	ADDDEGG	MEGES NAME AND						MANUFACT								
H	ADDRESS				URRY PUM					AS PER PO						
"	/	A 1.0	SYS	STEM	: FGD API	PLICATIO	N	BF	HEL WO	: AS PER	INTERNAI	LW/C				
Ran	ipet Custome	r Approved Source	OP	NO.	EGG-SI D	:723, REV	.00	DATE: 08	201 2021		ONTRACTO	R	M/S	S BH	IEL, I	RANIPET
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SL.	COMPONENT &	CHARACTERISTICS	CLASS		PE OF	QUANTU		REFERENCE DOCUMENT		TANCE	FORMAT		A	GEN(CY	REMARKS
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1.0	RAW MATERIA		4.		5.	0.		7.	•). 	9.	D.		10	'.	11.
1.1	Volute Casing, Casing Cover	Chemical & Mechanical Properties	Major	Mecl Prop	mical & hanical perties, dness	1 Samp Heat		NTPC Appr / Data Shee			MTC	V	Р	V	V	
1.2	Impeller, Wear Plate.	Chemical & Mechanical Properties	Major	Mecl Prop	mical & hanical perties, Iness k	1 Samp Heat		Drawing & Specification		MTC	V	Р	٧	V		
1.3	Volute Casing	Surface Defects	Major	DPT mack surfa	hined	100%	,	ISO4987	ISO -	4987, I 2	DPT Report	V	Р	٧	V	
1.4	Cover Plate & Frame Plate	Soundness	Major		RT *	100 %	6	ASME Sec Level - 5	V, ASTM	- E446	Test Report	√	Р	٧	V	*For Gypsum Bleed Pumps
		Chemical Composition		com	mical position			Drawing/Sp	ecificatio	n	Test Report	V	Р	٧	٧	
1.5	Shaft	Mechanical Properties	Major	Tests treat	hanical s, Heat ment if icable		1 Sample /Heat		Drawing/Specification		Test Report	√	Р	V	V	HT Chart Review.
		Legend: * Record, ident shall be submitted to cur package. M: Manufactur Contractor/BHEL/BHEL V: review of records, MA	stomer as rer / Sub AIA. N: N	s a QA supplie ITPC P	document er, C: Main : Perform:	ation witness,		def			Relights		+	2	,	A
Manuf	acturer Sign & Seal	Penetrant Test, UT: Ultr	asonic Te	estingT	C: Test Ce	ertificate,	Rake	esh Kr Madhu (, ,		njith (Mgr / 0		RA			am (DGM/Q
	-	COC: Certificate of conf						Prepared	l by		Reviewed by	y			Appr	oved by

79 1,3 0	/2022/BARTQACI	TEGF S NAME AND						MANUFA	CTUF	RING (QUALITY	Y PLAN					
σ	ADDRESS		ITE	EM: SL	URRY PUM	1P					S PER PO						
11,	/		SYS	STEM	: FGD APF	PLICATIO	N]	BHEI	WO :	AS PER	INTERNAL	. W/C)			
Rai	Customer A	Approved Source	OD	NO.	FGS:SLP	.702 DEV	7.00	DATE.	Λ0 Λ1	2021	MAIN CO	ONTRACTO	R	M/3	S BH	EL, F	RANIPET
			QP			:723, KE V	:00		TE: 08.01.2021 PAG		PAGE NO			Pag	Page 2 of 5		
SL.	COMPONENT &	CHARACTERISTICS	CLASS		YPE OF	QUANTU		REFERENCE		ACCEP'		FORMAT		A	GEN	CY	REMARKS
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1.	2.	J.		Moo	hanical			, , , , , , , , , , , , , , , , , , ,		- 0	•	Test	 .		10	1	11.
		Hardness Test			dness	100%		Drawing/S	Specif	ficatior	1	Report	V	Р	V	V	
		Internal Soundness		UT		100%		ASTM A	388	ASTM	A 788	UT Report	√	Р	V	٧	
		Surface & Sub Surface Defects		MT- Surf	on m/c ace	100%	%	ASTM E7	709	ASTM	A 788	MT Report	1	Р	V	V	MT- Magnetic Particle Test
1.6	Impeller	Surface & Sub Surface Defects	Major	DPT	-	Accessi Areas	ible	ISO4987		ISO 4 Level	,	DPT Report	1	Р	V	٧	
2.0	IN PROCESS INS	SPECTION															
2.1	Impeller/Volute Casing/ Wear Plate / Casing Cover/ Shaft After Machining	Surface Condition/ Defects/ Measurement	Major		ıal and ısuremen	100%	%		Drav	wing		IR (Protoco I)		Р	-	-	
2.2	Couplings	Verification of TC	Major	Rev	iew of TC	100%	6	Technica Drawing	l Spec	cificatio	on /	COC/TC	V	Р	٧	-	
2.3	Rotating Parts	Balancing	Major	, ,	ic & amic ancing	100%	/ ₆	ISO 1940)	ISO 1 grade lower	,	Balancin g Report	√	Р	٧	٧	
2.4	Volute Casing	Soundness	Major	Stat	ic	100 2	20%	See		No Le	akage	Test		Р	W		Test
	S	Legend: * Record, ident shall be submitted to cu backage. M: Manufactu Contractor/BHEL/BHEL V: review of records, MA	stomer a rer / Sub AIA. N: N	s a QA suppli ITPC F	documenta er, C: Main P: Perform:	ation witness,		de	1			Relights		+	2	,	A
			rasonic TestingTC: Test Certificate, Rakesh Kr Madhu (I				u (Dy l	Mgr / Q	A) K Re	njith (Mgr / (\overline{QA}	R	R Arunachalam (DGM/QA				
Manuf	facturer Sign & Seal	IR: inspection report, MCOC: Certificate of conf	TC: Mate	rial Te				Prepar	red by			Reviewed by	7			Appr	oved by

