p><b>LEGEND:</b> * RECORDS, IDENTIFIED WITH "TICK" (✓) UNDER COLUMN 'D' SHALL BE SUBMITTED TO CUSTOMER AS A 'QA' DOCUMENTATION PACKAGE.</p> <p><b>M:</b> MANUFACTURE/SUB SUPPLIER, <b>C:</b> MAIN CONTRACTOR(BHEL/BHEL AIA), <b>N:</b>NTPC <b>P:</b> PERFORM <b>W:</b> WITNESS AND <b>V:</b> VERIFICATION / REVIEW OF RECORDS, <b>MTC:</b> MATERIAL TEST CERTIFICATE, <b>TC:</b> TEST CERTIFICATE, <b>MA:</b> MAJOR, <b>MI:</b>MINOR, <b>COC:</b> CERTIFICATE OF CONFORMANCE, <b>IR:</b> INSPECTION REPORT, <b>TR:</b> TEST REPORT <b>AIA:</b> AUTHORISED INSPECTION AGENCY.</p>			
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<b>Annexure Q</b>		
	Indent No:	Enquiry no:
Sl.No	BHEL / Customer Requirements	## Specific confirmations by the manufacturer (Acceptable/Not acceptable)
	<b>Quality Plan Requirement: (If SQP is not given &amp; Vendor QP applicable)</b>	
	(i) MQP (Manufacturing 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 invariably cover w.r.t Inward inspection including on Raw material 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/standards to BHEL/Customer/Consultant.	
	<b>Important Notes shall be included in MQP :</b> (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 standard. (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 standard.	
2	<b>Domestic / Inland Inspection</b> will be carried out by BHEL/BHEL appointed Third Party Inspection Agency (TPIA) / Customer/Customer Appointed Inspection Agency/Consultant. 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 Instrumentation Diagram / Process Flow Diagram / Single Line Diagram) etc. (as applicable).	
3	<b>Inspection Agency for Foreign Bidders and also for Indian Bidder but importing from Foreign Sources:</b> (1) Any one of the following 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 are non claimable by the bidder. <b>List of TPIA</b> 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	

Receipt No : 721976/2022/BAP-QA\_MECH

Sl.No	BHEL / Customer Requirements	## Specific confirmations by the manufacturer (Acceptable/Not acceptable)
4	<b>Stage Inspection during manufacturing Process :</b> Stage Inspection during manufacturing shall be carried out as per approved quality plan and all necessary documents shall be provided for review, verification and clearance for further processing. This inspection call shall be given well in advance (at least 2 weeks before) to TPI/Bidder's own inspection agency to avoid delay in the manufacturing processes.	
5	<b>Inspection before despatch for domestic supplier :</b> Inspection before despatch at supplier's works shall be carried out by BHEL appointed Inspection agency (as in Sl no. 2). Inspection shall be done as per approved Quality plan/ Technical specification/ Approved Drawing/ Approved Data sheet .	
6	<b>Inspection at Foreign Source/Supplier:</b> (a) As in sl no: 3. shall be ensured without fail (b) No material / items shall be despatched without getting the written communication from BHEL / Customer inspection carried out by Bidder appointed Third Party Inspection Agency (As per Sl no.3) / Customer/Customer Appointed Inspection Agency/Consultant. 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 Instrumentation 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	<b>Painting</b> shall be done strictly 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 of BHEL well in advance before proceeding 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/Endorsement Sheet (As applicable) (iii) TCs identified by BHEL/ Customer for record for "CHP" / "W" and Verification portion ("V") as given in approved QP. (iv) Final inspection report + TC including Chemical + Mechanical + 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	<b>Packing / Seaworthy Packing</b> shall be as per BHEL Packing schedule / approved drg / sketch. This shall be ensured to take care transit / handling / transhipment in Road / Sea / Air. Photographs are to be submitted for BHEL review before despatching the material as per contract conditions.	
10	<b>Outsourcing of test facilities:</b> 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 accredited third party lab / Govt / Govt Lab for major testing such as NDT, Electrical & Mechanical testing.	
11	<b>Important Note:</b> No deviation on the above requirement 01 to 10 is acceptable with respect to 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 evidences in the offer itself.	
12	## Necessarily 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.	
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VENDOR SIGN AND STAMP:		Vendor Name & Address:



SURFACE PREPARATION	PRIMER		FINISH		TOTAL DFT IN (µm min.)
	PAINT	DFT (µm min.)	PAINT	DFT (µm min.)	

	intermediate paint pigmented with MIO/Tio2 DFT- 100µ		Shade: Light Blue, RAL 5012		
Blast Cleaning to SA 2 ½ (Near white metal) with surface profile 40 – 60 µm	<b>Primer:</b> One coat of Epoxy resin based Epoxy Zinc phosphate primer to IS 13238 DFT- 100µ  <b>Intermediate:</b> One coat of Two component epoxy based intermediate paint pigmented with MIO/Tio2 DFT- 100µ	100          100	<b>Finish:</b> One coat of Epoxy based finish paint to IS 14209; DFT- 75µ    <b>Finish:</b> One coat of acrylic aliphatic polyurethane paint to IS 13213 DFT-25µ Shade: Light Blue, RAL 5012	75          25	300

**Annexure-II****CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW****(For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)**

<b>PROJECT:</b> NTPC PVUNL Patratu 3 x 800MW (BHEL W.O no: R4R3, R4S3 and R4S4)  <b>NTPC PVUNL CONTRACT NO:</b> 01/PVUNL-CS-9585-001-2/NOA-SC for Patratu FGD 3 x 800MW  <b>PACKAGE: FGD PACKAGE</b> <b>MAIN CONTRACTOR:</b> BHEL - RANIPET <b>SUB CONTRACTOR (OEM) &amp;          ADDRESS:</b>  <b>(To be filled by OEM VENDOR)</b>		<b>CONTRACT QUALITY          REQUIREMENTS (CQR) for          LT MOTORS(IE3) - Up to 200KW used          in  <u>Absorber Agitator</u></b>  <b>NTPC PVUNL Patratu 3 x          800MW</b> (BHEL W.O no: R4R3, R4S3 and R4S4)	<b>DOC.NO:</b> BAP/QR/R4R3, R4S3 & R4S4/Patratu/LTM/Absorb er Agitator: 002  <b>Rev NO.: 00</b> <b>PAGE : Page 1 of 6</b> <b>DATE: 04.03.2020</b>	<b>##Enquiry No:</b>  <b>## OEM Supplier Name &amp;          Address:</b>  <b>##Offer reference:</b>  <b>##Date:</b>  <b>Contact Official Name:</b> <b>Mobile no:</b> <b>Email id:</b>
<b>Sl. NO.</b>	<b>DESCRIPTION</b>	<b>BHEL and Ultimate Customer - NTPC PVUNL (National Thermal Power Corporation), India Quality Requirements</b>		<b>##Specific confirmations by the vendor</b>
<b><u>ITEM: LT Motors(IE3) - Up to 200KW</u></b>				
01	<b>Type Test Requirements</b>	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 data of ultimate Customer NTPC PVUNL bid opening dt 03.03.2017. 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 PVUNL (National Thermal Power Corporation) at respective LT Motor Manufacture of OEM vendor.		
		B. However, if vendor is not able to submit the similar / identical type test report as per above condition in 01 (A) (or) in the case of type test reports are not found to be meeting the specification requirement and not acceptable to BHEL/BHEL AIA/ Ultimate Customer – NTPC PVUNL , , the vendor shall conduct all these tests at no additional cost if any to BHEL either at reputed third party lab (or) Government approved lab (or) own lab in the presence of BHEL AIA (BHEL Appointed Inspection Agency) / BHEL /Ultimate client NTPC PVUNL and submit the reports for BHEL / Ultimate Customer – NTPC PVUNL review & approval.		
		C. Type Test reports review and approval by BHEL AIA (BHEL Appointed Inspection Agency) / BHEL / Ultimate client NTPC PVUNL is must in line with NTPC PVUNL approved data sheet / BOM (Bill of Material) /GA (General Arrangement) Drawing etc.		

