

5 x 800 MW YADADRI TPS

ANNEXURE- I

Un-Price schedule									
Package : SCREENED CONTROL CABLES									
Project:5x800 MW YADADRI TPS									
Tender Enquiry No.									
S.No.	Item code	Item Description	UOM	ORDERED QUANTITY	LOT-1 QUANTITY	Quoted/Not Quoted	FREIGHT @ ____% OF TOTAL EX-WORKS	Applicable GST rate @ ____% (on "Total EX-WORKS + FREIGHT")	GST TYPE(IGST/CGST+SGST/UTGST)
Overall Screened Cable (Type-G)									
1	507-0310025-00-A	1.1kV TYPE G(O) 2P - 0.5 ARMOURED	MTR	33,000	33000				
2	507-0310029-00-A	1.1kV TYPE G(O) 4P - 0.5 ARMOURED	MTR	67,000	47000				
3	507-0310033-00-A	1.1kV TYPE G(O) 8P - 0.5 ARMOURED	MTR	1,19,000	83000				
4	507-0310017-00-A	1.1kV TYPE G(O) 12P - 0.5 ARMOURED	MTR	14,000	10000				
Individual & Overall Screened Cable (Type-F)									
5	507-0310009-00-A	1.1kV TYPE F(IO) 4P - 0.5 ARMOURED	MTR	47,000	47000				
6	507-0310013-00-A	1.1kV TYPE F(IO) 8P - 0.5 ARMOURED	MTR	69,000	48000				
7	507-0310001-00-A	1.1kV TYPE F(IO) 12P - 0.5 ARMOURED	MTR	22,000	16000				
8	507-0310005-00-A	1.1kV TYPE F(IO) 20P - 0.5 ARMOURED	MTR	17,000	12000				

BOQ CUM Price Schedule (Annexure A)															
Package: SCREENED CONTROL CABLES															
Project: 5x800 MW YADADRI TPS															
Tender Enquiry No.															
Bidders Name															
For prices, Bidders to enter values for columns highlighted in red															
S.No.	Item code	Item Description	UOM	ORDERED QUANTITY (Q)	LOT-1 QUANTITY	UNIT PRICE (EX-WORKS) (INR) (A)	TOTAL PRICE (EX-WORKS) (INR) (B = A x Q)	FREIGHT @ ____% OF TOTAL EX-WORKS (C)	FREIGHT CHARGES EXCLUDING GST (INR) (D = B x C%)	Total EX-WORKS + FREIGHT (INR) (E = B + D)	Applicable GST rate @ ____% (on "Total EX- WORKS + FREIGHT") (F)	GST Charges (on "Total EX- WORKS + FREIGHT") (INR) (G = E x F%)	GST TYPE(IGST/CGST+SGST/UTG ST) (H)	TOTAL F.O.R. SITE PRICE (INR) (I = E + G)	
Overall Screened Cable (Type-G)															
1	507-0310025-00-A	1.1kV TYPE G(O) 2P - 0.5 ARMoured	MTR	33,000	33000		0		0	0		0		0	
2	507-0310029-00-A	1.1kV TYPE G(O) 4P - 0.5 ARMoured	MTR	67,000	47000		0		0	0		0		0	
3	507-0310033-00-A	1.1kV TYPE G(O) 8P - 0.5 ARMoured	MTR	1,19,000	83000		0		0	0		0		0	
4	507-0310017-00-A	1.1kV TYPE G(O) 12P - 0.5 ARMoured	MTR	14,000	10000		0		0	0		0		0	
Individual & Overall Screened Cable (Type-F)															
5	507-0310009-00-A	1.1kV TYPE F(IO) 4P - 0.5 ARMoured	MTR	47,000	47000		0		0	0		0		0	
6	507-0310013-00-A	1.1kV TYPE F(IO) 8P - 0.5 ARMoured	MTR	69,000	48000		0		0	0		0		0	
7	507-0310001-00-A	1.1kV TYPE F(IO) 12P - 0.5 ARMoured	MTR	22,000	16000		0		0	0		0		0	
8	507-0310005-00-A	1.1kV TYPE F(IO) 20P - 0.5 ARMoured	MTR	17,000	12000		0		0	0		0		0	
TOTAL								0		0		0		0	
NOTES:-															
1.Total Quantity indicated above shall be known as Order Quantities. The total quantity variation shall be as per NIT.															
2. Lot-I quantities indicated above will be released along with PO. However, manufacturing of the cables shall be taken up by the successful bidder only after approval of technical and quality documentation. Subsequent lots shall be cleared for manufacturing based on site requirements															
3. Standard drum length shall be as per Datasheet provided in Technical Specification. Tolerance on Individual drum length shall be ±5%. For each Individual cable size, one short length of not less than 200m may be accepted only in the final drum length to complete the supply. The overall tolerance limits stipulated above shall continue to apply (In case short lengths are accepted).															
4. Overall tolerance on total dispatched quantity of each size shall be (-) 2% and (+) 0% except where the total ordered quantity is one single drum length, in which case it shall be -5% to 0%. Cables consumed for testing and inspection shall be to bidder's account.															
5. Bidder shall indicate unit price of cables inclusive of type test charges. No separate charges shall be payable for type tests.															

Annexure II : DEVIATION SHEET (COST OF WITHDRAWAL)									
PROJECT:-			5x800 MW YADADRI TPS						
PACKAGE :-			SCREENED CONTROL CABLES						
TENDER ENQUIRY :-									
NAME OF THE BIDDER									
Sl. No.	Volume/Section	Page No.	Clause No.	Technical Specification/Tender Document No	Complete Description of Deviation	Cost of withdrawal of deviation	Reference of price Schedule of which Cost of Withdrawal of Deviation is applicable	Nature of cost of withdrawal of deviation (Positive/Negative)	Reasons for quoting deviation
1	TECHNICAL DEVIATION								
1.01									
1.02									
1.03									
1.04									
1.05									
1.06									
1.07									
1.08									
2	COMMERCIAL DEVIATION								
2.01									
2.02									
2.03									
2.04									
2.05									
2.06									
2.07									
2.08									

All Notes shall be as per GCC Rev. 07

	PRE-QUALIFICATION REQUIRMENTS FOR SCREENED CONTROL CABLE YADADRI TPS 5X800MW	PE-PQ-417-507-E016
		REVISION NO. 00 DATE 06/10/2026
		SHEET NO. 1 OF 1

TECHNICAL PQR

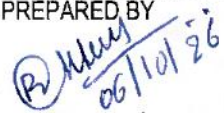
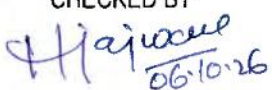
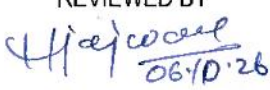
ITEMS : Screened Control Cable

SCOPE : Supply : YES; Erection & Commissioning : NO;

1.0	Vendor should be a manufacturer of screened/ instrumentation control cables.
2.0	Availability of test reports of tests on FRLS screened control cables to establish in-house Capability to carry out all routine, type acceptance as per relevant IS/ International Standards (except UV radiation & hydrolytic stability Test which can be conducted at Govt. Lab/ Govt. approved independent lab).
3.0	Capacity of manufacturing 200 km of screened control cables per month.
4.0	Manufactured and supplied at least one (1) km of FRLS cables.
5.0	Manufactured and supplied screened control cables up to 20 pairs.
6.0	Manufactured and supplied at least 800 Km of Screened Control cables in one or more orders and at least 200 Km in one single order.
7.0	Minimum two (2) nos. purchase orders for screened control cables shall be submitted which should not be more than five (5) years old from the date of techno-commercial bid opening for establishing continuity in business.

NOTES:

1. Consideration of offer shall be subject to customer's approval of bidders, if applicable.
2. Bidder to submit all supporting documents in English. If documents submitted by bidder are in language other than English, a self- attested English translated document should also be submitted.
3. Notwithstanding anything stated above, BHEL reserves the right to assess the capabilities and capacity of the bidder to perform the contract, should the circumstances warrant such assessment in the overall interest of BHEL.
4. After satisfactory fulfillment of all the above criteria/requirement, offer shall be considered for further evaluation as per NIT & all the other terms of the tender.

PREPARED BY  BIPIN KUMAR RAY SR. MANAGER	CHECKED BY  N.N. JAJWARE DGM	REVIEWED BY  N.N. JAJWARE 35 DGM.	APPROVED BY  SANDEEP LODH A.G.M.(DH-ELEC)
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VENDOR CREDENTIALS SUMMARY SHEET
(TO BE FILLED BY BIDDER AND SUBMITTED WITH BID)

i.	Item/Scope	SCREENED CONTROL CABLE		
ii.	Address of the registered office	Details of Contact Person (Name, Designation, Mobile, Email)		
iii.	Name and Address of the proposed vendor's works where item is being manufactured	Details of Contact Person: (Name, Designation, Mobile, Email)		
iv.	Annual Production Capacity for proposed item			
v.	Annual production for last 3 years for proposed item			
vi.	Details of proposed works			
1.	Year of establishment			
2.	Factory Registration Certificate			
3.	Overall organization Chart with Manpower Details (Design/Manufacturing/Quality etc.)			
4.	After sales service set up in India, in case of foreign sub-vendor (Location, Contact Person, Contact details etc.)	Applicable / Not applicable		
5.	Sources of Raw Material/Major Bought Out Item			
6.	Quality Control exercised during receipt of raw material/BOI, in-process, Final Testing, packing			
7.	Manufacturing facilities			



VENDOR CREDENTIALS SUMMARY SHEET

(TO BE FILLED BY BIDDER AND SUBMITTED WITH BID)

	(List of machines, special process facilities, material handling etc.)				
8.	Testing facilities (List of testing equipment)				
9.	Supply reference list including recent supplies (Preferably of reputed, well known clients to whom the vendor has supplied the material and are of quantum of item/scope at point (i) above)	Details of earlier supplied and received satisfactory Performance Certificates from other State /central PSU in industrial projects			
Project/ package	Customer Name	Supplied Item (Type/Rating/Model /Capacity/Size etc)	PO ref no/date	Supplied Quantity	Date of Supply
10.	Product satisfactory performance feedback letter/certificates/End User Feedback				
11.	Average annual turnover for last three years with documentary proof.				



VENDOR CREDENTIALS SUMMARY SHEET
(TO BE FILLED BY BIDDER AND SUBMITTED WITH BID)

12.	Summary of Type Test Report (Type Test Details, Report No, Agency, Date of testing) for the proposed product (similar or higher rating)Note:- Reports need not to be submitted	Applicable / Not applicable
13.	Copy of ISO 9001 certificate(if available)	
14.	Product technical catalogues for proposed item (if available)	

Name		Desig		Sign:		Date	
						:	

Company's Seal/Stamp:-

CIN No. U99999MH1970GAPO14629



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Cir. No. 05/DIV/CAB/05

31 January 2023

All Members of Cable Division & All SEBs, Utilities & Listed Purchasing organisations

Sub: Revision in Price Variation Formulae for Instrumentation cable

In current applicable PV formulae of IEEMA for Instrumentation Cable effective from July 2014 there is no variation available on polymers which is having significant portion of cost of the cable.

IEEMA Cable technical committee discussed the subject and felt that there is need of revision in the PV clause by inclusion of Polymer factors and pairs up to 61. IEEMA collected the weight factors for Copper, Steel and Polymer for pair and triad instrumentation as per BSEN standard 502887 and prepared draft formulae and circulated to all stakeholders vide Cir. No. 32/DIV/CAB/05 dated 10th November 2022.

Since there are no adverse comments received; we are making these operational from 1st January 2023.

Although, these PV clauses are made effective from 1st January 2023, practically they can be incorporated in all the current new tenders/contracts starting from 1st February 2023.

We request and recommend all the users & stakeholders including Utilities, PSUs etc. to incorporate these new PV formulae in all the new tenders/contracts henceforth.

For pending contracts, for the date of delivery on or after 1st February 2023, to arrive at the final price variation, we recommend using the following two stage method, which is a standard institutionalized methodology adopted by IEEMA for change over in all IEEMA PV clauses.

1. Calculate price variation 'P' from applicable prices/indices as per your base date / date of tendering up to January 2023 i.e. considering all prices/indices published in PV circular of January 2023; using applicable IEEMA PV clause of Instrumentation cable which is effective from July 2014.
2. Treat the above calculated 'P' as 'P₀' and calculate final price variation considering all prices / indices published in PV circular of January 2023 applicable for revised PV clause of Instrumentation cables effective from 1st January 2023 as base prices/indices up to the applicable prices/indices as per the date of delivery; applicable as per revised relevant PV clause of Instrumentation Cables effective from 1st January 2023.