91,30,			FGF'S NAME AND						MANUF	ACTURING							
n		DDRESS				URRY PUM				PROJECT: A							
""	/	.	10	SYS	STEM	: FGD APF	PLICAT	ION		BHEL WO	: AS PER	INTERNAL	. W/C				
Ran	ipet	ustomer A	Approved Source	QP	NO	ECC-CI D	723 PE	W.00	DATE	: 08.01.2021		IAIN CONTRACTOR			S BH	EL, F	RANIPET
						FGS:SLP:723, REV:00					PAGE N			Page 3 of 5			
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						ssure	%	/10 % of	Remarks Column	S		Report				VV	at 2x rate
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3.0	FINAL IN	ISPECTIO	ON		1										1		101 0011111
	Complete				Visu	al &	100					T	,		T		
3.1	Assembly		Completeness	Major		ensional	%	*	Approve	ed GA Drawin	ng	IR		Р	W	W	
		,	Measurement-				,,,					D (
			Flow vs		Perf	ormance	400				. .	Perform					
			Head(Complete	Major	testi	ng of	100	*		ed Drawing /[Jata	ance		Р	W	W	*BHEL to
			operating range),	,	pum	-	%		Sheet			Test					witness
			Power, Efficiency		•	•						Report					20% of
			Vibration Velocity														each type
			RMS [MM/S]									Perform					of Pump
			Bearing		Mea	suremen	100	*	Approve	d Drawing.		ance		Р	١٨/	W	and
			Temperature		t		%		Approve	ed Data Shee	et	Test	٧	-	V V	VV	NTPC-
			Noise Level									Report					one Pum
			RMS[MM/S]														per type.
			NPSH Test	Major	Mea	suremen	1 Pun	•	Design 9	Standard of I	⊃umn	NPSH		Р	W	W	
			111 011 1001	iviajoi	t		each t	ype	Boolgii	Staridard or i	ипр	Test	'				
		L	egend: * Record, identi	fied with	"tick" (√) under co	lumn 'D	'	0								
			shall be submitted to cus						M			0121			0		1 9
			oackage. M: Manufactur						M-	-		(Notath		1	r		IXI
			Contractor/BHEL/BHEL							_		J.		7	1	-	V -
			/: review of records, MA					Palze	och Kr Mad	hu (Dy Mgr / Q)Δ) K D	enjith (Mgr / Q)Δ)	D	Δηιη	achala	ım (DGM/Q
Manuf	acturer Sign		Penetrant Test, UT: Ultra					Nako	on Ki wiau	nu (Dy Mgi / C	(A) KK	enjini (wigi / C	(A)	IN .	AI UII	aciiali	пп (ром/Q
· ranul	acturer bigii	1	R: inspection report, M7	o: Mater ormance.	iai ie	si Gerillicati	₹.			ared by	1		7	1			oved by

79130/2022/BARTORC/WEGHS NAME AND				MANUFACTURING QUALITY PLAN											
77	ADDRESS		ITE	M: SLURRY PUM	1P	PRO,	JECT: A	S PER PO							
	<i>}</i> ***		SY	STEM: FGD API	PLICATION	BHE	EL WO	AS PER	INTERNAL	. W/C)				
Rar	Customer A	pproved Source	OB	NO. FGS:SLP	:723, REV:00	DATE: 08.0	1 2021	MAIN CO	CONTRACTOR			M/S BHEL, RANIPET			
			QP	NO. FOS.SLP	:725, KE V:00	DATE: 08.0	1.2021	PAGE NO	Э:		Pag	ge 4	of 5		
SL.			CLASS	TYPE OF	QUANTUM	REFERENCE	ACCEP'		FORMAT		A	GEN	CY	REMARKS	
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					/ design				Report						
3.2	O markets Brown	Leak test	Major	Leakage testing	100%	Mfg. Drawing, Approved Data Sheet	No Le	eakage	Report	1	Р	W	W		
3.3	Assembly	Complete Pump Assembly Strip Down Test (Not Required If Performance Test is Fine.)		Visual	100%	Mfg. Drawing, Data Sheet	, Appro	ved	Report	V	Р	W	W	Only Required in case of Abnormal Sound	
3.4	Painting	Dry Film Thickness/Paint shade	Major	Visual & Measuremen t	100%	NTPC Approv Schedule	ed Pair	nting	IR(Proto col)	√	Р	V	V		
3.5	Packing	Preservation	Major	Visual & Measuremen t	100%	Technical Spe approved Pac Procedure/Dra	cking	L	COC	V	Р	V	-		
4.0	DOCUMENTATION	N													
4.1	Check of Quality Assurance Documentation	Compliance to MQP	Major	Check of Complement s	100%	Manufacturing	g Qualit	y Plan	Protocol	√	V	V	V		

NOTE: 1. (\$) - 10 % of each type for NTPC (Customer).

	Legend: * Record, identified with "tick" (√) under column 'D' shall be submitted to customer as a QA documentation package. M: Manufacturer / Sub supplier, C: Main Contractor/BHEL/BHEL AIA.N: NTPC P: Perform: witness, V: review of records, MA: Major and MI: Minor, DPT: Dye	de la	Relights_	R. D
	Penetrant Test, UT: Ultrasonic TestingTC: Test Certificate,	Rakesh Kr Madhu (Dy Mgr / QA)	K Renjith (Mgr / QA)	R Arunachalam (DGM/QA)
Manufacturer Sign & Seal	IR: inspection report, MTC: Material Test Certificate.			
	COC: Certificate of conformance.	Prepared by	Reviewed by	Approved by

8791,30,	/2022/		RGP'S NAME AND						M	ANUFA	CTUR	RING (UALITY	PLAN			
ADDRESS					FEM: SLURRY PUMP PROJECT: AS PER PO												
					STEM	STEM: FGD APPLICATION BHEL WO: AS PER INTERNAL W/O											
Ran	Ranipet Customer Approved Source				QP NO. FGS:SLP:723, RE			EV:00		DATE:	E: 08.01.2021 MAIN CONTRACTOR M/S BHEL, RANIPE				ANIPET		
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SL.	COM	IPONENT &	CHARACTERISTICS	CLASS	TY	PE OF	QUA	NTUM		EFERENCE	-	ACCEPT	ANCE	FORMAT	OF	AGENCY	REMARKS
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1.	1. 2. 3.		4.		5.	(6.	_	7.		8.		9.	D*	** 10.	11.	

- 2. All other 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.
- 3. This QP is applicable for Mandatory Spare supply also.
- 4. Separate MQP to be submitted for Electric Motor.

SI No	Types of Pumps	Quantity	
01.	Limestone slurry feed Pump	06	
02.	Gypsum bleed Pump	06	
03.	Primary hydro cyclone feed tank Pump	02	No of Domeston Day
04.	Filtrate water tank Pump	02	No of Pumps as Per Approved Datasheet
05.	Secondary hydrocyclone feed tank	02	/ GA Drawing
06.	Waste water tank Pump	04	7 and brawing
07.	Auxiliary absorbent tank Pump	02	
08.	Emergency transfer Pump	03	
09.	Absorber area drain sump Pump	06	
10.	Gypsum area drain sump Pump	02	
11.	Limestone area drain sump Pump	02	

Record of revision

Rev no	Date	Description
00	08.01.2021	Original Issue – First submission.

