बीएच ई एल MANUFACTURING QUALITY PLAN									PROJECT:						
R	ĤFI	Manufa	acturer Name and A	ddress:			ITEM: AGITATORS			PACKAGE: FGD PACKAGE					
							QP NO: FGD:704, REV:00 CUST No: MAIN CONTRACTOR: BHEL								
Main contractor							DT: 26	6.10.2020 Pa	age 1 of 4				-		
SL.	COMPON	JENT &	CHARATERISTICS	CLASS	TYPE OF	QUATUN	/I OF	REFERENCE	ACCEPTANCE	FORMA		Α	GEN(CY	REMARKS
NO.	OPERATI	ION		02/100	CHECK	CHEC	K	DOCUMENT	NORMS	OF REC	ORD	M	C	N	
						M	C/N								
1	2)	3	4	5	6		7	8	9	D*		10		11

					•		L	•	•	•			
1.0	RAW MATERIA	LS INSPECTION											
1.1	Shaft & Blades, rubber composition & other material	Chem. & Mech Properties	Major	Review of MTC	One/ Heat	One/ Heat	Drawing/Data Sheet	TC	1	Р	V	V	For shaft Dia ≥ 40mm UT shall
	including castings & forgings	Dimensions	,	Measure nt	100%		·	IR	٧	P	-	-	be done as per ASTM A 388.
		Surface Defects		Visual	100%	-		IR		P	-	-	
2.0	Motor Separate MQP for Electrical Motor as applicable.												
3.0	Gear box	Make,Type, Rating,vibration,n oise Review of Routine/Run test Report	Major	Review of manufact ure's test report	100%	100%	Drawing/Data Sheet	TC/ Repo rt	1	P	V	V	
4.0	IN PROCESS INSPECTION												
4.1	Welding Qualifications	WPS,PQR,WPQ	Major	WPS, PQR & WPQ	100%	100%	ASME Sec IX/AWS D1.1	WPS/ PQR	1	Р	٧	٧	

	LEGEND: * RECORDS, INDENTIFIED 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			
MANUFACTURER SIGN & STAMP	CONFORMANCE, IR: INSPECTION REPORT, TR: TEST REPORT	PREPARED BY	reviewed by	APPROVED BY
	AIA: AUTHORISED INSPECTION AGENCY.			

वीर	बीएच ईएल MANUFACTURING QUALITY PLAN										PROJECT:					
R	Manufa	acturer Name and A	ddress:			ITEM:	AGITATORS	<u> </u>	PACK		FGD	PACK	AGE			
						QP NO): FGD:704, R	EV:00	CUST		DVC.	T∩D.	DUE	I		
Main o	contractor					DT: 26	.10.2020 P	age 2 of 4	MAIN CONTRACTOR: BHEL							
SL.	COMPONENT &	CHARATERISTICS	CLASS	TYPE OF	QUATL	JM OF	REFERENCE	ACCEPTANCE	FORMA			GENC		REMARKS		
NO.	OPERATION			CHECK	CHE M	CK C/N	DOCUMENT NORMS		OF RECORD		M	C	N			
1	2	3	4	5	W 6		7	8	9	D*		10		11		
4.2	Marking,cutting ,Edge preparation Tacking	Dimensions	Major	Measure ment	100%	-	Appd.Drawi		IR	-	Р	•	-			
4.3	Shaft & Impeller	Visual & Dimension check,face out and run out of shaft (after flange welding)	Major	Measure ment	100%	100%	As per Spec. & Appd.Drawing		IR	1	Р	٧	٧			
4.4	Welds	Visual, Dimension	Major	Visual, Measure ment	100%	100%	ASME Sec-VIII/ AWS D!.1		IR	1	Р	V	٧			
4.5	Weld surface check	Weld soundness	Major	DPT	100%	100%	ASME Sec- Appendix 8	VIII/AWS D1	IR	V	Р	W	٧			
4.6	Impeller	Balancing	Major	Visual, Measure ment	100%	10%	ISO 1940- /. Data sheet	Appd.Drg.&	TR	1	Р	W	٧			

	$\underline{\textbf{LEGEND:}} \ ^{\star} \ \ \text{RECORDS, INDENTIFIED WITH "TICK"} () \ \text{UNDER}$			
	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			
MANUFACTURER SIGN & STAMP	CONFORMANCE, IR: INSPECTION REPORT, TR: TEST REPORT	PREPARED BY	reviewed by	APPROVED BY
	AIA: AUTHORISED INSPECTION AGENCY.			

बीर	म ई एन				PROJ	ECT:										
H	HEL	Manufa	acturer Name and A	ddress:			ITEM:	AGITATOR	S		AGE:	FGD	PACK	AGE		
	//						QP NO): FGD:704, R	EV:00		CUST No: MAIN CONTRACTOR: BHEL					
Main	contractor						DT: 26	6.10.2020 P	age 3 of 4	IVIAIIN	OONI	ΠΛΟ	TOI1.	םו וע	L	
SL. NO.	COMPON OPERATI		CHARATERISTICS	CLASS	TYPE OF CHECK	QUATU CHE	CK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMA OF REC		M	AGENO C	Y N	REMARKS	
	,	<u> </u>	0	4	-	M	C/N	7	0	•	D÷		40		44	
1	2	<u>'</u>	3	4	5	()	7	8	9	D*		10		11	
4.7	Rubber	Lining	Thickness of Rubber, Hardness, Spark test, Adhesion Test on Test piece	Major	Measure ment	100%	10%	As per Specs./ Appd. Drg. & data sheet	Appd.Drg.& Data sheet,	TR	1	Р	W	٧		
5.0	FINAL I	NSPEC1	TION			l										
5.1	Final As Base Frame, A etc.	,	Visual- Workmanship, Dimensional,	Major	Visual, Measure ment	100%	20% of each type(Appd.Drg. 8	& Spec,	IR	1	Р	W	٧	For Top Agitator with shaft length>5meter	
5.2	Free Air test of Complet assemb	te	Current, RPM, Vibration, Noise & Temperature rise	Major	Measure ment	100%	Vertic al/Hor izonta l)		er's procedure Prawing/Data	/ IR	1	Р	W	W	run test to be carried out with bearing Shaft only.	
5.3	Painting		Visual,DFT	Major	Paint Shade & DFT measure ment	100%	10%	NTPC Appr Schedule	oved Painting	IR	1	Р	W	٧		
5.4	Marking		Visual	Major	Visual	100%	10%	Appd.Draw	ing	IR	1	Р	W	V		
5.5	Packing		Visual	Major	Visual	100%	100%		g/Specification	COC	-	Р	-			
5.6	Review Docume	of QA	MQP Compliance	Major	Complian ce Record	100%	100%	Completion	of alll Test Report	IR	1	Р	٧	٧		
MANU	FACTURER (SIGN & STA	LEGEND: * RECO COLUMN 'D'SHALI DOCUMENTATION M: MANUFACTURI CONTRACTOR(BH WITNESS AND V: MTC: MATERIAL T MA: MAJOR, MI:M AMP CONFORMANCE, AIA: AUTHORISEE	L BE SUBM I PACKAGE E/SUB SUP IEL/BHEL A VERIFICAT IEST CERTI INOR, COC IR: INSPEC	ITTED TO CUST :: PLIER, C: MAIN IA), N:NTPC P: ION / REVIEW C FICATE, TC: TE : CERTIFICATE TION REPORT,	PERFORM PERFORM OF RECORD ST CERTIF OF	A 'QA' I W : DS, FICATE,	PREPAI	RED BY	REVI	EWED	ВУ			APPROVED BY	

