 <b>JSC140/M2053</b>	<b>BHARAT HEAVY ELECTRICALS LTD.</b> (A GOVT. OF INDIA UNDERTAKING) P.O BHEL Jhansi - 284120, INDIA Tel.:0510-277001/2412260 Website : jhs.bhel.com	PURCHASE ENQUIRY	
	ENQ NO/DT: <b>E06240006</b> <b>30/05/24</b> REV NO/DT: <b>1</b> <b>11/06/24</b>	PAGE <span style="float: right;">1</span> <span style="float: right;">6</span>	

REQUIRED: TEST CERT/ GUARANTEE CERT	OUR ABOVE ENQUIRY OF PREVIOUS REV & DATE IS AMENDED WITH FOLLOWING CHANGED / ADDED ITEMS. <table style="width:100%; border-collapse: collapse;"> <tr><td>Eng Due on:</td><td>21-06-24</td><td>FRIDAY</td></tr> <tr><td>Close at:</td><td>13:15</td><td>Open at:14:00</td></tr> <tr><td>Matcat:</td><td colspan="2">061001 CONTINUOUSLY TRANSP</td></tr> <tr><td>Validity:</td><td colspan="2">120 days from Technical bid opening date</td></tr> <tr><td>ITEM:</td><td colspan="2">AS PER TENDER DOCUMENT</td></tr> <tr><td>TOP:</td><td colspan="2">See Special Remarks</td></tr> <tr><td>RA:</td><td colspan="2">RA not applicable</td></tr> </table> <table style="width:100%; border-collapse: collapse;"> <tr> <td>Est. Value:</td> <td>Item wise</td> <td></td> </tr> <tr> <td>Bid Type:</td> <td>TWO BID</td> <td>Delivery: FOR Jhansi</td> </tr> <tr> <td>Tot Item:</td> <td>4</td> <td>E-Proc: No</td> </tr> </table>	Eng Due on:	21-06-24	FRIDAY	Close at:	13:15	Open at:14:00	Matcat:	061001 CONTINUOUSLY TRANSP		Validity:	120 days from Technical bid opening date		ITEM:	AS PER TENDER DOCUMENT		TOP:	See Special Remarks		RA:	RA not applicable		Est. Value:	Item wise		Bid Type:	TWO BID	Delivery: FOR Jhansi	Tot Item:	4	E-Proc: No
Eng Due on:	21-06-24	FRIDAY																													
Close at:	13:15	Open at:14:00																													
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RA:	RA not applicable																														
Est. Value:	Item wise																														
Bid Type:	TWO BID	Delivery: FOR Jhansi																													
Tot Item:	4	E-Proc: No																													

ITEM NO : 1	PSL QTY/UM: 1600.00 MT
MATL CODE : TR173089A205	PO QTY /UM: 1600000.00 KG
DESTINATION: JS	

DESCRIPTION	DELIVERY	QUANTITY (PSL UM)
UPTO 43// STRANDS AND CROSS SECTION AREA OF INDIVIDUAL STRAND 30 SQ.MM MAX. PROOF STRESS, EPOXY COATED/GLUED CTC (WITH KRAFT PAPER COVERED) AS PER ANNEX-II. INDICATIVE SIZES SHALL BE AS PER ANNEXURE-B	SEP-24	320.00
	OCT-24	320.00
	DEC-24	320.00
	JAN-25	320.00
	MAR-25	320.00

ITEM NO : 2	PSL QTY/UM: 200.00 MT
MATL CODE : TR173089A206	PO QTY /UM: 200000.00 KG
DESTINATION: JS	

DESCRIPTION	DELIVERY	QUANTITY (PSL UM)
ABOVE 43// AND UPTO 65// STRANDS , CROSS SECTION AREA OF INDIVIDUAL ST RAND 30 SQ.MM MAX. PROOF STRESS, EPOXY COATED/GLUED CTC (WITH KRAFT PAPER COVERED) AS PER ANNEX-II. INDICATIVE SIZES SHALL BE AS PER ANNEXURE-C	SEP-24	40.00
	OCT-24	40.00
	DEC-24	40.00
	JAN-25	40.00
	MAR-25	40.00

