


<b>A-FORM</b>  <b>FORM NO BP-0021</b>	<b>BHARAT HEAVY ELECTRICALS LIMITED - BHOPAL</b> <b>MM DEPARTMENT</b> <b>ESTIMATE SHEET FOR ISSUE OF MATERIAL/COMPONENTS FROM BHEL</b> <b>CHECKLIST</b>	<b>A-FORM NO : A206N53</b> <b>REV NO : 0</b> <b>A-FORM DATE 15-APR-22</b> <b>DATE : 18-APR-22</b> <b>PAGE : 1 / 1</b>									
<b>DEPARTMENT : 206 PROJECT : "TRFR. &amp; REACTO PO NO : A206N53 END PRODUCT : END FRAME ASSY</b>											
<b>INDENT NO : 232626004 WORK ORDER NO : 62007F51222 PO DATE : DELY REQD : 04062022</b>											
<b>INDENT DATE : 11042022 MATERIAL ISSUE DIV : 206 SUPP CODE : SUPP NAME :</b>											
<b>DETAILS OF FINISHED GOODS</b>											
<table style="width:100%; border-collapse: collapse;"> <tr> <th style="width:10%;">A-SLNO</th> <th style="width:10%;">PO IT NO</th> <th style="width:10%;">PI IT NO</th> <th style="width:20%;">QUANTITY REQUIRED</th> <th style="width:5%;">UNIT</th> <th style="width:10%;">SHOP NO</th> <th style="width:10%;">DEST CD</th> <th style="width:10%;">COST CD</th> <th style="width:15%;">H.CELL</th> </tr> </table>			A-SLNO	PO IT NO	PI IT NO	QUANTITY REQUIRED	UNIT	SHOP NO	DEST CD	COST CD	H.CELL
A-SLNO	PO IT NO	PI IT NO	QUANTITY REQUIRED	UNIT	SHOP NO	DEST CD	COST CD	H.CELL			
DESCRIPTION OF SUB-ASSEMBLY/ITEM & WEIGHT/VOLUME/AREA											
<b>FREE ISSUE MATERIAL PER UNIT OF FINISHED GOODS</b>											
MATL CODE	QTY PSL UNIT	PSL UNIT	RATE PSL UNIT	TOTAL MATL TO BE ISSUED	ISSUE PSL/ UNIT WIP	SMIV/ PPMIV NO	MATERIAL VALUE	TARRIF HEAD	MATL ISSUE QTY		
DESCRIPTION OF FREE ISSUE MATERIAL AND WEIGHT /VOLUME/AREA											
	1		0	1			7902.000 KG	206	206		
SIDE LOCK PLATE											
TR4620076120	.0402	KG	40.000	318.00	KG	WIP	12720.000		.0402		
PLATE TO DRG 24987000017 #1 D40S/J4 MATERIAL TO SIZE 20TX260X3890 -- 2 NOS.											
	2		0	1			7902.000 KG	206	206		
MAIN LOCK PLATE											
TR4620076120	.0496	KG	40.000	392.00	KG	WIP	15680.000		.0496		
PLATE TO DRG 24987000018 #1 D40S/J4 MATERIAL TO SIZE 20TX400X4005 -- 2 NOS.											
	3		0	1			7902.000 KG	206	206		
BAND											
TR4620076120	.0058	KG	40.000	46.00	KG	WIP	1840.000		.0058		
PLATE D40S/J4 MATERIAL TO SIZE 10TX1250X460 -- 1 NO FOR #1 & 2 VAR 00/01 OF DRG 34987000078 (REFER NESTING L22-09).											
	4		0	1			7902.000 KG	206	206		
BAND											
TR4620076120	.0167	KG	40.000	132.00	KG	WIP	5280.000		.0167		
PLATE D40S/J4 MATERIAL TO SIZE 12TX860X1600 -- 1 NO FOR #3 & 4 VAR 00/01 OF DRG 34987000078 (REFER NESTING L22-09).											
<b>REMARKS</b> PLATE TO D40S/J4 MATERIAL IS BEING ISSUED ON FREE ISSUE BASIS & ITS WEIGHT SHALL BE DEDUCTED FROM CRX WEIGHT OF THE END FRAME ASSEMBLY.								<b>AFORM TOTAL</b> 35520.000			
<b>TOTAL NO OF CANCEL ITEM</b> 0											

1 MATERIAL TO BE ISSUED ON :-	FREE ISSUE BASIS	SIGNATURE OF INDENTOR	SIGNATURE OF ASC EXECUTIVE
2. TRANSPORT TO BE PROVIDED BY :-	SUPPLIER	NAME	NAME
3. EXCISE DUTY ON ISSUE MATL TO BE BORNE BY :-	SUPPLIER	DESIGNATION	DESIGNATION
4. SCRAP TO BE RETURNED :-	NO	TELEPHONE	TELEPHONE
5 INVARIABLY ISSUE WT. TO BE RECORDED ON SMIV/PMIV			