बी ए	च ई एल				MANUFACT	TURING (QUALI	TY PLAN		PROJECT:					
H	ĤFI	Manufa	acturer Name and <i>A</i>	\ddress:			ITEM: AGITATORS PACKAGE: FGD PACKAGE				AGE				
							QP N	0: FGD:704, RI	EV:00	CUST No: MAIN CONTRACTOR: BHEL					
Main c	contractor						DT: 20	6.10.2020 Pa	age 4 of 4	IVII UIT	00111	11/10	011.		_
SL.	COMPON	ENT &	CHARATERISTICS	CLASS	TYPE OF	QUATU	M OF	REFERENCE	ACCEPTANCE	FORMA	Γ	A	GEN(CY	REMARKS
NO.	OPERATI	ON		0200	CHECK	CHE	CK	DOCUMENT	NORMS	OF REC	ORD	M	С	N	
						M	C/N								
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.

	LEGEND: * RECORDS, INDENTIFIED 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,			
MANUEL OTUBED CION A OTAMB	MA: MAJOR, MI:MINOR, COC: CERTIFICATE OF	DDED40ED DV	DEVIEWED DV	4.DDDQ\/ED_D\/
MANUFACTURER SIGN & STAMP	CONFORMANCE, IR: INSPECTION REPORT, TR: TEST REPORT	PREPARED BY	reviewed by	APPROVED BY
	AIA: AUTHORISED INSPECTION AGENCY.			

	Annexure Q	
	Indent No: Enquiry no:	## Specific confirmations by the
Sl.No	BHEL / Customer Requirements	manufacturer (Acceptable/Not acceptable)
	Quality Plan Requirement: (If SQP is not given & Vendor QP applicable)	
	(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.	
	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 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	Domestic / Inland Inspection 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	Inspection Agency for Foreign Bidders and also for Indian Bidder but importing from Foreign Sources: (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. 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	

Sl.No	BHEL / Customer Requirements	## Specific confirmations by the manufacturer (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 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	Inspection before despatch for domestic supplier: Inspection before despatch at supplier's works shall be carried out by BHEL appointed Inspection agency (as in SI no. 2). Inspection shall be done as per approved Quality plan/Technical specification/ Approved Drawing/ Approved Data sheet.	
6	Inspection at Foreign Source/Supplier: (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	Painting 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	Packing / Seaworthy Packing 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	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 accredited 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 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.	
	VENDOR SIGN AND STAMP:	Vendor Name & Address:

W.r.t INDIGENOUS OEM VENDORS ONLY

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 Agitators (DOC.NO:	
	BAP/QR/G201 to G204/NTPC Nabinagar/ LTM/	
	Agitators: 001 Rev.00 dt 16.02.2022) 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 manufacture.	
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 Motor	
	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	
<u> </u>	Motors may also be submitted.	
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	
05	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.	

NTP (BHI NTP CS-C MAI BHE SUB ADD	JECT: PC Nabinagar 4 x 2. EL W.O no: G 201, G202 C CONTRACT NO: 0270-109(1A) -2-F KAGE: FGD PACKAN OCONTRACTOR: L - RANIPET CONTRACTOR (OE) RESS:	C/19-20/1819 GE M) &	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Agitators NTPC Nabinagar 4 x 250 MW (BHEL W.O no: G 201, G202, G203 and G204)	DOC.NO: BAP/QR/G201 to G204/NTPC Nabinagar/ LTM/ Agitators: 001 Rev NO.: 00 PAGE: Page 1 of 6 DATE: 16.02.2022	##Enquiry No: ## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:
(10	be filled by OEM	VENDOR)			
SI. NO.	DESCRIPTION	BHEL and	Ultimate Customer - NTPC (Nationa Corporation)., India Quality Require	##Specific confirmations by the vendor	
NO.			ITEM: LT Motors (IE3) Up to		by the vehicor
01	Type Test	A. Vendor sh	nall submit the type test reports of all		
	Requirements	of ultimat for the te proposed have beer been with / BHEL Manufacti B. However, test report	: 01 (D) below and carried out within e NTPC bid opening dt 01.08.2018. T st conducted on the identical/similar to be supplied under this enquiry and a conducted at an independent laboratessed by BHEL AIA (BHEL Appointed (or) Ultimate client NTPC at the original of the original origin		
		shall cond party lab Appointed submit the C. Type Te Appointed	duct all the tests at no additional cost to (or) own lab in the presence of d Inspection Agency) / BHEL /Ultime e reports for review & approval. st reports review and approval by d Inspection Agency) / BHEL / Ultime with NTPC approved data sheet / B		

PROJECT: NTPC Nabinagar 4 x 250 MW (BHEL W.O no: G 201, G202, G203 and G204) NTPC CONTRACT NO: CS-0270-109(1A) -2-FC/19-20/1819 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 Agitators NTPC Nabinagar 4 x 250 MW (BHEL W.O no: G 201, G202, G203 and G204)	DOC.NO: BAP/QR/G201 to G204/NTPC Nabinagar/ LTM/ Agitators: 001 Rev NO.: 00 PAGE: Page 2 of 6 DATE: 16.02.2022	##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		<u> </u>
01	Type Test RequirementContd	i. Meas ii. No le and s iii. Open moto iv. Full l v. Temp vi. Mom vii. High viii. Test s shall the n x. Over xi. Degre xii. Type proof	for above 50KW LT Motor as per residuard) - BIS 325 / IEC 60034 etc uring of resistance of winding of st plicable) bad test at rated voltage to determine peed. circuit voltage ratio of wound rotor not residuard etc. circuit voltage ratio of wound rotor not residuard etc. certain etc. certa	britted covering the levant BIS (Bureau of ator and wound rotor input current, power motor (in case slip ring factor and slip) or all the motors P motor for which ess Protection - IP 55). oil area having flame 79-1 ven as PDF file with	