ITEM NO : 3	PSL QTY/UM: 400.00 MT
MATL CODE : TR173089A207	PO QTY /UM: 400000.00 KG
DESTINATION: JS	

DESCRIPTION	DELIVERY	QUANTITY (PSL UM)
From 14// to 27// Strands, cross section area of individual strand 20 sq.mm max. Proof stress nomex covered CTC. Typical sizes generally as per Annex-TRE/FRT/CPR Rev-02. Nominal value of 0.1% Proof stress shall be 135 Mpa with +10% and -10 % tolerance. Indicative sizes shall be as per annexure-D	SEP-24	100.00
	OCT-24	100.00
	DEC-24	100.00
	JAN-25	100.00







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ITEM NO : 4 PSL QTY/UM: 50.00 MT  
MATL CODE : TR173089A209 PO QTY /UM: 50000.00 KG  
DESTINATION: JS

DESCRIPTION	DELIVERY	QUANTITY(PSL UM)
Up to 13// Strands, cross section	SEP-24	12.50
area of individual strand 20	OCT-24	12.50
sq.mm max. Proof stress nomex	DEC-24	12.50
covered CTC. Typical sizes	JAN-25	12.50
generally as per		
Annex-TRE/FRT/CPR Rev-02.		
Nominal value of 0.1% Proof stress		
shall be 135 Mpa with +10% and -10%		
tolerance.		
Indicative sizes shall be as per		
annexure-D.		

### SPECIAL REMARKS:

- REV.01 IS ISSUED TO EXTEND THE DUE DATE AS INDICATED ABOVE AND FURTHER ADD TECHNICAL ANNEXURE-B, ANNEXURE-C & ANNEXURE-D FOR ELABORATING THE SIZES OF ENQUIRY ITEM NO 01 (ANNEXURE-B), ENQUIRY ITEM NO 02 (ANNEXURE-C) AND ENQUIRY ITEM NO 03 & 04 (ANNEXURE-D).
- 1. ENQUIRY IS FLOATED FOR PROCUREMENT OF CTC AS PER TENDER DOCUMENT ANNEXURE-I TO ANNEXURE-X.
- 2. PLEASE READ ALL THE DOCUMENT CAREFULLY BEFORE SUBMITTING THE OFFER.
- 3. BIDS SHALL BE SUBMITTED IN A SEALED COVER WITH ENQUIRY NO., DUE DATE AND BIDDER(S) NAME INDICATED ON THE COVER. THE COVER SHOULD CONTAIN BOTH PART-I AND PART-II BIDS.

PART-II OF BID CONSIST OF PRICE BID AS PER PRICE FORMAT ANNEXURE-VI TO VII AND REQUIRED WITH DULY FILLED, SIGNED & STAMPED BY THE AUTHORIZED SIGNATORY OF THE VENDOR. EACH PRICE BIDS ENVELOPES SHALL BE DULY SUPER SCRIBED AS PRICE BID, ENQUIRY NUMBER, ENQUIRY ITEM NUMBER AND DUE DATE.

BIDDER HAS TO SUBMIT SEPARATE SEALED ENVELOPE OF PRICE BID AS PER PRICE BID FORMAT ANNEXURE-VI TO VII ONLY FOR THOSE ITEMS FOR WHICH THEY HAVE QUOTED.

IF ANY BIDDER WILLING TO QUOTE ANY ONE ITEM OF PURCHASE ENQUIRY, THEN BIDDER HAS TO SUBMIT SEPARATE SEALED ENVELOPE OF PRICE BID FOR THAT PARTICULAR ITEM AS PER PRICE BID FORMAT ANNEXURE- VI TO VII. THE ENVELOPES INDICATING PART-I OR PART-II, AS THE CASE MAY BE, TO BE PUT IN A BIGGER ENVELOPE, WHICH SHOULD BE ADDRESSED TO BELOW ADDRESS

IN-CHARGE,  
TENDER ROOM, ADMINISTRATION BUILDING,  
BHARAT HEAVY ELECTRICALS LTD., JHANSI (UP) INDIA  
PIN CODE- 284120.