RPT-101

T. ARUN RAJ  
 DESIGNATION  
 TELEPHONE  
 एफ.टी.एम. गढ़ाई /FTM Fabrication  
 सी.एच.ई.एल., भोपाल /BHEL, BHOPAL



L22-09 DT:- 16/04/2022

62007-F-512-22, 500 MVA P.I.NO 232626004

PLT SIZE:- 10X1250X460 MM LG

(MATERIAL-D40S/J4)

34987000078/00#02			
34987000078/01#02			
34987000078/00#01			
34987000078/01#01			

PLT SIZE:- 12X860X1600 MM LG (MATERIAL-D40S-J4)

34987000078/00#03
34987000078/01#04

तारुण राज / TARUN RAJ  
प्रबंधक / Manager  
एफ.टी.एम. मुद्राई / FTM Fabrication  
बी.एच.ई.एल., भोपाल / BHEL, BHOPAL

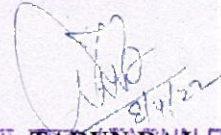


**FABRICATION DIVISION**  
**TRANSFORMER TANK PLANNING**

ANNEXURE- 1 "A"	PI. NO. 232626004	DATE:- 08/04/2022
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**TECHNICAL REQUIREMENT**

<b>1</b>	<b>SCOPE OF SUPPLY</b>	
a	Description	END FRAME ASSEMBLY AS PER ANNEXURE - 1 " B"
b	Contract No	W.O:- 62007-F-512-22, 500 MVA, M/s Megha Engg
c	Quantity	1 SET (UNIT - 1)
<b>2</b>	<b>CONDITION OF SUPPLY</b>	ON MIXED BASIS.
<b>3</b>	<b>RAW MATERIAL</b>	ALL MATERIAL WILL BE ARRANGED BY SUPPLIER EXCEPT CLAMP PLATE (FULLY FINISHED in Black Condition with slots), D40S/J4 PLATE MATERIAL for other items in the said category.
<b>4</b>	<b>NO. OF COATS OF PAINT &amp; SPECIFICATION</b>	AS PER MGES
<b>5</b>	<b>INSPECTION</b>	BHEL (QIX)
<b>6</b>	<b>WELDER QUALIFICATION REQUIRED</b>	YES
<b>7</b>	<b>WPS APPROVAL REQUIRED FROM BHEL</b>	YES
<b>8</b>	<b>APPLICABILITY OF QA PLAN</b>	YES
<b>9</b>	<b>QA PLAN/ LOG SHEETS</b>	AS PER QA/TCB/31/744 & QA/TCB/BO/39, REV. 02, DT - 01/01/2018
<b>10</b>	<b>ANY OTHER INFORMATION</b>	N/A
<b>11</b>	<b>IDENTIFICATION ON THE JOB</b>	BY HARD PUNCH & BY WHITE PAINT FOR PO., MO NO., DRG.NO., & ITEM NO.
<b>12</b>	Before start of job supplier should confirm the latest revision of the drawing from the online portal of TRE .	
<b>13</b>	Proof marking to be done by supplier for final matching if any at BHEL. Additional drilling on Endframes to be done by subcontractor as per drawings before its dispatch to BHEL.	
<b>14</b>	Numbering should be done for match marking on pins & on corresponding holes	
<b>15</b>	Tolerance of pins & its corresponding holes should be mentioned in inspection record sheet as per drawings.	
<b>16</b>	All pre-machining to be done by the supplier as per detail drawing.	
<b>17</b>	All Drawings and BOM issued after PI/PO date shall be saved by the supplier either in soft copy or hard copy until and unless Job is dispatched on site.	
<b>18</b>	This PI is on Mixed Basis and inline with this CLAMP PLATE (FULLY FINISHED in Black Condition with slots), D40S/J4 PLATE MATERIAL for other items in the said category will be free issued from BHEL. The weight of free issue material will be deducted from CRX weight of End Frame.	
<b>19</b>	All other terms and conditions as per Annexure 1 "D" and 1 "F".	
<b>20</b>	<b>DRAWINGS:- As per annexure 1 "B"</b>	

