Bharat Heavy Electricals Limited Ranipet-632406, India. Quality Assurance (Mech)

FGD: BULK: WP -SLP: 288

Dt. 01-10-2021

ITEM N	ITEM NAME SLURRY (WASTE WATER TANK)PUMPS WITH MOTOR & ACC							
SI No.	Project Name		Indent No	PGMA				
01	Northkaranpura	(3X660 MW)	RFW11381 - RFW11383	FW701 & FW997				
02	Mouda(2X500 M	IW)	RFW11377, RFW11379, 11380	FW701 & FW997				
03	Barh-I(3X660 M)	W)	RFW11371 - RFW11373	FW701 & FW997				
04	Barh-II(2X660 M	IW)	RFW11374 - RFW11376	FW701 & FW997				
Technic	Technical Specification ROS:9081, Rev:00, Dt:06.08.2021 and TECI:LT MOTOR:REV:05, Dt:28.07.2021							

"Customer/NTPC has informed that in case the item is covered under Sub-QR list, the proposed vendors for the same shall be accepted by QA after acceptance of vendor by NTPC Engg."

- 1. Since Slurry Pump appears under Sub-QR item, Sub-QR approved vendor by NTPC Engg. Acceptable to Quality also.
- 2. Inspection and testing shall be done as per approved Quality plan, Quality plan to be approved by Customer/NTPC after review of BHEL.
- **3.** Painting shall be as per Customer approved Painting schedule.
- **4.** Arrange MQP from sub QR Cleared vendor for taking up with Customer for their review and approval. Find herewith-attached typical MQP (QP NO.FGS: SLP: 723/00, DT: 08.01.2021). This MQP involves minimum check only and actual Quantum of Check/Stage may differ based on Project/Customer requirement and their approved MQP.
- **5.** Already NTPC approved latest MQP for similar application if available specific to Vendor may be shared for obtaining faster approval from Customer/Customer Consultant.
- **6.** All the Pumps shall be inspected at supplier works as per approved QP/Approved Drawing/Approved datasheet and Specification.
- 7. Packing of items shall be as per BHEL Engg Approved Packing Drawing/BHEL Specifications.
- **8.** BHEL Authorized representatives shall have the right to witness the necessary inspection and testing of goods mentioned in the PO. The supplier shall inform BHEL in advance about the readiness of the goods for inspection and testing. Inspection / Inspection wavier / approval by BHEL does not absolve Supplier's responsibility for conformity of the specification as per the terms of PO. Material Test Certificates shall be submitted to BHEL.
- 9. Annexure 'Q' and BOI's Details shall be part of enquiry File and shall be filled by Supplier with their duly sign and seal.

10. Vendor Quality Plan shall contain following Inspection Notes:

- a. Latest version of standards & Specification shall be applied.
- b. Materials shall be procured in compliance to Functional Technical specification.
- c. Gauges and measuring instruments with valid calibration only shall be used.
- d. Inspection / Inspection wavier / approval by BHEL does not absolve Supplier's responsibility for conformity of the specification as per the terms of PO.
- e. BHEL /BHEL Authorized representatives shall have the right to witness the necessary inspection and testing of goods mentioned in the PO
- f. In case of Vendor Drawing & Datasheet, it needs approval by BHEL Engineering.
- g. This QP shall be read along with relevant PO, BHEL Specification / Approved Drawing / Datasheet.

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

862,9,7	/2021/		MRGF'S NAME AND						MANUFACT	ΓURIN	G QUA	LITY	PLAN					
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1.3	Volu	te Casing	Surface Defects	Major		Γ on chined ace	10	00%	ISO4987) 4987, vel 2	1	DPT Report	V	Р	٧	٧	
1.4		Plate & Plate	Soundness	Major		RT *	10	0 %	ASME Sec Level - 5	V, AST	M - E4	46	Test Report	V	Р	V	٧	*For Gypsum Bleed Pumps
			Chemical Composition			emical nposition			Drawing/Sp	ecificat	ion		Test Report	V	Р	٧	V	- 1
1.5		Shaft	Mechanical Properties	Major	Tes trea	chanical ts, Heat tment if licable		ample leat	Drawing/Sp	ecificat	ion		Test Report	√	Р	V	٧	HT Chart Review.
			Legend: * Record, ident shall be submitted to cu package. M: Manufactu Contractor/BHEL/BHEL V: review of records, MA	stomer a rer / Sub AIA. N: N	s a QA suppli ITPC I	À document er, C: Main P: Perform:	ation witness	S,	def		-	(Relights		+	2	,	A
Manut	facturer S	Sign & Seal	Penetrant Test, UT: Ultr IR: inspection report, M	asonic To	esting [*]	TC: Test Ce	ertificate		tesh Kr Madhu (Dy Mgr	/ QA)	K Rei	njith (Mgr / (QA)	R	Arun	achala	nm (DGM/QA)
			COC: Certificate of conf						Prepared	l by			Reviewed by	1			Appr	oved by

486297	7/2021/	BARTQACIV	FIGHS NAME AND						MANUFACT	ΓURIN	IG QUA	LIT	Y PLAN					
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			Surface & Sub Surface Defects		MT-c Surfa	on m/c ace	100%	6	ASTM E709	9 AS	STM A 7	788	MT Report	1	Р	٧	V	MT- Magnetic Particle Test
1.6	Impel	ler	Surface & Sub Surface Defects	Major	DPT		Accessi Areas	ble	ISO4987		O 4987 vel 2	,	DPT Report	√	Р	V	٧	
2.0	IN PR	OCESS INS	PECTION															
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2.2	Coupl	lings	Verification of TC	Major	Revie	ew of TC	100%	/ 0	Technical S Drawing	Specific	cation /		COC/TC	1	Р	٧	1	
2.3	Rotati	ing Parts	Balancing	Major	Station Dyna Balar		100%	/o	ISO 1940	gra	O 1940 ade 2.5 ver	-	Balancin g Report	√	Р	٧	٧	
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					Pressur Testing Casing		%	/10 % of eac h	Remarks Column			Re	port				W	Pressure at 2x rated head or 1.5x shut
3.0	FINAL	INSPECTION	ON					type										of head whichever is higher for 30min
		ete Pump			Visual 8	ρ.	100							Τ,				<u> </u>
3.1	Assem		Completeness	Major	Dimens		%	*	Approved	d GA Draw	ving	IR			Р	W	W	
	7.655	~.y	Measurement- Flow vs Head(Complete operating range), Power, Efficiency	Major	Perform testing pump	nance	100 %	*	Approved Sheet	d Drawing	/Data	an Te		V	Р	w	W	*BHEL to witness 20% of
			Vibration Velocity RMS [MM/S] Bearing Temperature Noise Level RMS[MM/S]		Measur t	remen	100 %	*		d Drawing. d Data She		an Te		V	Р	w	W	each type of Pump and NTPC- one Pump per type.
			NPSH Test	Major	Measur t	remen	1 Pum each t	•	Design S	tandard o	f Pump	o NF Te	SH st	√	Р	W	W	per types
		r (Legend: * Record, identional be submitted to custoackage. M: Manufactur Contractor/BHEL/BHEL	stomer as er / Sub AIA. N: N	s a QA doo supplier, (ITPC P: P	cumenta C: Main erform:	ation witness,		de	1	_	O	Jets 13th		+	2	,	A
			V: review of records, MA Penetrant Test, UT: Ultr					Rak	esh Kr Madh	ıu (Dy Mgr /	/QA)	K Renjith	(Mgr /	QA)	R	Arun	achala	ım (DGM/QA
Manuf	acturer Si	gn & Seal 1	R: inspection report, MTCOC: Certificate of conf	ΓC: Mate	rial Test C				Prepa	red by		Revi	ewed by	y			Appr	oved by