Director

Encl.: as above



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IEEMA (PVC)/Instrumentation Cable/2022**Effective from: 01st January 2023****Material Price Variation Clause for Instrumentation Cables**

The Price quoted/confirmed is based on the input cost of raw materials/components as on the date of quotation, and the same is deemed to be related to the prices of raw materials as specified in the price variation clause given below. In case of any variation in these prices, the price payable shall be subject to adjustment up or down in accordance with the formulae provided in this document.

Terms used in price variation formulae:

P Price payable as adjusted in accordance with above appropriate formula **(in Rs/Km)**
 P₀ Price quoted/confirmed **(in Rs/Km)**

COPPER

CuF Variation factor for copper

Cu Price of CC copper rods. This price is as applicable for the month, **ONE** month prior to the date of delivery.

Cu₀ Price of CC copper rods. This price is as applicable for the month, **ONE** month prior to the date of tendering.

STEEL

FeF Variation factor for steel

Fe Price of Steel Strips/steel wire. This price is as applicable for the month, **ONE** month prior to the date of delivery.

Fe₀ Price of Steel Strips/steel wire. This price is as applicable for the month, **ONE** month prior to the date of tendering.

POLYMER

POCF Variation factor for polymer

POC Price of PVC/polymer. This price is as applicable for the month, **ONE** month prior to the date of delivery.

POC₀ Price of PVC/polymer. This price is as applicable for the month, **ONE** month prior to the date of tendering.

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IEEMA (PVC)/Instrumentation Cable/2022

Effective from: 01st January 2023

The above prices and indices are as published by IEEMA vide Circular reference IEEMA(PVC)/CABLE/--/-- for the month i.e. **ONE** month prior to the date of tendering.

The date of delivery is the date on which the instrumentation cable is notified as being ready for inspection/dispatch (in the absence of such notification, the date of manufacturer's dispatch note is to be considered as the date of delivery) or the contracted delivery date (including any agreed extension thereto), whichever is earlier.

Notes:

- (a) All prices are exclusive of GST amount and exclusive of any other central, state or local taxes etc.
- (a) All Prices are applicable for the month.
- (b) The details of prices are as under:
 1. Price of CC copper rods (in Rs/MT) is ex-works price as quoted by the primary producer.
 2. Price of galvanized steel strip / steel wire (in Rs/MT) is ex-works price as quoted by the manufacturer for Round steel Wire and Flat steel strip (the relevant price of steel strip or steel wire is to be selected depending upon the type of armouring of the cable).
 3. Price of Polymer Compound (in Rs/MT) is the ex-work price, as quoted by the manufacturer/s
 4. Price of PVC (in Rs/MT) is the ex-work price, as quoted by the manufacturer/s

Price variation formula for Instrumentation Cables

$$P = P_0 + CuF (Cu - Cu_0) + FeF (Fe - Fe_0) + POCF (POC - POC_0)$$

Tables References for CuF, FeF and POCF:

For Pair Instrumentation - Over all Screen Cables

Cu POS Copper factor
 Fe POS Steel factor
 POC POS Polymer factor

For Pair Instrumentation - Individual and Over all Screen Cables

Cu PIS Copper factor
 Fe PIS Steel factor
 POC PIS Polymer factor

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For Triad Instrumentation - Over all Screen Cables

Cu TOS Copper factor
Fe TOS Steel factor
POC TOS Polymer factor

For Triad Instrumentation - Individual and Over all Screen Cables

Cu TIS Copper factor
Fe TIS Steel factor
POC TIS Polymer factor

Authorised Signatory

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Copper Factors for Instrumentation Cables - Cu POS					
Pair Instrumentation Over all Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
1	0.0142	0.0191	0.0237	0.0330	0.0513
2	0.0236	0.0336	0.0430	0.0615	0.0986
3	0.0330	0.0481	0.0619	0.0897	0.1452
4	0.0424	0.0626	0.0810	0.1182	0.1921
5	0.0518	0.0769	0.0999	0.1464	0.2390
6	0.0614	0.0914	0.1191	0.1748	0.2859
7	0.0708	0.1062	0.1383	0.2035	0.3335
8	0.0805	0.1207	0.1576	0.2320	0.3806
9	0.0899	0.1353	0.1765	0.2605	0.4275
10	0.0992	0.1498	0.1957	0.2890	0.4744
11	0.1089	0.1643	0.2149	0.3174	0.5215
12	0.1183	0.1786	0.2339	0.3456	0.5684
13	0.1277	0.1931	0.2532	0.3741	0.6153
14	0.1371	0.2076	0.2721	0.4026	0.6624
15	0.1462	0.2216	0.2906	0.4300	0.7075
16	0.1559	0.2361	0.3095	0.4583	0.7544
17	0.1653	0.2507	0.3288	0.4867	0.8013
18	0.1746	0.2652	0.3477	0.5152	0.8482
19	0.1845	0.2802	0.3677	0.5446	0.8973
20	0.1939	0.2947	0.3869	0.5731	0.9442
21	0.2033	0.3093	0.4059	0.6016	0.9911
22	0.2130	0.3238	0.4251	0.6300	1.0382
23	0.2224	0.3383	0.4440	0.6585	1.0851
24	0.2318	0.3526	0.4633	0.6867	1.1322
25	0.2412	0.3671	0.4822	0.7152	1.1791
26	0.2508	0.3816	0.5015	0.7437	1.2260
27	0.2597	0.3954	0.5194	0.7704	1.2699
28	0.2691	0.4097	0.5384	0.7986	1.3168
29	0.2785	0.4242	0.5573	0.8271	1.3636
30	0.2879	0.4387	0.5766	0.8553	1.4105

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Copper Factors for Instrumentation Cables - Cu POS					
Pair Instrumentation Over all Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
31	0.2980	0.4542	0.5970	0.8858	1.4609
32	0.3074	0.4687	0.6160	0.9142	1.5080
33	0.3171	0.4832	0.6352	0.9427	1.5549
34	0.3265	0.4978	0.6542	0.9711	1.6018
35	0.3358	0.5120	0.6734	0.9993	1.6489
36	0.3453	0.5266	0.6924	1.0278	1.6958
37	0.3549	0.5411	0.7116	1.0563	1.7427
38	0.3643	0.5556	0.7305	1.0847	1.7898
39	0.3729	0.5689	0.7480	1.1105	1.8325
40	0.3823	0.5834	0.7670	1.1389	1.8791
41	0.3917	0.5977	0.7862	1.1671	1.9260
42	0.4011	0.6122	0.8052	1.1956	1.9729
43	0.4115	0.6282	0.8262	1.2268	2.0247
44	0.4211	0.6427	0.8454	1.2553	2.0716
45	0.4305	0.6572	0.8643	1.2837	2.1185
46	0.4399	0.6718	0.8835	1.3119	2.1656
47	0.4493	0.6861	0.9025	1.3404	2.2125
48	0.4590	0.7006	0.9217	1.3689	2.2594
49	0.4684	0.7151	0.9407	1.3973	2.3065
50	0.4778	0.7296	0.9599	1.4258	2.3534
51	0.4874	0.7441	0.9791	1.4543	2.4005
52	0.4968	0.7587	0.9981	1.4825	2.4474
53	0.5062	0.7732	1.0173	1.5110	2.4943
54	0.5156	0.7877	1.0363	1.5394	2.5414
55	0.5240	0.8003	1.0530	1.5642	2.5821
56	0.5334	0.8147	1.0720	1.5926	2.6289
57	0.5428	0.8293	1.0912	1.6208	2.6758
58	0.5522	0.8438	1.1102	1.6493	2.7227
59	0.5630	0.8601	1.1319	1.6815	2.7763
60	0.5724	0.8746	1.1511	1.7100	2.8232
61	0.5819	0.8891	1.1700	1.7384	2.8701

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Steel Factors for Instrumentation Cables - Fe POS					
Pair Instrumentation Over all Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
1	0.1233	0.1319	0.1375	0.1487	0.1739
2	0.1832	0.1944	0.2031	0.2148	0.2477
3	0.1866	0.1993	0.2102	0.2299	0.2733
4	0.2036	0.2188	0.2314	0.2538	0.3347
5	0.2215	0.2411	0.2538	0.2791	0.4395
6	0.2373	0.2583	0.2722	0.3306	0.4795
7	0.2373	0.2583	0.2722	0.3306	0.4795
8	0.2681	0.3210	0.3390	0.4482	0.5427
9	0.3184	0.3434	0.4388	0.4881	0.5884
10	0.3336	0.4333	0.4594	0.5114	0.6118
11	0.3376	0.4398	0.4659	0.5179	0.6183
12	0.3490	0.4511	0.4797	0.5291	0.6894
13	0.4239	0.4678	0.4993	0.5542	0.7153
14	0.4362	0.4678	0.4993	0.5542	1.3096
15	0.4503	0.4968	0.5283	0.5803	1.4666
16	0.4568	0.4968	0.5348	0.5870	1.5058
17	0.4790	0.5164	0.5570	0.6176	0.9134
18	0.4790	0.5229	0.5570	0.6176	0.9134
19	0.4855	0.5229	0.5570	0.6176	0.9134
20	0.5181	0.5609	0.6019	0.7147	0.9760
21	0.5181	0.5609	0.6019	0.7147	0.9855
22	0.5432	0.5889	0.6813	0.8479	1.0403
23	0.5432	0.5889	0.6813	0.8479	1.0403
24	0.5657	0.6608	0.7093	0.8842	1.1638
25	0.5657	0.6608	0.7093	0.8842	1.1638
26	0.5722	0.6740	0.7223	0.9037	1.1833
27	0.5806	0.6871	0.7354	0.9268	1.1996
28	0.5976	0.7075	0.7584	0.9542	1.2487
29	0.5976	0.7075	0.7584	0.9542	1.2487
30	0.5976	0.7075	0.7584	0.9542	1.2487

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IEEMA (PVC)/Instrumentation Cable/2022**Effective from: 01st January 2023**

Steel Factors for Instrumentation Cables - Fe POS					
Pair Instrumentation Over all Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
31	0.6816	0.7409	0.8977	0.9996	1.4648
32	0.6816	0.7409	0.8977	0.9996	1.4648
33	0.6816	0.7409	0.8977	0.9996	1.4648
34	0.7020	0.8710	0.9298	1.0270	1.5216
35	0.7020	0.8710	0.9298	1.0270	1.5216
36	0.7085	0.8775	0.9363	1.0335	1.5281
37	0.7085	0.8775	0.9363	1.0335	1.5281
38	0.7365	0.9006	0.9637	1.1527	1.5857
39	0.7430	0.9071	0.9702	1.1592	1.5924
40	0.7430	0.9071	0.9702	1.1592	1.5924
41	0.8667	0.9482	1.0023	1.2101	1.7887
42	0.8667	0.9547	1.0091	1.2101	1.7887
43	0.8732	0.9547	1.0091	1.2101	1.7952
44	0.9006	0.9822	1.0454	1.2540	1.8537
45	0.9006	0.9822	1.0519	1.2540	1.8537
46	0.9006	0.9887	1.0519	1.2540	1.8602
47	0.9071	0.9887	1.0519	1.2605	1.8602
48	0.9166	1.0028	1.1527	1.3661	1.8922
49	0.9392	1.0208	1.1756	1.4664	1.9433
50	0.9392	1.0275	1.1756	1.4729	1.9433
51	0.9457	1.0322	1.1830	1.4795	2.0691
52	0.9457	1.0322	1.1895	1.4795	2.0691
53	0.9457	1.0322	1.1895	1.4795	2.0756
54	0.9594	1.1369	1.2106	1.5222	2.2459
55	0.9731	1.1485	1.2222	1.5222	2.2794
56	0.9796	1.1485	1.2287	1.5222	2.2859
57	0.9796	1.1485	1.2287	1.5290	2.2859
58	0.9981	1.1877	1.2614	1.5791	2.3308
59	0.9981	1.1877	1.2614	1.5791	2.3376
60	1.0048	1.1877	1.2679	1.5856	2.3376
61	1.0048	1.1877	1.2679	1.5856	2.3376

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IEEMA (PVC)/Instrumentation Cable/2022