  
**TARUN RAJ RAJ**  
**MANAGER**

एफ.टी.एम. गढ़ाई / FTM Fabrication  
 बी.एच.ई.एल., भोपाल / BHEL, BHOPAL



**FABRICATION DIVISION  
TRANSFORMER TANK PLANNING**

**ANNEXURE 1"B"**

DATE: - 08/04/2022

PI - 232626004 DT- 08/04/2022		W.O:- 62007-F-512-22, 500 MVA, M/s Megha Engg.								
CORE AND END FRAME ASSY DRG. NO. - 04987000002				CORE STEEL PARTS DRG. NO. - AS PER MGES						
PAINTING:- AS PER MGES				MTL. CODE FOR END FRAME ASSEMBLY :- TR4620076120						
END FRAME ASSEMBLY :- SL. NO. 1 TO 32				ADDL. DRILLING DRAWING AS PER MGES						
GENERAL NOTES FOR CORE CLAMPING STRUCTURE TO BE FOLLOWED AS PER DRAWING NO. - 34997000093										
WELDING DETAIL FOR CORE CLAMPING STRUCTURE TO BE FOLLOWED AS PER DRAWING NO. - 34997000095										
DLY DATE:- AS PER PO				TOTAL QTY :-		1 SET				
SL. NO.	DESCRIPTION	DRG. NO.	VAR	W/A OF ITEMS	SS WT (Kgs)	D405/J4 (FREE ISSUE) (Kgs)	HTS WT (Kgs)	MS WT (Kgs)	TOTAL QTY	TOTAL WT (Kgs)
1	BAND (#1 OF DRG. 04987000002)	34987000077	OO	1 TO 3	0.00	0.00	78.88	1.84	4	80.72
2	BAND (#2 OF DRG. 04987000002)	34987000077	O1	1, 2, 4	0.00	0.00	76.04	1.84	4	77.88
3	BAND (#3 OF DRG. 04987000002)	34987000077	O2	1, 2, 5	0.00	0.00	19.92	0.46	1	20.38
4	BAND (#4 OF DRG. 04987000002)	34987000078	OO	1 TO 3	0.00	53.60	0.00	0.00	5	53.60
5	BAND (#5 OF DRG. 04987000002)	34987000078	O1	1, 2, 4	0.00	78.40	0.00	0.00	7	78.40
6	SIDE LOCK PLATE (#6 OF DRG. 04987000002)	24987000016	OO	1 TO 3	0.10	0.00	8.70	312.00	2	320.80
7	SIDE LOCK PLATE (#7 OF DRG. 04987000002)	24987000017	OO	1 & 2	0.00	312.00	8.70	0.00	2	320.70
8	MAIN LOCK PLATE (#8 OF DRG. 04987000002)	24987000018	OO	1 TO 3	0.20	384.00	10.60	0.00	2	394.80
9	BOTTOM SIDE BAND (#9 OF DRG. 04987000002)	24987000019	OO	1 TO 5	0.00	0.00	139.84	15.32	1	155.16
10	TOP SIDE BAND (#10 OF DRG. 04987000002)	24987000020	OO	1 TO 5	0.00	0.00	150.24	21.72	1	171.96
11	FOOT (#11 OF DRG. 04987000002)	34987000079	OO	1 & 2	0.00	0.00	877.68	0.00	6	877.68
12	WASHER (#12 OF DRG. 04987000002)	24987000021	OO	1 TO 3	0.00	0.00	0.00	7.82	24	7.82
13	WASHER (#13 OF DRG. 04987000002)	24987000021	O1	4 TO 6	0.00	0.00	0.00	17.15	50	17.15
14	TOP SIDE BEAM (#30 OF DRG. 04987000002)	24987000022	OO	1 TO 5	266.60	0.00	0.00	0.00	1	266.60
15	BOTTOM SIDE BEAM (#31 OF DRG. 04987000002)	24987000023	OO	1 to 12 & 14	452.49	0.00	0.00	0.00	1	452.49
16	BOTTOM HV YOKE BEAM (#32 OF DRG. 04987000002)	14987000018	OO	1 TO 4, 6 TO 40, 46 TO 49	317.36	0.00	9.60	735.17	1	1062.13
17	BOTTOM LV YOKE BEAM (#33 OF DRG. 04987000002)	14987000019	OO	1 TO 6, 8 TO 42 & 47 TO 50	317.31	0.00	9.60	740.23	1	1067.14
18	UPPER HV YOKE BEAM (#34 OF DRG. 04987000002)	14987000020	OO	1 TO 5, 7, 8, 10 TO 31 & 33 TO 38	209.78	0.00	46.45	795.91	1	1052.14
19	UPPER LV YOKE BEAM (#35 OF DRG. 04987000002)	14987000021	OO	1 TO 5, 7, 8, & 10 TO 38	210.16	0.00	46.45	812.82	1	1069.43
20	WEDGE (#93 OF DRG. 04987000002)	34987000109	OO	1	0.00	0.00	11.60	0.00	4	11.60
21	SEGMENT (#94 OF DRG. 04987000002)	34987000110	OO	1	0.00	0.00	6.70	0.00	2	6.70
22	BAR (#95 OF DRG. 04987000002)	34987000111	OO	1	0.00	0.00	0.00	3.00	4	3.00
23	LOCK PLATE (#96 OF DRG. 04987000002)	34987000112	OO	1	0.00	0.00	0.00	0.04	4	0.04
24	LOCK PLATE (#97 OF DRG. 04987000002)	34987000112	OO	2	0.00	0.00	0.00	0.08	8	0.08
25	WASHER (#98 OF DRG. 04987000002)	34987000113	OO	1	0.00	0.00	0.00	0.58	6	0.58
26	DISK (#100 OF DRG. 04987000002)	34987000115	OO	1	0.00	0.00	0.00	8.04	6	8.04
27	LOCK PLATE (#101 OF DRG. 04987000002)	34987000116	OO	1	0.00	0.00	0.00	0.12	6	0.12
28	LOCK PLATE (#102 OF DRG. 04987000002)	34987000117	OO	1	0.00	0.00	0.00	0.04	2	0.04
29	LOCK PLATE (#103 OF DRG. 04987000002)	34987000117	OO	2	0.00	0.00	0.00	0.48	2	0.48
30	PLATE (#108 OF DRG. 04987000002)	34987000120	OO	1	0.00	0.00	0.00	21.70	1	21.70
31	PLATE (#111 OF DRG. 04987000002)	44987000030	OO	1	0.00	0.00	0.00	10.80	24	10.80
32	BRACKET (#164 OF DRG. 04987000002)	34987000122	OO	1, 2 & 3	0.00	0.00	0.00	291.84	4	291.84
TOTAL END FRAME ASSY WEIGHT IN KG.					1774.00	828.00	1501.00	3799.00		7902.00