**Annexure-II****CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW****(For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)**

<b>PROJECT:</b> NTPC PVUNL Patratu 3 x 800MW (BHEL W.O no: R4R3, R4S3 and R4S4)  <b>NTPC PVUNL CONTRACT NO:</b> 01/PVUNL-CS-9585-001-2/NOA-SC for Patratu FGD 3 x 800MW  <b>PACKAGE: FGD PACKAGE</b> <b>MAIN CONTRACTOR:</b> BHEL - RANIPET <b>SUB CONTRACTOR (OEM) &amp; ADDRESS:</b>  <b>(To be filled by OEM VENDOR)</b>		<b>CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in</b>  <b><u>Absorber Agitator</u></b>  <b>NTPC PVUNL Patratu 3 x 800MW</b> (BHEL W.O no: R4R3, R4S3 and R4S4)	<b>DOC.NO:</b> BAP/QR/R4R3, R4S3 & R4S4/Patratu/LTM/Absorber Agitator: 002  <b>Rev NO.: 00</b> <b>PAGE : Page 2 of 6</b> <b>DATE: 04.03.2020</b>	<b>##Enquiry No:</b>  <b>## OEM Supplier Name &amp; Address:</b>  <b>##Offer reference:</b>  <b>##Date:</b>  <b>Contact Official Name:</b> <b>Mobile no:</b> <b>Email id:</b>
<b>Sl. NO.</b>	<b>DESCRIPTION</b>	<b>BHEL and Ultimate Customer - NTPC PVUNL (National Thermal Power Corporation), India Quality Requirements</b>		<b>##Specific confirmations by the vendor</b>
<b>ITEM: LT Motors(IE3) - Up to 200KW</b>				
01	<b>Type Test Requirement .....(Contd)</b>	D. The following Type test reports to be submitted covering the following for above 50KW LT Motor as per relevant BIS (Bureau of Indian Standard) - BIS 325 / IEC 60034 etc  i. Measuring of resistance of winding of stator and wound rotor (if applicable) ii. No load test at rated voltage to determine input current, power and speed. iii. Open circuit voltage ratio of wound rotor motor (in case slip ring motors) iv. Full load test to determine efficiency power factor and slip v. Temperature rise test. vi. Momentary excess /over load test vii. High voltage test viii. Test for vibration severity of motor ix. Test of noise levels of motor ( <b>Noise level for all the motors shall be limited to 85dB(A) except for BFP motor for which the maximum limit shall be 90dB(A).</b> ) x. Over speed test xi. Degree of Protection Tests (Minimum Ingress Protection - IP 55). xii. Type test reports for motors located in fuel oil area having flame proof enclosures as per BIS 2148/ IEC 60079-1  E. The TCs/Test reports shall also be given as PDF file with index sheet & page control through Email & Soft Copy (File size to less than 9MB).		
02	<b>Quality Plan Requirement</b>	a. MQP (Manufacturing Quality Plan) is applicable for these LT Motors and accordingly Actual LT Motor Manufacture shall submit the MQP in ultimate customer – NTPC PVUNL format for review and approval by BHEL / Ultimate Customer - NTPC PVUNL.  b. If any of LT Motor manufacture is having, ultimate customer NTPC PVUNL approved MQP (Manufacturing Quality Plan) and having validity, the same is applicable for these LT Motor for inspection purposes subject to obtaining ultimate customer NTPC PVUNL formal approval in the event of an order through endorsement sheet approval route as in sl no: 01 (c) below  c. Accordingly, LT Motor Manufacture & OEM supplier shall submit the filled up Endorsement sheet (copy attached) with ultimate customer approved MQP with signature & seal in the event of a Purchase Order from BHEL for BHEL/Ultimate Customer – NTPC PVUNL review and approval.		

**Annexure-II**  
**CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW**  
**(For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)**

<b>PROJECT:</b> NTPC PVUNL Patratu 3 x 800MW (BHEL W.O no: R4R3, R4S3 and R4S4)  <b>NTPC PVUNL CONTRACT NO:</b> 01/PVUNL-CS-9585-001-2/NOA-SC for Patratu FGD 3 x 800MW  <b>PACKAGE: FGD PACKAGE</b> <b>MAIN CONTRACTOR:</b> BHEL - RANIPET <b>SUB CONTRACTOR (OEM) &amp;          ADDRESS:</b>  <b>(To be filled by OEM VENDOR)</b>		<b>CONTRACT QUALITY          REQUIREMENTS (CQR) for          LT MOTORS(IE3) - Up to 200KW used          in  <u>Absorber Agitator</u></b>  <b>NTPC PVUNL Patratu 3 x          800MW</b> (BHEL W.O no: R4R3, R4S3 and R4S4)		<b>DOC.NO:</b> BAP/QR/R4R3, R4S3 & R4S4/Patratu/LTM/Absorb er Agitator: 002  <b>Rev NO.: 00</b> <b>PAGE : Page 3 of 6</b> <b>DATE: 04.03.2020</b>		<b>##Enquiry No:</b>  <b>## OEM Supplier Name &amp;          Address:</b>  <b>##Offer reference:</b>  <b>##Date:</b>  <b>Contact Official Name:</b> <b>Mobile no:</b> <b>Email id:</b>	
<b>Sl. NO.</b>	<b>DESCRIPTION</b>	<b>BHEL and Ultimate Customer - NTPC PVUNL (National Thermal Power Corporation), India Quality Requirements</b>				<b>##Specific confirmations by the vendor</b>	
<b><u>ITEM: LT Motors(IE3) - Up to 200KW</u></b>							
02	<b>Quality Plan Requirement ...contd</b>	d. If LT Motor Manufacture / OEM vendor does not have MQP, they should submit a fresh MQP to BHEL/NTPC PVUNL (in NTPC PVUNL format) for review & approval. (copy attached).  e. Typical Indicative MQP is attached for inf and & guidance purposes only and it is not final and binding on BHEL / Ultimate Customer NTPC PVUNL.					
03	<b>Inspection Methodology to be adopted at Actual LT Motor Manufacture works by OEM vendor</b>	a. All LT Motors are to be inspected by BHEL AIA (BHEL authorized inspection Agency) at LT Motor manufacture works as per approved MQP & approved data sheet/drg/spec/ as per relevant BIS (Bureau of Indian Standard) - BIS 325 / IEC 60034 etc by BHEL / Ultimate Customer-NTPC PVUNL  b. All Routine Tests are to be witnessed by BHEL AIA (BHEL authorized inspection Agency) at LT Motor manufacture works as per approved MQP & approved data sheet/drg/spec/ as per relevant BIS (Bureau of Indian Standard) - BIS 325 / IEC 60034 etc by BHEL / Ultimate Customer-NTPC PVUNL  c. BHEL AIA (BHEL authorized inspection Agency) / Ultimate Customer-NTPC PVUNL will also ensure LT Motor type tests reports review including Degree of Protection Test Reports & acceptance as per approved MQP & approved data sheet / drg / spec / as per relevant BIS (Bureau of Indian Standard) - BIS 325 / IEC 60034 etc.  d. BHEL AIA (BHEL authorized inspection Agency) ) / Ultimate Customer-NTPC PVUNL to witness / perform inspection at LT Motor Supplier works and submit all the inspection documents and routine & Type test reports including 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.					
<b><u>LT Motors up to 30KW – Inspection Categorization: III</u></b>  All Routine tests on LT Motors are to be ensured by OEM Vendor & same are to be inspected & witnessed by OEM Vendor / BHEL / BHEL AIA (BHEL authorized inspection Agency) at LT Motor manufacture works 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 PVUNL for review and to obtain inspection and dispatch clearance.							