8629/	/2021/BARTQACIM	RISP'S NAME AND				MANUFACTU	URING QUALITY	Y PLAN					
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					/ design			Report					
						N/If ~							
				Leakage		Mfg. Drawing,							
3.2		Leak test	Major	testing	100%	Approved	No Leakage	Report		Р	W	W	
				testing		Data Sheet							
	Complete Pump	0.1.5				Data Crioti							Only
	Assembly	Strip Down Test				N46 D :	Α .						Required
3.3		(Not Required If	Major	Visual	100%	Mfg. Drawing	j, Approved	Report	$\sqrt{}$	Р	W	W	in case of
		Performance Test	1			Data Sheet							Abnormal
		is Fine.)											Sound
		Dry Film		Visual &		NTPC Approv	vod Painting	IR(Proto					
3.4	Painting	Thickness/Paint	Major	Measuremen	100%	Schedule	ved i airiting	col)		Р	٧	V	
		shade		t				COI)					
				Visual &		Technical Sp			,				
3.5	Packing	Preservation	Major	Measuremen	100%	approved Pag		COC	V	Р	V	-	
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4.0	DOCUMENTATION	N	T					1	1	1	1	1	1
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4.1	Assurance	MQP	Major	Complement	100%	Manutacturing	g Quality Plan	Protocol	V	V	V	V	
	Documentation		1	S									

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

486297	/2021/		EGF NAME AND		MANUFACTURING QUALITY PLAN													
σ	ADDRESS					TTEM: SLURRY PUMP PROJECT: AS PER PO												
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- 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 Durana as 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	/ G/Y Drawing
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	Relight	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

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

$486297/2021/BAP\text{-}QA_MECH$

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

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

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

W.r.t INDIGENOUS OEM VENDORS ONLY

SI no	Description & Quality Requirements	Specific confirmation by 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 Slurry Pumps (DOC.NO: BAP/QR/ G601-G608 & G503-504/NTPC FGD/ LTM/Slurry Pumps: 001 Rev.00 dt 05.10.2021) and send us the same to follow / ensure all the requirements in the event of an order.	
02	OEM vendor shall ensure Credentials of design and Manufacturing capabilities w.r.t. LT Motors by their LT Motor 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 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-I

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

(For INDIGENOUS OEM VENDOR ONLY)

PROJECT: NTPC North Karanpura, Mouda-I, Barh-I&II FGD Projects PACKAGE: FGD PACKAGE MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OEM) & ADDRESS: (To be filled by OEM VENDOR)		GE M) &	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Slurry (Waste Water Tank) Pumps NTPC North Karanpura, Mouda-I, Barh-I&II FGD Projects (BHEL W.O NO: G601 to G608, G503 to G504)	DOC.NO: BAP/QR/ G601-G608 & G503-504/NTPC FGD/ LTM/Slurry Pumps: 001 Rev NO.: 00 PAGE: Page 1 of 6 DATE: 05.10.2021	##Enquiry No: ## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:
SI.	DESCRIPTION	BHEL and	d Ultimate Customer - NTPC (Nationa	l Thermal Power	##Specific confirmations
NO.			Corporation)., India Quality Require	by the vendor	
			ITEM: LT Motors (IE3) Up to	200KW	
01	Type Test Requirements		hall submit the type test reports of all : 01 (D) below and carried out within		
	Requirements		te NTPC bid opening dt 22.06.2018. T		
		for the te	est conducted on the identical/similar	r LT Motors to those	
			to be supplied under this enquiry and		
			n conducted at an independent labora	•	
		/ BHEL	essed by BHEL AIA (BHEL Appoint (or) Ultimate client NTPC at		
			if vendor is not able to submit the s		
		test repor			
			and to be meeting the specification reduct all the tests at no additional cost t	-	
			(or) own lab in the presence of		
			d Inspection Agency) / BHEL /Ultin		
			e reports for review & approval.		_
	I				

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

xi.

xii.

less than 9MB).

Annexure-I

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

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SI. NO.	DESCRIPTION	BHEL an	 d Ultimate Customer - NTPC (Nationa Corporation)., India Quality Require	##Specific confirmations by the vendor	
RequirementContd following Indian State Indian Indian State Indian Indian State Indian Indian State Indian India			load test to determine efficiency power perature rise test. nentary excess load test a voltage test	bmitted covering the elevant BIS (Bureau of tator and wound rotor e input current, power motor (in case slip ring	

Degree of Protection Tests (Minimum Ingress Protection - IP 55).

Type test reports for motors located in fuel oil area having flame

The TCs / Type Test reports shall also be given as PDF file with index sheet & page control through Email & Soft Copy (File size to

proof enclosures as per BIS 2148/ IEC 60079-1

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SI. NO.	DESCRIPTION	BHEL and	d Ultimate Customer - NTPC (Nationa Corporation)., India Quality Require		##Specific confirmations by the vendor
NO.					by the vendor
02	Quality Plan Requirement	2. RQP these Manicultim 3. If any NTP (Refe appli obtain even route 4. Accommodate submode with & second se	ITEM: LT Motors (IE3) Up to or MQP is applicable for these LT MOTOR (Manufacturing Quality Plate LT Motors and accordingly ufacture and OEM shall submit ate customer – NTPC format. Yof LT Motor manufacture is having the capproved MQP (Manufacturing Perence Quality Plan) and having the cable for these LT Motor for infining ultimate customer NTPC for it of an order through endorsement as in slino: 4 below and in the filled up Endorsement shoultimate customer approved MQP all in the event of a Purchase Order Motor Manufacture / OEM vene PRQP, they should submit as L/NTPC (in NTPC format) for reviewed.	Motor. an) is applicable for Actual LT Motor the RQP/MQP in g, ultimate customer Quality Plan) / RQP validity, the same is espection subject to mal approval in the nent sheet approval OEM supplier shall eet (copy attached) /RQP with signature r from BHEL.	
03					

Annexure-I

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

PROJECT: NTPC North Karanpura Barh-I&II FGD Projects PACKAGE: FGD PACK MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OF ADDRESS: (To be filled by OEM	AGE EM) &	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Slurry (Waste Water Tank) Pumps NTPC North Karanpura, Mouda-I, Barh-I&II FGD Projects (BHEL W.O NO: G601 to G608, G503 to G504)	DOC.NO: BAP/QR/ G601-G608 & G503-504/NTPC FGD/ LTM/Slurry Pumps: 001 Rev NO.: 00 PAGE: Page 4 of 6 DATE: 05.10.2021	##Enquiry No: ## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:
SI. DESCRIPTION	BHEL and	d Ultimate Customer - NTPC (Nationa		##Specific confirmations
NO.		Corporation)., India Quality Require		by the vendor
04 Inspection Methodology to be adopted at Actual LT Motor Manufacture works by OEM vendor	All Routine to same are to be AIA (BHEL a works as per a relevant BIS (all the Routine for BHEL/Ult and dispatch of LT Motor Mastates that the Customer specifrequency varrise, distance of tested in accordance of LT Motors (3) All Routine Tale witnessed Agency) at Lagrange Test Reports approved MC BIS (Bureau the Routine Tale BHEL/Ultima and dispatch of Above 50KV) All Routine & Vendor and sa authorized insinspection & variety approved MC BIS (Bureau the Routine Tale BHEL/Ultima and dispatch of Above 50KV) All Routine & Vendor and sa authorized insinspection & variety approved MC BIS 325 / IEC Reports including (IR) to be sub-	nufacturer has to issue COC(Certificat above motor/ motors was manufactured elific requirements regarding ambient to liation, hot starts, pull out torque, starting between centre of stud and gland plate. In the elification of the elification	ion: III OEM Vendor & lor / BHEL / BHEL Motor manufacture / drg / spec/ as per / IEC 60034 etc and IR) to be submitted id to obtain inspection e of Conformance) ed taking care of emp., voltage and ing KVA/KW, temp. space heater and eets Orization: II red by OEM vendor rized 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 Debe ensured by OEM AIA (BHEL NTPC for e of Protection Test ent sheet / approved of Indian Standard) - ports , Type test ith Inspection report	