  
**TARUN RAJ**  
 MANAGER  
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**ANNEXURE 1 "D"**  
**PI-232626004,**  
**W.O-62007-22,**  
**500 MVA MEGHA, 1 Set**  
**of ENDFRAME**  
**ASSEMBLY.**

Seal & Signature of Vendor (for acceptance)



## TENDER DOCUMENT

Issued by Bharat Heavy Electricals Limited, Bhopal Ancillary and Subcontracting dept. (Group 29/69)

### FOR SUPPLY OF TRANSFORMER ENDFRAMES ON MIXED BASIS

#### SALIENT TECHNICAL REQUIREMENTS

1.1 The scope of work covered in this enquiry is fabrication of endframe for transformer as per our drawings on mixed basis using vendor's own material & material issued by BHEL (**FULLY FINISHED CLAMP PLATE IN BLACK CONDITION WITH SLOTS & J4 Plate material (D40S/ J4 for all items in the said category)**). End Frame shall be supplied in painted condition, as specified in the purchase order/ annexure's. The activities mentioned below shall be in the scope of vendor:-

- All material, consumables, facilities, measuring equipment etc., required for fabrication, paint film thickness test etc. called in BHEL drawings except for helical inserts.
- All machining operations- Bending/ Forming/ slot cutting/ milling etc., called in the drawing for the items; as well as assemblies shall be in the scope of vendor, including items i.e. lifting pin, screw for dashpot guide, tightening nut for bottom pins, inner and outer band in C channel type end frame design, other hardware's as applicable etc.
- All other requirements, to satisfy relevant quality standards applicable for fabrication of product.

1.2 Vendor should ensure that the supplies are as per the latest drawings, DCA's, MID's (if issued), approved QA Plans and other related documents. The vendor should also ensure that latest revisions of these documents are collected by them from BHEL, time to time. They should obtain necessary certification about the latest revision at their B2B portal from time to time (especially before activities such as final welding, matching & dispatch) and the same to be duly certified by concerned inspection agency. Efforts will be made to supply all possible documents by BHEL along with purchase order. QA plans of customers & TRE and their latest revisions shall be applicable on the day of execution.

**2. MATERIAL:** Raw material should be procured from customer-approved source only; Otherwise, BHEL PMD will be followed. Confirmation to be taken from indenting/ engineering department.

2.1 **Clamp Plate (FULLY FINISHED IN BLACK CONDITION WITH SLOTS) & D40S/J4 plate material (for all items in the said category)** as per Annexure 1A & 1B) will be supplied by FBM Division as free issue item. Weight of the free issued items will be deducted from final weight of assembly/ SRV weight. Excise Duty on material issued, if any will be on supplier's account. Excise duty paid initially by BHEL through excise gate must be pass on to BHEL through bill invoices else we shall recover from vendors bills.