Effective from: 01st January 2023

Polymer Factors for Instrumentation Cables - POC POS					
Pair Instrumentation Over all Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
1	0.1073	0.1190	0.1233	0.1364	0.1643
2	0.1769	0.1953	0.2106	0.2312	0.2889
3	0.1793	0.1984	0.2032	0.2378	0.2973
4	0.2042	0.2255	0.2443	0.2752	0.3505
5	0.2341	0.2627	0.2861	0.3158	0.4240
6	0.2653	0.2941	0.3174	0.3753	0.4998
7	0.2595	0.2865	0.3079	0.3627	0.4801
8	0.3001	0.3380	0.3611	0.4188	0.5607
9	0.3312	0.3665	0.4117	0.4739	0.6256
10	0.3663	0.4074	0.4531	0.5212	0.6909
11	0.3686	0.4097	0.4551	0.5227	0.6923
12	0.3781	0.4336	0.4657	0.5307	0.7345
13	0.4030	0.4598	0.4929	0.5811	0.7763
14	0.4127	0.4717	0.5069	0.5979	0.8025
15	0.4571	0.5059	0.5601	0.6380	0.8792
16	0.4701	0.5207	0.5762	0.6575	0.9070
17	0.4964	0.5643	0.6033	0.7089	0.9729
18	0.5095	0.5792	0.6203	0.7298	1.0039
19	0.5090	0.5777	0.6180	0.7257	0.9972
20	0.5469	0.6235	0.6856	0.7822	1.0884
21	0.5554	0.6330	0.6959	0.7939	1.1049
22	0.5887	0.6679	0.7421	0.8704	1.2232
23	0.5966	0.6772	0.7525	0.8823	1.2413
24	0.6391	0.7092	0.7728	0.9293	1.3121
25	0.6473	0.7184	0.7831	0.9412	1.3301
26	0.6591	0.7320	0.7981	0.9582	1.3528
27	0.6624	0.7597	0.8297	0.9897	1.3569
28	0.6889	0.7840	0.8602	1.0276	1.4266
29	0.6986	0.7956	0.8730	1.0428	1.4493
30	0.7068	0.8049	0.8831	1.0548	1.4676

IEEMA(PVC)/Instrumentation Cable/2022/ 8 of 27

IEEMA (PVC)/Instrumentation Cable/2022**Effective from: 01st January 2023**

Polymer Factors for Instrumentation Cables - POC POS					
Pair Instrumentation Over all Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
31	0.7560	0.8780	0.9578	1.1024	1.5753
32	0.7697	0.8938	0.9758	1.1240	1.6084
33	0.7779	0.9032	0.9861	1.1361	1.6264
34	0.7987	0.9317	1.0110	1.1942	1.7045
35	0.8091	0.9436	1.0243	1.2102	1.7280
36	0.8262	0.9638	1.0472	1.2375	1.7693
37	0.8229	0.9590	1.0410	1.2289	1.7551
38	0.8727	0.9860	1.1023	1.2989	1.8217
39	0.8829	0.9978	1.1157	1.3145	1.8450
40	0.8940	1.0105	1.1294	1.3312	1.8695
41	0.9316	1.0705	1.1559	1.3625	1.9523
42	0.9508	1.0932	1.1812	1.3931	1.9981
43	0.9612	1.1051	1.1946	1.4088	2.0213
44	0.9826	1.1299	1.2540	1.4754	2.0903
45	0.9928	1.1417	1.2670	1.4911	2.1134
46	0.9940	1.1426	1.2678	1.4908	2.1130
47	1.0045	1.1545	1.2808	1.5065	2.1360
48	1.0393	1.1897	1.3007	1.5488	2.1913
49	1.0763	1.2267	1.3312	1.5929	2.2877
50	1.0865	1.2388	1.3443	1.6085	2.3107
51	1.0948	1.2487	1.3897	1.6248	2.3319
52	1.1058	1.2610	1.4037	1.6412	2.3565
53	1.1160	1.2729	1.4167	1.6566	2.3795
54	1.1474	1.3198	1.4514	1.6900	2.4387
55	1.1556	1.3256	1.4625	1.7421	2.4952
56	1.1713	1.3441	1.4836	1.7674	2.5333
57	1.1815	1.3560	1.4967	1.7829	2.5563
58	1.2046	1.4175	1.5269	1.8573	2.6381
59	1.2150	1.4294	1.5400	1.8727	2.6611
60	1.2290	1.4458	1.5585	1.8950	2.6946
61	1.2281	1.4440	1.5557	1.8907	2.6872

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IEEMA (PVC)/Instrumentation Cable/2022**Effective from: 01st January 2023**

Copper Factors for Instrumentation Cables - Cu PIS					
Pair Instrumentation Individual and Over all Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
1	0.0170	0.0216	0.0267	0.0363	0.0545
2	0.0330	0.0430	0.0524	0.0709	0.1080
3	0.0472	0.0621	0.0759	0.1039	0.1594
4	0.0605	0.0814	0.0997	0.1369	0.2109
5	0.0745	0.1005	0.1235	0.1699	0.2625
6	0.0886	0.1196	0.1473	0.2030	0.3140
7	0.1027	0.1390	0.1713	0.2365	0.3665
8	0.1167	0.1583	0.1951	0.2696	0.4181
9	0.1308	0.1773	0.2188	0.3026	0.4696
10	0.1446	0.1967	0.2426	0.3359	0.5213
11	0.1586	0.2158	0.2665	0.3689	0.5730
12	0.1727	0.2349	0.2902	0.4019	0.6247
13	0.1867	0.2542	0.3140	0.4352	0.6764
14	0.2005	0.2733	0.3378	0.4683	0.7281
15	0.2143	0.2921	0.3610	0.5002	0.7780
16	0.2284	0.3112	0.3846	0.5333	0.8295
17	0.2422	0.3303	0.4084	0.5664	0.8812
18	0.2562	0.3496	0.4322	0.5996	0.9326
19	0.2705	0.3692	0.4567	0.6339	0.9863
20	0.2846	0.3886	0.4808	0.6670	1.0381
21	0.2986	0.4076	0.5045	0.7000	1.0897
22	0.3127	0.4270	0.5283	0.7332	1.1414
23	0.3265	0.4461	0.5521	0.7663	1.1931
24	0.3405	0.4652	0.5758	0.7993	1.2448
25	0.3546	0.4845	0.5996	0.8326	1.2963
26	0.3686	0.5036	0.6235	0.8656	1.3480
27	0.3819	0.5219	0.6460	0.8969	1.3966
28	0.3960	0.5410	0.6697	0.9299	1.4481
29	0.4098	0.5603	0.6935	0.9630	1.4998
30	0.4238	0.5794	0.7173	0.9960	1.5513

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IEEMA (PVC)/Instrumentation Cable/2022**Effective from: 01st January 2023**

Copper Factors for Instrumentation Cables - Cu PIS					
Pair Instrumentation Individual and Over all Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
31	0.4387	0.5995	0.7424	1.0313	1.6064
32	0.4525	0.6189	0.7661	1.0644	1.6582
33	0.4665	0.6380	0.7899	1.0974	1.7096
34	0.4805	0.6573	0.8137	1.1306	1.7613
35	0.4946	0.6764	0.8375	1.1637	1.8130
36	0.5084	0.6955	0.8613	1.1967	1.8647
37	0.5225	0.7148	0.8850	1.2300	1.9164
38	0.5365	0.7339	0.9088	1.2630	1.9681
39	0.5496	0.7518	0.9309	1.2936	2.0153
40	0.5636	0.7710	0.9546	1.3266	2.0667
41	0.5777	0.7901	0.9784	1.3596	2.1184
42	0.5915	0.8093	1.0022	1.3927	2.1699
43	0.6065	0.8298	1.0280	1.4284	2.2263
44	0.6206	0.8492	1.0518	1.4617	2.2780
45	0.6344	0.8683	1.0756	1.4947	2.3298
46	0.6484	0.8876	1.0993	1.5277	2.3814
47	0.6625	0.9067	1.1231	1.5610	2.4331
48	0.6766	0.9258	1.1469	1.5941	2.4846
49	0.6905	0.9451	1.1707	1.6271	2.5362
50	0.7044	0.9642	1.1945	1.6604	2.5880
51	0.7185	0.9836	1.2183	1.6935	2.6397
52	0.7325	1.0026	1.2420	1.7265	2.6914
53	0.7465	1.0217	1.2658	1.7597	2.7430
54	0.7603	1.0410	1.2896	1.7928	2.7948
55	0.7731	1.0584	1.3109	1.8223	2.8402
56	0.7872	1.0775	1.3347	1.8553	2.8917
57	0.8013	1.0966	1.3585	1.8884	2.9434
58	0.8151	1.1159	1.3823	1.9214	2.9948
59	0.8303	1.1370	1.4086	1.9584	3.0530
60	0.8444	1.1561	1.4326	1.9915	3.1047
61	0.8585	1.1754	1.4564	2.0245	3.1564

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Effective from: 01st January 2023

Steel Factors for Instrumentation Cables - Fe PIS					
Pair Instrumentation Individual and Over all Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
1	0.1326	0.1381	0.1465	0.1575	0.1824
2	0.1958	0.2059	0.2146	0.2305	0.2619
3	0.2020	0.2159	0.2299	0.2494	0.3248
4	0.2201	0.2385	0.2494	0.2747	0.4298
5	0.2424	0.2594	0.2748	0.3332	0.4763
6	0.2597	0.3083	0.3279	0.4356	0.5097
7	0.2597	0.3083	0.3279	0.4356	0.5097
8	0.3224	0.4083	0.4450	0.4849	0.5823
9	0.4068	0.4497	0.4784	0.5278	0.6805
10	0.4299	0.4643	0.4904	0.5395	0.7919
11	0.4450	0.4795	0.5056	0.5575	0.8173
12	0.4562	0.4907	0.5194	0.5742	0.8447
13	0.4730	0.5100	0.5416	0.6453	0.8768
14	0.4730	0.5100	0.5481	0.6453	0.8833
15	0.5020	0.5390	0.5732	0.6826	0.9351
16	0.5020	0.5455	0.5797	0.6891	0.9416
17	0.5241	0.5735	0.6529	0.8202	0.9874
18	0.5306	0.5735	0.6529	0.8202	0.9874
19	0.5306	0.5735	0.6597	0.8267	0.9939
20	0.5546	0.6643	0.7076	0.8826	1.1405
21	0.5661	0.6690	0.7124	0.8920	1.1479
22	0.6430	0.6996	0.8427	0.9288	1.3591
23	0.6430	0.6996	0.8427	0.9288	1.3591
24	0.6660	0.8207	0.8790	0.9700	1.4233
25	0.6660	0.8207	0.8790	0.9700	1.4233
26	0.6792	0.8337	0.8920	0.9830	1.4428
27	0.6923	0.8521	0.9057	1.0014	1.4642
28	0.8070	0.8795	0.9378	1.1149	1.5144
29	0.8070	0.8795	0.9378	1.1149	1.5144
30	0.8070	0.8795	0.9378	1.1149	1.5144

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IEEMA (PVC)/Instrumentation Cable/2022

Effective from: 01st January 2023

Steel Factors for Instrumentation Cables - Fe PIS					
Pair Instrumentation Individual and Over all Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
31	0.8521	0.9199	0.9782	1.1673	1.7114
32	0.8521	0.9199	0.9782	1.1673	1.7114
33	0.8521	0.9199	0.9782	1.1673	1.7114
34	0.8795	0.9520	1.0895	1.3672	1.7766
35	0.8795	0.9520	1.0895	1.3737	1.7831
36	0.8795	0.9585	1.0962	1.3737	1.7831
37	0.8860	0.9585	1.0962	1.3737	1.7896
38	0.9134	1.0714	1.1380	1.4230	1.9677
39	0.9134	1.0779	1.1445	1.4230	1.9742
40	0.9199	1.0779	1.1445	1.4295	1.9742
41	0.9520	1.1153	1.1836	1.4863	2.1971
42	0.9520	1.1221	1.1836	1.4863	2.1971
43	0.9520	1.1221	1.1836	1.4928	2.2036
44	1.0719	1.1548	1.3877	1.5430	2.2705
45	1.0719	1.1548	1.3877	1.5495	2.2770
46	1.0719	1.1613	1.3877	1.5495	2.2770
47	1.0784	1.1613	1.3877	1.5495	2.2770
48	1.0826	1.1776	1.4156	1.6981	2.3170
49	1.1111	1.3598	1.4370	1.7237	2.3735
50	1.1111	1.3598	1.4370	1.7237	2.3802
51	1.1221	1.3672	1.4583	1.7557	2.3906
52	1.1221	1.3672	1.4583	1.7557	2.3971
53	1.1221	1.3737	1.4583	1.7557	2.3971
54	1.1432	1.3951	1.4928	1.7878	2.4421
55	1.1613	1.4099	1.5076	1.8133	2.4820
56	1.1613	1.4164	1.5076	1.8133	2.4820
57	1.1613	1.4164	1.5076	1.8198	2.4885
58	1.1897	1.4592	1.6774	2.1030	2.7680
59	1.1962	1.4592	1.6774	2.1030	2.7680
60	1.1962	1.4657	1.6774	2.1095	2.7745
61	1.1962	1.4657	1.6841	2.1095	2.7745