**Annexure-II****CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW****(For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)**

<b>PROJECT:</b> NTPC PVUNL Patratu 3 x 800MW (BHEL W.O no: R4R3, R4S3 and R4S4)  <b>NTPC PVUNL CONTRACT NO:</b> 01/PVUNL-CS-9585-001-2/NOA-SC for Patratu FGD 3 x 800MW  <b>PACKAGE: FGD PACKAGE</b> <b>MAIN CONTRACTOR:</b> BHEL - RANIPET <b>SUB CONTRACTOR (OEM) &amp;          ADDRESS:</b>  <b>(To be filled by OEM VENDOR)</b>		<b>CONTRACT QUALITY          REQUIREMENTS (CQR) for          LT MOTORS(IE3) - Up to 200KW used          in  <u>Absorber Agitator</u></b>  <b>NTPC PVUNL Patratu 3 x          800MW</b> (BHEL W.O no: R4R3, R4S3 and R4S4)	<b>DOC.NO:</b> BAP/QR/R4R3, R4S3 & R4S4/Patratu/LTM/Absorb er Agitator: 002  <b>Rev NO.: 00</b> <b>PAGE : Page 4 of 6</b> <b>DATE: 04.03.2020</b>	<b>##Enquiry No:</b>  <b>## OEM Supplier Name &amp;          Address:</b>  <b>##Offer reference:</b>  <b>##Date:</b>  <b>Contact Official Name:</b> <b>Mobile no:</b> <b>Email id:</b>
<b>Sl. NO.</b>	<b>DESCRIPTION</b>	<b>BHEL and Ultimate Customer - NTPC PVUNL (National Thermal Power Corporation), India Quality Requirements</b>	<b>##Specific confirmations by the vendor</b>	
<b>ITEM: LT Motors(IE3) - Up to 200KW</b>				
03	<b>Inspection Methodology to be adopted at Actual LT Motor Manufacture works by OEM vendor...contd</b>	<b><u>LT Motors (30KW to 50KW) – Inspection Categorization: II</u></b> 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 PVUNL for review and to obtain inspection and dispatch clearance .  <b><u>Above 50KW and up to 200KW – Inspection Categorization: I</u></b> 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 PVUNL 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 PVUNL review and to obtain inspection and dispatch clearance.  All the checks / tests /review of documents / inspection & witnessing at LT Motor Manufacture by OEM /BHEL / BHEL AIA (BHEL authorized inspection Agency)/ Ultimate Customer-NTPC PVUNL are under OEM scope and any cost implication arising out of due to conducting checks / tests including for witnessing of any of the tests at Actual LT Motor Manufacture Works (or) at third party etc by BHEL / BHEL AIA / Ultimate Customer – NTPC PVUNL are in the scope of OEM Supplier only.  As such No extra cost if any will be admissible and paid in the event of an order and also during execution of the contract.  No material shall be dispatched without BHEL / BHEL AIA and Ultimate Customer – NTPC PVUNL Inspection and dispatch clearance.		
04	<b>Painting Requirements</b>	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 PVUNL approved data sheet/drg/spec (As applicable)		

**Annexure-II**  
**CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW**  
**(For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)**

<b>PROJECT:</b> NTPC PVUNL Patratu 3 x 800MW (BHEL W.O no: R4R3, R4S3 and R4S4)  <b>NTPC PVUNL CONTRACT NO:</b> 01/PVUNL-CS-9585-001-2/NOA-SC for Patratu FGD 3 x 800MW  <b>PACKAGE: FGD PACKAGE</b> <b>MAIN CONTRACTOR:</b> BHEL - RANIPET <b>SUB CONTRACTOR (OEM) &amp;</b> <b>ADDRESS:</b>  <b>(To be filled by OEM VENDOR)</b>		<b>CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in</b> <b><u>Absorber Agitator</u></b>  <b>NTPC PVUNL Patratu 3 x 800MW</b> (BHEL W.O no: R4R3, R4S3 and R4S4)		<b>DOC.NO:</b> BAP/QR/R4R3, R4S3 & R4S4/Patratu/LTM/Absorber Agitator: 002  <b>Rev NO.: 00</b> <b>PAGE : Page 5 of 6</b> <b>DATE: 04.03.2020</b>		<b>##Enquiry No:</b>  <b>## OEM Supplier Name &amp; Address:</b>  <b>##Offer reference:</b>  <b>##Date:</b>  <b>Contact Official Name:</b> <b>Mobile no:</b> <b>Email id:</b>		
<b>Sl. NO.</b>	<b>DESCRIPTION</b>	<b>BHEL and Ultimate Customer - NTPC PVUNL (National Thermal Power Corporation), India Quality Requirements</b>				<b>##Specific confirmations by the vendor</b>		
<b><u>ITEM: LT Motors(IE3) - Up to 200KW</u></b>								
05	<b>Packing</b>	Packing shall be as per Specification / Drg. / Data sheet including sea worthy packing if any to avoid any transit & handling damages						
06	<b>For Inspection call</b>	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 PVUNL 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 Kovarathanan., DM (QC-Proc)., Mobile no: +91 8903502628., Email id: kovak@bhel.in including for inspection related activities for immediate response / resolution.						
07	<b>Document Package / Dossier</b>	Specific confirmation for Document Package in the event of an order (3 hard copies + soft copies in PDF file) is to be given containing the following with proper linkages (.) (i) Index Sheet (ii) MQP/RQP/Endorsement sheet (iii) TCs identified by BHEL/NTPC PVUNL for record for “CHP” (Customer Hold Point) Verification & Witness “W” portion as given in MQP / RQP / MQP (as applicable). (iv) Final Inspection Report + TC (v) BHEL AIA (BHEL Appointed Inspection Agency) / BHEL report + TC (vi) Ultimate customer NTPC PVUNL (National Thermal Power Corporation) CHP (Customer Hold Point) / MDCC (Material Dispatch Clearance Certificate) (vii) Type test reports conducted/submitted with approval with approved data sheet and BOM with actual make used with Customer approved drgs.						
08	<b>Important notes</b>	<b><u>Inspection Categorization: I</u></b>  Inspection by BHEL/BHEL AIA and also by Ultimate Customer – NTPC PVUNL based on MQP/RQP approved and as in sl no:03  <b><u>Inspection Categorization: II</u></b>  Inspection by Main contractor (BHEL) / BHEL AIA based on Ultimate Customer – NTPC PVUNL approved MQP/RQP & based on inspection as in sl no:03  <b><u>Inspection Categorization: III</u></b>  COC by Main contractor (BHEL) to Ultimate Customer – NTPC PVUNL based on inspection as in sl no:03						