	Legend: * Record, identified with "tick" (√) under column 'D' shall be submitted to customer as a QA documentation package. M: Manufacturer / Sub supplier, C: Main Contractor/BHEL/BHEL AIA.N: NTPC P: Perform: witness, V: review of records, MA: Major and MI: Minor, DPT: Dye	de H	Relights	R. A
	Penetrant Test, UT: Ultrasonic TestingTC: Test Certificate,	Rakesh Kr Madhu (Dy Mgr / QA)	K Renjith (Mgr / QA)	R Arunachalam (DGM/QA)
Manufacturer Sign & Seal	IR: inspection report, MTC: Material Test Certificate.			
	COC: Certificate of conformance.	Prepared by	Reviewed by	Approved by

30/202	Annexure Q	
	Indent No: Enquiry no:	
Sl.No	BHEL / Customer Requirements	## Specific confirmations by the 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. For NTPC Project ensure TPI Approved by NTPC. Refer our QC Procurement email in this re 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	

	P/BAP-QA_MECH 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.	
1) 1	## 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:

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

(For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)

NTP 3x50 (BHI NTP CS-4 PAC MAI BHE SUB ADD	DECT: C Kahalgaon Stage- I, 0 MW) EL W.O no: G213 to C CONTRACT NO: 1200-109(4)-9-FC-COA KAGE: FGD PACKA N CONTRACTOR: CL - RANIPET CONTRACTOR (OE ORESS: be filled by OEM	G216) 6916 GE M) &	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Slurry Pumps NTPC Kahalgaon Stage- I, II (4x210 MW + 3x500 MW) (BHEL W.O no: G213 to G216)	DOC.NO: BAP/QR/G213 to G216/Kahalgaon/SlurryPu mp/LTM: 002 Rev NO.: 00 PAGE: Page 1 of 6 DATE: 08.06.2022	##Enquiry No: ## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:
SI.	DESCRIPTION	BHEL a	nd Ultimate Customer - NTPC (Nation		##Specific
NO.			Corporation)., India Quality Requi	irements	confirmations by the vendor
	I		ITEM: LT Motors(IE3) - Up to	200KW	rendor
01	Type Test Requirements	the type tests as listed in 10 years from the data of 1.11.2019. These reports cal/similar LT Motors to y and test (s) either should ory (or) should have been inted Inspection Agency) all Power Corporation) at dor. Imilar / identical type test he case of type test reports on requirement and not ustomer – NTPC, the onal cost if any to BHEL			
		lab in the / BHEL Ultimate C. Type To Appointed	reputed third party lab (or) Government presence of BHEL AIA (BHEL Apportunity) (Ultimate client NTPC and submit to Customer – NTPC review & approval. The est reports review and approval by the distribution of the distribution of the content of	binted Inspection Agency) the reports for BHEL / by BHEL AIA (BHEL atte client NTPC is must in	

(General Arrangement) Drawing etc.

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

(For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)

NTPO 3x500 (BHH NTPO CS-4 PAC MAI BHE SUB ADD	DECT: C Kahalgaon Stage- I, 0 MW) EL W.O no: G213 to 0 C CONTRACT NO: 1200-109(4)-9-FC-COA KAGE: FGD PACKA N CONTRACTOR: CL - RANIPET CONTRACTOR (OE DRESS: be filled by OEM	G216) 6916 GE M) &	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Slurry Pumps NTPC Kahalgaon Stage- I, II (4x210 MW + 3x500 MW) (BHEL W.O no: G213 to G216)	DOC.NO: BAP/QR/G213 to G216/Kahalgaon/SlurryPu mp/LTM: 002 Rev NO.: 00 PAGE: Page 2 of 6 DATE: 08.06.2022	##Enquiry No: ## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:
SI.	DESCRIPTION	BHEL a	nd Ultimate Customer - NTPC (Nation	nal Thermal Power	##Specific
NO.			Corporation)., India Quality Requi	irements	confirmations by the
			ITEM: LT Motors(IE3) - Up to	200KW	vendor
01	Type Test	D The follo	wing Type test reports to be submitted		
	Requirement(Contd)	for above	e 100KW LT Motor as per relevant - BIS 325 / IEC 60034 etc		
02	 i. Measuring of resistance of winding of stator and w (if applicable) ii. No load test at rated voltage to determine input current, speed. iii. Open circuit voltage ratio of wound rotor motor (in camotors) 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 (Noise level for all the moto be limited to 85dB(A) except for BFP motor for which maximum limit shall be 90dB(A).) x. Over speed test xi. Degree of Protection Tests (Minimum Ingress Protection xii. Type test reports for motors located in fuel oil area having proof enclosures as per BIS 2148/ IEC 60079-1 E. The TCs/Test reports shall also be given as PDF file with incopage control through Email & Soft Copy (File size to less than 				
	Quality Plan Requirement				
02	Quality Plan Requirement				

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

(For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)

PROJECT: NTPC Kahalgaon Stage- I, II (4x210 MW + 3x500 MW) (BHEL W.O no: G213 to G216) NTPC CONTRACT NO: CS-4200-109(4)-9-FC-COA-6916 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 Slurry Pumps NTPC Kahalgaon Stage- I, II (4x210 MW + 3x500 MW) (BHEL W.O no: G213 to G216)	##Enquiry No: ## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:	
SI.	DESCRIPTION	BHEL a	nd Ultimate Customer - NTPC (Nation		##Specific
NO.			Corporation)., India Quality Requ	irements	confirmations by the
			ITEM: LT Motors(IE3) - Up to	200KW	vendor
		should su review &	otor Manufacture / OEM vendor do abmit a fresh MQP to BHEL/NTPO approval. (copy attached).	Des not have MQP, they C (in NTPC format) for	
			ot final and binding on BHEL / Ultim		
03	Inspection Methodology to be adopted at Actual LT Motor Manufacture	a. All LT M inspection MQP & Indian St Customer			
	works by OEM vendor	inspection MQP & a	ne Tests are to be witnessed by BHE n Agency) at LT Motor manufacture approved data sheet/drg/spec / as per andard) - BIS 325 / IEC 60034 e-NTPC		

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

(For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)

PROJECT: CONTRACT QUALITY ##Enquiry No: DOC.NO: REOUIREMENTS (CQR) for NTPC Kahalgaon Stage- I, II (4x210 MW + BAP/OR/G213 LT MOTORS(IE3) - Up to 200KW used 3x500 MW) ## OEM Supplier Name & G216/Kahalgaon/SlurryPu (BHEL W.O no: G213 to G216) Address: mp/LTM: 002 Slurry Pumps Rev NO.: 00 NTPC CONTRACT NO: ##Offer reference: CS-4200-109(4)-9-FC-COA-6916 PAGE: Page 4 of 6 DATE: 08.06.2022 ##Date: NTPC Kahalgaon Stage- I, II (4x210 PACKAGE: FGD PACKAGE MAIN CONTRACTOR: MW + 3x500 MWContact Official Name: **BHEL - RANIPET** (BHEL W.O no: G213 to G216) Mobile no: SUB CONTRACTOR (OEM) & Fmail id: ADDRESS: (To be filled by OEM VENDOR) SI. **DESCRIPTION BHEL and Ultimate Customer - NTPC (National Thermal Power** ##Specific confirmations by the NO. Corporation)., India Quality Requirements vendor

ITEM: LT Motors(IE3) - Up to 200KW

03 Inspection Methodology to be adopted at Actual LT Motor Manufacture works by OEM vendor...contd

LT Motors up to 50KW - Inspection Categorization: III

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 for review and to obtain inspection and dispatch clearance.