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IEEMA (PVC)/Instrumentation Cable/2022

Effective from: 01st January 2023

Polymer Factors for Instrumentation Cables - POC PIS					
Pair Instrumentation Individual and Over all Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
1	0.1160	0.1170	0.1337	0.1346	0.1726
2	0.1950	0.2126	0.2285	0.2551	0.3100
3	0.1994	0.2191	0.2285	0.2644	0.3325
4	0.2289	0.2539	0.2723	0.3023	0.3985
5	0.2646	0.2885	0.3127	0.3540	0.4774
6	0.2929	0.3300	0.3576	0.4166	0.5515
7	0.2871	0.3226	0.3488	0.4046	0.5321
8	0.3429	0.3764	0.4043	0.4615	0.6250
9	0.3738	0.4275	0.4532	0.5160	0.7060
10	0.4110	0.4502	0.4997	0.5736	0.7657
11	0.4160	0.4702	0.5016	0.5718	0.7794
12	0.4433	0.4977	0.5299	0.6039	0.8152
13	0.4655	0.5268	0.5573	0.6607	0.8838
14	0.4767	0.5404	0.5731	0.6797	0.9122
15	0.5117	0.5772	0.6371	0.7281	0.9941
16	0.5266	0.5934	0.6557	0.7490	1.0244
17	0.5703	0.6232	0.6879	0.8042	1.0892
18	0.5846	0.6400	0.7071	0.8270	1.1223
19	0.5847	0.6397	0.7055	0.8238	1.1161
20	0.6153	0.6933	0.7631	0.8880	1.2007
21	0.6386	0.7250	0.7969	0.9252	1.2473
22	0.6811	0.7649	0.8360	0.9930	1.3768
23	0.6903	0.7753	0.8476	1.0062	1.3963
24	0.7362	0.8267	0.9054	1.0685	1.4608
25	0.7453	0.8371	0.9168	1.0817	1.4803
26	0.7606	0.8539	0.9355	1.1026	1.5077
27	0.7717	0.8870	0.9672	1.1344	1.5577
28	0.8026	0.9217	0.9932	1.1768	1.6222
29	0.8132	0.9343	1.0073	1.1934	1.6463
30	0.8224	0.9447	1.0186	1.2066	1.6659

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Effective from: 01st January 2023

Polymer Factors for Instrumentation Cables - POC PIS					
Pair Instrumentation Individual and Over all Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
31	0.8880	0.9893	1.1008	1.2919	1.7863
32	0.9027	1.0067	1.1205	1.3155	1.8214
33	0.9119	1.0171	1.1318	1.3286	1.8409
34	0.9402	1.0727	1.1664	1.3727	1.9228
35	0.9521	1.0861	1.1815	1.3903	1.9486
36	0.9707	1.1082	1.2061	1.4202	1.9929
37	0.9677	1.1041	1.2008	1.4122	1.9796
38	0.9956	1.1427	1.2649	1.4803	2.0606
39	1.0073	1.1561	1.2800	1.4978	2.0860
40	1.0194	1.1703	1.2955	1.5162	2.1129
41	1.0780	1.2328	1.3608	1.5876	2.2506
42	1.0983	1.2567	1.3876	1.6200	2.2985
43	1.1100	1.2701	1.4024	1.6374	2.3240
44	1.1484	1.3302	1.4412	1.7017	2.4034
45	1.1600	1.3436	1.4560	1.7192	2.4289
46	1.1625	1.3459	1.4582	1.7209	2.4308
47	1.1741	1.3593	1.4731	1.7383	2.4561
48	1.2063	1.3716	1.5157	1.7940	2.5204
49	1.2427	1.4171	1.5582	1.8357	2.6182
50	1.2544	1.4305	1.5731	1.8529	2.6434
51	1.2683	1.4765	1.5845	1.9048	2.6621
52	1.2806	1.4904	1.6002	1.9233	2.6891
53	1.2920	1.5038	1.6148	1.9404	2.7143
54	1.3260	1.5068	1.6580	1.9807	2.7652
55	1.3342	1.5463	1.7031	1.9972	2.8202
56	1.3514	1.5668	1.7258	2.0247	2.8611
57	1.3630	1.5799	1.7404	2.0418	2.8864
58	1.4284	1.6246	1.8115	2.1284	3.0240
59	1.4398	1.6377	1.8261	2.1458	3.0492
60	1.4556	1.6557	1.8465	2.1704	3.0854
61	1.4552	1.6549	1.8446	2.1669	3.0793

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Copper Factors for Instrumentation Cables - Cu TOS					
Triad Instrumentation Over all Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
1	0.0187	0.0263	0.0332	0.0472	0.0748
2	0.0330	0.0481	0.0619	0.0900	0.1457
3	0.0472	0.0699	0.0907	0.1326	0.2160
4	0.0614	0.0917	0.1194	0.1751	0.2866
5	0.0757	0.1135	0.1481	0.2178	0.3569
6	0.0896	0.1350	0.1763	0.2600	0.4265
7	0.1038	0.1565	0.2047	0.3024	0.4968
8	0.1181	0.1783	0.2334	0.3449	0.5671
9	0.1323	0.2001	0.2621	0.3876	0.6374
10	0.1462	0.2216	0.2906	0.4300	0.7075
11	0.1604	0.2434	0.3193	0.4725	0.7779
12	0.1746	0.2652	0.3477	0.5152	0.8482
13	0.1891	0.2875	0.3772	0.5589	0.9208
14	0.2033	0.3093	0.4059	0.6016	0.9911
15	0.2176	0.3310	0.4346	0.6443	1.0616
16	0.2318	0.3526	0.4633	0.6867	1.1322
17	0.2455	0.3736	0.4907	0.7277	1.1998
18	0.2597	0.3954	0.5194	0.7704	1.2699
19	0.2736	0.4169	0.5479	0.8128	1.3402
20	0.2879	0.4387	0.5766	0.8553	1.4105
21	0.3021	0.4605	0.6050	0.8979	1.4808
22	0.3163	0.4820	0.6337	0.9404	1.5512
23	0.3303	0.5038	0.6622	0.9829	1.6215
24	0.3453	0.5266	0.6924	1.0278	1.6958
25	0.3595	0.5484	0.7211	1.0705	1.7664
26	0.3737	0.5701	0.7498	1.1132	1.8367
27	0.3879	0.5919	0.7785	1.1557	1.9073
28	0.4011	0.6122	0.8052	1.1956	1.9729
29	0.4153	0.6340	0.8339	1.2380	2.0432
30	0.4295	0.6557	0.8623	1.2805	2.1135

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Copper Factors for Instrumentation Cables - Cu TOS					
Triad Instrumentation Over all Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
31	0.4438	0.6773	0.8910	1.3232	2.1838
32	0.4577	0.6991	0.9195	1.3656	2.2541
33	0.4720	0.7209	0.9482	1.4081	2.3244
34	0.4862	0.7424	0.9766	1.4508	2.3948
35	0.5014	0.7659	1.0076	1.4967	2.4709
36	0.5156	0.7877	1.0363	1.5394	2.5414
37	0.5298	0.8095	1.0650	1.5821	2.6117
38	0.5440	0.8313	1.0937	1.6248	2.6823
39	0.5570	0.8510	1.1196	1.6632	2.7461
40	0.5712	0.8726	1.1483	1.7060	2.8165
41	0.5852	0.8943	1.1768	1.7484	2.8868
42	0.5994	0.9161	1.2055	1.7909	2.9571
43	0.6136	0.9377	1.2339	1.8336	3.0274
44	0.6278	0.9594	1.2626	1.8760	3.0975
45	0.6420	0.9810	1.2911	1.9185	3.1678
46	0.6577	1.0050	1.3228	1.9657	3.2459
47	0.6717	1.0268	1.3515	2.0083	3.3165
48	0.6859	1.0486	1.3802	2.0511	3.3868
49	0.7001	1.0704	1.4089	2.0938	3.4574
50	0.7144	1.0922	1.4376	2.1362	3.5279
51	0.7286	1.1139	1.4663	2.1789	3.5983
52	0.7411	1.1330	1.4913	2.2163	3.6601
53	0.7553	1.1547	1.5199	2.2588	3.7302
54	0.7695	1.1763	1.5484	2.3013	3.8005
55	0.7835	1.1980	1.5771	2.3439	3.8708
56	0.7976	1.2199	1.6058	2.3864	3.9411
57	0.8119	1.2414	1.6342	2.4289	4.0115
58	0.8261	1.2631	1.6630	2.4715	4.0818
59	0.8421	1.2879	1.6954	2.5200	4.1621
60	0.8563	1.3097	1.7241	2.5627	4.2324
61	0.8705	1.3315	1.7528	2.6051	4.3030

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Steel Factors for Instrumentation Cables - Fe TOS					
Triad Instrumentation Over all Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
1	0.1297	0.1368	0.1449	0.1548	0.1812
2	0.1977	0.2144	0.2271	0.2478	0.3074
3	0.2103	0.2286	0.2410	0.2658	0.3600
4	0.2314	0.2481	0.2632	0.3018	0.4608
5	0.2508	0.2718	0.3018	0.3615	0.5070
6	0.2733	0.3394	0.3587	0.4618	0.5563
7	0.2733	0.3394	0.3587	0.4618	0.5563
8	0.3480	0.4473	0.4702	0.5221	0.6339
9	0.4098	0.4877	0.5138	0.5777	0.7457
10	0.4611	0.5047	0.5334	0.5973	0.8776
11	0.4611	0.5047	0.5334	0.5973	0.8776
12	0.4788	0.5251	0.5540	0.6140	0.9115
13	0.5047	0.5511	0.5854	0.7015	0.9588
14	0.5047	0.5511	0.5854	0.7015	0.9588
15	0.5308	0.5799	0.6170	0.7387	1.0177
16	0.5308	0.5799	0.6170	0.7387	1.0177
17	0.5624	0.6144	0.7092	0.8290	1.0809
18	0.5624	0.6144	0.7092	0.8290	1.0809
19	0.5624	0.6144	0.7092	0.8290	1.0809
20	0.5911	0.6982	0.7444	0.9319	1.2189
21	0.5911	0.7029	0.7491	0.9366	1.2336
22	0.6318	0.7418	0.7925	0.9907	1.3783
23	0.6318	0.7418	0.7925	0.9907	1.3783
24	0.7168	0.7787	0.9414	1.0428	1.5368
25	0.7168	0.7787	0.9414	1.0428	1.5368
26	0.7168	0.7787	0.9414	1.0428	1.5368
27	0.7298	0.9077	0.9615	1.0677	1.5788
28	0.7568	0.9418	1.0001	1.1885	1.6428
29	0.7568	0.9418	1.0001	1.1885	1.6428
30	0.7568	0.9418	1.0001	1.1885	1.6428

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IEEMA (PVC)/Instrumentation Cable/2022**Effective from: 01st January 2023**

Steel Factors for Instrumentation Cables - Fe TOS					
Triad Instrumentation Over all Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
31	0.8331	0.9757	1.0432	1.2432	1.8271
32	0.8331	0.9757	1.0432	1.2432	1.8271
33	0.8331	0.9757	1.0432	1.2432	1.8271
34	0.9309	1.0144	1.0876	1.2942	1.9165
35	0.9309	1.0144	1.0876	1.2942	1.9165
36	0.9309	1.0144	1.0876	1.2942	1.9165
37	0.9309	1.0144	1.0876	1.2942	1.9165
38	0.9710	1.0617	1.2161	1.5235	1.9944
39	0.9710	1.0617	1.2161	1.5235	1.9944
40	0.9710	1.0617	1.2161	1.5235	1.9944
41	1.0096	1.1889	1.2716	1.5793	2.3468
42	1.0096	1.1889	1.2716	1.5793	2.3468
43	1.0096	1.1889	1.2716	1.5793	2.3468
44	1.0527	1.2372	1.3171	1.6498	2.4498
45	1.0527	1.2372	1.3171	1.6498	2.4498
46	1.0527	1.2372	1.3171	1.6498	2.4498
47	1.0527	1.2372	1.3171	1.6498	2.4498
48	1.0729	1.2600	1.3382	1.6777	2.4895
49	1.1737	1.2811	1.5449	1.8497	2.5629
50	1.1737	1.2811	1.5449	1.8497	2.5629
51	1.1784	1.2885	1.5514	1.8638	2.5629
52	1.1784	1.2885	1.5514	1.8638	2.5629
53	1.1784	1.2947	1.5514	1.8638	2.5629
54	1.2053	1.3158	1.5802	1.8959	2.6141
55	1.2174	1.5032	1.6007	1.9212	2.6540
56	1.2174	1.5032	1.6007	1.9212	2.6540
57	1.2174	1.5032	1.6007	1.9212	2.6540
58	1.2631	1.5457	1.6572	1.9852	2.9483
59	1.2631	1.5457	1.6572	1.9852	2.9483
60	1.2631	1.5457	1.6572	1.9852	2.9483
61	1.2631	1.5457	1.6572	1.9852	2.9483