2.2 End Frame are combined fabrication of Mild Steel, High Tensile Steel (HTS) & Stainless Steel (SS/J4), hence in line with it additional charges has been fixed. However in free issue material the same has been issued after final cutting as per the drawing hence scrap generation is negligible as it lies in the form of powder, chips etc.

2.3 Epoxy painting shall be done as per BHEL Product Standard TR 10005P Sl. No. 20 & 22. The paints will be procured from BHEL approved vendors only.

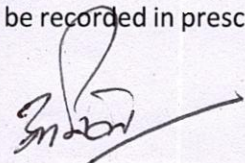
2.4 Paints of TRE specifications along with matching thinner should be procured from BHEL approved vendors only.

2.5 Customer inspection co-ordination will be done by vendor through QIX as per existing practice.

**3. QUALITY REQUIREMENTS:** BHEL will accept End frames & their accessories only after ensuring compliance of the following checklist.

- Transformer core plate and End frame checklist (Checklist No. QC/TCB/EF/01 with latest revision)
- Reactor core & Clamp plate checklist (Checklist No. QC/TCB/EF/02 with latest revision)
- Individual hole dimensions of end plate and pin OD and the resulted clearance to be recorded in prescribed format already in practice.

Seal & Signature of Vendor (for acceptance)





- Finally inspection by the BHEL inspection team after routine inspection by QIX

3.1 End frames shall be matched with all items and inspected at vendor works as per the drawing/ TRM requirement & the approved QAP. All welding shall be done as per BHEL/ Customer approved WPS (Welding Procedure Specification) and ASME section IX qualified welder.

3.2 End frames shall be free from shots, dust, weld slags and other foreign materials from inside & outside surfaces. This has to be ensured strictly. Penalty/ deductions will be imposed for non-compliance.

3.3 All tapped holes shall be blanked with insulation adhesive tape. For bigger size hole such as. 110 mm diameter, thick and strong polythene sheet will be put to cover them to prevent entry of dust, dirt, and other foreign materials.

3.4 All loose items like feet's, cross beams, side plates etc should be packed in bubble polythene & Lifting all pins should be tightened with End frames with proper identification.

3.5 Painting outside/ inside should be excellent. Only approved make & types of paint should be used as called in TR10005P (latest revision).

3.6 Suppliers to ensure scratch free and good aesthetics delivery of end frame to BHEL. Penalty will be imposed for quality related issues in painting like paint peel off, de-colourization etc.

**GENERAL NOTES DRAWING 34997000093 & 34997000095 TO BE REFERRED IN EACH CASE OF FABRICATION OF END FRAME ASSEMBLY**

**4. SHOT BLASTING/ GRIT BLASTING & PAINTING:** All grinding work is to be completed before shot blasting with soft grinder. Deep grinding marks to be avoided. All the threaded portion to be protected by putting suitable caps and nylon plugs on tapped items, all machined surface to be protected before shot blasting.

**5. TESTING REQUIREMENT**

5.1 Only tested and approved materials are to be used. MS material (AA10108) shall be tested in line with TR-30141T.

5.2 NDT (if applicable) shall be carried out by BHEL approved personnel/ agencies. The details of agency carrying out NDT shall be intimated by Vendor to BHEL NDT division/ third party inspection for their approval.

5.3 Vendors have to arrange for radiographic test at their works as per customer's QAP/ BHEL drawings (if applicable).

**6. QUALITY REQUIREMENTS:** - Quality requirements mentioned below are only for guidance and not exhaustive. Supplier has to take all necessary care and deliver the item to satisfy all relevant quality standards applicable for such product.

6.1 Inspection co-ordination will be done by the vendor through concerned inspection agencies as per existing practice. Prior/ advance notice is to be given by the vendor for necessary & timely allocation of the inspection.

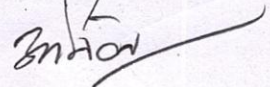
6.2 Material identification, co-relation etc. shall be done as per referred QA plan. In any case, vendor shall have to keep complete record of material identification and test certificate co-relation as per quality system for review.

6.3 Endframe and other fabricated components shall be free from shots, dust, weld slag and other foreign materials.

6.4 All Tapped holes must be cleared by vendors at their works to avoid re-tapping at BHEL. The tapped holes shall be thoroughly cleaned after application of third tap to remove any burr, chips, paint etc. QC must ensure this operation after final painting and before dispatch to BHEL. Tapped holes meant for hot dip galvanized hardware's shall be tapped oversize as given in table 1 of IS 1367 Pt III.