PROJECT:			CONTRACT QUALITY	DOC.NO:	##Enquiry No:
NTF	NTPC Nabinagar 4 x 250 MW		REQUIREMENTS (CQR) for		
(BHF	(BHEL W.O no: G 201, G202, G203 and G204)		LT MOTORS(IE3) - Up to 200KW used	BAP/QR/G201 to G204/NTPC Nabinagar/	## OEM Supplier Name &
			<u>in Agitators</u>	LTM/ Agitators: 001	Address:
NTP	NTPC CONTRACT NO:			Rev NO.: 00	##Offer reference:
	0270-109(1A) -2-F	C/19-20/1819		PAGE: Page 3 of 6	##Offer reference.
	02/010/(111) 21	0,1019		DATE: 16.02.2022	##Date:
PAC	KAGE: FGD PACKA	GE	NTPC Nabinagar 4 x 250 MW		
	N CONTRACTOR:		(BHEL W.O no: G 201, G202, G203 and G204)		Contact Official Name:
	L - RANIPET	MD 8.			Mobile no:
	CONTRACTOR (OEI RESS:	vi) &			Email id:
(To	be filled by OEM	VENDOR)			
SI.	DESCRIPTION	BHFI and	d Ultimate Customer - NTPC (Nationa	l Thermal Power	##Specific confirmations
NO.	DESCRIPTION	Dille and	Corporation)., India Quality Require		by the vendor
NO.					by the vendor
0.5			ITEM: LT Motors (IE3) Up to		
02	Quality Plan	1. RQP	or MQP is applicable for these LT	Motor.	
	Requirement	•	MOD /// /	\	
			/MQP (Manufacturing Quality Pla		
			E LT Motors and accordingly		
			ufacture and OEM shall submit	the RQP/MQP in	
		ultim	ate customer – NTPC format.		
			y of LT Motor manufacture is havin		
			C approved MQP (Manufacturing		
			erence Quality Plan) and having v		
			cable for these LT Motor for in		
			ning ultimate customer NTPC for		
		even	t of an order through endorsem	ent sheet approval	
		route	e as in sl no: 4 below		
			rdingly, LT Motor Manufacture &		
		subn	nit the filled up Endorsement sho		
		with	ultimate customer approved MQP		
		& sea	al in the event of a Purchase Order		
			Motor Manufacture / OEM ven		
			P/RQP, they should submit a		
		BHE	L/NTPC (in NTPC format) for revie	w & approval. (copy	
		attac	,		
03	BHEL /		are to be procured only from		
	Ultimate		NTPC approved vendors and ne	o deviation on this	
	Customer –		rement is acceptable.		
	NTPC		/ Bengaluru (Up to 200KW) & Hub	li (Up to 90KW)	
	approved		/Ahemdnagar (Up to 200KW)		
	vendors	➤ SIEN	MENS/Mumbai (Up to 200KW)		
		➤ ABB/	Faridabad (Up to 55KW) and	Bengaluru (Up to	
		200k			
			Mumbai (Up to 200KW)		
			F/ Bengaluru (Up to 15KW)		
			thon / Kolkatta (Up to 200KW)		
			ni / Vadodara (Up to 200KW)		
			ni Hydralics Private Limited (LHP	L) / Solapur (Up to	
		200k			
		•			

PROJECT: NTPC Nabinagar 4 x 250 MW (BHEL W.O no: G 201, G202, G203 and G204) NTPC CONTRACT NO: CS-0270-109(1A) -2-FC/19-20/1819 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 Agitators NTPC Nabinagar 4 x 250 MW (BHEL W.O no: G 201, G202, G203 and G204)	DOC.NO: BAP/QR/G201 to G204/NTPC Nabinagar/ LTM/ Agitators: 001 Rev NO.: 00 PAGE: Page 4 of 6 DATE: 16.02.2022	##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
		ı	ITEM: LT Motors (IE3) Up to	200KW	1
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 for BHEL/Ulti and dispatch c LT Motor Mar states that the Customer spec frequency varirise, distance by	ests on LT Motors are to be ensured by inspected & witnessed by OEM Vend uthorized inspection Agency) at LT M pproved MQP & approved data sheet a Bureau of Indian Standard) - BIS 325 at Test Reports with Inspection report (I imate Customer – NTPC for review and learance. In the action of the provided motor		
		All Routine T & witnessed Agency) at L Test Reports approved MC BIS (Bureau the Routine Te BHEL/Ultima and dispatch c 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 subi	ests on LT Motors are to be ensure by BHEL/BHEL AIA (BHEL author). T Motor manufacture works include and Degree of Protection Test Reports approved data sheet/drg/spector Indian Standard) - BIS 325 / IEC est Reports with Inspection report (IR) the Customer – NTPC for review and to learance. Wand up to 200KW – Inspection Company of the Standard of the Standard of the Standard of the Standard of Stan	ed by OEM vendor ized inspection ing review of Type ports (IP 55) as per c / as per relevant c 60034 etc and all to be submitted for o obtain inspection Categorization: I be be ensured by OEM AIA (BHEL -NTPC for e of Protection Test ent sheet / approved of Indian Standard) - ports , Type test ith Inspection report	