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

LT Motors (Above 50KW & upto 75KW) – Inspection Categorization: II All Routine Tests on LT Motors are to be ensured by OEM vendor & same are to be inspected & witnessed by BHEL / BHEL AIA (BHEL authorized inspection Agency) at LT Motor manufacture works including review of Type Test Reports and Degree of Protection Test Reports (IP 55) as per approved MQP & approved data sheet/drg/spec / as per relevant BIS (Bureau of Indian Standard) - BIS 325 / IEC 60034 etc and all the Routine Test Reports with Inspection report (IR) to be submitted for BHEL/Ultimate Customer – NTPC for review and to obtain inspection and dispatch clearance .

Above 75KW and up to 200KW - Inspection Categorization: I

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

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

	<u>(For 1</u>	FOREIG	N (OUTSIDE INDIA)	OEM VENDOR	ONLY)
NTPO 3x500 (BHH NTPO CS-4 PAC MAI BHE SUB ADD	JECT: C Kahalgaon Stage- I, 0 MW) EL W.O no: G213 to C C CONTRACT NO: 200-109(4)-9-FC-COA KAGE: FGD PACKAN N CONTRACTOR: L - RANIPET CONTRACTOR (OE) RESS: be filled by OEM	G216) -6916 GE M) &	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Slurry Pumps NTPC Kahalgaon Stage- I, II (4x210 MW + 3x500 MW) (BHEL W.O no: G213 to G216)	DOC.NO: BAP/QR/G213 to G216/Kahalgaon/SlurryPu mp/LTM: 002 Rev NO.: 00 PAGE: Page 5 of 6 DATE: 08.06.2022	##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	 nal Thermal Power	##Specific
NO.			Corporation)., India Quality Requi		confirmations by the
					vendor
	T .		ITEM: LT Motors(IE3) - Up to		
03	Inspection Methodology to be adopted at Actual LT Motor Manufacture works by OEM vendorcontd	LT Motor Ma inspection Ag and any cost including for w Works (or) at NTPC are in the As such No ex- order and also No material	s / tests /review of documents / ins nufacture by OEM /BHEL / BHEL / gency) / Ultimate Customer-NTPC implication arising out of due to condustinessing of any of the tests at Actual third party etc by BHEL / BHEL AIA he scope of OEM Supplier only. Attra cost if any will be admissible and puring execution of the contract. shall be dispatched without BH tomer – NTPC Inspection and disp	AIA (BHEL authorized are under OEM scope acting checks / tests LT Motor Manufacture / Ultimate Customer – paid in the event of an	
04	Painting Requirements	coats if any ar	rement like paint shade and painting the to be ensured by the OEM vendor for the Customer -NTPC approved datas	r these LT Motors as per	
05	Packing	Packing shall	be as per Specification / Drg. / Data sit to avoid any transit & handling dama		
06	For Inspection call Document				
	Package / Dossier	ving with proper linkages (.)			

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

BHEL AIA (BHEL Appointed Inspection Agency) /

CHP (Customer Hold Point) / MDCC (Material Dispatch

Type test reports conducted/submitted with approval with approved data sheet and BOM with actual make used with

Final Inspection Report + TC

BHEL report + TC

Clearance Certificate)

Customer approved drgs.

(Customer Hold Point) Verification & Witness "W" portion as given in MQP / RQP / MQP (as applicable).

Ultimate customer NTPC (National Thermal Power Corporation)

(iii)

(iv)

(v)

(vi)

(vii)

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

(For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)

3x500 (BHE NTPC CS-42 PACI MAIN BHEI SUB (ADD)	C Kah D MW L W. C CON 200-10 KAGF N CON L - RA CONT RESS	nalgaon Stage) O no: G213 t NTRACT NO 19(4)-9-FC-Co E: FGD PACE NTRACTOR ANIPET TRACTOR (6	: OA-6916 KAGE :	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Slurry Pumps NTPC Kahalgaon Stage- I, II (4x21 MW + 3x500 MW) (BHEL W.O no: G213 to G216)	##Offer ##Date Contact Mobile	## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:		
SI.	I. DESCRIPTION BHEL and Ultimate Customer - NTPC (National Thermal Power							##Specific
NO.				Corporation)., India Quality Rec	uirements	5	conf	irmations by the
				ITEM: LT Motors(IE3) - Up	to 200KW	I		vendor
08	Imp	ortant	Inspection Cat		CO MUUIX VV	_		
09	Mod	tor details	Inspection Cat Inspection by N Customer – NT Inspection Cat COC by Main inspection as in Any cost implicate tests at Act Customer – NT	Main contractor (BHEL) / BHEL AIA TPC approved MQP/RQP & based on egorization: III contractor (BHEL) to Ultimate Custo	based on U inspection mer – NTP uding for w BHEL / BHI y and no ex	Ultimate as in sl no:03 C based on ritnessing of any EL AIA / Ultima stra cost if any w	of te	
09			rnish following M	otor details (as applicable) for this e	nquiry.			
		S. No		Pumps		LT Motor		
					Rating (in kW)	Quantity (in nos)	Make	
		1						
		2						
		3 4						-
	-	5						-
	-	6						1
	f	7				 		1
		8						
		9						_
		10						-
		11						1