ENQUIRY NO., DUE DATE AND BIDDERS NAME MUST BE MENTIONED ON THE BIGGER ENVELOPE. OFFER MUST REACH TENDER ROOM OF BHEL JHANSI LATEST BY 13.15 HRS OF THE ENQUIRY DUE DATE.

IN CASE, THE BIDS ARE NOT SUBMITTED IN THE MANNER STATED ABOVE, THE OFFER OF THE BIDDER(S) ARE LIABLE TO BE REJECTED.

IT IS PREFERRED THAT OFFERS TO BE SENT IN SEALED ENVELOPE. HOWEVER, IF THE BIDDER CHOSSES TO SEND THE OFFER THROUGH E-MAIL, OFFERS RECEIVED THROUGH E-MAIL SHALL BE CONSIDERED ONLY WHEN SUCH OFFERS ARE COMPLETE IN ALL RESPECTS. IN CASES OF OFFERS THROUGH E-MAIL, THE OFFERS SHALL BE SENT TO EMAIL ID:- TENDERBOX.JHS@BHEL.IN ., WHEREIN THE SUBJECT OF THE EMAIL SHOULD MENTION THE ENQUIRY NUMBER. E MAIL OFFERS SENT TO ANY OTHER E MAIL ID SHALL NOT BE ENTERTAINED. BHEL SHALL NOT TAKE ANY RESPONSIBILITY IF THE OFFERS ARE INCOMPLETE





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OR IF THE ENQUIRY NUMBER IS NOT MENTIONED IN THE SUBJECT OF THE E-MAIL.

THERE WILL BE A SIZE LIMIT FOR THE VIA MAIL OFFERS, THEN SUPPLIERS SHOULD SEND THE OFFER IN PARTS AND EACH PART SHOULD CLEARLY STATE THE ATTACHMENT CONTENT INDICATING THE ENQUIRY NO. AND DUE DATE.

4. CLAUSE NO. 8C (RISK PURCHASE) OF GENERAL TERMS AND CONDITIONS OF ENQUIRY (JHS-2055A REV.03) WILL NOT BE APPLICABLE TO THIS ENQUIRY.

THE QUOTATION MUST BE SEALED AND BE SENT IN DOUBLE ENVELOPE.

THE INNER ENVELOPE SHOULD BEAR ENQUIRY NUMBER & DUE DATE AT THE TOP.

In case the bidder has not submitted PAN No, TIN No. and E-mail ID, the bidder has to submit the same along with the copy of PAN No and TIN No. Else his offer will be liable to be rejected.

If you are not in a position to quote due to any reason, you must send regret letter titled enquiry no. etc, failing which you may not be considered for sending future enquiries.

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ENCLOSERS:





JSC140/M2053

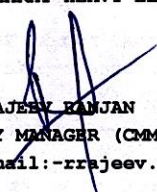
**BHARAT HEAVY ELECTRICALS LTD.**  
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ENQ NO/DT: E06240006 30/05/24  
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FOR AND ON BEHALF OF  
BHARAT HEAVY ELECTRICALS LTD