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

PAC MAI BHE SUB ADD	JECT: C North Karanpura, MI&II FGD Projects KAGE: FGD PACKAON CONTRACTOR: L - RANIPET CONTRACTOR (OEIRESS: be filled by OEM	GE M) &	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Slurry (Waste Water Tank) Pumps NTPC North Karanpura, Mouda-I, Barh-I&II FGD Projects (BHEL W.O NO: G601 to G608, G503 to G504)	DOC.NO: BAP/QR/ G601-G608 & G503-504/NTPC FGD/ LTM/Slurry Pumps: 001 Rev NO.: 00 PAGE: Page 5 of 6 DATE: 05.10.2021	##Enquiry No: ## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:		
SI. NO.	DESCRIPTION	BHEL and	d Ultimate Customer - NTPC (Nationa Corporation)., India Quality Require		##Specific confirmations by the vendor		
		[ITEM: LT Motors (IE3) Up to				
04	Inspection Methodology to be adopted at Actual LT Motor Manufacture works by OEM vendor	Customer-NT works and sub reports includi approved MQ (Bureau of Inc	AIA (BHEL authorized inspection A: PC to witness / perform inspection at I mit all the inspection documents and ing Degree of Protection Test Reports P & approved data sheet / drg / spec / lian Standard) - BIS 325 /IEC 60034 mall be dispatched without BHEL / BF				
	Contd						
05	Painting Requirements	of coats if any as per BHEL/	rement like paint shade and painting thickness including no are to be ensured by the OEM vendor for these LT Motors Ultimate Customer -NTPC approved data ec (As applicable).				
06	Packing		be as per Specification / Drg. / Dag if any to avoid any transit & handling				
07	For Inspection call	Motor Manufa / Ultimate Cube ensured / a +91 9443006 DM (QC-Prodincluding for resolution.	l by OEM Vendor for LT Motor in acture works to be raised for BHEL/stomer – NTPC including for type test ddressed to Mr R Kesavan., DGM (303., Email id: kesavan@bhel.in are)., Mobile no: +91 8903502628., Eminspection related activities for in	BHEL AIA inspection of witnessing if any to QC-Proc)., Mobile no: and Mr Kovarathanan., nail id: kovak@bhel.in mmediate response /			
08	Document Package / Dossier	copies + soft coproper linkages (i) Index (ii) MQF (iii) TCs in (Custon as give) (iv) Final (v) BHE BHEI (vi) Ultin CHP Clears (vii) Type appro	nation for Document Package in the evopies in PDF file) is to be given contain (.) a Sheet RQP/Endorsement sheet dentified by BHEL/NTPC for record for "omer Hold Point) Verification & Witness on the endormal point of	ining the following with CCHP" "W" portion ncy) / ower Corporation) Dispatch oroval with			

Annexure-I

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

(For INDIGENOUS OEM VENDOR ONLY)

PACI MAII BHE SUB ADD	NTPC North Karanpura, Mouda-I, Barh-I&II FGD Projects PACKAGE: FGD PACKAGE MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OEM) & ADDRESS: (To be filled by OEM VENDOR)			CONTRACT QUALITY REQUIREMENTS (CQR) f LT MOTORS(IE3) - Up to 200K in Slurry (Waste Water Ta Pumps NTPC North Karanpur Mouda-I, Barh-I&II F(Projects (BHEL W.O NO: G601 to G608, G. G504)	W used nk) ra, GD	G503-504 LTM/Slu 001 Rev NO.:	G601-G608 & NTPC FGD rry Pumps 00 Page 6 of 6	Address:	plier Name & rence:
SI.	DESCRIPTI	ON	BHEL and	d Ultimate Customer - NTPC (I			Power	-	c confirmations
NO.				Corporation)., India Quality	Require	ments		by t	the vendor
				ITEM: LT Motors (IE3) Up to	200KW			
09	Important notes	egorization: I BHEL/BHEL AIA and also by U/RQP approved and as in sl no: egorization: II Main contractor (BHEL) / BHEL TPC approved MQP/RQP & base egorization: III contractor (BHEL) to Ultimate a sl no:04.	L AIA based on in	nsed on Ul spection a er – NTPC	timate s in sl no:04 C based on				
Any cost implication for conducting checks / tests including for witnessing of any of the tests at Actual LT Motor Manufacture Works by BHEL / BHEL AIA / Ultimate Customer – NTPC is in the scope of OEM Supplier only and no extra cost if any will be admissible in the event of an order and also during execution of the contract.									
10 Motor details Vendor shall furnish following LT Motor (upto 200 kW) details for the Pumps appli				plicable for	this enquiry.				
	Rating Quant (in kW) (in no				LT Motor Quantity (in nos)	Make			
	1	waste	Water Tank Pump						

OEM Supplier signature with seal

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

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

TO BE FILLED IN BY SUPPLIER AT T	TIME OF SUBMISSION	एनदीपीसी NTPC	To be filled in by NTPC
PROJECT NAME	NTPC FGD BHEL W.O NO:	2REVIEW &	ENDORSEMENT BY NTPC PECIFIC QP NUMBER ALLOTTED
CONTRACT NO.:	CS-		
MAIN SUPPLIER	M/S.BHEL, RANIPET , TAMIL NADU., INDIA	QP NO:	
MANUFACTURER WORKS & ADDRESS	(TO BE FILLED BY OEM / LT MOTOR SUPPLIER	REV. NO.: 0	00 DT:
ITEM /EQUIPMENT / SYSTEM/ SUB-SYSTEM DETAILS i.e. MODEL TYPE/SIZE/RATING etc.	LT MOTOR(IE3) - SLURRY PUMPS FOR FGD APPLICATION	REV. NO 0	Ю 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	nsidered for SQP approval. $$	The MQP/RQ	
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 SOP	without any c	hange
III. That there are minor changes in the item/ con the same affect the MQP/RQP/SQP slightly, as inc	nponent with respect to that considered for MQP/RQP/SQP approval, however dicated below / in attached sheet.	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/SFO 1. MAIN SUPP 2. MANUFACT 3. NTPC FQA (LIER (WITH A COPY OF OP) CURER OP: LIER (with a copy of MQP/RQP/SQP
	(TO BE FILLED BY OEM / LT MOTOR SUPPLIER	NTPC (Revie	wed /Approved by/ Date & Seal)
SIGN.: (Main Supplier) DATE:	SIGN.: (Manufacturer) DATE:		