##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	एनवैपेसी To be filled in by NTPC
PROJECT NAME		REVIEW & ENDORSEMENT BY NTPC PROJECT SPECIFIC QP NUMBER ALLOTTED
CONTRACT NO.:	CS-	TROUBLE OF BEHIND AT THE MEDITED
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) - WATER PUMPS FOR FGD APPLICATION	
APPROVED QP NO.: RQP/SQP/RFQP/SFQP	(TO BE FILLED BY OEM / LT MOTOR SUPPLIER	
Confirmation by Main Supplier (TICK WHICHE)	VER APPLICABLE)	(TICK APPLICABLE)
	ponent with respect to that considered for MQP/RQP/SQP approval, however	The MQP/RQP/SQP is endorsed for this project without any change
the same do not affect the contents of MQP/RQP/S	SQP uponent with respect to that considered for MQP/RQP/SQP approval, however	The SQP is endorsed for this project with changes
the same affect the MQP/RQP/SQP slightly, as ind		as indicated. DISTRIBUTION OF ENDORSEMENT OF A) MQP/RQP/SQP: 1. MAIN SUPPLIER (WITH A COPY OF MQP/RQP/SQP) 2. MANUFACTURER 3. RIO 4. CQA-SPL 5. CQA-O/C B) RFQP/SFQP: 1. MAIN SUPPLIER (with a copy of MQP/RQP/SQP) 2. MANUFACTURER 3. NTPC FQA (with a copy of MQP/RQP/SQP) 4. NTPC Erection (with a copy of MQP/RQP/SQP) 5. CQA-SPL 6. CQA-O/C
	(TO BE FILLED BY OEM / LT MOTOR SUPPLIER	NTPC (Reviewed /Approved by/ Date & Seal)
SIGN.: (Main Supplier) DATE:	SIGN.: (Manufacturer) DATE:	

		OEM SUPF	PLIER		MANU	FACTURING QL	JALITY PLAN FO	R		M:KHGN:FGD	SLURRY	PUMPS:001		
		To be fille		١.,					REV:NO:0	0				
			-	L	IMOTOR	(Up to 10 200	KW) - FGD Appli	cation	DATE: 08.06.2022					
BAI	BHEL P/ RANIPET /	OEM Sup	piier								Page:			
	AMIL NADU													
	INDIA													
		Supplie												
04.11	OOMBONET/A			TYPE OF	OUANUITM OF	DEFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF DEG		AOENOV		DEMARKS.		
S1.No	SSEMBLY/OP	CHARACTE- RISTIC	CLASS	CHECK	CHECK	REFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF REC		AGENCY		REMARKS		
	ERATION/TES			OH EOI	on zon				D	М	BHEL/ BHEL			
	TS										AIA			
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	Į.	12.		
INCC	MING INSPCI	ETIONS:												
1.1	Enamelled round copper conductor(Dual	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	V			
	coated)MM	2.Bare conductor diameter	Major	Mechanical	1 sample/lot	BHEL / NTPC Spec & Apprd Datasheet	BHEL / NTPC Spec & Apprd Datasheet	Plant format		Р	٧			
		3.BDV test	Major	Electrical	1 sample/lot	do	do	Plant format		Р	V			
		4.Elongation	Major	Mechanical	1 sample/lot	do	do	Plant format		Р	V			
		$\begin{array}{c} \text{5.Continuity (insulatio} \\ \text{n)} \end{array}$	Major	Electrical	1 sample/lot	do	do	Insp report/ Supplier TC		Р	V			
		6.Tan Delta (If applicable)	Major	Electrical	1 sample/lot	do	do	Insp report/ Supplier TC		Р	V	EC gr purity: -99.6%		
1.2	Aluminum Ingots	1.Chemical composition	Major	Chemical	1 sample/lot	do	do	Supplier Tc		Р	V	- g. pay		
1.3	FAN	1.Diameter (ID&OD)	Major	Mechanical	1 sample/lot	do	do	Inspection Report		Р	V			
1.4	Bearings (SKF OR FAG)	1.Type & Make	Major	Visual	100%	do	do	Inspection Record		Р	V			
		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	V			

		OEM SUP	PLIER		MANII	FACTURING OF	IALITY PLAN FO	R	MQP:E:LTN	M:KHGN:FGE	SLURRY	PUMPS:001	
		To be fille		1					REV:NO:00				
	5			L	IMOTOR	(Up to 10 2001	KW) - FGD Appli	cation	DATE: 08.06.2022				
ВАГ	BHEL P/ RANIPET /	OEM Sup	plier						Page :				
	MIL NADU	LT MOT	OR										
	INDIA												
			Manufacture To be filled by OEM										
		Suppli											
S1.No	COMPONET/A	CHARACTE-	CLASS	TYPE OF		REFERENCE DOCUMENT	ERENCE DOCUMENT ACCEPTANCE STANDARD	FORMAT OF REC		AGENCY		REMARKS	
	SSEMBLY/OP ERATION/TES TS	RISTIC		CHECK	CHECK				D	М	BHEL/ BHEL AIA		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11	_	12.	
INPR	OCESS INSP	CETIONS:											
2.1	Stator core	1.Core length dia	Major	Mechanical	100%	do	do	Inspection Record		Р	V		
		2.Core locking	Major	Visual	100%	do	do	Inspection Record		Р	V		
		3.Rigidity of core	Major	Mechanical	100%	do	do	Inspection Record		Р	V		
2.2	Die cast rotor	1.Core length	Major	Mechanical	100%	do	do	Inspection Record		Р	V		
		2.Blow holes	Major	Mechanical	100%	do	do	Inspection Record		Р	V		
2.3	Wound stator (if applicable)	1.Resistance	Major	Electrical	100%	do	do	Inspection Record		Р	V		
		2.H.V.Test	Major	Electrical	100%	do	do	Inspection Record		Р	V		
		3.Insulation resisitance	Major	Electrical	100%	do	do	Inspection Record		P	V		
2.4	Final Assembiy	1.Completeness	Major	Visual	100%	do	do	Inspection Record		Р	V		
		2.Runout in case of flanged motors	Major	Mechanical	100%	do	do	Inspection Record		P	V		
		3.Mounting dimensions	Major	Mechanical	100%	do	do	Inspection Record		Р	V		

OEM SUPPLIER		PLIER		I WANUFAGIUNING GUALIIT FLAN FUN					MQP:E:LTM:KHGN:FGDSLURRY PUMPS:001				
		To be fille							REV:NO:00	<u> </u>			
	BUEL		-	L	MOTOR	(Up to 10 200)	KW) - FGD Applic	cation	DATE: 08.06.2022				
	BHEL	OEM Sup	piier						Page :				
	P/ RANIPET /	1 7 8407	^ D										
1 4	AMIL NADU	LT MOT											
	INDIA	<u>Manufac</u>	ture										
	To be filled by OEM												
		<u>Supplie</u>	<u>er</u>										
S1.No		CHARACTE-	CLASS	TYPE OF		REFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF REC		AGENCY		REMARKS	
	SSEMBLY/OP ERATION/TES	RISTIC		CHECK	CHECK				D	М	BHEL/		
	TS										BHEL		
				_		_					AIA		
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.		12.	
		N AND TESTING											
3.1		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		Р	W		
		2.HV Test	Major	Electrical	100%	do	do	Inspection Record		Р	W		
		3.Phase sequence & direction of rotation	Major	Electrical	100%	do	do	Inspection Record		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		Р	W		
		8.Moutings & Overall dimensions	Major	Mechanical	100%	do	-do-	Inspection Record		P	W		