PROJECT:			CONTRACT QUALITY	DOC.NO:	##Enquiry No:
NTPC Nabinagar 4 x 250 MW		50 MW	REQUIREMENTS (CQR) for		
	EL W.O no: G 201, G202		LT MOTORS(IE3) - Up to 200KW used in Agitators	BAP/QR/G201 to G204/NTPC Nabinagar/ LTM/ Agitators: 001	## OEM Supplier Name & Address:
	C CONTRACT NO: 0270-109(1A) -2-F	C/19-20/1819		Rev NO.: 00 PAGE : Page 5 of 6	##Offer reference:
			NUDDO NALIZA A A A A A A A A A A A A A A A A A A	DATE: 16.02.2022	##Date:
MAII BHE SUB	KAGE: FGD PACKAON CONTRACTOR: L - RANIPET CONTRACTOR (OE		NTPC Nabinagar 4 x 250 MW (BHEL W.O no: G 201, G202, G203 and G204)		Contact Official Name: Mobile no: Email id:
ADD	RESS:				
(То	be filled by OEM	VENDOR)			
SI.	DESCRIPTION	BUEL and	। d Ultimate Customer - NTPC (Nationa	l Thormal Power	##Specific confirmations
NO.	DESCRIPTION	DHEL AIIC	Corporation)., India Quality Require		by the vendor
NO.					by the vehicor
0:			ITEM: LT Motors (IE3) Up to		<u> </u>
04	Inspection		AIA (BHEL authorized inspection Ag		
	Methodology		PC to witness / perform inspection at I		
	to be adopted at Actual LT		mit all the inspection documents and ring Degree of Protection Test Reports		
	Motor		P & approved data sheet / drg / spec / a		
	Manufacture		lian Standard) - BIS 325 /IEC 60034		
	works by OEM	(Durcau of file	man Standard) - DIS 323/IEC 00034	cic.	
	vendor	No material sh	nall be dispatched without BHEL / BH	IEL AIA and Ultimate	
	Contd		TPC Inspection and dispatch clearance		
05	Painting	Painting requir	rement like paint shade and painting th	nickness including no	
	Requirements	of coats if any	are to be ensured by the OEM vendor	for these LT Motors	
			Ultimate Customer -NTPC approved		
		sheet/drg/spe	ec (As applicable).		
06	Packing		be as per Specification / Drg. / Dat g if any to avoid any transit & handlin		
07	F I				
07	For Inspection call		I by OEM Vendor for LT Motor insacture works to be raised for BHEL/		
	Call		stomer – NTPC including for type tes		
			ddressed to Mr R Kesavan., DGM (
			303., Email id: kesavan@bhel.in an		
			e)., Mobile no: +91 8903502628., Em		
		•	inspection related activities for it	mmediate response /	
		resolution.			
08	Document		mation for Document Package in the ev		
	Package /	proper linkages	opies in PDF file) is to be given contai	ining the ionowing with	
	Dossier	1 1	Sheet		
		(ii) MQP	/RQP/Endorsement sheet		
			identified by BHEL/NTPC for record for "		
			omer Hold Point) Verification & Witness 'en in MQP / RQP / MQP (as applicable).		
			Inspection Report + TC		
			L AIA (BHEL Appointed Inspection Agen		
			report + TC		
			nate customer NTPC (National Thermal Po		
			(Customer Hold Point) / MDCC (Material ance Certificate)	Dispaten	
			test reports conducted/submitted with app	roval with	
			ved data sheet and BOM with actual make		
		Cust	tomer approved drgs.		

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

PROJECT: NTPC Nabinagar 4 x 250 MW (BHEL W.O no: G 201, G202, G203 and G204) NTPC CONTRACT NO: CS-0270-109(1A) -2-FC/19-20/1819 PACKAGE: FGD PACKAGE MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OEM) & ADDRESS: (To be filled by OEM VENDOR)			201, G20: F NO: A) -2-F PACKA: FOR:	C/19-20/1819 GE M) &	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW in Agitators NTPC Nabinagar 4 x 250 M (BHEL W.O no: G 201, G202, G203 and to	IW	LTM/ Ag Rev NO. PAGE :	/G201 to FPC Nabinagar/ gitators: 001	##Enquiry N ## OEM Sup Address: ##Offer refe ##Date: Contact Offic Mobile no: Email id:	plier Name & rence:
SI. NO.	D	ESCRIPT	ION	BHEL and	d Ultimate Customer - NTPC (Na Corporation)., India Quality Ro			l Power	_	c confirmations he vendor
					ITEM: LT Motors (IE3) I	Jp to	200KW			
09	Inspection by I based on MQP Inspection Cat Inspection Cat Inspection Cat COC by Main inspection as in Any cost in witnessing of			Inspection Cate Inspection by M Customer – NT Inspection Cate COC by Main inspection as in witnessing of BHEL / BHEI	BHEL/BHEL AIA and also by Ulti /RQP approved and as in sl no:04 egorization: II // Main contractor (BHEL) / BHEL / PC approved MQP/RQP & based egorization: III contractor (BHEL) to Ultimate Cu	AIA bal on instance of the control o	er – NTPO tests i Manufacti s in the so	Itimate as in sl no:04 C based on ncluding for ure Works by cope of OEM		
				order and also	during execution of the contract					
10	Motor details Vendor shall furnish following M S. No			Agitators]	pplicable Rating in kW)	e) for this enquestre LT Motor Quantity (in nos)	uiry. Make		
				rber Tank Agita						
		3			Cank Agitator Motor	-				
		4		te Water Tank	Agitator Motor Ione Feed Tank Agitator Motor	-				
	5 Waste Water Tank A			, , ,	<u> </u>	-				
				rage Tank Agitator Motor	+					
		7			ne Feed Tank Agitator Motor					
				rber Area Drain	Sump Agitator Motor					
		9			Sump Agitator Motor					
		10			Sump Agitator Motor					
		11	Other	LT motors involv	red in the system (if any)					

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	IME OF SUBMISSION	ान्ववस्त्र To be filled in by NTPC
PROJECT NAME	NTPC Nabinagar 4 x 250 MW (BHEL W.O no: G 201, G202, G203 and G204)	2REVIEW & ENDORSEMENT BY NTPC PROJECT SPECIFIC QP NUMBER ALLOTTED
CONTRACT NO.:	CS-0270-109(1A) -2-FC/19-20/1819	
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.	LT MOTOR(IE3) - AGITATORS FOR FGD APPLICATION	
APPROVED QP NO.; RQP/SQP/RFQP/SFQP	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	sidered for SQP approval. $$	The MQP/RQP/SQP is endorsed for this project
II. That there are minor changes in the item/com the same do not affect the contents of MQP/RQP/	ponent with respect to that considered for MQP/RQP/SQP approval, however SQP	without any change
III. That there are minor changes in the item/ con the same affect the MQP/RQP/SQP slightly, as ind	iponent 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:	1111 & (Meticinea /Approved by/ Date & Seal)