a ∩162	/2021/R∆P.∩	A.MEC	R MANUFACTURER'S	1						I					
	EM SUPPLIER		R'MANUFACTURER'S D ADDRESS	MA	NUFAC'	<u>TU</u> RI	<u>NG (</u>	QUALITY P	LAN	PROJECT NTPC FG	PROJECT: NTPC FGD				
(TO	WITH OEM MFGR.'s LOGO D BE FILLED BY EM SUPPLIER)	(TO BE FI	LLED BY OEM / R MANUFACTURER)	ITEM: LT TO 200KW APPLICAT SUB-SYSTI SLURRY P	TON EM: FGD -		MOTO REV.N DATE	IO.: 00	MPS: LT BHEL W.O NO: FGD PACKAGE NTPC CONTRACT NO: MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OEM) & ADDRESS:		BHEL W.O NO: FGD PACKAGE NTPC CONTRACT NO: MAIN CONTRACTOR: BH				
SL.	COMPONEN	TT &	CHARACTERISTI	CS CLASS	TYPE OF	QUA	NTUM	REFERENCE	ACCEPTANO	(TO BE FI	LLED	BY O		PPLIE	R)
NO	OPERATIO	NS			CHECK	OF C M	HECK C/N	DOCUMENT	NORMS	RECO	ORD	M	C	N	REMARKS
1.	2.		3.	4.	5.	_	<mark>6.</mark>	<mark>7.</mark>	8.	9.	D*	-	** 10		11.
				GEND: * RECO				C"(√) SHALL BE		DOC. NO.:				REV	CAT
	MANUFACTURER OTOR SUPPLIER SIGN	/ MAIN SUPPI ATURE	(BHEL) (C: M P: Pl	<mark>M:</mark> OEM MANUF 1AIN SUPPLIER -	ACTURER/LT N - BHEL/BHEL A TNESS AND V	MOTOR S IA , N: ': VERIFI	UB-SUPF NTPC CATION.	PLIER AS APPROPRIATE,	FOR NTPC USE	REVIEWEI) BY	A	PPROV	ED BY	APPROVAL

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



W.r.t INDIGENOUS OEM VENDORS ONLY

SI no	Description & Quality Requirements	Specific confirmation by 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 Slurry Pumps (DOC.NO: BAP/QR/ G601-G608 & G503-504/NTPC FGD/ LTM/Slurry Pumps: 001 Rev.00 dt 05.10.2021) and send us the same to follow / ensure all the requirements in the event of an order.	
02	OEM vendor shall ensure Credentials of design and Manufacturing capabilities w.r.t. LT Motors by their LT Motor 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 Motors may also be submitted.	
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PROJECT: NTPC North Karanpura, Mouda-I, Barh-I&II FGD Projects PACKAGE: FGD PACKAGE MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OEM) & ADDRESS: (To be filled by OEM VENDOR)		GE M) &	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Slurry (Waste Water Tank) Pumps NTPC North Karanpura, Mouda-I, Barh-I&II FGD Projects (BHEL W.O NO: G601 to G608, G503 to G504)	DOC.NO: BAP/QR/ G601-G608 & G503-504/NTPC FGD/ LTM/Slurry Pumps: 001 Rev NO.: 00 PAGE: Page 1 of 6 DATE: 05.10.2021	##Enquiry No: ## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:
SI.	DESCRIPTION	BHEL and	d Ultimate Customer - NTPC (Nationa	l Thermal Power	##Specific confirmations
NO.			Corporation)., India Quality Require	by the vendor	
			ITEM: LT Motors (IE3) Up to	200KW	
01	Type Test Requirements		hall submit the type test reports of all : 01 (D) below and carried out within		
	Requirements		te NTPC bid opening dt 22.06.2018. T		
		for the te	est conducted on the identical/similar	r LT Motors to those	
			to be supplied under this enquiry and		
			n conducted at an independent labora	•	
		/ BHEL	essed by BHEL AIA (BHEL Appoint (or) Ultimate client NTPC at		
			if vendor is not able to submit the s		
		test repor			
			and to be meeting the specification reduct all the tests at no additional cost t	-	
			(or) own lab in the presence of		
			d Inspection Agency) / BHEL /Ultin		
			e reports for review & approval.		_
	I				

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

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SI. NO.	DESCRIPTION	BHEL an	 d Ultimate Customer - NTPC (Nationa Corporation)., India Quality Require		##Specific confirmations by the vendor	
RequirementContd following for Indian Standa i. Measurin (if applic ii. No load and speed iii. Open circ motors) iv. Full load v. Temperat vi. Momenta			oad test at rated voltage to determine speed. In circuit voltage ratio of wound rotor rors) load test to determine efficiency power perature rise test. In entary excess load test In voltage test	bmitted covering the elevant BIS (Bureau of tator and wound rotor e input current, power motor (in case slip ring		

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03	BHEL / Ultimate Customer – NTPC approved vendors	LT Motors Customer - specific requ	are to be procured only from NTPC approved vendors and nirement is acceptable. / Bengaluru (Up to 200KW) & Hub/Ahemednagar (Up to 200KW) //ENS/Mumbai (Up to 200KW) //Faridabad (Up to 55KW) and (W) //Mumbai (Up to 200KW) //F/ Bengaluru (Up to 15KW) //Inthon / Kolkatta (Up to 200KW) //Ini / Vadodara (Up to 200KW) //Ini Hydralics Private Limited (LHP	o deviation on this ili (Up to 90KW) Bengaluru (Up to	

Annexure-I

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

PROJECT: NTPC North Karanpura Barh-I&II FGD Projects PACKAGE: FGD PACK MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OF ADDRESS: (To be filled by OEM	AGE EM) &	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Slurry (Waste Water Tank) Pumps NTPC North Karanpura, Mouda-I, Barh-I&II FGD Projects (BHEL W.O NO: G601 to G608, G503 to G504)	DOC.NO: BAP/QR/ G601-G608 & G503-504/NTPC FGD/ LTM/Slurry Pumps: 001 Rev NO.: 00 PAGE: Page 4 of 6 DATE: 05.10.2021	##Enquiry No: ## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:
SI. DESCRIPTION	BHEL and	d Ultimate Customer - NTPC (Nationa		##Specific confirmations
NO.		Corporation)., India Quality Require		by the vendor
04 Inspection Methodology to be adopted at Actual LT Motor Manufacture works by OEM vendor	All Routine to same are to be AIA (BHEL a works as per a relevant BIS (all the Routine for BHEL/Ult and dispatch of LT Motor Mastates that the Customer specifrequency varrise, distance of tested in accordance of LT Motors (3) All Routine Tale witnessed Agency) at Lagrange Test Reports approved MC BIS (Bureau the Routine Tale BHEL/Ultima and dispatch of Above 50KV) All Routine & Vendor and sa authorized insinspection & variety approved MC BIS (Bureau the Routine Tale BHEL/Ultima and dispatch of Above 50KV) All Routine & Vendor and sa authorized insinspection & variety approved MC BIS 325 / IEC Reports including (IR) to be sub-	nufacturer has to issue COC(Certificat above motor/ motors was manufactured elific requirements regarding ambient to liation, hot starts, pull out torque, starting between centre of stud and gland plate. In the elification of the elification	ion: III OEM Vendor & lor / BHEL / BHEL Motor manufacture / drg / spec/ as per / IEC 60034 etc and IR) to be submitted id to obtain inspection e of Conformance) ed taking care of emp., voltage and ing KVA/KW, temp. space heater and eets Orization: II red by OEM vendor rized 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 Debe ensured by OEM AIA (BHEL NTPC for e of Protection Test ent sheet / approved of Indian Standard) - ports , Type test ith Inspection report	