		OEM SUPF	PLIER								SLURRY	PUMPS:001	
		To be fille		1			_		REV:NO:00	١			
			-	L	MOTOR	(Up to 10 2001	KW) - FGD Appli	cation	DATE: 08.0	DATE: 08.06.2022			
	BHEL	OEM Sup	plier						Page :				
	P/ RANIPET /												
TAMIL NADU LT MOTOR													
INDIA Manufacture													
To be filled by OEM													
<u>Supplier</u>			<u>r</u>										
S1.No			CLASS	TYPE OF		REFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF REC		AGENCY		REMARKS	
		RISTIC		CHECK	CHECK				D	М	BHEL/		
	ERATION/TES										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		Р	V		
	3												
		2.Motors covered with polythene sheets	Major	Visual	100%	do	do	Inspection Record		Р	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. 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)

	/2022/BAP-Q EM SUPPLIER		R MANUFACTURER'S D ADDRESS	MANUFACTURING QUALITY PLAN						NTPC SIPAT 2 x 500 MW (BHEL W.O no: G 517 and G 518)					
(TO	WITH OEM MFGR.'s LOGO (TO BE FILLED BY OEM SUPPLIER) (TO BE FILLED BY OEM / LT MOTOR MANUFACTUR		LLED BY OEM /	TO 200KW FOR FGD APPLICATION			QP NO.: WATER PUMPS: LT MOTOR:001 REV.NO.: 00 DATE: PAGE: OF			NTPC CONTRACT NO: CS- MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OEM) & ADDRESS: (TO BE FILLED BY OEM SUPPLIER)				RESS:	
SL. NO	COMPONEN OPERATIO		CHARACTERISTIC	CS CLASS	TYPE OF CHECK	QUAN OF CH	IECK	REFERENCE DOCUMENT	ACCEPTANO NORMS		AT OF		GENC		REMARKS
1.	2.		3.	<mark>4.</mark>	5.	M 6.	C/N	<mark>7.</mark>	8.	9.	D*	M	C 10***	N).	11.
			ESSE	GEND: * RECO ENTIALLY INCLUI M: OEM MANUFA	DED BY SUPPL	JER IN QA	A DOCU	MENTATION.		DOC. NO.:		<u> </u>		REV.	CAT
	MANUFACTURER OTOR SUPPLIER SIGNA	/ MAIN SUPPI ATURE	(BHEL) C: M. P: PI	IAIN SUPPLIER -	BHEL/BHEL AI NESS AND V	IA, N: N : VERIFIC	NTPC ATION.	AS APPROPRIATE,	FOR NTPC USE	REVIEWE	D BY	A	PPROV	ED BY	APPROVAL

एनरीपीसी NTPC

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Annexure-I

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

(For INDIGENOUS OEM VENDOR ONLY)

	(TOI II)	<u>DIGENOUS OEM VI</u>	ENDUK UN	
3x500 MW) (BHEL W.O no: NTPC CONTRA CS-4200-109(4)-9 PACKAGE: FGI MAIN CONTRA BHEL - RANIPE SUB CONTRAC ADDRESS:	CT NO: 0-FC-COA-6916 D PACKAGE CTOR:	+ CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Slurry Pumps NTPC Kahalgaon Stage- I, II (4x210 MW + 3x500 MW) (BHEL W.O no: G213 to G216)	DOC.NO: BAP/QR/G213 to G216/Kahalgaon/Slurry Pump/LTM: 001 Rev NO.: 00 PAGE: Page 1 of 5 DATE: 08.06.2022	##Enquiry No: ## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:
SI. DESCRII	PTION RHEI	 and Ultimate Customer - NTPC (Nationa	 Thermal Power	##Specific confirmations
NO.	JIION DILE	Corporation)., India Quality Require		by the vendor
		ITEM: LT Motors (IE3) Up to		<u> </u>
01 Type Ter Requirer Requirer Con	ments in SL of ultiments of ult	r shall submit the type test reports of all NO: 01 (D) below and carried out within nate NTPC bid opening dt 11.11.2019. To test conducted on the identical/similar ed to be supplied under this enquiry and een conducted at an independent laboral itnessed by BHEL AIA (BHEL Appoint of the conducted at an independent laboral itnessed by BHEL AIA (BHEL Appoint of the conduct of the conduct of the conduct of the conduct all the tests at no additional cost to the conduct all the tests at no additional cost to the conduct all the tests at no additional cost to the conduct all the tests at no additional cost to the conduct all the tests at no additional cost to the conduct all the tests at no additional cost to the conduct all the tests at no additional cost to the conduct all the tests at no additional cost to the conduct all the tests at no additional cost to the conduct all the tests at no additional cost to the conduct all the tests at no additional cost to the conduct all the tests at no additional cost to the conduct all the tests at no additional cost to the conduct all the tests at no additional cost to the presence of the conduct all the tests at no additional cost to the presence of the conduct all the tests at no additional cost to the conduct all the tests at no additional cost to the conduct all the presence of the conduct all the submitted to the presence of the conduct all the submitted to	10 years from the data these reports should be a LT Motors to those at test (s) either should attory (or) should have ted Inspection Agency) respective LT Motor similar / identical type ase of type test reports equirement, the vendor to BHEL either at third BHEL AIA (BHEL mate client NTPC and BHEL AIA (BHEL imate client NTPC is OM/GA Drawing etc. Is omitted covering the elevant BIS (Bureau of elevant BIS (Bureau of elevant BIS (Bureau of elevant BIS) attor and slip or factor and slip	

Degree of Protection Tests (Minimum Ingress Protection - IP 55). Type test reports for motors located in fuel oil area having flame proof enclosures as per BIS 2148/ IEC 60079-1

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

(For INDIGENOUS OEM VENDOR ONLY)