(T(0)	EM SUPPLIER WITH OEM MFGR.'S LOGO) BE FILLED BY EM SUPPLIER)	LT MOTOR MANUFACTURER'S NAME AND ADDRESS (TO BE FILLED BY OEM/ LT MOTOR MANUFACTURE)		ITEM: LT MOTOR(IE3) UP TO 200KW FOR FGD APPLICATION SUB-SYSTEM: FGD - AGITATORS			QP NO.: AGITATORS: LT MOTOR:001 REV.NO.: 00 DATE: PAGE: OF			(BHEL W.O NTPC CON CS-0270-1) MAIN CON SUB CONT (TO BE FII	NTPC Nabinagar 4 x 250 MW (BHEL W.O no: G 201, G202, G203 and G204) NTPC CONTRACT NO: CS-0270-109(1A) -2-FC/19-20/1819 MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OEM) & ADDRESS: (TO BE FILLED BY OEM SUPPLIER)			NIPET RESS:		
<mark>SL.</mark> NO	COMPONEN OPERATIO		CHARACTERIST	ICS	CLASS	TYPE OF CHECK	OF C	HECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMA RECO			GENC 		REMARKS
<u>1.</u>	<u>2.</u>		3.		<mark>4</mark> .	<u>5,</u>	M	C/N 6.	<mark>7.</mark>	8.	9 <u>.</u>	D*	M **	C * 1	N 0.	<mark>11.</mark>
									"(√) SHALL BE		DOC. NO.:				REV.	CAT
	MANUFACTURER IOTOR SUPPLIER SIGN	MAIN SUPPI ATURE	ESS: ** C: 1 P: F	ENTIALLY M: OEM M MAIN SUPF PERFORM	INCLUDI MANUFAC PLIER – B W: WITN	ED BY SUPPL TURER/LT M HEL/BHEL AI	JER IN (OTOR S IA , N: VERIFI	(A DOCU UB-SUPP NTPC CATION.	MENTATION. LIER AS APPROPRIATE,	FOR NTPC USE	REVIEWED	BY	AF	PPROV	VED BY	APPROVAL SEAL

FORMAT NO.: QS-01-QAI-P-09/F1-R1 1/1 ENGG. DIV./QA&I



W.r.t FOREIGN OEM VENDORS ONLY

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 Agitators (DOC.NO:	
	BAP/QR/G201 to G204/NTPC Nabinagar/ LTM/	
	Agitators: 002 Rev.00 dt 16.02.2022) 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 manufacture.	
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 Motor	
	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	
<u> </u>	Motors may also be submitted.	
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

NTP (BHE NTPC CS-(PAC: MAI: BHE SUB ADD	PROJECT: NTPC Nabinagar 4 x 250 MW (BHEL W.O no: G 201, G202, G203 and G204) NTPC CONTRACT NO: CS-0270-109(1A) -2-FC/19-20/1819 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 Agitators NTPC Nabinagar 4 x 250 MW (BHEL W.O no: G 201, G202, G203 and G204)	DOC.NO: BAP/QR/G201 to G204/NTPC Nabinagar/ LTM/ Agitators: 002 Rev NO.: 00 PAGE: Page 1 of 6 DATE: 16.02.2022	##Enquiry No: ## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:
SI.	DESCRIPTION	BHEL a	 nd Ultimate Customer - NTPC (Natior	l nal Thermal Power	##Specific
NO.			Corporation)., India Quality Requi	irements	confirmations by the
			TOTAL TO M. A (TEX)	2001/11/	vendor
01	Type Test	A Vendor sl	ITEM: LT Motors(IE3) - Up to hall submit the type test reports of all		
	Requirements	ultimate should be those prop have been witnessed (or) Ultin	O1 (D) below and carried out within 12 Customer NTPC bid opening dt 0 22 for the test conducted on the identity ossed to be supplied under this enquiry a conducted at an independent laborate by BHEL/BHEL AIA (BHEL Appoint of Customer NTPC (National Therm of LT Motor Manufacture of OEM vences.)		
		report as pare not facceptable vendor she either at rab in the face of the fac	if vendor is not able to submit the siper 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 the presence of BHEL AIA (BHEL Apportunity presence of BHEL AIA (BHEL Apportunity Customer – NTPC review & approval.		
		C. Type To Appointed line with (General A			

Annexure-II

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

NTF (BHI NTP CS-(PAC MAI BHE SUB ADD	JECT: PC Nabinagar 4 x 2 EL W.O no: G 201, G20 C CONTRACT NO: 0270-109(1A) -2-F KAGE: FGD PACKA N CONTRACTOR: L - RANIPET CONTRACTOR (OE PRESS: be filled by OEM	2, G203 and G204) FC/19-20/1819 GE M) &	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Agitators NTPC Nabinagar 4 x 250 MW (BHEL W.O no: G 201, G202, G203 and G204)	DOC.NO: BAP/QR/G201 to G204/NTPC Nabinagar/ LTM/ Agitators: 002 Rev NO.: 00 PAGE: Page 2 of 6 DATE: 16.02.2022	##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 (Nation Corporation)., India Quality Requi		##Specific confirmations by the vendor
01	Type Test Requirement(Contd)	for above Standard) i. Meas (if ap ii. No le speec iii. Open moto iv. Full l v. Temp vi. Mom vii. High viii. Test ix. Test be lin maxi x. Over xi. Degraxii. Type proof E. The TCs/	circuit voltage ratio of wound rotor		
02	Quality Plan Requirement	b. If any of l approved 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, ultin MQP (Manufacturing Quality Plan) and opplicable for these LT Motor for inspectuation of the customer NTPC formal appropulation of the customer NTPC formal appropulation of the customer sheet approval router than the customer sheet appro	shall submit the MQP in ad approval by BHEL / nate customer NTPC and having validity, the ction purposes subject to oval in the event of an	

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

NTP (BHE NTPC CS-(PACI MAII BHE SUB ADD	JECT: C Nabinagar 4 x 2: C Nabinagar 4 x 2: C W.O no: G 201, G202 C CONTRACT NO: D270-109(1A) -2-F0 KAGE: FGD PACKAON CONTRACTOR: L - RANIPET CONTRACTOR (OEI RESS: be filled by OEM	C/19-20/1819 GE M) &	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Agitators NTPC Nabinagar 4 x 250 MW (BHEL W.O no: G 201, G202, G203 and G204)	DOC.NO: BAP/QR/G201 to G204/NTPC Nabinagar/ LTM/ Agitators: 002 Rev NO.: 00 PAGE: Page 3 of 6 DATE: 16.02.2022	##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
110.			Corporations, india Quality Requi	in Cilifetius	vendor
			ITEM: LT Motors(IE3) - Up to		
02	Quality Plan Requirement	filled up I approved from BHI d. If LT Mo	gly, LT Motor Manufacture & OEM st Endorsement sheet (copy attached) wit MQP with signature & seal in the even EL for BHEL/Ultimate Customer – NT otor Manufacture / OEM vendor do abmit a fresh MQP to BHEL/NTPO		
		e. Typical Ir			
03	Inspection Methodology to be adopted at Actual LT Motor	inspection MQP & :	Motors are to be inspected by BHEL an Agency) at LT Motor manufacture approved data sheet/drg/spec/ as per andard) - BIS 325 / IEC 60034 e-NTPC	e works as per approved relevant BIS (Bureau of	
	Manufacture works by OEM vendor	inspection MQP & a	ne Tests are to be witnessed by BHEIn Agency) at LT Motor manufacture approved data sheet/drg/spec / as per andard) - BIS 325 / IEC 60034 e-NTPC		
		NTPC wi Degree of	A (BHEL authorized inspection Ager Ill also ensure LT Motor type tests Protection Test Reports & acceptance data sheet / drg / spec / as per releva - BIS 325 / IEC 60034 etc.		
		Customer works and reports in approved	IA (BHEL authorized inspection -NTPC to witness / perform inspect d submit all the inspection documents cluding Degree of Protection Test Re MQP & approved data sheet / drg / s f Indian Standard) - BIS 325 / IEC 6	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