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

PAC MAI BHE SUB ADD	JECT: C North Karanpura, MI&II FGD Projects KAGE: FGD PACKAON CONTRACTOR: L - RANIPET CONTRACTOR (OEIRESS: be filled by OEM	GE M) &	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Slurry (Waste Water Tank) Pumps NTPC North Karanpura, Mouda-I, Barh-I&II FGD Projects (BHEL W.O NO: G601 to G608, G503 to G504)	DOC.NO: BAP/QR/ G601-G608 & G503-504/NTPC FGD/ LTM/Slurry Pumps: 001 Rev NO.: 00 PAGE: Page 5 of 6 DATE: 05.10.2021	##Enquiry No: ## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:
SI. NO.	DESCRIPTION	BHEL and	d Ultimate Customer - NTPC (Nationa Corporation)., India Quality Require		##Specific confirmations by the vendor
		[ITEM: LT Motors (IE3) Up to		
04	Inspection Methodology to be adopted at Actual LT Motor Manufacture works by OEM vendor	Customer-NT works and sub reports includi approved MQ (Bureau of Inc	AIA (BHEL authorized inspection A: PC to witness / perform inspection at I mit all the inspection documents and ing Degree of Protection Test Reports P & approved data sheet / drg / spec / lian Standard) - BIS 325 /IEC 60034 mall be dispatched without BHEL / BF	gency) / Ultimate LT Motor Supplier routine & Type test (IP 55) as per as per relevant BIS etc. HEL AIA and Ultimate	
	Contd		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).	for these LT Motors	
06	Packing		be as per Specification / Drg. / Dag if any to avoid any transit & handling		
07	For Inspection call	Motor Manufa / Ultimate Cube ensured / a +91 9443006 DM (QC-Prodincluding for resolution.	l by OEM Vendor for LT Motor in acture works to be raised for BHEL/stomer – NTPC including for type test ddressed to Mr R Kesavan., DGM (303., Email id: kesavan@bhel.in are)., Mobile no: +91 8903502628., Eminspection related activities for in	BHEL AIA inspection of witnessing if any to QC-Proc)., Mobile no: and Mr Kovarathanan., nail id: kovak@bhel.in mmediate response /	
08	Document Package / Dossier	copies + soft coproper linkages (i) Index (ii) MQF (iii) TCs in (Custon as give) (iv) Final (v) BHE BHEI (vi) Ultin CHP Clears (vii) Type appro	nation for Document Package in the evopies in PDF file) is to be given contain (.) a Sheet RQP/Endorsement sheet dentified by BHEL/NTPC for record for "omer Hold Point) Verification & Witness on the endormal point of	ining the following with CCHP" "W" portion ncy) / ower Corporation) Dispatch oroval with	

Annexure-I

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

(For INDIGENOUS OEM VENDOR ONLY)

NTPC North Karanpura, Mouda-I, Barh-I&II FGD Projects PACKAGE: FGD PACKAGE MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OEM) & ADDRESS: (To be filled by OEM VENDOR)			GE M) &	CONTRACT QUALITY REQUIREMENTS (CQR) f LT MOTORS(IE3) - Up to 200K in Slurry (Waste Water Ta Pumps NTPC North Karanpur Mouda-I, Barh-I&II F(Projects (BHEL W.O NO: G601 to G608, G. G504)	W used nk) ra, GD	G503-504 LTM/Slu 001 Rev NO.:	G601-G608 & NTPC FGD rry Pumps 00 Page 6 of 6	Address:	plier Name & rence:
SI.	DESCRIPTI	ON	BHEL and	d Ultimate Customer - NTPC (I			Power	-	c confirmations
NO.				Corporation)., India Quality	Require	ments		by t	the vendor
				ITEM: LT Motors (IE3) Up to	200KW			
09	Important notes		Inspection Cate Inspection by M Customer – NT Inspection Cate COC by Main inspection as in	BHEL/BHEL AIA and also by U/RQP approved and as in sl no: (egorization: II Main contractor (BHEL) / BHEL FPC approved MQP/RQP & base egorization: III contractor (BHEL) to Ultimate a sl no:04.	L AIA based on in	nsed on Ul spection a er – NTPC	timate s in sl no:04 C based on		
			witnessing of BHEL / BHEI Supplier only	aplication for conducting clany of the tests at Actual LT LAIA / Ultimate Customer – land no extra cost if any will be during execution of the contra	Motor N NTPC is admiss	Manufactus in the sc	re Works by cope of OEM		
10	10 Motor details Vendor shall furnish following L7			Γ Motor (upto 200 kW) details	for the	Pumps ap	plicable for	this enquiry.	
	S. No			Pump		ting kW)	LT Motor Quantity (in nos)	Make	
	1 Waste Water Tank Pump								

OEM Supplier signature with seal

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

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

TO BE FILLED IN BY SUPPLIER AT T	TIME OF SUBMISSION	एनदीपीसी NTPC	To be filled in by NTPC
PROJECT NAME	NTPC FGD BHEL W.O NO:	2REVIEW &	ENDORSEMENT BY NTPC PECIFIC QP NUMBER ALLOTTED
CONTRACT NO.:	CS-		
MAIN SUPPLIER	M/S.BHEL, RANIPET , TAMIL NADU., INDIA	QP NO:	
MANUFACTURER WORKS & ADDRESS	(TO BE FILLED BY OEM / LT MOTOR SUPPLIER	REV. NO.: 0	00 DT:
ITEM /EQUIPMENT / SYSTEM/ SUB-SYSTEM DETAILS i.e. MODEL TYPE/SIZE/RATING etc.	LT MOTOR(IE3) - SLURRY PUMPS FOR FGD APPLICATION	REV. NO 0	Ю 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	nsidered for SQP approval. $$	The MQP/RQ	
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 SOP	without any c	hange
III. That there are minor changes in the item/ con the same affect the MQP/RQP/SQP slightly, as inc	nponent with respect to that considered for MQP/RQP/SQP approval, however dicated below / in attached sheet.	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/SFO 1. MAIN SUPP 2. MANUFACT 3. NTPC FQA (LIER (WITH A COPY OF OP) CURER OP: LIER (with a copy of MQP/RQP/SQP
	(TO BE FILLED BY OEM / LT MOTOR SUPPLIER	NTPC (Revie	wed /Approved by/ Date & Seal)
SIGN.: (Main Supplier) DATE:	SIGN.: (Manufacturer) DATE:		

a ∩162	/2021/R∆P.∩	A.MEC	R MANUFACTURER'S	1						I					
	EM SUPPLIER		R'MANUFACTURER'S D ADDRESS	MA	NUFAC'	<u>TU</u> RI	<u>NG (</u>	QUALITY P	LAN	PROJECT NTPC FG					
(TO	WITH OEM MFGR.'s LOGO (TO BE FILLED BY OEM SUPPLIER) (TO BE FILLED BY OEM SUPPLIER)		LLED BY OEM /	TO 200KW APPLICAT SUB-SYST	TO 200KW FOR FGD APPLICATION			QP NO.: SLURRY PUMPS: LT MOTOR:001 REV.NO.: 00 DATE: PAGE: OF		BHEL W.O NO: FGD PACKAGE NTPC CONTRACT NO: MAIN CONTRACTOR: BHEL - RANIPET					
SL.	COMPONEN	TT &	CHARACTERISTI	CS CLASS	TYPE OF	QUA	NTUM	REFERENCE	ACCEPTANO	SUB CON' (TO BE FI	LLED	BY O		PPLIE	R)
NO	OPERATIO	NS			CHECK	OF C M	HECK C/N	DOCUMENT	NORMS	RECO	ORD	M	C	N	REMARKS
1.	2.		3.	4.	5.	_	<mark>6.</mark>	<mark>7.</mark>	8.	9.	D*	-	** 10		11.
				GEND: * RECO				C"(√) SHALL BE		DOC. NO.:				REV	CAT
	MANUFACTURER OTOR SUPPLIER SIGN	/ MAIN SUPPI ATURE	(BHEL) (C: M P: Pl	<mark>M:</mark> OEM MANUF 1AIN SUPPLIER -	ACTURER/LT N - BHEL/BHEL A TNESS AND V	MOTOR S IA , N: ': VERIFI	UB-SUPF NTPC CATION.	PLIER AS APPROPRIATE,	FOR NTPC USE	REVIEWEI) BY	A	PPROV	ED BY	APPROVAL