  
RAJEEV RANJAN  
DY MANAGER (CMM)  
Email:-rrajeev.s@bhel.in

\*\*\*\*\* END OF PURCHASE ENQUIRY\*\*\*\*\*

### NOTE :

- \* THE BIDDER IS INFORMED THAT THE GENERAL TERMS & CONDITIONS OF ENQUIRY (JHS 2055A Rev 03) WHICH ARE UPLOADED AT <https://jhs.bhel.com/apps/sip/index.php> AT (TERMS & CONDITION -> FOR ENQUIRY ) LINK, ARE TO BE READ BY THE BIDDER BEFORE SUBMITTING QUOTE IN THE ENQUIRY. BHEL SHALL CONSTRUCT THE PARTICIPATION BY THE BIDDER IN ENQUIRY AS ACCEPTANCE TO THE GENERAL TERMS AND CONDITIONS OF ENQUIRY.
- \* SUPPLIERS ARE REQUESTED TO INFORM US WITH VALID CERTIFICATE, IF THEY ARE REGISTERED UNDER MSMED ACT'2006. (APPLICABLE FOR INDIAN SUPPLIERS ONLY).
- \* FOR SUPPLIERS SUPPLYING FROM OUTSIDE THE LOCAL AREA OF BHEL JHANSI, ENTRY TAX WILL BE APPLICABLE. SUPPLIERS SHOULD NECESSARILY INDICATE RATE OF ENTRY TAX SEPARATELY WHEREVER APPLICABLE. THEY SHOULD ALSO MENTION THE ENTRY TAX CHARGED SEPARATELY IN THE INVOICE.
- \* FOR SUPPLIERS SUPPLYING FROM OUTSIDE UP, IN CASE THE OFFER IS SILENT ON ENTRY TAX, IT SHALL BE LOADED SUITABLY WITH THE APPLICABLE RATES
- \* IN CASE IF THERE IS ANY DIFFERENCE BETWEEN THE 'SPECIAL REMARKS/ANNEXURES' OF THE ENQUIRY AND THE PREPRINTED TERMS & CONDITIONS (REF JSC140/M2053), THE REQUIREMENT GIVEN IN REMARKS WILL PREVAIL.
- \* Reference Sl. No. 2(B) of General Terms and Conditions regarding option for offer submission through Email addressed to [tenderbox.jhs@bhel.in](mailto:tenderbox.jhs@bhel.in) , please note that the maximum mail size including attachments should not exceed 15 MB , otherwise the offer shall not be delivered due to size limitation and bidder sending mail attachments more than 15 MB will have no claim whatsoever on the subject tender . Also due to any technical snag ; if offer has not reached [tenderbox.jhs@bhel.in](mailto:tenderbox.jhs@bhel.in) , it will be bidder's sole responsibility to ensure offer submission through alternate routes before the due date and time . BHEL will not entertain any such claim for non-receipt of offer on time .



**Annexure - B "Indicative sizes against PI-1216240254 item-001 i.e. CTC upto  
43 Parallel strands and cross section area 30sqmm max".**

Item No	Size (mm x mm)
1	7//2.0 x 8.45 x 1.5 rp
2	7//1.6 x 4.4 x 0.65 rp
3	21//1.5 x 5.40 x 0.55 rp
4	25//2.0 x 4.0 x 1.6rp
5	11//1.65 x 7.40 x 0.7rp
6	11//1.95 x 11.2 x 1.4rp
7	39//2.0 x 7.40 x 0.5rp
8	9//1.7 x 5.7 x 1.5rp
9	19//2.1 x 5.05 x 0.5rp
10	17//1.8 x 5.15 x 1.8rp
11	27//1.3 x 5.45 x 0.55rp
12	27//2.2 x 4.8 x 0.5 rp
13	33// 1.30 x 5.25
14	19// 1.50 x 6.55
15	35 // 2.05 x 6.10
16	23 // 2.05 x 6.10
17	13 // 2.40 x 8.55
18	21 // 1.4 x 7.4
19	27 // 1.45 x 6.80
20	27 // 1.45 x 6.80
21	43 // 1.50 x 3.20

*(Signature)*  
10/6/24  
(अरुण कुमार वर्मा)  
(A. K. VERMA)  
अपर महाप्रबंधक (टी.आर.पी.)  
Addl. General Manager (TRP)  
बी०एच०ई०एल०, झांसी  
B.H.E.L. JHANSI

*(Signature)*  
10/6/24  
(मनोज कुमार)  
(MANOJ KUMAR)  
अभियन्ता (टी०आर०पी०)  
Engineer (TRP)  
बी०एच०ई०एल०, झांसी  
B.H.E.L. JHANSI



**Annexure - C "Indicative sizes against PI-1216240254 item-002 i.e. CTC above  
43 Parallel strands and cross section area 30sqmm max".**

Item No	Size (mm x mm)
1	57//1.9 x 5.2 x 0.45 rp
2	51//1.5 x 4.1 x 0.5rp
3	61//2.0 x 7.30 x 0.4 rp
4	45//1.6 x 6.0 x 0.5rp

*10/6/24*  
(अरुण कुमार वर्मा)  
(A. K. VERMA)  
अपर महाप्रबंधक (टी.आर.पी.)  
Addl. General Manager (TRP)  
बी०एच०ई०एल०, झांसी  
B.H.E.L. JHANSI