PROJECT: NTPC Nabinagar 4 x 250 MW (BHEL W.O no: G 201, G202, G203 and G204) NTPC CONTRACT NO: CS-0270-109(1A) -2-FC/19-20/1819 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 Agitators NTPC Nabinagar 4 x 250 MW (BHEL W.O no: G 201, G202, G203 and G204)	DOC.NO: BAP/QR/G201 to G204/NTPC Nabinagar/ LTM/ Agitators: 002 Rev NO.: 00 PAGE: Page 4 of 6 DATE: 16.02.2022	##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 (Nation Corporation)., India Quality Requi		##Specific confirmations by the vendor
		<u> </u>	ITEM: LT Motors(IE3) - Up to	200KW	venuui
03	Inspection	LT Motors m	to 30KW – Inspection Categorizati		
	Methodology to be adopted at Actual LT Motor Manufacture works by OEM vendorcontd	All Routine te are to be inspe (BHEL author per approved I (Bureau of Ind Test Reports v Customer – N' LT Motor Mat that the above specific requir variation, hot she between centre with approved LT Motors (3 All Routine T same are to authorized in the same in the same are to authorized in the same are to a sa	sts on LT Motors are to be ensured by octed & witnessed by OEM Vendor / Fized inspection Agency) at LT Motor MQP & approved data sheet /drg / spection Standard) - BIS 325 / IEC 60034 & with Inspection report (IR) to be submit TPC for review and to obtain inspection unfacturer has to issue COC (Certifical motor/ motors was manufactured taking ements regarding ambient temp., volta starts, pull out torque, starting KVA/K et of stud and gland plate, space heater drawing/data. 10KW to 50KW) – Inspection Categor ests on LT Motors are to be ensured to be inspected & witnessed by BH inspection Agency) at LT Motors.	r OEM Vendor & same BHEL / BHEL AIA manufacture works as c/ as per relevant BIS etc and all the Routine tted for BHEL/Ultimate on and dispatch clearance. It e of Conformance) states ing care of Customer in the state of Cu	
		Reports (IP sheet/drg/spe 325 / IEC 60 report (IR) to and to obtain i Above 50KV All Routine & Vendor at Act BHEL/ BHEI Customer-NTI Protection Tes with endorsen relevant BIS (the Routine T	iew of Type Test Reports and Dec 55) as per approved MQ ec / as per relevant BIS (Bureau of 2034 etc and all the Routine Test be submitted for BHEL/Ultimate Cust inspection and dispatch clearance. Wand up to 200KW – Inspection (C Type Tests if any on LT Motors are ual LT Motor Manufacture Works and LAIA (BHEL authorized inspection & witnessing includent Reports as per approved MQP /RQI ment sheet approved) / approved data Bureau of Indian Standard) - BIS 32: Cest Reports with Inspection report of the Customer – NTPC review and thance.	P & approved data f Indian Standard) - BIS Reports with Inspection tomer – NTPC for review Categorization: I e to be ensured by OEM d same shall be offered to on Agency) / Ultimate ding review of Degree of P (Reference Quality Plan sheet / drg / spec / as per 5 / IEC 60034 etc and all (IR) to be submitted for	

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

PRO	JECT:		CONTRACT QUALITY	DOC.NO:	##Enquiry No:				
NTF	C Nabinagar 4 x 2	50 MW	REQUIREMENTS (CQR) for						
	EL W.O no: G 201, G202		LT MOTORS(IE3) - Up to 200KW used in Agitators	BAP/QR/G201 to G204/NTPC Nabinagar/ LTM/ Agitators: 002	## OEM Supplier Name & Address:				
	C CONTRACT NO: 0270-109(1A) -2-F	C/19-20/1819		##Offer reference:					
			NTDC Nabinagan 4 v 250 MW	##Date:					
MAI BHE SUB	KAGE: FGD PACKA N CONTRACTOR: L - RANIPET CONTRACTOR (OE RESS:		NTPC Nabinagar 4 x 250 MW (BHEL W.O no: G 201, G202, G203 and G204)						
(То	be filled by OEM	VENDOR)							
SI.	DESCRIPTION	DUEL 0	 nd Ultimate Customer - NTPC (Natior	and Thormal Dayyor	##Cnocific				
	DESCRIPTION	DITEL 4	-		##Specific				
NO.			Corporation)., India Quality Requi	irements	confirmations by the vendor				
			ITEM: LT Motors(IE3) - Up to						
03	Inspection		s / tests /review of documents / ins						
	Methodology		nufacture by OEM /BHEL / BHEL A						
	to be adopted at Actual LT		gency) / Ultimate Customer-NTPC implication arising out of due to condu						
	Motor		witnessing of any of the tests at Actual						
	Manufacture		third party etc by BHEL / BHEL AIA						
	works by OEM		he scope of OEM Supplier only.						
	vendorcontd		tra cost if any will be admissible and p	paid in the event of an					
			during execution of the contract.						
			shall be dispatched without Bh tomer – NTPC Inspection and disp						
04	Painting	Painting requi	rement like paint shade and painting th	nickness including no of					
	Requirements		e to be ensured by the OEM vendor fo						
		applicable)	ate Customer -NTPC approved data						
05	Packing		be as per Specification / Drg. / Data s to avoid any transit & handling dama						
06	For Inspection		all by OEM Vendor for LT Motor i						
	call		facture works to be raised for	BHEL/BHEL AIA					
		inspection/	Ultimate Customer – NTPC in	cluding for type test					
		(OC-Proc)	any to be ensured / addressed to Mobile no: +91 9443006303., Ema	Wir R Nesavan., DGW ail id: kesavan@hhel in					
			rathanan., DM (QC-Proc)., Mobile						
			vak@bhel.in including for inspecti						
		immediate re	sponse / resolution.						
07	Document		nation for Document Package in the event						
	Package /		Of file) is to be given containing the follow a Sheet	ving with proper linkages (.)					
	Dossier		/RQP/Endorsement sheet						
			dentified by BHEL/NTPC for record for "						
			omer Hold Point) Verification & Witness '						
			en in MQP / RQP / MQP (as applicable). Inspection Report + TC						
			L AIA (BHEL Appointed Inspection Agen	ncy)/					
		BHEI	report + TC						
			nate customer NTPC (National Thermal Po						
			(Customer Hold Point) / MDCC (Material ance Certificate)	ыгракш					
		(vii) Type	test reports conducted/submitted with app ved data sheet and BOM with actual make						