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



W.r.t FOREIGN OEM VENDORS ONLY

SI no	Description & Quality Requirements	Specific confirmation by the vendor (Confirmed/Not Confirmed)
01	OEM vendor shall meet all the requirements as in Annexure-II and also OEM Vendor shall endorse (Signature and Stamp in all the pages) in attached CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) Up to 200KW used in Slurry Pumps (DOC.NO: BAP/QR/ G601-G608 & G503-504/NTPC FGD/ LTM/Slurry Pumps: 002 Rev.00 dt 05.10.2021) and send us the same to follow / ensure all the requirements in the event of an order.	
02	OEM vendor shall ensure Credentials of design and Manufacturing capabilities w.r.t. LT Motors by their LT Motor 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 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

(For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)

	(1 01 1	CILLIO	(OCIDIDE II (DIII)	OEM VENDOR	OTILI)
PROJECT: NTPC North Karanpura, Mouda-I, Barh-I&II FGD Projects PACKAGE: FGD PACKAGE MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OEM) & ADDRESS: (To be filled by OEM VENDOR)		GE M) &	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Slurry (Waste Water Tank) Pumps NTPC North Karanpura, Mouda-I, Barh-I&H FGD Projects (BHEL W.O NO: G601 to G608, G503 to G504)	DOC.NO: BAP/QR/ G601-G608 & G503-504/NTPC FGD/ LTM/Slurry Pumps: 002 Rev NO.: 00 PAGE: Page 1 of 6 DATE: 05.10.2021	##Enquiry No: ## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:
SI. NO.	DESCRIPTION	BHEL a	 nd Ultimate Customer - NTPC (Nation Corporation)., India Quality Requ	##Specific confirmations by the vendor	
	1		ITEM: LT Motors(IE3) - Up to	200KW	
01	Type Test Requirements	SL NO: (ultimate should be those pro have beer witnessed (or) Ultim	hall submit the type test reports of all (D) below and carried out within Customer NTPC bid opening dt 2: e for the test conducted on the identity of the test conducted under this enquiry a conducted at an independent laborate by BHEL/BHEL AIA (BHEL Appoint the customer NTPC (National Therm to LT Motor Manufacture of OEM veneral).	10 years from the data of 2.06.2018. These reports ical/similar LT Motors to y and test (s) either should ory (or) should have been pinted Inspection Agency) and Power Corporation) at	
		report as are not acceptable vendor she either at i	if vendor is not able to submit the sper 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 to the puted third party lab (or) Government presence of BHEL AIA (BHEL Appear).	the case of type test reports ion requirement and not dustomer – NTPC, , the ional cost if any to BHEL nt approved lab (or) own	

/ BHEL /Ultimate client NTPC and submit the reports for BHEL /

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

Ultimate Customer – NTPC review & approval.

(General Arrangement) Drawing etc.

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

(For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)

PAC MAI BHE SUB ADD	JECT: C North Karanpura, 1 -I&II FGD Projects KAGE: FGD PACKA N CONTRACTOR: L - RANIPET CONTRACTOR (OE RESS: be filled by OEM	GE M) &	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Slurry (Waste Water Tank) Pumps NTPC North Karanpura, Mouda-I, Barh-I&II FGD Projects (BHEL W.O NO: G601 to G608, G503 to G504)	DOC.NO: BAP/QR/ G601-G608 & G503-504/NTPC FGD/ LTM/Slurry Pumps: 002 Rev NO.: 00 PAGE: Page 2 of 6 DATE: 05.10.2021	##Enquiry No: ## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:
SI.	DESCRIPTION	BHEL a	nd Ultimate Customer - NTPC (Nation	nal Thermal Power	##Specific
NO.			Corporation)., India Quality Requi	irements	confirmations by the
			ITEM. IT Motors(IE2) Up to	. 200KW	vendor
01	Type Test	D The follow	<u>ITEM: LT Motors(IE3) - Up to</u> wing Type test reports to be submitted		
01	Requirement		e 50KW LT Motor as per relevant		
	(Contd)				
	• • • • • • • • • • • • • • • • • • • •			input current, power and motor (in case slip ring factor and slip) or all the motors shall tor for which the less Protection - IP 55). oil area having flame 79-1 or file with index sheet &	
02	Quality Plan Requirement	b. If any of I approved same is apobtaining	unufacturing Quality Plan) is applicable dingly Actual LT Motor Manufacture ustomer – NTPC format for review and Customer - NTPC. LT Motor manufacture is having, ultim MQP (Manufacturing Quality Plan) and applicable for these LT Motor for inspectultimate customer NTPC formal approach endorsement sheet approval routed.	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	

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

(For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)

PAC MAI BHE SUB ADD	JECT: C North Karanpura, North Karanpura, North Karanpura, North FGD Projects KAGE: FGD PACKAON CONTRACTOR: L - RANIPET CONTRACTOR (OEIRESS: be filled by OEM	GE M) &	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Slurry (Waste Water Tank) Pumps NTPC North Karanpura, Mouda-I, Barh-I&II FGD Projects (BHEL W.O NO: G601 to G608, G503 to G504)	DOC.NO: BAP/QR/ G601-G608 & G503-504/NTPC FGD/ LTM/Slurry Pumps: 002 Rev NO.: 00 PAGE: Page 3 of 6 DATE: 05.10.2021	##Enquiry No: ## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:
SI. NO.	DESCRIPTION	BHEL a	nd Ultimate Customer - NTPC (Nation Corporation)., India Quality Requi		##Specific confirmations by the
					vendor
			ITEM: LT Motors(IE3) - Up to		
02	Quality Plan Requirement	filled up I approved from BHI	gly, LT Motor Manufacture & OEM su Endorsement sheet (copy attached) with MQP with signature & seal in the even EL for BHEL/Ultimate Customer – NT otor Manufacture / OEM vendor do ubmit a fresh MQP to BHEL/NTPC approval. (copy attached).	h ultimate customer nt of a Purchase Order PC review and approval.	
			ndicative MQP is attached for inf and of ot final and binding on BHEL / Ultima		
03	Inspection Methodology to be adopted at Actual LT Motor	inspection MQP &	Motors are to be inspected by BHEL in Agency) at LT Motor manufacture approved data sheet/drg/spec/ as per randard) - 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	e works as per approved relevant BIS (Bureau of	
		NTPC with Degree of	A (BHEL authorized inspection Agenill also ensure LT Motor type tests Protection Test Reports & acceptance data sheet / drg / spec / as per releva - BIS 325 / IEC 60034 etc.	reports review including e as per approved MQP &	