**Annexure-II**  
**CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW**  
**(For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)**

<b>PROJECT:</b> NTPC PVUNL Patratu 3 x 800MW (BHEL W.O no: R4R3, R4S3 and R4S4)  <b>NTPC PVUNL CONTRACT NO:</b> 01/PVUNL-CS-9585-001-2/NOA-SC for Patratu FGD 3 x 800MW  <b>PACKAGE: FGD PACKAGE</b> <b>MAIN CONTRACTOR:</b> BHEL - RANIPET <b>SUB CONTRACTOR (OEM) &amp;          ADDRESS:</b>  <b>(To be filled by OEM VENDOR)</b>		<b>CONTRACT QUALITY          REQUIREMENTS (CQR) for          LT MOTORS(IE3) - Up to 200KW used          in  <u>Absorber Agitator</u></b>  <b>NTPC PVUNL Patratu 3 x          800MW</b> (BHEL W.O no: R4R3, R4S3 and R4S4)		<b>DOC.NO:</b> BAP/QR/R4R3, R4S3 & R4S4/Patratu/LTM/Absorb er Agitator: 002  <b>Rev NO.: 00</b> <b>PAGE : Page 6 of 6</b> <b>DATE: 04.03.2020</b>		<b>##Enquiry No:</b>  <b>## OEM Supplier Name &amp;          Address:</b>  <b>##Offer reference:</b>  <b>##Date:</b>  <b>Contact Official Name:</b> <b>Mobile no:</b> <b>Email id:</b>																																																									
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<b>ITEM: LT Motors(IE3) - Up to 200KW</b>																																																															
		Any cost implication for conducting checks / tests including for witnessing of any of the tests at Actual LT Motor Manufacture Works by BHEL / BHEL AIA / Ultimate Customer – NTPC PVUNL is in the scope of OEM Supplier only and no extra cost if any will be admissible in the event of an order and also during execution of the contract.																																																													
09	<b>Motor details</b> Vendor shall furnish following LT Motor details for the Agitators applicable for this enquiry. NTPC PVUNL Patratu 3 x 800 – FGD Project :-																																																														
	<table border="1"> <thead> <tr> <th rowspan="2">S. No</th> <th rowspan="2">Agitators</th> <th colspan="3">LT Motor for the Agitators</th> </tr> <tr> <th>Rating (in kW)</th> <th>Quantity</th> <th>Proposed Make and Country of origin</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Absorber Agitators</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>Other LT Motors involved in the system (if any)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>7</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>8</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>9</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>10</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		S. No	Agitators	LT Motor for the Agitators			Rating (in kW)	Quantity	Proposed Make and Country of origin	1	Absorber Agitators				2	Other LT Motors involved in the system (if any)				3					4					5					6					7					8					9					10							
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**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 PVUNL (National Thermal Power Corporation Limited) specific requirements.**

<b>ENDORSEMENT SHEET FOR QP</b> REFERENCE / STANDARD / FIELD QUALITY PLAN (RQP / SQP/RFQP/SFQP)		
<i>TO BE FILLED IN BY SUPPLIER AT TIME OF SUBMISSION</i>		 To be filled in by NTPC
PROJECT NAME	NTPC PVUNL Patratu 3 x 800 MW FGD Project (BHEL W.O no: R4R3, R4S3 and R4S4)	<b>REVIEW &amp; ENDORSEMENT BY NTPC PROJECT SPECIFIC QP NUMBER ALLOTTED</b>  QP NO:  REV. NO.: 00 DT :
CONTRACT NO.:	01/PVUNL-CS-9585-001-2/NOA-SC for Patratu FGD (3 x 800MW)	
MAIN SUPPLIER	M/S.BHEL, RANIPET , TAMIL NADU,, INDIA	
MANUFACTURER WORKS & ADDRESS	<div style="background-color: yellow; text-align: center;">TO BE FILLED BY OEM / LT MOTOR SUPPLIER</div>	
ITEM /EQUIPMENT / SYSTEM/ SUB-SYSTEM DETAILS i.e. MODEL TYPE/SIZE/RATING etc.	LT MOTOR(IE3) – ABSORBER AGITATORS	
APPROVED QP NO.: RQP/SQP/RFQP/SFQP	<div style="background-color: yellow; text-align: center;">TO BE FILLED BY OEM / LT MOTOR SUPPLIER</div>	
<i>Confirmation by Main Supplier (TICK WHICHEVER APPLICABLE)</i>		<i>(TICK APPLICABLE)</i>
<i>I. That the item/ component is identical to that considered for SQP approval. ✓</i>		The MQP/RQP/SQP is endorsed for this project without any change
<i>II. That there are minor changes in the item/ component with respect to that considered for MQP/RQP/SQP approval, however the same do not affect the contents of MQP/RQP/SQP</i>		
<i>III. That there are minor changes in the item/ component with respect to that considered for MQP/RQP/SQP approval, however the same affect the MQP/RQP/SQP slightly, as indicated below / in attached sheet.</i>		
		<b><u>DISTRIBUTION OF ENDORSEMENT OF</u></b> 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
<div style="background-color: yellow; text-align: center;">TO BE FILLED BY OEM / LT MOTOR SUPPLIER</div>		NTPC (Reviewed /Approved by/ Date & Seal)
SIGN.: (Main Supplier)      DATE:	SIGN.: (Manufacturer )      DATE:	

BHEL BAP/ RANIPET / TAMIL NADU INDIA		OEM SUPPLIER		MANUFACTURING QUALITY PLAN FOR LT MOTOR ( Up to TO 200KW) - FGD Application					MQP:E:LTM:PATRATU :FGD ABSORBER AGITATOR :001			
		To be filled by OEM Supplier							REV:NO:00			DATE: 04.03.2021
		LT MOTOR Manufacture		Page :								
		To be filled by OEM Supplier										
S1.No.	COMPONENT/ASSEMBLY/OPERATION/TESTS	CHARACTERISTIC	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF REC	D	M	BHEL/BHEL AIA	REMARKS
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	
<b>INCOMING INSPCTIONS:</b>												
1.1	Enamelled round copper conductor(Dual coated)MM	1.Overall diameter	Major	Mechanical	1 sample/lot	IS 13730 1993 Part 13 / IEC 60317-0-1-2008 (As applicable)	IEC 60317-0-1 2008	Plant format	P	V		
		2.Bare conductor diameter	Major	Mechanical	1 sample/lot	BHEL / NTPC Spec & Apprd Datasheet	BHEL / NTPC Spec & Apprd Datasheet	Plant format	P	V		
		3.BDV test	Major	Electrical	1 sample/lot	--do--	--do--	Plant format	P	V		
		4.Elongation	Major	Mechanical	1 sample/lot	--do--	--do--	Plant format	P	V		
		5.Continuity (insulation)	Major	Electrical	1 sample/lot	--do--	--do--	Insp report/ Supplier TC	P	V		
		6.Tan Delta (If applicable)	Major	Electrical	1 sample/lot	--do--	--do--	Insp report/ Supplier TC	P	V		
1.2	Aluminum Ingots	1.Chemical composition	Major	Chemical	1 sample/lot	--do--	--do--	Supplier Tc	P	V		EC gr purity: -99.6%
1.3	FAN	1.Diameter (ID&OD)	Major	Mechanical	1 sample/lot	--do--	--do--	Inspection Report	P	V		
1.4	Bearings (SKF OR FAG)	1.Type & Make	Major	Visual	100%	--do--	--do--	Inspection Record	P	V		
		2.Dimensions - ID,OD&width	Major	Mechanical	1 sample/lot	--do--	--do--	Inspection Record	P	V		
1.5	Terminal Block	1.Dimensions	Major	Mechanical	Plant std.	--do--	--do--	Inspection Report	P	V		
		2.Proof voltage test	Major	Electrical	Plant std.	--do--	--do--	Inspection Report	P	V		