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

(For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)

NTP (BHE NTP CS-(CS-(CMAII) BHE SUB ADD)	C CONTRAC' 0270-109(14 KAGE: FGD I N CONTRAC' L - RANIPET CONTRACTO RESS:	201, G202 T NO: A) -2-F0 PACKAO TOR:	C/19-20/1819	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW to in Agitators NTPC Nabinagar 4 x 250 M (BHEL W.O no: G 201, G202, G203 and G	w	Rev NO.:	/G201 PC Nabin itators: 002 00 Page 6 of 6	to agar/	##Offer	Supplier Name & :: reference: Official Name:
SI.	DESCRIPT	TION	BHEL a	nd Ultimate Customer - NTPC (N	ation	al Therm	al Power			##Specific
NO.				Corporation)., India Quality F	Requi	rements			confi	rmations by the
				ITEM: LT Motors(IE3) - I	In to	200KW				vendor
			Custo	mer approved drgs.	<u> </u>	ZUUIX VV				
08	Important notes	t	Inspection Cate Inspection Cate COC by Main inspection as ir Any cost implicate tests at Actropy Customer – NT	BHEL/BHEL AIA and also by Ultinapproved and as in sl no:03 egorization: II Main contractor (BHEL) / BHEL A FPC approved MQP/RQP & based egorization: III contractor (BHEL) to Ultimate Cu	stome	nsed on Ul spection a or – NTPC ing for wi EL / BHE and no ext	C based on tnessing of ar	ny of mate		
09	Motor det	ails			5			<u> </u>		
			ish following M	otor details involved in Agitators Agitators	F	pplicable Rating n kW)) for this end LT Motor Quantity (in nos)		ake	
	1		rber Tank Agita					1		
	2	iary Absorber T								
	3		te Water Tank A	Agitator Motor lone Feed Tank Agitator Motor						-
	5		e Water Tank A							1
	6			rage Tank Agitator Motor						1
	7			ne Feed Tank Agitator Motor						1
	8			Sump Agitator Motor]
	9			Sump Agitator Motor]
	10			Sump Agitator Motor yed in the system (if any)						
	11									

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.

		OEM SUP	PLIER		MANU	FACTURING QL	JALITY PLAN FO	R			AR :FGD	AGITATORS:001	
		To be fille	d hv	١.	T M∩T∩D	/ Up to TO 200	KW) - FGD Appli	ootion	REV:NO:0	-			
	BHEL	OEM Sup	•	L	IWUIUN	(up to 10 200	DATE: 17.02.2022						
BAP	P/RANIPET/	OEIWI Sup	hiiei						Page :				
	MIL NADU	LT MOT	OR										
	INDIA	Manufac											
		To be filled b											
		Supplie											
S1.No.	COMPONET/A	CHARACTE-	CLASS	TYPE OF	QUANUTM OF	REFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF REC		AGENCY		REMARKS	
	SSEMBLY/OP	RISTIC		CHECK	CHECK				D	М	BHEL/		
	ERATION/TES TS										BHEL Aia		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.		12.	
INCO	MING INSPCE	ETIONS:	<u> </u>					•		<u> </u>		•	
1.1	copper	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		Р	٧		
	conductor(Dual coated)MM	2.Bare conductor diameter	Major	Mechanical	1 sample/lot	BHEL / NTPC Spec & Apprd Datasheet	BHEL / NTPC Spec & Apprd Datasheet	Plant format		Р	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	٧		
		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	٧	EC gr purity: -99.6%	
1.2	Aluminum Ingots	1.Chemical composition	Major	Chemical	1 sample/lot	do	do	Supplier Tc		P	٧	Lo gr punty. 00.070	
1.3	FAN	1.Diameter (ID&OD)	Major	Mechanical	1 sample/lot	do	do	Inspection Report		P	٧		
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		Р	V		
1.5	Terminal Block	1.Dimensions	Major	Mechanical	Plant std.	do	do	Inspection Report		Р	V		
		2.Proof voltage test	Major	Electrical	Plant std.	do	do	Inspection Report		Р	٧		

		OEM SUP	PLIER		MΔNII	FACTURING OF	IALITY PLAN FO	R	MQP:E:LTM: NABINAGAR :FGD AGITATORS:001						
		To be fille		1			· · · · · · · · · · · · · · · · · · ·	••	REV:NO:00						
	BHEL		•	L	I WUTUR	(Up to TO 2001	DATE: 17.02.2022								
DAI	BUEL P/ RANIPET /	OEM Sup	plier						Page :						
	AMIL NADU	LT MOT	OR												
	INDIA	Manufac	ture												
		To be filled b	y OEM												
		Suppli	er												
S1.No	. COMPONET/A		CLASS	TYPE OF		REFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF REC		AGENCY		REMARKS			
	SSEMBLY/OP ERATION/TES TS	RISTIC		CHECK	CHECK				D	M	BHEL/ BHEL AIA				
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.		12.			
	ROCESS INSP		<u></u>	, o.	0.	71	J.	Ų.	10.			121			
2.1	Stator core	1.Core length dia	Major	Mechanical	100%	do	do	Inspection Record		Р	٧				
		2.Core locking	Major	Visual	100%	do	do	Inspection Record		Р	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		P	٧				
		2.Blow holes	Major	Mechanical	100%	do	do	Inspection Record		P	٧				
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		Р	٧				
		3.Insulation resisitance	Major	Electrical	100%	do	do	Inspection Record		P	٧				
2.4	Final Assembiy	1.Completeness	Major	Visual	100%	do	do	Inspection Record		P	٧				
		2.Runout in case of flanged motors	Major	Mechanical	100%	do	do	Inspection Record		P	٧				
		3.Mounting dimensions	Major	Mechanical	100%	do	do	Inspection Record		P	٧				