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IEEMA (PVC)/Instrumentation Cable/2022**Effective from: 01st January 2023**

Polymer Factors for Instrumentation Cables- POC TOS					
Triad Instrumentation Over all Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
1	0.1229	0.1291	0.1414	0.1489	0.1884
2	0.2057	0.2293	0.2513	0.2848	0.3773
3	0.2162	0.2401	0.2603	0.2928	0.3895
4	0.2476	0.2776	0.3028	0.3474	0.4491
5	0.3007	0.3324	0.3591	0.4109	0.5423
6	0.3409	0.3830	0.4160	0.4857	0.6385
7	0.3359	0.3761	0.4075	0.4736	0.6191
8	0.3928	0.4376	0.4710	0.5411	0.7471
9	0.4365	0.5025	0.5432	0.6170	0.7832
10	0.4650	0.5354	0.5725	0.6541	0.8422
11	0.4646	0.5341	0.5707	0.6508	0.8370
12	0.4979	0.5485	0.6093	0.6925	0.9559
13	0.5451	0.6171	0.6637	0.7627	1.0687
14	0.5596	0.6338	0.6824	0.7846	1.1018
15	0.5993	0.6833	0.7553	0.8638	1.2061
16	0.6116	0.6972	0.7706	0.8817	1.2332
17	0.6501	0.7380	0.8235	0.9587	1.3575
18	0.6661	0.7565	0.8442	0.9837	1.3951
19	0.6652	0.7548	0.8416	0.9788	1.3870
20	0.7224	0.8058	0.8816	1.0300	1.4613
21	0.7156	0.8209	0.8967	1.0453	1.4777
22	0.7648	0.8706	0.9617	1.1454	1.6106
23	0.7760	0.8835	0.9759	1.1621	1.6359
24	0.8429	0.9776	1.0735	1.2715	1.8169
25	0.8552	0.9915	1.0890	1.2895	1.8439
26	0.8555	0.9913	1.0882	1.2875	1.8410
27	0.8921	1.0375	1.1338	1.3352	1.9078
28	0.9283	1.0803	1.1820	1.3945	2.0054
29	0.9428	1.0970	1.2004	1.4164	2.0384
30	0.9549	1.1110	1.2159	1.4344	2.0654

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IEEMA (PVC)/Instrumentation Cable/2022**Effective from: 01st January 2023**

Polymer Factors for Instrumentation Cables- POC TOS					
Triad Instrumentation Over all Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
31	1.0261	1.1842	1.2887	1.5200	2.1807
32	1.0166	1.1742	1.2775	1.5077	2.1664
33	1.0279	1.1871	1.2918	1.5244	2.1916
34	1.0685	1.2293	1.3712	1.6104	2.2888
35	1.1108	1.2776	1.4252	1.6731	2.3798
36	1.1310	1.3013	1.4517	1.7053	2.4287
37	1.1260	1.2944	1.4432	1.6932	2.4094
38	1.2035	1.3712	1.4990	1.7877	2.5696
39	1.2155	1.3852	1.5145	1.8057	2.5969
40	1.2282	1.3997	1.5304	1.8243	2.6253
41	1.2651	1.4536	1.6138	1.9154	2.7553
42	1.2883	1.4811	1.6445	1.9525	2.8112
43	1.2624	1.4515	1.6112	1.9140	2.7575
44	1.3297	1.5317	1.6899	2.0110	2.8738
45	1.3410	1.5446	1.7042	2.0277	2.8988
46	1.3813	1.5900	1.7544	2.0850	2.9804
47	1.3935	1.6039	1.7699	2.1030	3.0074
48	1.4100	1.6502	1.8248	2.1518	3.1155
49	1.4594	1.6887	1.8761	2.2154	3.1799
50	1.4717	1.7027	1.8914	2.2333	3.2069
51	1.4823	1.7156	1.9048	2.2488	3.2389
52	1.4955	1.7306	1.9213	2.2681	3.2683
53	1.5137	1.7528	1.9463	2.2984	3.3133
54	1.5536	1.8012	1.9945	2.3870	3.4241
55	1.5932	1.8237	2.0406	2.4005	3.4925
56	1.5625	1.7894	2.0022	2.3567	3.4329
57	1.5737	1.8024	2.0164	2.3735	3.4581
58	1.6163	1.8777	2.0706	2.4604	3.5647
59	1.6801	1.9501	2.1518	2.5549	3.7008
60	1.6959	1.9686	2.1725	2.5798	3.7387
61	1.7055	1.9792	2.1846	2.5930	3.7578

IEEMA(PVC)/Instrumentation Cable/2022/ 21 of 27

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IEEMA (PVC)/Instrumentation Cable/2022**Effective from: 01st January 2023**

Copper Factors for Instrumentation Cables - Cu TIS					
Triad Instrumentation Individual & Overall Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
1	0.0215	0.0289	0.0364	0.0509	0.0782
2	0.0424	0.0575	0.0713	0.0993	0.1551
3	0.0614	0.0841	0.1048	0.1466	0.2302
4	0.0802	0.1104	0.1381	0.1939	0.3054
5	0.0992	0.1368	0.1714	0.2414	0.3805
6	0.1177	0.1631	0.2044	0.2882	0.4546
7	0.1366	0.1895	0.2377	0.3352	0.5295
8	0.1556	0.2158	0.2709	0.3824	0.6047
9	0.1743	0.2422	0.3042	0.4297	0.6795
10	0.1932	0.2686	0.3375	0.4769	0.7544
11	0.2122	0.2949	0.3708	0.5242	0.8296
12	0.2309	0.3215	0.4040	0.5715	0.9045
13	0.2502	0.3483	0.4383	0.6200	0.9816
14	0.2691	0.3750	0.4716	0.6673	1.0568
15	0.2880	0.4013	0.5048	0.7145	1.1319
16	0.3068	0.4276	0.5383	0.7618	1.2073
17	0.3251	0.4532	0.5703	0.8076	1.2794
18	0.3442	0.4798	0.6039	0.8548	1.3543
19	0.3629	0.5062	0.6371	0.9018	1.4295
20	0.3817	0.5326	0.6704	0.9491	1.5044
21	0.4005	0.5588	0.7036	0.9963	1.5795
22	0.4195	0.5852	0.7369	1.0436	1.6544
23	0.4383	0.6116	0.7702	1.0909	1.7293
24	0.4578	0.6392	0.8050	1.1404	1.8084
25	0.4769	0.6658	0.8385	1.1877	1.8835
26	0.4957	0.6921	0.8718	1.2352	1.9587
27	0.5147	0.7184	0.9050	1.2824	2.0338
28	0.5325	0.7436	0.9365	1.3269	2.1042
29	0.5515	0.7699	0.9698	1.3742	2.1794
30	0.5703	0.7965	1.0031	1.4212	2.2542

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IEEMA (PVC)/Instrumentation Cable/2022**Effective from: 01st January 2023**

Copper Factors for Instrumentation Cables - Cu TIS					
Triad Instrumentation Individual & Overall Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
31	0.5891	0.8228	1.0363	1.4685	2.3291
32	0.6079	0.8492	1.0696	1.5158	2.4043
33	0.6269	0.8756	1.1029	1.5630	2.4791
34	0.6457	0.9019	1.1361	1.6103	2.5543
35	0.6657	0.9300	1.1719	1.6611	2.6352
36	0.6845	0.9566	1.2052	1.7083	2.7103
37	0.7035	0.9829	1.2387	1.7556	2.7855
38	0.7223	1.0096	1.2720	1.8031	2.8606
39	0.7399	1.0339	1.3028	1.8464	2.9293
40	0.7588	1.0602	1.3360	1.8936	3.0041
41	0.7777	1.0866	1.3693	1.9409	3.0790
42	0.7965	1.1132	1.4026	1.9879	3.1542
43	0.8152	1.1395	1.4358	2.0352	3.2291
44	0.8343	1.1659	1.4691	2.0825	3.3039
45	0.8531	1.1923	1.5024	2.1298	3.3791
46	0.8735	1.2208	1.5386	2.1815	3.4617
47	0.8923	1.2474	1.5721	2.2290	3.5368
48	0.9111	1.2738	1.6054	2.2763	3.6120
49	0.9301	1.3004	1.6387	2.3235	3.6874
50	0.9489	1.3267	1.6722	2.3708	3.7625
51	0.9680	1.3531	1.7055	2.4183	3.8377
52	0.9850	1.3769	1.7352	2.4603	3.9040
53	1.0038	1.4032	1.7685	2.5076	3.9789
54	1.0228	1.4296	1.8017	2.5546	4.0538
55	1.0416	1.4562	1.8353	2.6019	4.1290
56	1.0604	1.4826	1.8685	2.6491	4.2039
57	1.0792	1.5089	1.9018	2.6964	4.2788
58	1.0982	1.5353	1.9350	2.7437	4.3539
59	1.1190	1.5646	1.9723	2.7966	4.4388
60	1.1377	1.5912	2.0056	2.8442	4.5139
61	1.1568	1.6176	2.0389	2.8915	4.5891

IEEMA(PVC)/Instrumentation Cable/2022/ 23 of 27

IEEMA (PVC)/Instrumentation Cable/2022**Effective from: 01st January 2023**

Steel Factors for Instrumentation Cables - Fe TIS					
Triad Instrumentation Individual & Overall Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
1	0.1381	0.1465	0.1545	0.1660	0.1939
2	0.2145	0.2315	0.2437	0.2647	0.4189
3	0.2272	0.2454	0.2594	0.3135	0.4447
4	0.2482	0.2679	0.3137	0.3800	0.4943
5	0.2720	0.3347	0.3525	0.4544	0.5463
6	0.3332	0.4250	0.4544	0.4972	0.5919
7	0.3332	0.4250	0.4544	0.4972	0.5919
8	0.4453	0.4798	0.5121	0.5575	0.8243
9	0.4834	0.5298	0.5617	0.6635	0.9033
10	0.5030	0.5523	0.5813	0.6886	0.9444
11	0.5030	0.5523	0.5813	0.6886	0.9444
12	0.5233	0.5636	0.6016	0.7134	0.9783
13	0.5494	0.5954	0.6813	0.8492	1.0326
14	0.5494	0.5954	0.6813	0.8492	1.0326
15	0.5787	0.6842	0.7213	0.9080	1.1759
16	0.5787	0.6842	0.7213	0.9080	1.1759
17	0.6620	0.7242	0.8699	0.9513	1.4008
18	0.6620	0.7242	0.8699	0.9513	1.4008
19	0.6620	0.7242	0.8699	0.9513	1.4008
20	0.6944	0.8634	0.9127	1.0052	1.4699
21	0.6944	0.8681	0.9174	1.0147	1.4847
22	0.7766	0.9179	0.9765	1.1553	1.5695
23	0.7766	0.9179	0.9765	1.1553	1.5695
24	0.8793	0.9608	1.0241	1.2109	1.7861
25	0.8793	0.9608	1.0241	1.2109	1.7861
26	0.8793	0.9608	1.0241	1.2109	1.7861
27	0.9020	0.9907	1.1282	1.3071	1.8248
28	0.9359	1.0985	1.1674	1.4573	2.0168
29	0.9359	1.0985	1.1674	1.4573	2.0168
30	0.9359	1.0985	1.1674	1.4573	2.0168

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IEEMA (PVC)/Instrumentation Cable/2022**Effective from: 01st January 2023**

Steel Factors for Instrumentation Cables - Fe TIS					
Triad Instrumentation Individual & Overall Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
31	0.9698	1.1419	1.2156	1.5135	2.2294
32	0.9698	1.1419	1.2156	1.5135	2.2294
33	0.9698	1.1419	1.2156	1.5135	2.2294
34	1.0938	1.1932	1.4220	1.5767	2.3315
35	1.0938	1.1932	1.4220	1.5767	2.3315
36	1.0938	1.1932	1.4220	1.5767	2.3315
37	1.0938	1.1932	1.4220	1.5767	2.3315
38	1.1329	1.4024	1.4861	1.7654	2.4344
39	1.1329	1.4024	1.4861	1.7654	2.4344
40	1.1329	1.4024	1.4861	1.7654	2.4344
41	1.1885	1.4656	1.5495	1.8551	2.5362
42	1.1885	1.4656	1.5495	1.8551	2.5362
43	1.1885	1.4656	1.5495	1.8551	2.5362
44	1.2987	1.5149	1.7334	2.0413	2.8585
45	1.2987	1.5149	1.7334	2.0413	2.8585
46	1.2987	1.5149	1.7334	2.0413	2.8585
47	1.2987	1.5149	1.7334	2.0413	2.8585
48	1.3286	1.5431	1.7728	2.2075	2.9159
49	1.4442	1.7095	1.8049	2.2592	2.9742
50	1.4442	1.7095	1.8049	2.2592	2.9742
51	1.4516	1.7095	1.8164	2.2772	3.0028
52	1.4516	1.7095	1.8164	2.2772	3.0028
53	1.4516	1.7095	1.8164	2.2772	3.0093
54	1.4795	1.7481	1.8624	2.3276	3.2700
55	1.5009	1.7671	1.8806	2.3506	3.5370
56	1.5009	1.7671	1.8806	2.3506	3.5370
57	1.5009	1.7671	1.8806	2.3506	3.5370
58	1.5430	1.8246	1.9406	2.4190	3.6397
59	1.5430	1.8246	1.9406	2.4190	3.6397
60	1.5430	1.8246	1.9406	2.4190	3.6397
61	1.5430	1.8246	1.9406	2.4190	3.6397