6.5 Items, having male threading shall be protected using PVC tube. All tapped holes shall be blanked with insulation adhesive tape/ plastic plugs. For bigger size holes e.g. 110 mm dia & above, thick and strong polythene sheet will be put to cover them which will be sealed using insulation adhesive tapes/ clamps to avoid ingress of

Seal & Signature of Vendor (for acceptance)





moisture and dust during transportation. No grease shall be applied. All inside/ outside threads, machined surfaces are to be duly protected with suitable means during shot blasting, painting and transportation.

6.6 Care should be taken during loading/ unloading of items on trolley at supplier's end & BHEL to avoid damage to painted surface. BHEL will take extra care during unloading of the job.

6.7 Drilling to be done by flat nose tip only to avoid puncher on main plate.

6.8. Painting is to be carried out in dedicated painting area..

6.9 Checklist duly signed covering all items, their dimensions; quantity etc should be furnished to QC.

6.10 Stage inspection should not be skipped, in case it is skipped deduction will be imposed as established in QDRC.

**7. MATCHING REQUIREMENTS:** Following matching criteria shall be adopted:-

7.1 Complete matching of HV part with LV part may be ensured with all the matching counterparts such as clamp plates, foot assy, cross beams, locking arrangements, end tie plates etc.

7.2 QC should ensure all items & fitting on HV & LV part are as per drawings & within tolerance.

7.3 Photographs of all matching work of assemblies shall be presented along with SRV as proof.

**8. MISCELLANEOUS REQUIREMENTS:-**

8.1 Dispatch clearance shall be given after inspection at vendor's works. However, final acceptance will be given only after proper assy. of active part inside tank at BHEL works.

8.2 Endframe assemblies shall be manufactured maintaining the fabrication tolerances called in the drawings.

8.3 Painting & related quality checks shall be done as per process/ specification called in the drawings/ MID's.

8.4 Suppliers to ensure to maintain weld sizes using weld checking gauges. Any lumps, scars or under cuts etc. are ground smooth for neat appearance.

8.5 To ensure desired aesthetics all sharp points cut edges dents etc. shall be grounded smooth wherever radius or rounded off is called in drawing; it should be ground as per drawing without any surface defect.

8.6 Supplier to put proper identifications covering-work order, project, vendor's name & PO details at a suitable location by contrast paint and hard punch mark.

8.7 Endframe shall be free from shots, dust, weld slags and other foreign materials from inside & outside surfaces. This has to be ensured strictly. Penalty as per QDRC will be deducted.

8.8 Suppliers to ensure scratch free and good aesthetics delivery of endframe to BHEL. Heavy penalty will be imposed for quality related issues in painting like paint peel off, de-colourization etc. Penalty as per QDRC will be deducted.

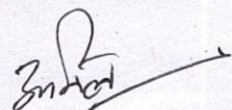
**9. PRE-QUALIFICATION REQUIREMENT (PQR):-** Refer Annexure "1F".

**BHEL SHALL RESERVE THE RIGHT TO CONDUCT QUALITY AUDIT OF VENDORS AND COMPLIANCE OF IT WITHIN REASONABLE TIME IS TO BE ENSURED BY VENDOR FOR GETTING FURTHER ORDERS.**

**COMMERCIAL TERMS & CONDITIONS**

**10. SCOPE OF WORK:-** The scope of work covered in this enquiry is fabrication of END FRAME on mixed basis in all respects using supplier's own material. However, FULLY FINISHED in black condition (with slots) Clamp Plate, D40S/ J4 Plate material & Shipping beam/ Channel shall be issued on free issue basis. Components and assemblies should be fabricated and supplied as per the technical scope, drawings & QA plan. Technical scope shall be as per Annexure IA, but it is only for guidance and not exhaustive. Supplier has to take all necessary care and deliver the item to satisfy relevant quality standard applicable for such product as per refer drawings, standard drawings & documents.

Seal & Signature of Vendor (for acceptance)





## **11. RATES:-**

11.1 Enquiry is issued in kg (weight). Single rate is to be submitted in Rupees per kg inclusive of shot blasting & epoxy painting with own material & Free issue material by BHEL (as per annexure-1A, 1B & 1D). Lowest price quoted in Rupees per kg shall be declared as L1.

11.2 Rates quoted on mixed basis should be with vendor's own material considering all the process charges on total material i.e. material procured by vendor & free issue material from BHEL. Rates quoted may be inclusive of transportation charges up to BHEL Bhopal.

11.3 Quoted rates should be valid for ordering for 90 days from the date of tender opening. Offers received with validity period less than 90 days shall not be considered.

## **12. DELIVERY PERIOD & ORDERING PROPOSAL:**

Ordering shall be done among:-

- **Single vendor**, necessary loading will be 100% i.e.