NTP 3x50 (BHI NTP CS-4 PAC MAI BHE SUB ADD	JECT: C Kahalgaon Stage- I, 0 MW) EL W.O no: G213 to C C CONTRACT NO: 200-109(4)-9-FC-COA KAGE: FGD PACKA N CONTRACTOR: L - RANIPET CONTRACTOR (OE) RESS: be filled by OEM	G216) 6916 GE M) &	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Slurry Pumps NTPC Kahalgaon Stage- I, II (4x210 MW + 3x500 MW) (BHEL W.O no: G213 to G216)	DOC.NO: BAP/QR/G213 to G216/Kahalgaon/Slurry Pump/LTM: 001 Rev NO.: 00 PAGE: Page 2 of 5 DATE: 08.06.2022	##Enquiry No: ## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:
SI.	DESCRIPTION	BHEL and	Ultimate Customer - NTPC (Nationa		##Specific confirmations
NO.			Corporation)., India Quality Require		by the vendor
			ITEM: LT Motors (IE3) Up to / Type Test reports shall also be gi et & page control through Email & S OMB).	ven as PDF file with	
02	Quality Plan Requirement	2. RQP these Manualtim 3. If any NTP (Refe appli obtai even route 4. Accosubm with & sea	or MQP is applicable for these LT /MQP (Manufacturing Quality Plate LT Motors and accordingly ufacture and OEM shall submit ate customer – NTPC format. Y of LT Motor manufacture is having a cable for these LT Motor for in ning ultimate customer NTPC for to fan order through endorseme as in sl no: 4 below Indicated a price of a purchase Order of a Purchase Order of a Purchase Order of the customer approved MQP and in the event of a Purchase Order of Motor Manufacture / OEM ventage of the customer of a purchase Order of Motor Manufacture / OEM ventage of the customer	an) is applicable for Actual LT Motor the RQP/MQP in g, ultimate customer Quality Plan) / RQP validity, the same is spection subject to mal approval in the lent sheet approval OEM supplier shall leet (copy attached) /RQP with signature r from BHEL.	
03	BHEL / Ultimate Customer – NTPC approved vendors	LT Motors Customer - specific requi	are to be procured only from NTPC approved vendors and not rement is acceptable. / Bengaluru (Up to 200KW) & Hubel/Ahemdnagar (Up to 200KW) //Faridabad (Up to 55KW) and (W) //Faridabad (Up to 55KW) and (W) //Faridabad (Up to 15KW) //Faridabad (Up to 200KW) //Feridabad (Up to 200KW) //Foridabad (Up to 200KW)	o deviation on this li (Up to 90KW) Bengaluru (Up to	

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

(For INDIGENOUS OEM VENDOR ONLY)

PROJECT: CONTRACT OUALITY ##Enquiry No: DOC.NO: NTPC Kahalgaon Stage- I, II (4x210 MW + REQUIREMENTS (COR) for BAP/OR/G213 3x500 MW) LT MOTORS(IE3) - Up to 200KW used ## OEM Supplier Name & G216/Kahalgaon/Slurry (BHEL W.O no: G213 to G216) Address: Pump/LTM: 001 Slurry Pumps Rev NO.: 00 NTPC CONTRACT NO: ##Offer reference: PAGE: Page 3 of 5 CS-4200-109(4)-9-FC-COA-6916 DATE: 08.06.2022 ##Date: NTPC Kahalgaon Stage- I, II (4x210 PACKAGE: FGD PACKAGE MAIN CONTRACTOR: MW + 3x500 MW**Contact Official Name:** BHEL - RANIPET (BHEL W.O no: G213 to G216) Mohile no: SUB CONTRACTOR (OEM) & Fmail id: ADDRESS: (To be filled by OEM VENDOR) **DESCRIPTION BHEL and Ultimate Customer - NTPC (National Thermal Power** ##Specific confirmations NO. by the vendor

ITEM: LT Motors (IE3) Up to 200KW

Corporation)., India Quality Requirements

04 Inspection Methodology to be adopted at Actual LT Motor Manufacture works by OEM vendor

LT Motors up to 50KW – Inspection Categorization: III

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 for review and to obtain inspection and dispatch clearance.

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

LT Motors (Above 50KW & upto 75KW) – Inspection **Categorization: II**

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 for review and to obtain inspection and dispatch clearance.

Above 75KW and up to 200KW – Inspection Categorization: I

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 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 for review and to obtain inspection and dispatch clearance.

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

	<u></u>	For IND	IGENOUS OEM VI	ENDOR ON	LY)			
NTPO 3x500 (BHI NTPO CS-4 PAC MAI BHE SUB ADD	JECT: C Kahalgaon Stage- I, 0 MW) EL W.O no: G213 to C C CONTRACT NO: 200-109(4)-9-FC-COA KAGE: FGD PACKA N CONTRACTOR: L - RANIPET CONTRACTOR (OE RESS: be filled by OEM	G216) 6916 GE M) &	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Slurry Pumps NTPC Kahalgaon Stage- I, II (4x210 MW + 3x500 MW) (BHEL W.O no: G213 to G216)	DOC.NO: BAP/QR/G213 to G216/Kahalgaon/Slurry Pump/LTM: 001 Rev NO.: 00 PAGE: Page 4 of 5 DATE: 08.06.2022	##Enquiry No: ## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:			
SI.	DESCRIPTION	BHFI and	l d Ultimate Customer - NTPC (Nationa	l Thermal Power	##Specific confirmations			
NO.	DESCRIPTION	Sile and	Corporation)., India Quality Require		by the vendor			
			ay the render					
04	Inspection	DUEL / DUEL	ITEM: LT Motors (IE3) Up to AIA (BHEL authorized inspection Ag					
	Methodology to be adopted at Actual LT Motor Manufacture works by OEM	Customer-NTI works and sub reports includi approved MQI (Bureau of Inc	PC to witness / perform inspection at I mit all the inspection documents and r ng Degree of Protection Test Reports P & approved data sheet / drg / spec / a lian Standard) - BIS 325 /IEC 60034					
	vendor Contd		nall be dispatched without BHEL / BH TPC Inspection and dispatch clearance					
05	Painting Requirements	of coats if any as per BHEL/	rement like paint shade and painting the are to be ensured by the OEM vendor Ultimate Customer -NTPC approved ec (As applicable).					
06	Packing		be as per Specification / Drg. / Dat g if any to avoid any transit & handlin					
07	For Inspection call	Motor Manufa / Ultimate Cus be ensured / a +91 9443006 DM (QC-Proc	l by OEM Vendor for LT Motor insacture works to be raised for BHEL/stomer – NTPC including for type tes ddressed to Mr R Kesavan., DGM (6303., Email id: kesavan@bhel.in and c)., Mobile no: +91 8903502628., Eminspection related activities for in					
08	Document Package / Dossier	copies + soft c proper linkages (i) Index	s Sheet //RQP/Endorsement sheet	•				

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

BHEL AIA (BHEL Appointed Inspection Agency) /

CHP (Customer Hold Point) / MDCC (Material Dispatch

Type test reports conducted/submitted with approval with

approved data sheet and BOM with actual make used with

Final Inspection Report + TC

Customer approved drgs.