BHEL BAP/ RANIPET / TAMIL NADU INDIA		<b>OEM SUPPLIER</b>  <b>To be filled by OEM Supplier</b>  <b>LT MOTOR Manufacture</b>  <b>To be filled by OEM Supplier</b>		<b>MANUFACTURING QUALITY PLAN FOR LT MOTOR ( Up to TO 200KW) - FGD Application</b>					MQP:E:LTM:PATRATU :FGD ABSORBER AGITATOR :001		
									REV:NO:00		
									DATE: 04.03.2021		
									Page :		
S1.No.	COMPONENT/ ASSEMBLY/ OPERATION/ TESTS	CHARACTERISTIC	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF REC	AGENCY		REMARKS
									D	M	BHEL/ BHEL AIA
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
<b>INPROCESS INSPCTIONS:</b>											
2.1	Stator core	1.Core length dia	Major	Mechanical	100%	--do--	--do--	Inspection Record	P	V	
		2.Core locking	Major	Visual	100%	--do--	--do--	Inspection Record	P	V	
		3.Rigidity of core	Major	Mechanical	100%	--do--	--do--	Inspection Record	P	V	
2.2	Die cast rotor	1.Core length	Major	Mechanical	100%	--do--	--do--	Inspection Record	P	V	
		2.Blow holes	Major	Mechanical	100%	--do--	--do--	Inspection Record	P	V	
2.3	Wound stator (if applicable)	1.Resistance	Major	Electrical	100%	--do--	--do--	Inspection Record	P	V	
		2.H.V.Test	Major	Electrical	100%	--do--	--do--	Inspection Record	P	V	
		3.Insulation resistence	Major	Electrical	100%	--do--	--do--	Inspection Record	P	V	
2.4	Final Assembly	1.Completeness	Major	Visual	100%	--do--	--do--	Inspection Record	P	V	
		2.Runout in case of flanged motors	Major	Mechanical	100%	--do--	--do--	Inspection Record	P	V	
		3.Mounting dimensions	Major	Mechanical	100%	--do--	--do--	Inspection Record	P	V	

S1.No.		COMPONENT/ASSEMBLY/OPERATION/TESTS	CHARACTERISTIC	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF RECORD	AGENCY		REMARKS
										D	M	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	
<b>FINAL INSPECTION AND TESTING:</b>												
3.1	Routine Test	1.Resistance Measurement on winding & space heater	Major	Electrical	100%	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	P	W		
		2.HV Test	Major	Electrical	100%	--do--	--do--	Inspection Record	P	W		
		3.Phase sequence & direction of rotation	Major	Electrical	100%	--do--	--do--	Inspection Record	P	W		
		4.No load run test	Major	Electrical	100%	--do--	--do--	Inspection Record	P	W		
		5.Vibration test	Major	Mechanical	100%	--do--	--do--	Inspection Record	P	W		
		6.Name plate recheck	Major	Visual	100%	--do--	--do--	Inspection Record	P	W		
		7.Paint shade thickness & adhesion	Major	Visual & Measurement	100%	--do--	--do--	Inspection Record	P	W		
		8.Moutings & Overall dimensions	Major	Mechanical	100%	--do--	--do--	Inspection Record	P	W		

BHEL BAP/ RANIPET / TAMIL NADU INDIA	<b>OEM SUPPLIER</b> To be filled by OEM Supplier		<b>MANUFACTURING QUALITY PLAN FOR                  LT MOTOR ( Up to TO 200KW) - FGD Application</b>						MQP:E:LTM:PATRATU :FGD ABSORBER AGITATOR :001			
									REV:NO:00			
									DATE: 04.03.2021			
									Page :			
S1.No.	COMPONENT/ASSEMBLY/OPERATION/TESTS	CHARACTERISTIC	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF REC	D	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		P	V	
		2.Motors covered with polythene sheets	Major	Visual	100%	--do--	--do--	Inspection Record		P	V	
		3.Packing	Major	Visual	100%	--do--	--do--	Inspection Record		P	V	
### 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. <u>If not available 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.</u>												
1. Measurement of Resistance of Stator 2. No Load test at Rated Voltage 3. Pull out test 4. Temperature Rise Test 5. Momentary Exceeds 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)												
<b>LEGEND:</b> OEM = Original Equipment Supplier M = LT Motor Manufacture - BHEL AIA = BHEL AUTHORISED INSPECTION AGENCY GA Drawing : General Arrangement 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)												

<b>OEM SUPPLIER WITH OEM MFGR.'s LOGO (TO BE FILLED BY OEM SUPPLIER)</b>	<b>LT MOTOR MANUFACTURER'S NAME AND ADDRESS (TO BE FILLED BY OEM/ LT MOTOR MANUFACTURE)</b>	<b>MANUFACTURING QUALITY PLAN</b>		PROJECT: NTPC PVUNL Patratu 3 x 800MW (BHEL W.O no: R4R3, R4S3 and R4S4) FGD PACKAGE NTPC PVUNL CONTRACT NO: 01/PVUNL-CS-9585-001-2/NOA-SC for Patratu FGD (3 x 800 MW) MAIN CONTRACTOR: BHEL - RANIPET <b>SUB CONTRACTOR (OEM) &amp; ADDRESS: (TO BE FILLED BY OEM SUPPLIER)</b>
		ITEM: LT MOTOR(IE3) UP TO 200KW FOR FGD APPLICATION SUB-SYSTEM: FGD - ABSORBER AGITATORS	QP NO.: ABSORBER AGITATOR :LT MOTOR:001 REV.NO.: 00 <b>DATE:</b> <b>PAGE: .... OF....</b>	

SL. NO	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY			REMARKS
					M	C/N				D*	M	C	N	
1.	2.	3.	4.	5.	6.		7.	8.	9.	D*	** 10.			11.