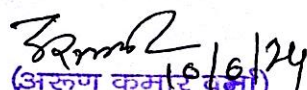
*16/6/24*  
(मनोज कुमार)  
(MANOJ KUMAR)  
अभियन्ता (टी०आर०पी०)  
Engineer (TRP)  
बी०एच०ई०एल०, झांसी  
B.H.E.L. JHANSI

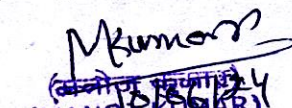


Sl.	Bare	Rad.	Enamel Grade	Max		No.	Length	Weight		Weight	Remark	No of sets	Total Weight
No.	Copper Size	Nomex Insul.		Covered size		Of	per	(KG)		Per			
	(mm)	(mm)		(mm)		Reels	Reel			Reel			
						(Mtr.)	Bare	Covered	(Kg)				(Ton)
ITEM-03 (14// - 27// STRANDS)													
1	21//1.7 X 3.4	0.3	M	21.8	8.32	4	295	1194	1235.5	308.87	FOR 6531 KVA (TR & FL)	190	235
2	21//1.7 X 3.4	0.3	M	21.8	8.32	4	234	947	980	245	FOR 7775 KVA (TR)	94	92
3	25//1.7 X 3.4	0.3	M	25.7	8.32	2	56	135	140	70	FOR 7775 KVA (FL)	94	13
4	25//1.55 X 3.35	0.25	M	23.6	8.12	2	91	202	216	108	FOR 7775 KVA (HL1 & HL2)	94	20
5	19//1.8 X 3.6	0.3	M	20.9	8.72	1	130	134	138	138	FOR 6531/7775 KVA (SOD)	284	39
6	21//1.7 X 5.2	0.3	Gr-II	21.3	11.8	8	127	1608	1646	205.75	FOR 9035 KVA (TR)	0	0
7	19//1.8 X 4.0	0.3	Gr-II	20.4	9.4	1	136	157	162	162	FOR 9035 KVA (SOD)	0	0
8	25//1.7 X 3.4	0.3	Gr-II	25.7	8.32	1	103	124	128	128	FOR 9035 KVA (FL)	0	0
TOTAL IT-03												400	
ITEM-04 (UPTO 13// STRANDS)													
9	13//1.8 X 4.0	0.3	M	14.8	9.52	1	95	75	77.5	77.5	FOR 6531 KVA (BUR)	190	15
10	13//1.8 X 4.0	0.3	M	14.8	9.52	1	95	75	77.5	77.5	FOR 7775 KVA (BUR)	94	7
11	13//1.8 X 4.0	0.3	Gr-II	14.8	9.52	1	90	71	73.5	73.5	FOR 9035 KVA (BUR)	0	0
12	9//1.6 X 6.8	0.15	Gr-I	14.8	9.28	4	97	331	340	85	FOR 2370 KVA (TR)	10	3
13	11//1.6 X 6.2	0.15	Gr-I	13.5	11	2	101	192	196	98	FOR 2370 KVA (AUX)	10	2
14	7 // 2.0 X 9.2	0.15	Gr-I	19.5	9.14	2	107	240	244	122	FOR 1276 /1578 KVA (TR)	50	12
TOTAL IT-04												40	

**NOTE TO SUPPLIERS:**

- Conductor must confirm to CPS-AA28129/ Rev-04 and nominal value of 0.1% Proof stress shall be 135 Mpa with  $\pm 10\%$  tolerance.  
For conductor Sl.no. - 1-13, the insulation shall be enamel covering to CPS-AA28144/ Rev-03 and Aramid (Nomex) paper to CPS-AA22901/ Rev-05 in place of Kraft paper. Winding mould diameter shall be 330 mm for IT-1-11, 209 mm for IT-12 & 539 mm for IT-13.  
For conductor Sl.no.-14, the insulation shall be dual enamel covering to IEC-60317-29 (Polyester or Polyesterimide over coated with polyamide-imide) and Nomex paper to CPS-AA22901/ Rev-03 in place of Kraft paper. Winding mould diameter shall be 199 mm.
- Source Test certificate of Nomex paper to be supplied along with the supply.
- Length of reel is very important and in no case it should be less than the specified.
- Length of conductor and weight must be marked clearly on each drum.
- Individual item quantities within Item-03 & Item-04 are tentative and may vary depending on the actual requirements.