		OEM SUPP				FACTURING QU	MQP:E:LTM: NABINAGAR :FGD AGITATORS:001 REV:NO:00 DATE: 17.02.2022 Page :					
		To be fille	•	L1	MOTOR	(Up to TO 200)						
	BHEL	OEM Sup	plier			•						
BAP	/ RANIPET /								-			
TA	MIL NADU	<u>LT MOT</u>	<u> OR</u>									
	INDIA	Manufac	ture									
		To be filled b										
		Supplier										
	COMPONET/A					REFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF REC		AGENCY		REMARKS
	ERATION/TES	RISTIC		CHECK	CHECK				D	M	BHEL/ BHEL	
	TS										AIA	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.		12.
FINAL	. INSPCETIO	N AND TESTING	ì:									
3.1		1.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		P	W	
		2.HV Test	Maior	Electrical	100%	do	do	Inspection Record		Р	W	
		3.Phase sequence & direction of rotation	-7-	Electrical	100%	do	do	Inspection Record		P	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		P	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		P	W	
		8.Moutings & Overall dimensions	Major	Mechanical	100%	do	-do-	Inspection Record		P	W	

		OEM SUPF	LIER		MANU	FACTURING QU	ALITY PLAN FO	R		MQP:E:LTM: NABINAGAR :FGD AGITATORS:001						
		To be fille	d hv	11	_		-		REV:NO:00							
	BHEL		•	L	IWUIUN	(Up to TO 200)	DATE: 17.02.2022									
l _{DA}		OEM Sup	piler						Page :							
	P/ RANIPET / Amil Nadu India	LT MOTOR Manufacture														
		To be filled b	y OEM													
		Supplie	<u>r</u>													
S1.No	COMPONET/A	ET/A CHARACTE- CLASS				REFERENCE DOCUMENT ACCEPTANCE STANDARD		FORMAT OF REC		AGENCY		REMARKS				
	SSEMBLY/OP ERATION/TES TS	RISTIC			CHECK			D		BHEL/ BHEL Aia						
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	d0	Inspection Record		P	V					
		3.Packing	Major	Visual	100%	do	do	Inspection Record		Р	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. 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.

- 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)

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

TO BE FILLED IN BY SUPPLIER AT T	IME OF SUBMISSION		एनश्रेपीसी NTPC	To be filled in by NTPC					
PROJECT NAME	NTPC Nabinagar 4 x 250 MW (BHEL W.O no: G 201, G202, G203 and G204)		2REVIEW & 1	ENDORSEMENT BY NTPC ECIFIC QP NUMBER ALLOTTED					
CONTRACT NO.:	CS-0270-109(1A) -2-FC/19-20/1819								
MAIN SUPPLIER	M/S.BHEL, RANIPET , TAMIL NADU., INDIA		QP NO:						
MANUFACTURER WORKS & ADDRESS	(TO BE FILLED BY OEM / LT MOTOR SUPPLI		REV. NO.: 00 DT:						
ITEM /EQUIPMENT / SYSTEM/ SUB-SYSTEM DETAILS i.e. MODEL TYPE/SIZE/RATING etc.	LT MOTOR(IE3) - AGITATORS FOR FGD	APPLICATION							
APPROVED QP NO.: RQP/SQP/RFQP/SFQP	TO BE FILLED BY OEM/LT MOTOR SU	PLIER							
Confirmation by Main Supplier (TICK WHICHE	/ER APPLICABLE)		(TICK APPLICAB	LE)					
I. That the item/ component is identical to that con	sidered for SQP approval. $$			P/SQP is endorsed for this project					
II. That there are minor changes in the item/com the same do not affect the contents of MQP/RQP/S		QP/SQP approval, however	without any c	nange					
III. That there are minor changes in the item/ con the same affect the MQP/RQP/SQP slightly, as ind		QP/SQP approval, however	as indicated. DISTRIBUTION A) MQP/RQ 1. MAIN SUPP. MQP/RQP/SQ 2. MANUFACT 3. RIO 4. CQA-SPL 5. CQA-O/C B) RFQP/SF(1. MAIN SUPP. 2. MANUFACT 3. NTPC FQA (LIER (WITH A COPY OF P) URER PP: LIER (with a copy of MQP/RQP/SQP					
	(TO BE FILLED BY OEM / LT MOTOR SUPPLI	ER	NTPC (Review	wed /Approved by/ Date & Seal)					
SIGN.: (Main Supplier) DATE:	SIGN.: (Manufacturer) DAT	E:	THE CHILL	The implication of Dune & Denty					

OEM SUPPLIER WITH OEM MFGR.'s LOGO (TO BE FILLED BY OEM SUPPLIER) NAME AND ADDRESS (TO BE FILLED BY OEM / LT MOTOR MANUFACTU		LLED BY OEM/ R MANUFACTURE)	ITEM: LT MOTOR(IE3) UP TO 200KW FOR FGD APPLICATION SUB-SYSTEM: FGD - AGITATORS PAGE: OF						NTPC CONTRACT NO: CS-0270-109(1A) -2-FC/19-20 MAIN CONTRACTOR: BHEI SUB CONTRACTOR (OEM) & (TO BE FILLED BY OEM SUP					and G204 20/1819 EL - RA & ADD	nd G204) D/1819 L - RANIPET & ADDRESS: PPLIER)		
SL. NO	COMPONEN OPERATIO		CHARACTERIS	STICS	CLASS	TYPE OF CHECK	OF C	NTUM HECK C/N	REFERENCE DOCUMENT	ACCEPTANCI NORMS	E FORMA' RECO			GENC		REMARKS	
1.	2 <u>.</u>		3.		4.	<u>5.</u>	5.		7.	<mark>8.</mark>	9 <u>.</u>	D*		M C N ** 10.		<u>11.</u>	
			L	LEGEND: * RECORDS, INDENTIFIED WITH "TICK" ($\sqrt{\ }$) SHALL BE							DOC. NO.:				REV	CAT	
	I MANUFACTURER MOTOR SUPPLIER SIGN	MAIN SUPPI ATURE	(BHEL) P:	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	ВУ	AF	PPROV	/ED BY	APPROVAL SEAL	

FORMAT NO.: QS-01-QAI-P-09/F1-R1 1/1 ENGG. DIV./QA&I