		<b>LEGEND:</b> * RECORDS, IDENTIFIED WITH "TICK" (✓) SHALL BE 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'		DOC. NO.:	REV..... CAT.....	
OEM MANUFACTURER/ LT MOTOR SUPPLIER	MAIN (BHEL) SUPPLIER		FOR NTPC USE			
SIGNATURE				REVIEWED BY	APPROVED BY	APPROVAL SEAL

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

1/1

ENGG. DIV./QA&I



**Annexure-I**  
**CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW**  
**(For INDIGENOUS OEM VENDOR ONLY)**

<b>PROJECT:</b> NTPC PVUNL Patratu 3 x 800MW (BHEL W.O no: R4R3, R4S3 and R4S4)  <b>NTPC PVUNL CONTRACT NO:</b> 01/PVUNL-CS-9585-001-2/NOA-SC for Patratu FGD 3 x 800 MW  <b>PACKAGE: FGD PACKAGE</b> <b>MAIN CONTRACTOR:</b> BHEL - RANIPET <b>SUB CONTRACTOR (OEM) &amp;</b> <b>ADDRESS:</b>  <b>(To be filled by OEM VENDOR)</b>		<b>CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in</b> <b><u>Absorber Agitator</u></b>  <b>NTPC PVUNL Patratu 3 x 800MW</b> (BHEL W.O no: R4R3, R4S3 and R4S4)		<b>DOC.NO:</b> BAP/QR/R4R3, R4S3 & R4S4/Patratu/LTM/ Absorber Agitator: 001  <b>Rev NO.:</b> 00 <b>PAGE :</b> Page 1 of 5 <b>DATE:</b> 04.03.2021		<b>##Enquiry No:</b>  <b>## OEM Supplier Name &amp; Address:</b>  <b>##Offer reference:</b>  <b>##Date:</b>  <b>Contact Official Name:</b> <b>Mobile no:</b> <b>Email id:</b>		
SI. NO.	DESCRIPTION	BHEL and Ultimate Customer - NTPC PVUNL (National Thermal Power Corporation) PVUNL., India Quality Requirements			##Specific confirmations by the vendor			
<b><u>ITEM: LT Motors(IE3) Up to 200KW</u></b>								
01	Type Test Requirements	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 data of ultimate NTPC PVUNL bid opening dt 03.03.2017. 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 AIA (BHEL Appointed Inspection Agency) / BHEL (or) Ultimate client NTPC PVUNL at respective LT Motor Manufacture of OEM vendor.						
		B. However, if vendor is not able to submit the similar / identical type test report as per above condition (or) in the case of type test reports are not found to be meeting the specification requirement, the vendor shall conduct all the tests at no additional cost to BHEL either at third party lab (or) own lab in the presence of BHEL AIA (BHEL Appointed Inspection Agency) / BHEL /Ultimate client NTPC PVUNL and submit the reports for review & approval.						
		C. Type Test reports review and approval by BHEL AIA (BHEL Appointed Inspection Agency) / BHEL / Ultimate client NTPC PVUNL is must in line with NTPC PVUNL approved data sheet / BOM/GA Drawing etc.						
		D. The following Type test reports to be submitted covering the following for above 50KW LT Motor as per relevant BIS (Bureau of Indian Standard) - BIS 325 / IEC 60034 etc						
			i. Measuring of resistance of winding of stator and wound rotor (if applicable) ii. No load test at rated voltage to determine input current, power and speed. iii. Open circuit voltage ratio of wound rotor motor (in case slip ring motors) iv. Full load test to determine efficiency power factor and slip v. Temperature rise test. vi. Momentary excess load test vii. High voltage test viii. Test for vibration severity of motor ix. Test of noise levels of motor ( <b>Noise level for all the motors shall be limited to 85dB(A) except for BFP motor for which the maximum limit shall be 90dB(A).</b> ) x. Over speed test xi. Degree of Protection Tests (Minimum Ingress Protection - IP 55). xii. Type test reports for motors located in fuel oil area having flame proof enclosures as per BIS 2148/ IEC 60079-1					

**Annexure-I**  
**CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW**  
**(For INDIGENOUS OEM VENDOR ONLY)**

<b>PROJECT:</b> NTPC PVUNL Patratu 3 x 800MW (BHEL W.O no: R4R3, R4S3 and R4S4)  <b>NTPC PVUNL CONTRACT NO:</b> 01/PVUNL-CS-9585-001-2/NOA-SC for Patratu FGD 3 x 800 MW  <b>PACKAGE: FGD PACKAGE</b> <b>MAIN CONTRACTOR:</b> BHEL - RANIPET <b>SUB CONTRACTOR (OEM) &amp;</b> <b>ADDRESS:</b>  <b>(To be filled by OEM VENDOR)</b>		<b>CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in</b> <b><u>Absorber Agitator</u></b>  <b>NTPC PVUNL Patratu 3 x 800MW</b> (BHEL W.O no: R4R3, R4S3 and R4S4)		<b>DOC.NO:</b> BAP/QR/R4R3, R4S3 & R4S4/Patratu/LTM/ Absorber Agitator: 001  <b>Rev NO.:</b> 00 <b>PAGE :</b> Page 2 of 5 <b>DATE:</b> 04.03.2021		<b>##Enquiry No:</b>  <b>## OEM Supplier Name &amp; Address:</b>  <b>##Offer reference:</b>  <b>##Date:</b>  <b>Contact Official Name:</b> <b>Mobile no:</b> <b>Email id:</b>	
SI. NO.	DESCRIPTION	BHEL and Ultimate Customer - NTPC PVUNL (National Thermal Power Corporation) PVUNL., India Quality Requirements			##Specific confirmations by the vendor		
<b><u>ITEM: LT Motors(IE3) Up to 200KW</u></b>							
01	Type Test Requirement .....Contd	E. The TCs / Type Test reports shall also be given as PDF file with index sheet & page control through Email & Soft Copy (File size to less than 9MB).					
02	Quality Plan Requirement	<ol style="list-style-type: none"> <li>1. RQP or MQP is applicable for these LT Motor.</li> <li>2. RQP/MQP (Manufacturing Quality Plan) is applicable for these LT Motors and accordingly Actual LT Motor Manufacture and OEM shall submit the RQP/MQP in ultimate customer – NTPC PVUNL format.</li> <li>3. If any of LT Motor manufacture is having, ultimate customer NTPC PVUNL approved MQP (Manufacturing Quality Plan) / RQP (Reference Quality Plan) and having validity, the same is applicable for these LT Motor for inspection subject to obtaining ultimate customer NTPC PVUNL formal approval in the event of an order through endorsement sheet approval route as in sl no: 4 below</li> <li>4. Accordingly, LT Motor Manufacture &amp; OEM supplier shall submit the filled up Endorsement sheet (copy attached) with ultimate customer approved MQP/RQP with signature &amp; seal in the event of a Purchase Order from BHEL.</li> <li>5. If LT Motor Manufacture / OEM vendor does not have MQP/RQP, they should submit a fresh MQP to BHEL/NTPC PVUNL (in NTPC PVUNL format) for review &amp; approval. (copy attached).</li> </ol>					
03	BHEL / Ultimate Customer – NTPC PVUNL approved vendors	LT Motors are to be procured only from following Ultimate Customer - NTPC PVUNL approved vendors and no deviation on this specific requirement is acceptable. <ul style="list-style-type: none"> <li>➤ KEC / Bengaluru (Up to 200KW) &amp; Hubli (Up to 90KW)</li> <li>➤ CGL/Ahemednagar (Up to 200KW)</li> <li>➤ SIEMENS/Mumbai (Up to 200KW)</li> <li>➤ ABB/Faridabad (Up to 55KW) and Bengaluru (Up to 200KW)</li> <li>➤ BBL/Mumbai (Up to 200KW)</li> <li>➤ NGEF/ Bengaluru (Up to 15KW)</li> <li>➤ Marathon / Kolkatta (Up to 200KW)</li> <li>➤ Jyothi / Vadodara (Up to 200KW)</li> <li>➤ Laximi Hydraulics Private Limited (LHPL) / Solapur (Up to 200KW)</li> </ul>					