  
 (अरुण कुमार वर्मा)  
 (A. K. VERMA)  
 अपर महाप्रबंधक (टी.आर.पी.)  
 Addl. General Manager (TRP)  
 बी.एच.ई.एल., झांसी  
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 (मनोज कुमार)  
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 Engineer (TRP)  
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 B.H.E.L., JHANSI



**TECHNICAL TERMS & CONDITIONS FOR PURCHASE OF COPPER WINDING WIRE – CONTINUOUSLY TRANSPOSED COPPER WIRE (CTC) ITEM #1 AND ITEM #2 ON FIRM QTY BASIS & FINISHED BASIS.**

1. **Technical Parameters:** CTC Item #1 and Item #2 to be supplied under this enquiry shall strictly conform to the following purchase / technical specifications.

SI	Type of CTC	Specification	Special Requirement
i.	Proof Stress with Epoxy coating / Glued Copper CTC (i.e. CTC with proof stress copper strips with PVA enamel and with bonding layer)	AA28129 Rev. 04, TRE036 Rev. 08	The conductor proof strength of conductor shall be 0.2%  Copper strips / strands/CTC, must comply to IEC 60317-0-2 Edition 4.0, 2020-06 for all parameters including following parameters.  1. Dimensional tolerance and corner radius. 2. Proof strength and resistivity. 3. Breakdown voltage

**Continuously Cast Copper bar / rods** i.e Raw material for manufacturing bare copper strips:

SI	Copper	Specification no.
i.	Electrolytic Tough Pitch Copper Wire Bars / Ingots / continuously cast wire rods / Extruded Sections.	AA12024 Rev. 07 (complying to latest standards referred in AA12024)

**Insulating Paper** for use as conductor covering.

SI.	Type of paper	Specification no.
i.	Kraft insulating paper – High air permeability (for use as covering)	AA21111 Rev. 06. The kraft paper shall completely comply to all parameters as per grade 5B2-2H1 of IEC 554-3-5 for all thickness size of paper.
ii.	Normal Density Thermally upgraded paper (for use as covering)	TRE218 Rev. 01

2. The Copper CTC should be free from instability / twisting / entanglement / tilting when unwound from the drum / payoff.
3. The bidder has to comply BHEL Quality Assurance Plan (QAP) no. QC/TCB/QAP/BO/55 Rev. 01. In addition to BHEL Quality Assurance Plan, BHEL's customer Quality Assurance Plan (QAP) shall also to be adhered by the suppliers. Copy of NTPC and POWERGRID approved QAP attached herewith for reference only.

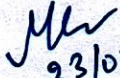
Mh  
23/05/24

Ghansani



## Annexure-II

4. The bidders shall guarantee that curing properties and shelf life of the Epoxy Coated Copper CTC shall not be affected by transportation in GP container in the ambient temperature up to 50° C.
5. **Inspection of material:** BHEL reserves the right to get the material at source inspected through it's own Engineers / Customer / Third party (TP) inspection agency (e.g. Lloyds, Bureau Veritas, SGS etc.). Seller shall submit the test certificates covering test results for each size of CTC as required in our purchase / technical specification. Test certificates for Copper, insulating paper, Enamel etc, and CTC shall be submitted along with each supply, complete in all respect and complying to Technical specification, BHEL Quality Assurance Plan (QAP) and BHEL's customer Quality Assurance Plan.
6. **Guarantee:** Copper CTC under this tender shall be free from any kind of manufacturing defect and shall be under guarantee for a period of 12 months from the date of dispatch or until testing of transformers using CTC supplied under this enquiry, whichever occurs earlier.
7. Drum width i.e. dimension 'D' of Annexure-I of spec AA28129 shall be 440 mm (max.). The supplier can select drum designation 8 or 9 from Annexure-I of spec 28129 depending upon the 'length per drum' requirement of CTC to be supplied.
8. Bidders shall mark on each drum/package of CTC the following data:  
BHEL Specification no. , BHEL order no. Gross and net weight, Weight of empty, bobbin/drum, Weight of other packing material, Dimension of drum, date of manufacture etc.