IEEMA(PVC)/Instrumentation Cable/2022/ 25 of 27

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IEEMA (PVC)/Instrumentation Cable/2022**Effective from: 01st January 2023**

Polymer Factors for Instrumentation Cables - POC TIS					
Triad Instrumentation Individual & Overall Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
1	0.1233	0.1405	0.1426	0.1613	0.1850
2	0.2242	0.2528	0.2738	0.3046	0.4104
3	0.2400	0.2650	0.2849	0.3215	0.4184
4	0.2742	0.3014	0.3310	0.3834	0.4974
5	0.3246	0.3703	0.3970	0.4439	0.5936
6	0.3775	0.4204	0.4510	0.5193	0.6968
7	0.3728	0.4137	0.4426	0.5075	0.6780
8	0.4318	0.4754	0.5285	0.6006	0.7373
9	0.4958	0.5431	0.6012	0.6901	0.9313
10	0.5245	0.5763	0.6377	0.7265	1.0061
11	0.5251	0.5761	0.6374	0.7245	1.0027
12	0.5427	0.6139	0.6794	0.7750	1.0612
13	0.6086	0.6688	0.7406	0.8635	1.1738
14	0.6242	0.6868	0.7605	0.8869	1.2085
15	0.6704	0.7650	0.8358	0.9798	1.3294
16	0.6836	0.7799	0.8523	0.9993	1.3582
17	0.7305	0.8266	0.9070	1.0719	1.4969
18	0.7479	0.8465	0.9296	1.0986	1.5369
19	0.7475	0.8452	0.9271	1.0942	1.5293
20	0.7870	0.9151	1.0070	1.1562	1.6060
21	0.8033	0.9079	0.9987	1.1738	1.6249
22	0.8594	0.9988	1.0821	1.2805	1.7817
23	0.8717	1.0127	1.0977	1.2984	1.8085
24	0.9577	1.1053	1.2035	1.4129	2.0025
25	0.9710	1.1202	1.2200	1.4321	2.0313
26	0.9723	1.1212	1.2207	1.4316	2.0296
27	1.0239	1.1690	1.2765	1.4892	2.0989
28	1.0623	1.2236	1.3284	1.5790	2.2108
29	1.0779	1.2416	1.3481	1.6024	2.2455
30	1.0909	1.2568	1.3649	1.6217	2.2740

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IEEMA (PVC)/Instrumentation Cable/2022**Effective from: 01st January 2023**

Polymer Factors for Instrumentation Cables - POC TIS					
Triad Instrumentation Individual & Overall Screen Cables					
Cable size in sq.mm No. of Pairs	0.5 sq.mm	0.75 sq.mm	1.0 sq.mm	1.5 sq.mm	2.5 sq.mm
31	1.1639	1.3365	1.4418	1.7150	2.4025
32	1.1558	1.3281	1.4320	1.7047	2.3902
33	1.1681	1.3420	1.4475	1.7226	2.4170
34	1.2195	1.3857	1.5425	1.8070	2.5685
35	1.2628	1.4355	1.5977	1.8713	2.6613
36	1.2845	1.4606	1.6260	1.9052	2.7126
37	1.2798	1.4541	1.6179	1.8936	2.6935
38	1.3479	1.5470	1.6986	2.0001	2.8623
39	1.3612	1.5622	1.7154	2.0196	2.8910
40	1.3750	1.5780	1.7326	2.0398	2.9211
41	1.4230	1.6564	1.8307	2.1352	3.0490
42	1.4472	1.6848	1.8627	2.1738	3.1065
43	1.4222	1.6565	1.8308	2.1365	3.0543
44	1.5099	1.7490	1.9168	2.2371	3.2019
45	1.5221	1.7631	1.9322	2.2551	3.2289
46	1.5638	1.8095	1.9837	2.3138	3.3120
47	1.5767	1.8246	2.0005	2.3330	3.3408
48	1.6219	1.8739	2.0627	2.4040	3.4196
49	1.6659	1.9210	2.1084	2.5024	3.5355
50	1.6789	1.9360	2.1251	2.5219	3.5643
51	1.6909	1.9494	2.1391	2.5385	3.6401
52	1.7051	1.9658	2.1571	2.5592	3.6713
53	1.7253	1.9892	2.1841	2.5912	3.7191
54	1.7741	2.0439	2.2294	2.6525	3.8075
55	1.8258	2.0989	2.2897	2.7070	3.8918
56	1.7964	2.0660	2.2528	2.6651	3.8346
57	1.8087	2.0802	2.2684	2.6831	3.8614
58	1.8452	2.1171	2.3549	2.7792	3.9710
59	1.9100	2.1908	2.4374	2.8747	4.1088
60	1.9272	2.2110	2.4599	2.9016	4.1488
61	1.9381	2.2233	2.4733	2.9170	4.1700

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DOCUMENTATION REQUIREMENT

DRAWINGS & DOCUMENTS TO BE SUBMITTED BY SUCCESSFUL BIDDER AFTER AWARD OF CONTRACT ALONG WITH SUBMISSION SCHEDULE

Sl. No.	DOCUMENT TITLE	SUBMISSION SCHEDULE			
		Vendor submission (Days)*	BHEL Comment (Days)	Vendor re-submission (Days)#	BHEL & Customer comment/approval (Days)
I	Primary documents				
1	Datasheet and Cross Section Drawings for Screened Control Cable	14	18	10	18
2	QAP for Screened Control cables	14	18	10	18
II	Secondary documents				
1	Type Test Report for Screened Control cables	7\$	3	2	18

NOTES:

a) * 1st submission within indicated days from date of purchase order.

b) # Submission (within indicated days) after incorporating all BHEL comments.

c) Primary documents shall be considered for Delay analysis

d) \$: 1st submission within indicated days from date of purchase order (in case Type test report is available)/ from the date of conduction tests.

DRAWINGS & DOCUMENTS TO BE SUBMITTED AS FINAL/AS-BUILT DOCUMENT

Sl. No.	DOCUMENT TITLE
1	APPROVED DOCUMENTS
2	APPROVED QUALITY PLAN.
3	ALL TEST CERTIFICATES

MAKE IN INDIA**Subject: - CERTIFICATION REGARDING LOCAL CONTENT****Reference:** ENQUIRY No.**Description of item(s):**

We hereby certify that the quoted items offered by us against above Enquiry No. is having local content of% .

Further, to certify that the local content % certified above is in line with definition of Local content given in point no 2 of Public Procurement (Preference to Make in India), Order 2017 dated 19.07.2024 and we qualify as **Class –.....** (Class-I/ Class-II/Non-Local Supplier - as applicable) local supplier.

We further confirm that details of location at which the local value addition is made is at
..... (Supplier's / OEM's Manufacturing works)

Country of Origin from OEM:

(For items sold by Supplier as reseller, OEM certificate for Country of Origin to be submitted.)

We confirm the following for the current tender:

- (1) Repackaging/ Refurbishment/ Rebranding of imported products has not been considered for calculation of local content or Domestic Value Addition (DVA).

That the cost of imported items sourced locally from resellers/ distributors and cost of license/royalty paid/technical expertise cost etc. source from outside of India has been excluded from the local content, as mentioned in 2(d) of PPP-MII order Public Procurement (Preference to Make in India), Order 2017 dated 19.07.2024 issued by DPIIT.

- (2) For contracts involving supply of multiple items, weighted average of all items has been taken while calculating the local content.
- (3) We understand, for this procurement, the local content to categorize a supplier as a Class I local supplier/ Class II local Supplier/ Non-local supplier and purchase preference to Class I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 19.07.2024 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT.
- (4) We understand that we have to give a self-certification regarding local content wherever the tender value is up to INR 10 crores. In case, the tender value is more than INR 10 Crores, we shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content. In both the cases, the certification has to be provided by us during bid submission.
- (5) We also understand, false declaration will be in breach of Code of Integrity under the rule 175(1)(i)(h) of the General finance rules for which the Supplier or its successors can be debarred for up to two years as per Rule 151(iii) of the General Finance Rules along with such other actions as may be permissible under the law.

- (6) That in case we are the successful Supplier and the contract value of the order awarded to us is more than INR 10 crores, we will provide local content certification duly certified by cost/ chartered accountant in practice during execution of the contract. That a penalty up to 10% of the contract value may be imposed on us during execution, in case we do not meet the stipulated local content during the execution of the contract. We are also aware that the contract awarded to us will not be terminated on this account.
- (7) We hereby declare that the details furnished above are true and correct to the best of our knowledge and belief and we undertake to inform you of any changes therein, immediately. In case any of the above information is found to be false or untrue or misleading or misrepresenting, we are aware that we may be held liable for it.

Thanking you,
Yours faithfully,

**(Signature, Date & Seal of
Authorized Signatory of the Supplier)**

Note: Suppliers to note that in case above certification given by a Supplier, whose bid is accepted, is found to be false, then this would be a ground for penal action and for taking further action in accordance with law and as per extant guidelines.

DECLARATION REGARDING COMPLIANCE TO RESTRICTIONS UNDER RULE 144 (xi) OF GFR 2017

(To be typed and submitted in the Letter Head of the Entity/ Firm providing certificate as applicable)

TO WHOMSOEVER IT MAY CONCERN

TO

BHARAT HEAVY ELECTRICALS LTD.
POWER SECTOR - PROJECT ENGINEERING MANAGEMENT (PS- PEM)
3rd Floor, BHEL-SADAN,
PLOT NO. 25, SECTOR-16-A,
NOIDA-210-301 (U.P.)

Sub: Declaration regarding compliance to Restrictions under Rule 144 (xi) of GFR 2017

Ref: OM dtd. 23.02.2023 of Department of Expenditure, Ministry of Finance, Govt. of India

ENQUIRY No.

Description of item(s):

I have read the clause regarding restrictions on procurement from a Supplier of a country which shares a land border with India, as per OM dtd. 23.02.2023 of Department of Expenditure, Ministry of Finance, Govt. of India. I certify that _____ (**SPECIFY THE NAME OF THE ORGANIZATION HERE**), is not from such a country/ has been registered with the Competent Authority (*attach valid registration by the Competent Authority, i.e., the Registration Committee constituted by the Dept. for Promotion of Industry and Internal Trade (DPIIT).*

I hereby certify that we fulfil all requirements in this regard and is eligible to be considered.

Thanking you,
Yours faithfully,

(Signature, Date & Seal of
Authorized Signatory of the Supplier)

Note: Suppliers to note that in case above certification given by a Supplier, whose bid is accepted, is found to be false, then this would be a ground for penal action and for taking further action in accordance with law and as per extant guidelines.

UNDERTAKING FOR CONFLICT OF INTEREST

(To be typed and submitted in the Letter Head of the Supplier)

Ref : 1) ENQUIRY No. & Date:

Treatment of Cases Regarding Conflict of Interest:

The Supplier notes that a conflict of interest would said to have occurred in the tender process and execution of the resultant contract, in case of any of the following situations:

- i) If its personnel have a close personal, financial, or business relationship with any personnel of BUYER who are directly or indirectly related to the procurement or execution process of the contract, which can affect the decision of BUYER directly or indirectly;
- ii) The Supplier (or his allied firm) provided services for the need assessment/ procurement planning of the Tender process in which it is participating;
- iii) Procurement of goods directly from the manufacturers/ suppliers shall be preferred. However, if the OEM/ Principal insists on engaging the services of an agent, such agent shall not be allowed to represent more than one manufacturer/ supplier in the same tender. Moreover, either the agent could bid on behalf of the manufacturer/ supplier or the manufacturer/ supplier could bid directly but not both. In case bids are received from both the manufacturer/ supplier and the agent, bid received from the agent shall be ignored. However, this shall not debar more than one Authorised distributor (with/ or without the OEM). from quoting equipment manufactured by an Original Equipment Manufacturer (OEM) in procurements under a Proprietary Article Certificate.
- iv) A Supplier participates in more than one bid in this tender process. Participation in any capacity by a Supplier (including the participation of a Supplier as a partner/ JV member or sub-Supplier in another bid or vice-versa) in more than one bid shall result in the disqualification of all bids in which he is a party. However, this does not limit the participation of an entity as a sub-Supplier in more than one bid if he is not bidding independently in his own name or as a member of a JV.