BHEL report + TC

Clearance Certificate)

(Customer Hold Point) Verification & Witness "W" portion as given in MQP / RQP / MQP (as applicable).

Ultimate customer NTPC (National Thermal Power Corporation)

(iii)

(iv) (v)

(vi)

(vii)

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

(For INDIGENOUS OEM VENDOR ONLY)

PROJECT: NTPC Kahalgaon Stage- I, II (4x210 MW + 3x500 MW) (BHEL W.O no: G213 to G216) NTPC CONTRACT NO: CS-4200-109(4)-9-FC-COA-6916 PACKAGE: FGD PACKAGE MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OEM) & ADDRESS:					CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW u in Slurry Pumps NTPC Kahalgaon Stage- I, II (4x MW + 3x500 MW) (BHEL W.O no: G213 to G216	210	Pump/LT Rev NO.: PAGE : I	/G213 to halgaon/Slurry FM: 001	##Enquiry No ## OEM Sup Address: ##Offer refer ##Date: Contact Offic Mobile no: Email id:	plier Name & rence:		
·				VENDOR)								
SI.	SI. DESCRIPTION BHEL and			BHEL and	d Ultimate Customer - NTPC (National Thermal Power				##Specific confirmations			
NO.					Corporation)., India Quality Re	orporation)., India Quality Requirements				by the vendor		
					ITEM: LT Motors (IE3) U	p to 2	200KW					
09	Im not	portant tes		Inspection Cate Inspection by M Customer – NT Inspection Cate COC by Main inspection as in Any cost im witnessing of BHEL / BHEI Supplier only	egorization: I BHEL/BHEL AIA and also by Ultin/RQP approved and as in sl no:04 egorization: II Main contractor (BHEL) / BHEL A TPC approved MQP/RQP & based egorization: III contractor (BHEL) to Ultimate Cust asl no:04. eplication for conducting check any of the tests at Actual LT Mo L AIA / Ultimate Customer – NT and no extra cost if any will be ad-	IA bason ins	sed on Ulpection a r – NTPC tests in lanufacture in the sc	c based on cluding for the Works by cope of OEM				
10	order and also during execution of the contract. Motor details											
	Ve		ıll furn	ish following M	otor details for this enquiry.	1						
		S. No			Pump	P.	-4:	LT Motor	Mala			
							ating n kW)	Quantity (in nos)	Make			
		1				(<i>,</i>	\				
		2										
	3											
	4											
		5										
		6										
		7										
		8				-						
	10											
	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.

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

TO BE FILLED IN BY SUPPLIER AT T	IME OF SUBMISSION	एनरीपीसी NTPC	To be filled in by NTPC				
PROJECT NAME		REVIEW & E	NDORSEMENT BY NTPC PECIFIC QP NUMBER ALLOTTED				
CONTRACT NO.:	CS-	rkojeci si	ECIFIC OF NONDER ALEOT IED				
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) - WATER PUMPS FOR FGD APPLICATION	KEV. NO.: (ш Б1:				
APPROVED QP NO.: RQP/SQP/RFQP/SFQP	(TO BE FILLED BY OEM / LT MOTOR SUPPLIER						
Confirmation by Main Supplier (TICK WHICHE)		(TICK APPLICAE	BLE)				
I. That the item/ component is identical to that con			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/S	ponent with respect to that considered for MQP/RQP/SQP approval, howeve	r without any c	hange				
III. That there are minor changes in the item/con	rponent with respect to that considered for MQP/RQP/SQP approval, howeve		The SQP is endorsed for this project with changes				
the same affect the MQP/RQP/SQP slightly, as ind	licated below / in attached sheet.	A) MQP/RQ I. MAIN SUPP MQP/RQP/SQ 2. MANUFACT 3. RIO 4. CQA-SPL 5. CQA-O/C B) RFQP/SFO 1. MAIN SUPP 2. MANUFACT 3. NTPC FQA (LIER (WITH A COPY OF DP) FURER QP: LIER (with a copy of MQP/RQP/SQP				
	(TO BE FILLED BY OEM / LT MOTOR SUPPLIER	NTDC (D	and /Ammond by/ Data & Co-1				
SIGN.: (Main Supplier) DATE:	SIGN.: (Manufacturer) DATE:	NIPC (Revie	wed /Approved by/ Date & Seal)				

LEGEND: * RECORDS, INDENTIFIED WITH "TICK" (\sqrt{)} SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER DOC. NO.: DOC. NO.:	OEM SUPPLIER NA WITH OEM (TO		ATMEGRMANUFACTURER'S NAME AND ADDRESS (TO BE FILLED BY OEM / LT MOTOR MANUFACTURE)		MANUFACTURING QUALIT ITEM: LT MOTOR(IE3) UP TO 200KW FOR FGD APPLICATION SUB-SYSTEM: FGD - AGITATORS QP NO.: WATER MOTOR:001 REV.NO.: 00 DATE: PAGE: OF					NTPC SIPAT 2 x 500 MW (BHEL W.O no: G 517 and G 518) NTPC CONTRACT NO: CS- MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OEM) & ADDRESS: (TO BE FILLED BY OEM SUPPLIER)				
LEGEND: * RECORDS, INDENTIFIED WITH "TICK" (√) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. ** M: OBM MANUFACTURER LT MOTOR SUB-SUPPLIER					S CLASS		OF CHECK	CK DOCUMENT				AGENCY M C N		REMARKS
ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. ** M: OEM MANUFACTURER/LT MOTOR SUB-SUPPLIER	1.	<mark>2.</mark>		3.	<mark>4.</mark>	<mark>5.</mark>	<mark>6.</mark>	<mark>7.</mark>	<mark>8.</mark>	9.	D*	*:	* 10.	<mark>11.</mark>
ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. ** M: OEM MANUFACTURER/LT MOTOR SUB-SUPPLIER														
OEM MANUFACTURER/ LT MOTOR SUPPLIER C: MAIN SUPPLIER - BHEL/BHEL AIA, N: NTPC P: PERFORM W: WITNESS AND V: VERIFICATION. AS APPROPRIATE, CHP: NTPC SHALL IDENTIFIED IN COLUM "N" AS 'W" FOR NTPC USE REVIEWED BY APPR		MOTOR SUPPLIER	SUPPLIER	ESSEN ** M C: MA P: PER	TIALLY INCLUE : OEM MANUFA AIN SUPPLIER – F RFORM W: WITI	DED BY SUPPLI CTURER/LT MO BHEL/BHEL AIA NESS AND V:	ER IN QA DOCU OTOR SUB-SUP A, N: NTPC VERIFICATION	JMENTATION. PLIER . AS APPROPRIATE,	NTPC				REV	APPROVAL

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