Thus delivery in the above such cases will be (including final clearance from the Committee) will be 8 weeks. Final delivery in case of fabrication will be accounted against following criteria's:-

- 8 weeks from date of issue of PO.
- 6 weeks from date of issue of free issue materials (In case of Clamp Plate Assy & D40S/ J4 plate material) OR PO delivery whichever is later.
- Delivery extension for delay (attributed to BHEL) may be provided (case to case basis) for reasons such as delay encountered in inspection or delay due to any other technical reason, for which vendor has to submit proper evidence for further perusal.

12.1 Delivery mentioned in the purchase order can be preponed/ postponed as per the project schedule & TRM requirement. Accordingly, supplier will be required to meet the revised delivery schedule. Early delivery of endframe assembly is acceptable.

12.2 In case of mixed basis job normally vendors are expected to lift material in time without any reminders from BHEL & delivery is computed as per the agreed manufacturing cycle mentioned in the enquiry/ offer. However, at times BHEL will remind the vendors through emails to lift the material. In such cases, delivery date will be computed from the last date of issue of material or 7 days from the generation of email, whichever is later.

## **13. BASIS FOR DECIDING LOWEST (L1) OFFER:**

Vendor should quote their lowest single rate for complete fabrication work of END FRAMES with own material, in epoxy painted condition, on per kg. F.O.R. BHEL, Bhopal basis in the Bid format enclosed

13.1 Only offers meeting the terms and conditions of the enquiry will be considered.

13.2 All offers shall be compared for Total cost to BHEL at BHEL Bhopal stores to derive L1 status.

13.3 L1 will be decided on Total L-1 basis/Total package basis

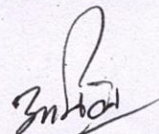
13.4 In cases where more than one offer is at on the same price, supplier having higher vendor performance rating (VPR) shall be placed at higher rank.

13.5 Offer having deviations to the terms and conditions will be suitably loaded with BHEL Current/ Standard loading factors to derive the L1 status on total landed cost basis.

13.6 Current rate GST shall be taken wherever it is not indicated in the offer, to arrive the price to BHEL Bhopal.

13.7 Decision of BHEL in this regard will be final and binding without any further correspondence with the supplier.

Seal & Signature of Vendor (for acceptance)





13.8 During bid evaluation, no loading of price with regard to preferential payment within 45 days will be made to vendors falling under MSMED ACT – October- 2006. Vendor has to submit MSME/CA certificate to avail MSME benefit along with offer.

13.9 This enquiry is in two-part bid system. "BHEL reserves the right to go in for Reverse Auction instead of opening the submitted sealed bid, which will be decided after technical evaluation". For instructions for submission of two-part bid & reverse auction.

13.10 Rate quoted in unit other than called in the enquiry will be calculated as per the design weight

#### **14. TAXES & DUTIES:-**

14.1 Applicable Duties & Taxes, which BHEL is required to pay, should be clearly declared considering the offer validity and quoted delivery period. Otherwise, BHEL will not be responsible for payment of any kind of duties & taxes.

14.2 Taxes and duties will be paid extra as applicable on the date/ dates of contractual delivery or actual delivery whichever is lower.

**15. Q.A. PLAN** of the concerned project in addition to BHEL STD quality plan are to be strictly followed without any deviation. Qualified welders approved by BHEL will be employed as per job requirement & QA plan.

**16. TESTING:** All types of NDT will be in the scope of supplier and will be carried out through BHEL approved agencies unless specified otherwise in technical specification subject to review of NDT reports by BHEL. Testing of sample will be done in BHEL TSD department on chargeable basis as per plant standard no. B.P. 0460298.

**17. INSPECTION** shall be done by concerned inspection agency/ customer, as mentioned in the QA plan /annexure. Intimation of readiness of job for calling the inspection agency/ customer should be given in advance.

**18. TEST CERTIFICATE & CORRELATION:** - In all cases, material should be procured from BHEL's approved vendors with correlated test certificates. Where, material is procured by the supplier without test certificate & correlation, it will be tested as per the instruction/requirement of BHEL and testing charges will be borne by the supplier.

**19.** No jigs & fixture/ tools etc will be issued by BHEL for fabrication work except those jigs and fixtures which have been specified in the technical scope and drawing(s). Vendors are requested to return the tools immediately on completion of jobs. In case the tools are not returned within 3 months of issue of the same, the bills of the vendors may be kept under hold till return of the tools

**20. PROGRESS REPORT:** – Supplier will be required to send progress report via email (skbarnwal@@bhel.in) OR in hard copy indicating status of each purchase order.