Annexure-II

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

	(For 1	FOREIGN	N (OUTSIDE INDIA)	OEM VENDOR	ONLY)
PROJECT: NTPC North Karanpura, Mouda-I, Barh-I&II FGD Projects 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 (Waste Water Tank) Pumps NTPC North Karanpura, Mouda-I, Barh-I&II FGD Projects (BHEL W.O NO: G601 to G608, G503 to G504)	DOC.NO: BAP/QR/ G601-G608 & G503-504/NTPC FGD/ LTM/Slurry Pumps: 002 Rev NO.: 00 PAGE: Page 4 of 6 DATE: 05.10.2021	##Enquiry No: ## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:
SI. NO.	DESCRIPTION	BHEL a	nd Ultimate Customer - NTPC (Nation Corporation)., India Quality Requi		##Specific confirmations by the vendor
			ITEM: LT Motors(IE3) - Up to	200KW	
03	Inspection Methodology to be adopted at Actual LT Motor Manufacture works by OEM vendorcontd	All Routine tesare to be inspecible (BHEL author per approved Marchael of Ind Test Reports where Customer – N' LT Motor Marchael the above specific requirevariation, hot substantiates between cantrowith approved LT Motors (3 All Routine Temports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Same are to authorized in including review Reports (1P sheet/drg/specible of 19 All Sam	sts on LT Motors are to be ensured by cted & witnessed by OEM Vendor / I ized inspection Agency) at LT Motor MQP & approved data sheet /drg / spectian Standard) - BIS 325 / IEC 60034 exith Inspection report (IR) to be submit ΓPC for review and to obtain inspection furfacturer has to issue COC(Certificat motor/ motors was manufactured taking ements regarding ambient temp., volta starts, pull out torque, starting KVA/KV exits of stud and gland plate, space heater drawing/data sheets OKW to 50KW Inspection Categor (ests on LT Motors are to be ensured to be inspected & witnessed by BH inspection Agency) at LT Motor (exits of Type Test Reports and Decomposite of Type Test Reports and Type Test Repor	OEM Vendor & same BHEL / BHEL AIA manufacture works as color as per relevant BIS etc and all the Routine tted for BHEL/Ultimate on and dispatch clearance. The of Conformance of Conformance states are care of Customer age and frequency with the property of the original states and tested in accordance orization: II ared by OEM vendor & EL / BHEL AIA (BHEL or manufacture works approved data and fundian Standard) - BIS are Reports with Inspection	

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

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

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

(For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)

PAC MAII BHE SUB ADD	JECT: C North Karanpura, N-1&II FGD Projects KAGE: FGD PACKAON CONTRACTOR: L - RANIPET CONTRACTOR (OEIRESS: be filled by OEM	GE M) &	CONTRACT QUALITY REQUIREMENTS (CQR) for LT MOTORS(IE3) - Up to 200KW used in Slurry (Waste Water Tank) Pumps NTPC North Karanpura, Mouda-I, Barh-I&II FGD Projects (BHEL W.O NO: G601 to G608, G503 to G504)	##Enquiry No: ## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:							
SI. NO.	DESCRIPTION	BHEL a	l nal Thermal Power irements	##Specific confirmations by the vendor							
			ITEM: LT Motors(IE3) - Up to	200KW	Vendoi						
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 v Works (or) at NTPC are in the As such No ex order and also	pection & witnessing at AIA (BHEL authorized are under OEM scope acting checks / tests LT Motor Manufacture / Ultimate Customer – paid in the event of an HEL / BHEL AIA and eatch clearance.								
04	Painting Requirements	coats if any ar	rement like paint shade and painting the to be ensured by the OEM vendor foute Customer -NTPC approved data	r these LT Motors as per							
05	Packing		be as per Specification / Drg. / Data si to avoid any transit & handling dama								
06	For Inspection call	Inspection ca Motor Manu inspection/ witnessing if (QC-Proc)., I and Mr Kova Email id: kov immediate re									
07	Document Package / Dossier	soft copies in Pl (i) Index (ii) MQP (iii) TCs i (Custo as giv (iv) Final (v) BHE BHEI (vi) Ultin	(ii) MQP/RQP/Endorsement sheet (iii) TCs identified by BHEL/NTPC for record for "CHP" (Customer Hold Point) Verification & Witness "W" portion as given in MQP / RQP / MQP (as applicable). (iv) Final Inspection Report + TC (v) BHEL AIA (BHEL Appointed Inspection Agency) / BHEL report + TC								

Annexure-II

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

(For FOREIGN (OUTSIDE INDIA) OEM VENDOR ONLY)

PACH MAIN BHEI SUB (JECT: C North Karanpura, MI&H FGD Projects KAGE: FGD PACKAON CONTRACTOR: L - RANIPET CONTRACTOR (OEL RESS: be filled by OEM	GE M) &	CONTRACT QUALITY REQUIREMENTS (CQR) fo LT MOTORS(IE3) - Up to 200KV in Slurry (Waste Water Tai Pumps NTPC North Karanpur Mouda-I, Barh-I&II FG Projects (BHEL W.O NO: G601 to G608, G5 G504)	##Enquiry No: ## OEM Supplier Name & Address: ##Offer reference: ##Date: Contact Official Name: Mobile no: Email id:		
SI. NO.	DESCRIPTION	##Specific confirmations by the vendor				
			ITEM: LT Motors(IE3)	- Up to 200KV	V	
07	Document Package / Dossiercontd	(vii) Type appro Custo	ance Certificate) test reports conducted/submitted voted data sheet and BOM with actumer approved drgs.			
08	Important notes	Inspection Cate Inspection by I on MQP/RQP Inspection Cate Inspection by M Customer – NT Inspection Cate COC by Main inspection as in Any cost implicate tests at Acte Customer – NT be admissible in	y of mate			
09	Motor details:-		nish following LT Motor (upto 200kW		mps applicable for	
	S. No		Pump	ъ	LT Moto	
				Rating (in kW)	Quantity (in nos)	Make and Country of origin
ı l	1 Waste	V8				

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	NTPC FGD BHEL W.O NO:	2REVIEW & I	ENDORSEMENT BY NTPC ECIFIC OP NUMBER ALLOTTED
CONTRACT NO.:	CS-		
MAIN SUPPLIER	M/S.BHEL, RANIPET , TAMIL NADU., INDIA	QP NO:	
MANUFACTURER WORKS & ADDRESS	(TO BE FILLED BY OEM / LT MOTOR SUPPLIER	DEW NO. 0	A DE
ITEM /EQUIPMENT / SYSTEM/ SUB-SYSTEM DETAILS i.e. MODEL TYPE/SIZE/RATING etc.	LT MOTOR(IE3) - SLURRY PUMPS FOR FGD APPLICATION	REV. NO.: 0	0 DT:
APPROVED QP NO.: RQP/SQP/RFQP/SFQP	(TO BE FILLED BY OEM / LT MOTOR SUPPLIER		
Confirmation by Main Supplier (TICK WHICHE)		(TICK APPLICAB.	LE)
I. That the item/ component is identical to that con		The MQP/RQ	
II. That there are minor changes in the item/ comp the same do not affect the contents of MQP/RQP/S	ponent with respect to that considered for MQP/RQP/SQP approval, however SOP	without any cl	nange
III. That there are minor changes in the item/ com the same affect the MQP/RQP/SQP slightly, as ind	nponent with respect to that considered for MQP/RQP/SQP approval, however licated below / in attached sheet.	as indicated. DISTRIBUTIO A) MQP/RQP 1. MAIN SUPPI MQP/RQP/SQ 2. MANUFACT 3. RIO 4. CQA-SPL 5. CQA-O/C B) RFQP/SFQ 1. MAIN SUPPI 2. MANUFACT 3. NTPC FQA (1)	LIER (WITH A COPY OF P) URER P: LIER (with a copy of MQP/RQP/SQP
SIGN.: (Main Supplier) DATE:	(TO BE FILLED BY OEM / LT MOTOR SUPPLIER SIGN.: (Manufacturer) DATE:	NTPC (Review	ved /Approved by/ Date & Seal)