**Annexure-I**  
**CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW**  
**(For INDIGENOUS OEM VENDOR ONLY)**

<b>PROJECT:</b> NTPC PVUNL Patratu 3 x 800MW (BHEL W.O no: R4R3, R4S3 and R4S4)  <b>NTPC PVUNL CONTRACT NO:</b> 01/PVUNL-CS-9585-001-2/NOA-SC for Patratu FGD 3 x 800 MW  <b>PACKAGE: FGD PACKAGE</b> <b>MAIN CONTRACTOR:</b> BHEL - RANIPET <b>SUB CONTRACTOR (OEM) &amp;</b> <b>ADDRESS:</b>  <b>(To be filled by OEM VENDOR)</b>		<b>CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in</b> <b><u>Absorber Agitator</u></b>  <b>NTPC PVUNL Patratu 3 x 800MW</b> (BHEL W.O no: R4R3, R4S3 and R4S4)		<b>DOC.NO:</b> BAP/QR/R4R3, R4S3 & R4S4/Patratu/LTM/Absorber Agitator: 001  <b>Rev NO.:</b> 00 <b>PAGE :</b> Page 3 of 5 <b>DATE:</b> 04.03.2021		<b>##Enquiry No:</b>  <b>## OEM Supplier Name &amp; Address:</b>  <b>##Offer reference:</b>  <b>##Date:</b>  <b>Contact Official Name:</b> <b>Mobile no:</b> <b>Email id:</b>	
SI. NO.	DESCRIPTION	BHEL and Ultimate Customer - NTPC PVUNL (National Thermal Power Corporation) PVUNL., India Quality Requirements			##Specific confirmations by the vendor		
<b><u>ITEM: LT Motors(IE3) Up to 200KW</u></b>							
04	<b>Inspection Methodology to be adopted at Actual LT Motor Manufacture works by OEM vendor</b>	<b><u>LT Motors up to 30KW – Inspection Categorization: III</u></b>					
		All Routine tests on LT Motors are to be ensured by OEM Vendor & same are to be inspected & witnessed by OEM Vendor / BHEL / BHEL AIA (BHEL authorized inspection Agency) at LT Motor manufacture works 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 PVUNL for review and to obtain inspection and dispatch clearance .					
		<b><u>LT Motors (30KW to 50KW) – Inspection Categorization: II</u></b>					
All Routine Tests on LT Motors are to be ensured by OEM vendor & 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 PVUNL for review and to obtain inspection and dispatch clearance .							
<b><u>Above 50KW and up to 200KW – Inspection Categorization: I</u></b>							
All Routine & Type Tests if any on LT Motors are to be ensured by OEM Vendor and same shall be offered to BHEL/ BHEL AIA (BHEL authorized inspection Agency) / Ultimate Customer-NTPC PVUNL for inspection & witnessing including review of Degree of Protection Test Reports as per approved MQP /RQP with endorsement sheet / approved data sheet / drg / spec / as per relevant BIS (Bureau of Indian Standard) - BIS 325 / IEC 60034 etc and all the Routine Test Reports , Type test Reports including Degree of protection test report with Inspection report (IR) to be submitted for BHEL/Ultimate Customer – NTPC PVUNL for review and to obtain inspection and dispatch clearance .							

**Annexure-I**  
**CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW**  
**(For INDIGENOUS OEM VENDOR ONLY)**

<b>PROJECT:</b> NTPC PVUNL Patratu 3 x 800MW (BHEL W.O no: R4R3, R4S3 and R4S4)  <b>NTPC PVUNL CONTRACT NO:</b> 01/PVUNL-CS-9585-001-2/NOA-SC for Patratu FGD 3 x 800 MW  <b>PACKAGE: FGD PACKAGE</b> <b>MAIN CONTRACTOR:</b> BHEL - RANIPET <b>SUB CONTRACTOR (OEM) &amp;</b> <b>ADDRESS:</b>  <b>(To be filled by OEM VENDOR)</b>		<b>CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in</b> <b><u>Absorber Agitator</u></b>  <b>NTPC PVUNL Patratu 3 x 800MW</b> (BHEL W.O no: R4R3, R4S3 and R4S4)		<b>DOC.NO:</b> BAP/QR/R4R3, R4S3 & R4S4/Patratu/LTM/ Absorber Agitator: 001  <b>Rev NO.:</b> 00 <b>PAGE :</b> Page 4 of 5 <b>DATE:</b> 04.03.2021		<b>##Enquiry No:</b>  <b>## OEM Supplier Name &amp; Address:</b>  <b>##Offer reference:</b>  <b>##Date:</b>  <b>Contact Official Name:</b> <b>Mobile no:</b> <b>Email id:</b>	
SI. NO.	DESCRIPTION	BHEL and Ultimate Customer - NTPC PVUNL (National Thermal Power Corporation) PVUNL., India Quality Requirements			##Specific confirmations by the vendor		
<b><u>ITEM: LT Motors(IE3) Up to 200KW</u></b>							
04	<b>Inspection Methodology to be adopted at Actual LT Motor Manufacture works by OEM vendor..... Contd</b>	BHEL/ BHEL AIA (BHEL authorized inspection Agency) ) / Ultimate Customer-NTPC PVUNL to witness / perform inspection at LT Motor Supplier works and submit all the inspection documents and routine & Type test reports including 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.  No material shall be dispatched without BHEL / BHEL AIA and Ultimate Customer – NTPC PVUNL Inspection and dispatch clearance.					
05	<b>Painting Requirements</b>	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 PVUNL approved data sheet/drg/spec (As applicable).					
06	<b>Packing</b>	Packing shall be as per Specification / Drg. / Data sheet including sea worthy packing if any to avoid any transit & handling damages .					
07	<b>For Inspection call</b>	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 PVUNL 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 Kovarathanan., DM (QC-Proc)., Mobile no: +91 8903502628., Email id: kovak@bhel.in including for inspection related activities for immediate response / resolution.					
08	<b>Document Package / Dossier</b>	Specific confirmation for Document Package in the event of an order (3 hard copies + soft copies in Pdf file) is to be given containing the following with proper linkages (.) (i) Index Sheet (ii) MQP/RQP/Endorsement sheet (iii) TCs identified by BHEL/NTPC PVUNL for record for “CHP” (Customer Hold Point) Verification & Witness “W” portion as given in MQP / RQP / MQP (as applicable). (iv) Final Inspection Report + TC (v) BHEL AIA (BHEL Appointed Inspection Agency) / BHEL report + TC (vi) Ultimate customer NTPC PVUNL (National Thermal Power Corporation) CHP (Customer Hold Point) / MDCC (Material Dispatch Clearance Certificate)					