**21.** Apart from the above, Terms & conditions of indigenous enquiry and P.O. issued by material management department vide BP200102 will also be applicable (already available with the suppliers).

**22.** Extended of help is required from vendor for difficulties, if any, faced during erection & commissioning of the jobs in BHEL. Vendors to comply the same.

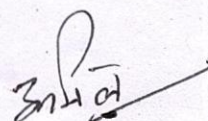
#### **23. PAYMENT:-**

23.1 In cases where the variation in the actual weight is more than 5%, the same shall refer to concerned Engg. dept. and payment on account of increased weight beyond 5 % shall be released as per the decision of concerned Engg. dept.

23.2 Where due to subsequent changes/ modification in drawing, there is variation in the design weight, the purchase order value shall be revised as per actual weight.

23.3 In cases where the job weight exceeds the weigh bridge capacity, design weight given in drawing would be taken as basis for payment.

Seal & Signature of Vendor (for acceptance)





23.4 Payment shall be made within 90 days as per BHEL norms. Preferential payment within 45 days will be made to vendors falling under MSMED Act, October-2006.

**24. ISSUE's WITH RESPECT TO FREE ISSUE ITEMS FROM BHEL:**

24.1 Material shall be issued in form of raw material & components as mentioned in the technical scope with adequate allowance as per prevailing engineering practice.

24.2 It shall be the responsibility of Subcontractor to check the raw materials received by them for quality & quantity and ensure its correctness before removing it from BHEL premises.

24.3 Any wrong material collected should be immediately communicated for remedy. Excess material collected should be immediately returned in the usable form.

24.4 Material issued for job work shall be taken back only in exceptional circumstances and upon written request of vendor with due justification.

24.5 The cost of rework or rejection, and any cost of freight incidental to such work will be to the Subcontractor's account. The cost of rejected/damaged raw material shall be recovered from the supplier at the rate(s) as declared in free issue material details ["A" Form]

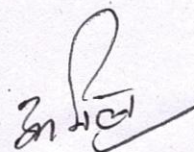
24.6 In cases wherever availability of material becomes critical for certain work order, BHEL has the right to either take back or transfer the balance, material available with the Subcontractor to other, with due material accounting.

24.7 Supplier has to ensure the return of all the free issue material issued by BHEL either in assembled or in raw form if left unused to BHEL.

25. If any vendor is under hold by BHEL/Customer on enquiry due date then its offer shall be technically rejected, irrespective of vendor qualifying the PQR conditions at SI No 9 of the salient technical requirement

**ANY DEVIATION TO ANY POINTS OF THIS ANNEXURE OR ENQUIRY SHOULD BE CLEARLY MENTIONED IN OFFER. OTHERWISE, IT WILL BE PRESUMED THAT SUPPLIER AGREES TO THESE CONDITIONS.**

Seal & Signature of Vendor (for acceptance)





Annexure -1 "F"		PI - 232626004, DT - 08/04/2022
Pre-Qualification Criteria		
Item name and item no.: End Frame Assembly, 500 MVA, MEGHA ENGG)		
S.No.	Criteria	Remark by bidder
<b>Technical PQC</b>		
1	Vendor should have fabricated (supplied) End Frame Assembly (for Transformer) of similar type or design i.e. Box & Flat Type (having Clamp Plate Assembly) of design weight not less than 3500 kg. PO Copy along with supply details such as dispatch certificate/ invoices etc. are to be submitted as a proof of it along with tender. All the bidders including MSE and Startups to comply the same for qualification.	
2	Vendor should have fabricated (supplied) End Frame Assembly (of Transformer, as stated in SL. No. 1 above) in the last 5 year as on enquiry due date. PO Copy along with supply details such as dispatch certificate/ invoices etc. are to be submitted as a proof of it along with tender. All the bidders including MSE and Startups to comply the same for qualification.	
<b>General Note</b>		
3	BHEL reserves the right to verify information & documents provided by vendor & submitted at the time of enquiry. In case the information provided by vendor is found to be incorrect, the offer/bid shall be rejected.	

तरुण राज / TARUN RAJ  
 प्रबंधक / Manager  
**TARUN RAJ**  
 एफ.टी.एम. विभाग / FTM Fabrication  
**MANAGER**  
 बी.एच.ई.एल., भोपाल / BHEL, BHOPAL

**VENDOR SIGN & SEAL**

अनिल मर्कम / ANIL MARKAM  
 वरिष्ठ. उप महाप्रबंधक / Sr. Dy. General Manager  
**A MARKAM**  
**SE, DGM (FTM)**  
 एफ.टी.एम. विभाग / FTM Division  
 बी.एच.ई.एल., भोपाल / BHEL, BHOPAL