The Supplier declares that they have read and understood the above aspects, and the Supplier confirms that such conflict of interest does not exist and undertakes that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Supplier(s), in this regard. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process. **In case, the Supplier is found having indulged in above activities, the same will be considered as a violation of the tender conditions, and suitable action shall be taken by the BUYER as per extant policies/ guidelines.**

(Signature, Date & Seal of
Authorized Signatory of the Supplier)

Ref : 1) ENQUIRY No. & Date:

DECLARATION BY MSE SUPPLIERS REGARDING OWNERSHIP STRUCTURE
ALONG WITH UDYAM CERTIFICATE

Any Supplier falling under MSE category shall furnish the following details & submit documentary evidence/ Govt. Certificate etc. in support of the same along with their techno-commercial offer:

Type under MSE	SC/ST Owned	Women Owned	Others (excluding SC/ST & Women Owned)
Micro			
Small			

(Signature, Date & Seal of Authorized Signatory of the Supplier)

UNDERTAKING

(To be typed and submitted in the Letter Head of the Company/Firm of Supplier)

To

BHARAT HEAVY ELECTRICALS LTD.
POWER SECTOR - PROJECT ENGINEERING MANAGEMENT (PS- PEM)
3rd Floor, BHEL-SADAN,
PLOT NO. 25, SECTOR-16-A,
NOIDA-210-301 (U.P.)

Dear Sir/Madam,

Sub: DECLARATION REGARDING INSOLVENCY/ LIQUIDATION/ BANKRUPTCY PROCEEDINGS

Ref: GeM Bid No:

I/We, _____ declare that,

I/We am/are not admitted under insolvency resolution process or liquidation under Insolvency and Bankruptcy Code, 2016, as amended from time to time or under any other law as on date, by NCLT or any adjudicating authority/authorities.

**Sign. of the AUTHORISED SIGNATORY
(With Name, Designation and Company seal)**

Place:

Date:

ANNEXURE K

GUIDELINES FOR PAYMENT OF DETENTION CHARGES FOR PEM'S BOIs

- 1) Detention charges shall be paid extra if the vehicles are not unloaded/ released beyond free period owing to reasons attributable to BHEL/Customer site. 'free time' and detention charges shall be as follows:

Sl. No.	Vehicle type	Free time in days	Detention charges per day (Rs.)
i	ICV/LCV/HCV/Truck/ Multi-axle vehicle. Open body	3	1000
ii	Mechanical Trailers up to 28T	3	1200
iii	Mechanical Trailers above 28T	3	1500

- 2) Free Time (in days) includes the day of arrival at Halt station but excludes the day of exit.
3) If the reporting period happened to be Sundays & Holidays, then the next working day will be considered as date of reporting of vehicle.
4) Total detention charges shall be limited to 50% of basic freight charges (at actual limited to the value mentioned in PO/ Contract) of respective consignment.

5) **Illustration of Calculation of Detention Days:**

If the vehicle reached the site for unloading and made IN entry on 01.01.2026, then free period (3 days) will be up to 03.01.2026. If the Exit Entry of vehicle is made on 06.01.2026, then detention will be calculated excluding 06.01.2026 and free period (3 days) and two days will be eligible for detention.

6) **Payment of Detention Charges**

Detention charges at unloading point at sites shall be paid based on Gate entry at site with certification duly signed and stamped by BHEL Site MM site personnel. In case the vehicle reached at site and the site security/ site officials are not allowing the vehicle to enter the site., the date of arrival of vehicle at site, based on GPS report (GPS report should have vehicle details to ensure genuineness) will be considered as the date of reporting at site for calculation of detention charges duly certified BHEL site MM personnel. For claiming detention charges against GPS report, vendor to immediately intimate through mail to concerned PEM's Purchase personnel along with GPS report. Supporting document such as RC of vehicle shall be submitted along with the invoice for authentication of vehicle type.

No detention charges shall be payable, if the delay in receipt & unloading of the materials at site is attributable to the transporter.

INTEGRITY PACT**Between**

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi - 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

and

_____, (description of the party along with address), hereinafter referred to as "The Bidder/ Contractor" which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for _____

_____ (hereinafter referred to as "Contract"). The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint panel of Independent External Monitor(s) (IEMs), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1- Commitments of the Principal

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: -
 - 1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - 1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
 - 1.1.3 The Principal will exclude from the process all known prejudiced persons.
- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Bharatiya Nyaya Sanhita (BNS) 2023 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 2 - Commitments of the Bidder(s)/ Contractor(s)

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. The Bidder(s)/ Contractor(s) commits himself to observe the following principles during participation in the tender process and during the contract execution.

- 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he/ she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
- 2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- 2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant Bharatiya Nyaya Sanhita (BNS) and Prevention of Corruption Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- 2.1.4 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and shall await their decision in the matter.

Section 3 - Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process, terminate the contract, if already awarded, exclude from future business dealings and/ or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

Section 4 - Compensation for Damages

- 4.1 If the Principal has disqualified the Bidder (s) from the tender process before award / order acceptance according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/ Bid Security.
- 4.2 If the Principal is entitled to terminate the Contract according to Section 3, or terminates the Contract in application of Section 3 above, the Bidder(s)/ Contractor (s) transgression through a violation of Section 2 above shall be construed breach of contract and the Principal shall be entitled to demand and recover from the Contractor an amount equal to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee, whichever is higher, as damages, in addition to and without prejudice to its right to demand and recover compensation for any other loss or damages specified elsewhere in the contract.

Section 5 - Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 (three) years (to be reckoned from date of bid submission) with any other company in any country conforming to the anti-corruption approach in India that could justify his exclusion from the tender process. The date of such transgression, for the purpose of disclosure by the bidders in this regard, would be the date on which cognizance of the said transgression was taken by the competent authority. The transgression(s), for which cognizance was taken even before the said period of three years, but are pending conclusion, shall also be reported by the bidders.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason or action can be taken as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

Section 6 - Equal treatment of all Bidder (s)/ Contractor (s) / Sub-contractor (s)

- 6.1 The Principal will enter into Integrity Pacts with identical conditions as this Integrity Pact with all Bidders and Contractors.
- 6.2 In case of a joint venture, all the partners of the joint venture should sign the Integrity Pact. In case of Sub-contracting, the Principal Contractor shall be solely responsible for the adherence to the provisions of IP by the sub-contractor(s).
- 6.3 The Principal will disqualify from the tender process all Bidders who do not sign this Integrity Pact or violate its provisions.

Section 7 - Criminal Charges against violating Bidders/ Contractors /Subcontractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 -Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible panel of Independent External Monitor (s) (IEMs) for this Integrity Pact. The task of the IEMs is to review independently and objectively, whether and to what extent the parties comply with the obligations under this Integrity Pact on receipt of any complaint by them from the bidder(s).
- 8.2 The IEMs are not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The IEMs shall be provided access to all documents/ records pertaining to the Contract, for which a complaint or issue is raised before them as and when warranted. However, the documents/records/information having National Security implications and those documents which have been classified as /Top Secret are not to be disclosed.
- 8.4 The Principal will provide to the IEMs sufficient information about all meetings among the parties related to the Contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the IEMs the option to participate in such meetings.
- 8.5 The role of IEM is advisory and the advice of IEM is non- binding on the Organization. However, as IEMs are invariably persons with rich experience who have retired as senior functionaries of the government, their advice would help in proper implementation of the IP.

- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of the tendering process, the matter should be examined by the full panel of IEMs jointly, who would look into the records, conduct an examination, and submit their joint recommendations to the Management. In case the full panel is not available due to some unavoidable reasons, the available IEM(s) will conduct examination of the complaints. Consent of the IEM(s), who may not be available, shall be taken on record.
- 8.7 The IEMs shall examine all the representations/grievances/ complaints received by them from the bidders or their authorized representative related to any discrimination on account of lack of fair play in modes of procurement and bidding systems, tendering method, eligibility conditions, bid evaluation criteria, commercial terms & conditions, choice of technology/ specifications etc.
- 8.8 The CMD, BHEL shall decide the compensation to be paid to the IEMs and its terms and conditions.
- 8.9 IEMs should examine the process integrity, they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the Principal should be looked into by the CVO of the Principal.
- 8.10 If the IEMs have reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Bharatiya Nyaya Sanhita (BNS)/ Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the IEMs may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.11 After award of work, the IEMs shall look into any issue relating to execution of Contract, if specifically raised before them. As an illustrative example, if a Contractor who has been awarded the Contract, during the execution of Contract, raises issue of delayed payment etc. before the IEMs, the same shall be examined by the panel of IEMs.
- 8.12 However, the IEMs may suggest systemic improvements to the management of the Principal, if considered necessary, to bring about transparency, equity and fairness in the system of procurement.
- 8.13 The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration

- 9.1 This Integrity Pact shall be operative from the date this Integrity Pact is signed by both the parties. Any violation of the same would entail disqualification of the bidders and exclusion from future business dealings.
- 9.2 If any claim is made/ lodged during currency of this Integrity Pact, the same shall be binding and continue to be valid despite the lapse of this Pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 - Other Provisions

- 10.1 This Integrity Pact is subject to Indian Laws and exclusive jurisdiction shall be of the competent Courts as indicated in the Tender or Contract, as the case may be.
- 10.2 Changes and supplements as well as termination notices need to be made in writing.

- 10.3 If the Bidder(s)/ Contractor(s) is a partnership or a consortium or a joint venture, this Integrity Pact shall be signed by all partners of the partnership or joint venture or all consortium members.
- 10.4 Should one or several provisions of this Integrity Pact turn out to be invalid, the remainder of this Integrity Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 10.5 Only those bidders / contractors who have entered into this Integrity Pact with the Principal would be competent to participate in the bidding. In other words, entering into this Integrity Pact would be a preliminary qualification.
- 10.6 In the event of any dispute between the Principal and Bidder(s)/ Contractor(s) relating to the Contract, in case, both the parties are agreeable, they may try to settle dispute through Mediation before the panel of IEMs in a time bound manner. If required, the Principal may adopt any mediation rules for this purpose. However, not more than five meetings shall be held for a particular dispute resolution. The fees/expenses on dispute resolution shall be equally shared by both the parties. In case, the dispute remains unresolved even after mediation by the panel of IEMs, either party may take further action as the terms & conditions of the Contract.

Dheeraj Singh

Digitally signed
by Dheeraj Singh
DN: cn=Dheeraj
Singh, o=BHEL,
ou=PEM,
email=dheerajsin
gh@bhel.in, c=IN
Date: 2026.10.15
10:51:12 +05'30'

For & On behalf of the Principal
(Office Seal)

Place _____

Date _____

Witness: _____
(Name & Address) _____

For & On behalf of the Bidder/ Contractor
(Office Seal)

Witness: _____
(Name & Address) _____

BANK GUARANTEE FOR EARNEST MONEY DEPOSIT

(On Non-Judicial paper of appropriate value)

Bank Guarantee No.....**Date.....**

To

BHARAT HEAVY ELECTRICALS LTD.

POWER SECTOR - PROJECT ENGINEERING MANAGEMENT (PS- PEM)

3rd Floor, BHEL-SADAN,

PLOT NO. 25, SECTOR-16-A,

NOIDA-210-301 (U.P.)

Dear Sirs,

In accordance with the terms and conditions of Invitation for Bids/Notice Inviting Tender No.....¹(Tender Conditions), M/s. having its registered office at ² (hereinafter referred to as the 'Tenderer'), is submitting its bid for the work of.....³ invited by ⁴(name of the Employer) through its Unit at(

The Tender Conditions provide that the Tenderer shall pay a sum of Rs as Earnest Money Deposit in the form therein mentioned. The form of payment of Earnest Money Deposit includes Bank Guarantee executed by a Scheduled Bank.

In lieu of the stipulations contained in the aforesaid Tender Conditions that an irrevocable and unconditional Bank Guarantee against Earnest Money Deposit for an amount of ⁵ is required to be submitted by the Tenderer as a condition precedent for participation in the said Tender and the Tenderer having approached us for giving the said Guarantee,

we, the[Name & address of the Bank]

..... having our Registered Office at

.....(hereinafter referred to as the Bank) being the Guarantor under this

Guarantee, hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer without any demur, merely on your first demand any sum or sums of Rs.