  
23/05/24  
Milind Kulkarni  
AGM, TRE & FES

  
G S Lalwani  
AGM (TRE)



114882/2024/HEP-CMM34007


Ref: TRE/FRT/CPR REV-02

**COPPER DATA FOR CONTINUOUSLY TRANSPOSED NOMEX COVERED COPPER  
CONDUCTOR (CTC) FOR TRACTION TRANSFORMERS (LOCO/EMU/MEMU/TRAIN SETS)**

Sl. No.	Bare Copper Size (mm)	Rad. Nomex Insul. (mm)	Enamel Grade	Max Covered size (mm)		No. Of Reels	Length per Reel (Mtr.)	Weight (KG)		Weight Per Reel (Kg)	Remark
								Bare	Covered		
1.	21//1.7 X 3.4	0.30	M	21.81	8.32	04	295	1194	1235.5	308.87	FOR 6531 KVA (TR & FL)
2.	13//1.8 X 4.0	0.30	M	14.83	9.52	01	95	75	77.5	77.5	FOR 6531 KVA (BUR)
3.	21//1.7 X 3.4	0.30	M	21.81	8.32	04	234	947	980	245	FOR 7775 KVA (TR)
4.	<del>25//1.7 X 3.4</del>	<del>0.30</del>	<del>M</del>	<del>25.67</del>	<del>8.32</del>	<del>02</del>	<del>56</del>	<del>135</del>	<del>140</del>	<del>70</del>	<del>FOR 7775 KVA (FL)</del>
5.	13//1.8 X 4.0	0.30	M	14.83	9.52	01	95	75	77.5	77.5	FOR 7775 KVA (BUR)
6.	25//1.55 X 3.35	0.25	M	23.62	8.12	02	91	202	216	108	FOR 7775 KVA (HL1 & HL2)
7.	19//1.8 X 3.6	0.30	M	20.89	8.72	01	130	134	138	138	FOR 6531/7775 KVA (SOD)
8.	21//1.7 X 5.2	0.3	Gr-II	21.26	11.82	08	127	1608	1646	205.75	FOR 9035 KVA (TR)
9.	19//1.8 X 4.0	0.3	Gr-II	20.4	9.4	01	136	157	162	162	FOR 9035 KVA (SOD)
10.	13//1.8 X 4.0	0.3	Gr-II	14.83	9.52	01	90	71	73.5	73.5	FOR 9035 KVA (BUR)
11.	25//1.7 X 3.4	0.3	Gr-II	25.67	8.32	01	103	124	128	128	FOR 9035 KVA (FL)
12.	9//1.6 X 6.8	0.15	Gr-I	14.76	9.28	04	97	331	340	85	FOR 2370 KVA (TR)
13.	11//1.6 X 6.2	0.15	Gr-I	13.52	11.02	02	101	192	196	98	FOR 2370 KVA (AUX)
14.	7 // 2.0 X 9.2	0.15	<del>Gr-I</del>	<del>19.46</del>	<del>9.14</del>	<del>02</del>	<del>107</del>	<del>240</del>	<del>244</del>	<del>122</del>	<del>FOR 1276/1578 KVA (TR)</del>

**NOTE TO SUPPLIERS:**

- Conductor must confirm to CPS-AA28129/ Rev-04 and nominal value of 0.1% Proof stress shall be 135 Mpa with  $\pm 10\%$  tolerance.
- For conductor Sl.no. - 1-13, the insulation shall be enamel covering to CPS-AA28144/ Rev-03 and Aramid (Nomex) paper to CPS-AA22901/ Rev-05 in place of Kraft paper. Winding mould diameter shall be 330 mm for IT-1-11, 209 mm for IT-12 & 539 mm for IT-13.
- For conductor Sl.no.-14, the insulation shall be dual enamel covering to IEC-60317-29 (Polyester or Polyesterimide over coated with polyamide-imide) and Nomex paper to CPS-AA22901/ Rev-03 in place of Kraft paper. Winding mould diameter shall be 199 mm.
- Source Test certificate of Nomex paper to be supplied along with the supply.
- Length of reel is very important and in no case it should be less than the specified.
- Length of conductor and weight must be marked clearly on each drum.

  
 11/1/24  
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