**Annexure-I**  
**CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW**  
**(For INDIGENOUS OEM VENDOR ONLY)**

<b>PROJECT:</b> NTPC PVUNL Patratu 3 x 800MW (BHEL W.O no: R4R3, R4S3 and R4S4)  <b>NTPC PVUNL CONTRACT NO:</b> 01/PVUNL-CS-9585-001-2/NOA-SC for Patratu FGD 3 x 800 MW  <b>PACKAGE: FGD PACKAGE</b> <b>MAIN CONTRACTOR:</b> BHEL - RANIPET <b>SUB CONTRACTOR (OEM) &amp;</b> <b>ADDRESS:</b>  (To be filled by OEM VENDOR)	<b>CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in</b> <b><u>Absorber Agitator</u></b>  NTPC PVUNL Patratu 3 x 800MW (BHEL W.O no: R4R3, R4S3 and R4S4)	<b>DOC.NO:</b> BAP/QR/R4R3, R4S3 & R4S4/Patratu/LTM/ Absorber Agitator: 001  <b>Rev NO.:</b> 00 <b>PAGE :</b> Page 5 of 5 <b>DATE:</b> 04.03.2021	<b>##Enquiry No:</b>  <b>## OEM Supplier Name &amp; Address:</b>  <b>##Offer reference:</b>  <b>##Date:</b>  <b>Contact Official Name:</b> <b>Mobile no:</b> <b>Email id:</b>
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SI. NO.	DESCRIPTION	BHEL and Ultimate Customer - NTPC PVUNL (National Thermal Power Corporation) PVUNL., India Quality Requirements	##Specific confirmations by the vendor
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**ITEM: LT Motors(IE3) Up to 200KW**

08	Document Package / Dossier...contd	(vii) Type test reports conducted/submitted with approval with approved data sheet and BOM with actual make used with Customer approved drgs.																																																											
09	Important notes	<u>Inspection Categorization: I</u> Inspection by BHEL/BHEL AIA and also by Ultimate Customer – NTPC PVUNL based on MQP/RQP approved and as in sl no:04  <u>Inspection Categorization: II</u> Inspection by Main contractor (BHEL) / BHEL AIA based on Ultimate Customer – NTPC PVUNL approved MQP/RQP & based on inspection as in sl no:04  <u>Inspection Categorization: III</u> COC by Main contractor (BHEL) to Ultimate Customer – NTPC PVUNL based on inspection as in sl no:04.  Any cost implication for conducting checks / tests including for witnessing of any of the tests at Actual LT Motor Manufacture Works by BHEL / BHEL AIA / Ultimate Customer – NTPC PVUNL is in the scope of OEM Supplier only and no extra cost if any will be admissible in the event of an order and also during execution of the contract.																																																											
10	Motor details	Vendor shall furnish following LT Motor details for the Agitators applicable for this enquiry. NTPC PVUNL Patratu 3 x 800 MW – FGD Project :-																																																											
		<table border="1" style="width: 100%;"> <thead> <tr> <th rowspan="2">S. No</th> <th rowspan="2">Agitator</th> <th colspan="3">LT Motor</th> </tr> <tr> <th>Rating (in kW)</th> <th>Quantity</th> <th>Proposed Make</th> </tr> </thead> <tbody> <tr><td>1</td><td>Absorber Agitator</td><td></td><td></td><td></td></tr> <tr><td>2</td><td>Other LT motors involved in the system (if any)</td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td><td></td><td></td></tr> <tr><td>6</td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td></td><td></td><td></td><td></td></tr> <tr><td>10</td><td></td><td></td><td></td><td></td></tr> </tbody> </table>	S. No	Agitator	LT Motor			Rating (in kW)	Quantity	Proposed Make	1	Absorber Agitator				2	Other LT motors involved in the system (if any)				3					4					5					6					7					8					9					10					
S. No	Agitator	LT Motor																																																											
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**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 PVUNL (National Thermal Power Corporation Limited) specific requirements.**

<b>ENDORSEMENT SHEET FOR QP</b> REFERENCE / STANDARD / FIELD QUALITY PLAN (RQP / SQP/RFQP/SFQP)		
<i>TO BE FILLED IN BY SUPPLIER AT TIME OF SUBMISSION</i>		 To be filled in by NTPC
PROJECT NAME	NTPC PVUNL Patratu 3 x 800 MW FGD Project (BHEL W.O no: R4R3, R4S3 and R4S4)	<b>REVIEW &amp; ENDORSEMENT BY NTPC PROJECT SPECIFIC QP NUMBER ALLOTTED</b>  QP NO:  REV. NO.: 00 DT :
CONTRACT NO.:	01/PVUNL-CS-9585-001-2/NOA-SC for Patratu FGD (3 x 800MW)	
MAIN SUPPLIER	M/S.BHEL, RANIPET , TAMIL NADU,, INDIA	
MANUFACTURER WORKS & ADDRESS	<div style="background-color: yellow; text-align: center;">TO BE FILLED BY OEM / LT MOTOR SUPPLIER</div>	
ITEM /EQUIPMENT / SYSTEM/ SUB-SYSTEM DETAILS i.e. MODEL TYPE/SIZE/RATING etc.	LT MOTOR(IE3) – ABSORBER AGITATORS	
APPROVED QP NO.: RQP/SQP/RFQP/SFQP	<div style="background-color: yellow; text-align: center;">TO BE FILLED BY OEM / LT MOTOR SUPPLIER</div>	
<i>Confirmation by Main Supplier (TICK WHICHEVER APPLICABLE)</i>		<i>(TICK APPLICABLE)</i>
<i>I. That the item/ component is identical to that considered for SQP approval. ✓</i>		The MQP/RQP/SQP is endorsed for this project without any change
<i>II. That there are minor changes in the item/ component with respect to that considered for MQP/RQP/SQP approval, however the same do not affect the contents of MQP/RQP/SQP</i>		
<i>III. That there are minor changes in the item/ component with respect to that considered for MQP/RQP/SQP approval, however the same affect the MQP/RQP/SQP slightly, as indicated below / in attached sheet.</i>		
		<b><u>DISTRIBUTION OF ENDORSEMENT OF</u></b> 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
<div style="background-color: yellow; text-align: center;">TO BE FILLED BY OEM / LT MOTOR SUPPLIER</div>		NTPC (Reviewed /Approved by/ Date & Seal)
SIGN.: (Main Supplier)      DATE:	SIGN.: (Manufacturer )      DATE:	

OEM SUPPLIER WITH OEM MFRG.'s LOGO (TO BE FILLED BY OEM SUPPLIER)	LT MOTOR MANUFACTURER'S NAME AND ADDRESS (TO BE FILLED BY OEM/ LT MOTOR MANUFACTURE)	<b>MANUFACTURING QUALITY PLAN</b>		PROJECT: NTPC PVUNL Patratu 3 x 800MW (BHEL W.O no: R4R3, R4S3 and R4S4) FGD PACKAGE  NTPC PVUNL CONTRACT NO: 01/PVUNL-CS-9585-001-2/NOA-SC for Patratu FGD (3 x 800 MW)  MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OEM) & ADDRESS: (TO BE FILLED BY OEM SUPPLIER)
		ITEM: LT MOTOR(IE3) UP TO 200KW FOR FGD APPLICATION  SUB-SYSTEM: FGD - ABSORBER AGITATORS	QP NO.: ABSORBER AGITATOR :LT MOTOR:001 REV.NO.: 00 DATE: PAGE: .... OF....	

SL. NO	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD		AGENCY			REMARKS
					M	C/N					M	C	N	
1.	2.	3.	4.	5.	6.		7.	8.	9.	D*	** 10.			11.

OEM MANUFACTURER/ LT MOTOR SUPPLIER MAIN (BHEL) SUPPLIER SIGNATURE		<b>LEGEND:</b> * RECORDS, IDENTIFIED WITH "TICK" (✓) SHALL BE 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	DOC. NO.:		REV..... CAT.....	
				REVIEWED BY	APPROVED BY	APPROVAL SEAL	

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

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ENGG. DIV./QA&I