		OEM SUP	PLIER		MANU	FACTURING QL	JALITY PLAN FO	R			LURRY(W	WT) PUMP:001				
		To be fille		1					REV:NO:00							
	BHEL	OEM Sup	•	L	MOTOR	(Up to 10 200	KW) - FGD Appli	Callon	DATE: 05.10.2021							
BAF	P/ RANIPET /	OEM Sup	pilei						Page :							
	MIL NADU	LT MOT	OR													
	INDIA	Manufac	ture													
		To be filled b	y OEM													
		Supplie	<u>er</u>													
S1.No.	COMPONET/A	-	CLASS	TYPE OF		REFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF REC		AGENCY		REMARKS				
	SSEMBLY/OPE RATION/TEST	RISTIC		CHECK	CHECK				D	М	BHEL/					
	S										BHEL AIA					
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11		12.				
INCO	MING INSPCE	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					
	,	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		Р	V					
		4.Elongation	Major	Mechanical	1 sample/lot	do	do	Plant format		Р	V					
		5.Continuity (insulati on)	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		Р	V	EC gr purity: -99.6%				
1.2	Aluminum Ingots	1.Chemical composition	Major	Chemical	1 sample/lot	do	do	Supplier Tc		Р	٧	LO gr punty. 00.0%				
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		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		MANU	IALITY PLAN FO	R			SLURRY(W	WT) PUMP:001					
		To be fille	ed by	١.	T MOTOR	2 / Un to TO 2001	KW) - FGD Appli	cation	REV:NO:00 DATE: 05.10.2021							
	BHEL	OEM Sup	_	_	w.o	(Op to 10 2001	(W) - I GD Appli	Cation								
BAF	P/ RANIPET /	OLIN Out	plici						Page :							
	MIL NADU	LT MOT	OR													
	INDIA	Manufac														
		To be filled b														
		Suppli														
S1.No	COMPONET/A		CLASS	TYPE OF		REFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF REC		AGENCY		REMARKS				
	SSEMBLY/OPE RATION/TEST S	RISTIC		CHECK	CHECK				D	М	BHEL/ BHEL AIA					
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	1		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	٧					
		2.Blow holes	Major	Mechanical	100%	do	do	Inspection Record		Р	٧					
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		Р	V					
2.4	Final Assembiy	1.Completeness	Major	Visual	100%	do	do	Inspection Record		Р	V					
		2.Runout in case of flanged motors	Major	Mechanical	100%	do	do	Inspection Record		Р	٧					
		3.Mounting dimensions	Major	Mechanical	100%	do	do	Inspection Record		Р	V					

		OEM SUPF	PLIER		MANU	FACTURING QL	JALITY PLAN FO	R			GD: SLURRY(W	WT) PUMP:001		
		To be fille	d by] IT	MOTOR	/ Up to TO 200	KW) - FGD Appli	cation	REV:NO:0					
	BHEL	OEM Sup	-	L-1	WOTON	(Op to 10 200	KW) - I GD Appli	CallOII	DATE: 05.10.2021					
BVD	/ RANIPET /	OLIVI Sup	hilei						Page :					
	MIL NADU	LT MOT	OR											
	INDIA	Manufac [*]												
				-										
		To be filled b	-											
		Supplie	_											
-	COMPONET/A		CLASS	_		REFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF REC		AGEN	ICY	REMARKS		
	SSEMBLY/OPE RATION/TEST	RISTIC		CHECK	CHECK				D	М	BHEL/			
	S										BHEL			
-1	2.	3.	4.	5.	6.	7.	8.	9.	10.		AIA 11.	12.		
LINIAI		N AND TESTING		<u>j</u> 5.	О.	7.	0.	9.	10.		11.	12.		
3.1	Routine Test	1.Resistance Measurement on winding & space heater	Major	Electrical	100%	BHEL / NTPC Spec, GA Drawing & Apprd Datasheet and IS/IEC 60034 (As applicable)	BHEL / NTPC Spec, GA Drawing & Apprd Datasheet and IS/IEC 60034 (As applicable)	Inspection Record		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		Р	W			
		6.Name plate recheck	Major	Visual	100%	do	do	Inspection Record		Р	W			
		7.Paint shade thickness & adhesion	Major	Visual & Measurement	100%	do	do	Inspection Record		Р	W			
		8.Moutings & Overall dimensions	Major	Mechanical	100%	do	-do-	Inspection Record		Р	W			

		OEM SUPF	PLIER		MANU	FACTURING QU	JALITY PLAN FO	R	MQP:E:LTM:NTPC FGD: SLURRY(WWT) PUMP:001						
		To be fille	d by	1				REV:NO:00							
	BHEL		-	L	INDION	(Up to 10 2001	KW) - FGD Appli	cation	DATE: 05.10.2021						
I 54.		OEM Sup	piier						Page :						
BAP/ RANIPET / TAMIL NADU INDIA		LT MOT Manufac To be filled b Supplie	ture y OEM	_											
S1.No.	COMPONET/A	CHARACTE- CLASS		TYPE OF	QUANUTM OF	REFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF REC		AGENCY		REMARKS			
	SSEMBLY/OPE RATION/TEST S			CHECK CHECK					D	M 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		Р	V				
		2.Motors covered with polythene sheets	Major	Visual	100%	do	do	Inspection Record		Р	V				
		3.Packing	Major	Visual		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)

Ol (TO	OEM SUPPLIER NUTH OEM (RMANUFACTURER'S O ADDRESS LED BY OEM / R MANUFACTURER)	ITEM: LT MOTOR(IE3) UP TO 200KW FOR FGD APPLICATION RE DA				QP NO.: SLURRY PUMPS: LT MOTOR:001 REV.NO.: 00 DATE: PAGE: OF				PROJECT: NTPC FGD BHEL W.O NO: FGD PACKAGE NTPC CONTRACT NO: MAIN CONTRACTOR: BHEL - RANIPET SUB CONTRACTOR (OEM) & ADDRESS: (TO BE FILLED BY OEM SUPPLIER)					
SL. NO	COMPONEN OPERATIO			CS CLASS	TYPE OF CHECK	QUAN OF CH M		REFERENCE DOCUMENT	ACCEPTANO NORMS	CE	FORMAT RECOL		AGENCY M C N			REMARKS	
1.	2.		3.	4.	5.	<mark>6.</mark>		<mark>7.</mark>	8.		9.	D*	*:	* 10.		11.	
	MANUFACTURER OTOR SUPPLIER	/ MAIN SUPPL	(BHEL) ESSE ** M C: M P: PE	NTIALLY INCLUE M: OEM MANUFA AIN SUPPLIER – I	DED BY SUPPL CTURER/LT M BHEL/BHEL AI NESS AND V:	IER IN QA OTOR SU A, N: N VERIFIC	A DOCU IB-SUPP ITPC ATION.	LIER AS APPROPRIATE,	FOR NTPC USE		OC. NO.:	BY	AI	PPROVED		CAT	

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