.....⁵ (in words Rupees.....) without any reservation, protest, and recourse and without the beneficiary needing to prove or demonstrate reasons for its such demand.

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Suppliers in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal. The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment hereunder and the Tenderer shall have no claim against us for making such payment.

We Bank further agree that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Tender or to extend the time of submission of from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Tenderer and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Tenderer or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Tenderer or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Tenderer and notwithstanding any security or other guarantee that the Employer may have in relation to the Tenderer's liabilities.

This Guarantee shall be irrevocable and shall remain in force up to and including.....⁶ and shall be extended from time to time for such period as may be desired by the Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Tenderer but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms hereof. However, unless a demand or claim under this Guarantee is made on us in writing on or before the ⁷ we shall be discharged from all liabilities under this Guarantee.

This Bank Guarantee shall be governed, construed and interpreted in accordance with the laws of India.

Courts at shall alone have exclusive jurisdiction over any matter arising out of or in connection with this Bank Guarantee

We, ... Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a. The liability of the Bank under this Guarantee shall not exceed.....⁵....
- b. This Guarantee shall be valid up to ⁶
- c. Unless the Bank is served a written claim or demand on or before ⁷ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, ... Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of
(Name of the Bank)

Date.....

Place of Issue.....

¹ *Details of the Invitation to Bid/Notice Inviting Tender*

² *Name and Address of the Tenderer*

³ *Details of the Work*

⁴ *Name of the Employer*

⁵ *BG Amount in words and Figures*

⁶ *Validity Date*

⁷ *Date of Expiry of Claim Period*

Notes:

1. The BG for EMD shall remain valid for a period of 45 (forty-five) days beyond the final bid validity period.
2. The BG should be on Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the BG is submitted or is to be acted upon or the rate prevailing in the State where the BG was executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Supplier/ Bank issuing the guarantee.
3. From Nationalized/Public Sector / Private Sector/ Foreign Banks can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.

INSURANCE SURETY BOND TOWARDS BID SECURITY

(To be stamped in accordance with Stamp Act of India)

Insurance Surety Bond No. [Insert Bond Number]

Date [Insert Date]

TO

BHARAT HEAVY ELECTRICALS LTD.
 POWER SECTOR - PROJECT ENGINEERING MANAGEMENT (PS- PEM)
 3rd Floor, BHEL-SADAN,
 PLOT NO. 25, SECTOR-16-A,
 NOIDA-210-301 (U.P.)

Dear Sirs,

In accordance with the terms and conditions of Invitation for Bids/Notice Inviting Tender No..... (Tender Conditions), M/s. having its registered office at (hereinafter referred to as the 'Tenderer'), is submitting its bid for the work of invited by (name of the Employer, hereinafter referred to as the 'Employer') through its Unit at The Tender Conditions provide that the Tenderer shall pay a sum of Rs as Earnest Money Deposit/ Bid Security in the form therein mentioned. The form of payment of Earnest Money Deposit/ Bid Security includes Insurance Surety Bond from an Insurer as per the extant guidelines issued by Insurance Regulatory and Development Authority of India (IRDAI).

In lieu of the stipulations contained in the aforesaid Tender Conditions that an irrevocable and unconditional Insurance Surety Bond against Earnest Money Deposit for an amount of is required to be submitted by the Tenderer as a condition precedent for participation in the said Tender and the Tenderer having approached us for giving the said Bond, we, the[Name & address of the Insurer] having our Registered Office at(hereinafter referred to as the Insurer) under this Bond, hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer without any demur, merely on your first demand any sum or sums up to the maximum of Rs.....(in words Rupees.....) without any reservation, protest, and recourse and without the Employer needing to prove or demonstrate reasons for its such demand.

Any such demand made on the Insurer shall be conclusive as regards the amount due and payable by the Insurer under this Surety Bond. However, our liability under this Bond shall be restricted to an amount not exceeding Rs.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the tenderer in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

The payment so made by us under this Bond shall be a valid discharge of our liability for payment hereunder.

We Insurer further agree that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Tender or to extend the time of submission from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Tenderer and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Tenderer or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Tenderer or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Insurer also agrees that the Employer at its option shall be entitled to enforce this Surety Bond against the Insurer as a principal debtor, in the first instance without proceeding against the Tenderer and notwithstanding any security or other guarantee that the Employer may have in relation to the Tenderer's liabilities.

This Surety Bond shall be irrevocable and shall remain in force up to and including and shall be extended from time to time for such period as may be desired by the Employer.

This Surety Bond shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Tenderer but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms hereof. However, unless a demand or claim under this Surety Bond is made on us in writing on or before the or the extended date in accordance with the preceding para, we shall be discharged from all liabilities under this Bond.

We, ... Insurer lastly undertake not to revoke this Surety Bond during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Insurer under this Surety Bond shall not exceed.....
- b) This Surety Bond shall be valid up to or the extended date, if any.
- c) Unless the Insurer is served a written claim or demand on or before or the extended date, if any, all rights under this Surety Bond shall be forfeited and the Insurer shall be relieved and discharged from all liabilities under this Surety Bond irrespective of whether or not the original Insurance Surety Bond is returned to the Insurer. We, ... Insurer, have power to issue this Surety Bond under law and the undersigned as a duly authorized person has full powers to sign this Surety Bond on behalf of the Insurer.

For and on behalf of

[Signature]

[(Name of the Insurer)]

[Official Address]

[Designation of Insurer Stamp]

Authorized vide Power of Attorney No./Staff Authority No. [Insert POA Number]

Date.....

Place of Issue.....

1 Details of the Invitation to Bid/Notice Inviting Tender

2 Name and Address of the Tenderer

3 Details of the Work

4 Name of the Employer

5 Insurance Surety Bond Amount in words and Figures

6 Validity Date

7 Date of Expiry of Claim Period

Notes:

1. The Insurance Surety Bond for EMD shall remain valid for a period of 45 (forty-five) days beyond the final bid validity period.
2. The Insurance Surety Bond should be on Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the Insurance Surety Bond is submitted or is to be acted upon or the rate prevailing in the State where the Insurance Surety Bond was executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Supplier/ Insurer issuing the Insurance Surety Bond.

3. The Insurance Surety Bond shall be from an Insurer as per guidelines issued by Insurance Regulatory and Development Authority of India (IRDAI) as amended from time to time.
4. Insurance Surety Bond issued by Branches in India can be accepted subject to the condition that the Insurance Surety Bond should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.

BANK GUARANTEE FOR PERFORMANCE SECURITY

(On non-Judicial paper of appropriate value)

Bank Guarantee No:

Date:

TO

BHARAT HEAVY ELECTRICALS LTD.

POWER SECTOR - PROJECT ENGINEERING MANAGEMENT (PS- PEM)

3rd Floor, BHEL-SADAN,

PLOT NO. 25, SECTOR-16-A,

NOIDA-210-301 (U.P.)

Dear Sirs,

In consideration of Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at _____¹ through its Unit at.....(name of the Unit) having awarded to (Name of the Supplier) with its registered office at _____² hereinafter referred to as the ' Supplier', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated ³ valued at Rs.....⁴ (Rupees -----) / FC.....(in words.....) for ⁵ (hereinafter called the 'Contract') and the Supplier having agreed to provide a Contract Performance Bank Guarantee, equivalent to% (... Percent) of the said value of the Contract to the Employer for the faithful performance of the Contract,

We, ..., (hereinafter referred to as the Bank), having registered/Head office at and inter alia a branch at being the Guarantor under this Guarantee, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer any sum or sums up to a maximum amount of Rs -----⁶ (Rupees -----) without any demur, immediately on first demand from the Employer and without any reservation, protest, and recourse and without the Employer needing to prove or demonstrate reasons for its such demand.

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Supplier in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder and the Supplier shall have no claim against us for making such payment.

We the bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract/ satisfactory completion of the performance guarantee period as per the terms of the Contract and that it shall

continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

We BANK further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Supplier and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Supplier and notwithstanding any security or other guarantee that the Employer may have in relation to the Supplier's liabilities.

This Guarantee shall remain in force up to and including.....⁷ and shall be extended from time to time for such period as may be desired by Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.

Unless a demand or claim under this guarantee is made on us in writing on or before the ⁸ we shall be discharged from all liabilities under this guarantee thereafter.

This Bank Guarantee shall be governed, construed and interpreted in accordance with the laws of India.

Courts at shall alone have exclusive jurisdiction over any matter arising out of or in connection with this Bank Guarantee

We, ... BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a. The liability of the Bank under this Guarantee shall not exceed.....⁶
- b. This Guarantee shall be valid up to ⁷
- c. Unless the Bank is served a written claim or demand on or before ⁸ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, _____ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of
(Name of the Bank)

Dated.....

Place of Issue.....

¹ NAME AND ADDRESS OF EMPLOYER i.e., Bharat Heavy Electricals Limited

² NAME AND ADDRESS OF THE SUPPLIER /SUPPLIER / SUPPLIER.

³ DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

⁴ CONTRACT VALUE

⁵ PROJECT/SUPPLY DETAILS

⁶ BG AMOUNT IN FIGURES AND WORDS

⁷ VALIDITY DATE

⁸ DATE OF EXPIRY OF CLAIM PERIOD

Note:

1. Bank Guarantee should be refunded to the contractor without interest, after he duly performs and completes the contract in all respects but not later than 60 (sixty) days of completion of all such obligations including the warranty under the contract.
2. The BG should be on Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the BG is submitted or is to be acted upon or the rate prevailing in the State where the BG was executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Supplier/ Bank issuing the guarantee.
3. From Nationalized/Public Sector / Private Sector/ Foreign Banks can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.

INSURANCE SURETY BOND TOWARDS PERFORMANCE SECURITY

(To be stamped in accordance with Stamp Act of India)

Insurance Surety Bond No. [Insert Bond Number]

Date [Insert Date]

TO

BHARAT HEAVY ELECTRICALS LTD.
 POWER SECTOR - PROJECT ENGINEERING MANAGEMENT (PS- PEM)
 3rd Floor, BHEL-SADAN,
 PLOT NO. 25, SECTOR-16-A,
 NOIDA-210-301 (U.P.)

Dear Sirs,

In consideration of Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at _____ through its Unit at.....(name of the Unit) having awarded to (Name of the Vendor / Contractor / Supplier) with its registered office at _____ hereinafter referred to as the ' Vendor / Contractor / Supplier ', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated valued at Rs..... (Rupees -----)/FC.....(in words.....) for (hereinafter called the 'Contract') and the Vendor / Contractor / Supplier having agreed to provide an Insurance Surety Bond towards Performance Security, equivalent to% (.... Percent) of the said value of the Contract to the Employer for the faithful performance of the Contract, we, ... (hereinafter referred to as the Insurer), having registered/Head office at and inter alia a branch at under this Surety Bond, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer any sum or sums up to a maximum amount of Rs ----- (Rupees -----) without any demur, immediately on first demand from the Employer and without any reservation, protest, and recourse and without the Employer needing to prove or demonstrate reasons for its such demand.

Any such demand made on the Insurer shall be conclusive as regards the amount due and payable by the Insurer under this Surety Bond. However, our liability under this Surety Bond shall be restricted to an amount not exceeding Rs. _____.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Vendor / Contractor / Supplier in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

The payment so made by us under this Surety Bond shall be a valid discharge of our liability for payment thereunder.

We the Insurer further agree that the Surety Bond herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract/satisfactory completion of the performance guarantee period as per the terms of the Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

We Insurer further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and

conditions of the said Contract or to extend time of performance by the said Vendor / Contractor / Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Vendor / Contractor / Supplier and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Vendor / Contractor / Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Vendor / Contractor / Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Insurer also agrees that the Employer at its option shall be entitled to enforce this Surety Bond against the Insurer as a principal debtor, in the first instance without proceeding against the Vendor / Contractor / Supplier and notwithstanding any security or other guarantee that the Employer may have in relation to the Vendor / Contractor / Supplier 's liabilities.

This Surety Bond shall remain in force up to and including..... and shall be extended from time to time for such period as may be desired by Employer.

This Surety Bond shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Vendor / Contractor / Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.

Unless a demand or claim under this guarantee is made on us in writing on or before the or the extended date in accordance with the preceding para, we shall be discharged from all liabilities under this Surety Bond thereafter.

We, ... Insurer lastly undertake not to revoke this Surety Bond during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Insurer under this Surety Bond shall not exceed.....
- b) This Surety Bond shall be valid up to or the extended date, if any.
- c) Unless the Insurer is served a written claim or demand on or before _____ or the extended date, if any, all rights under this guarantee shall be forfeited and the Insurer shall be relieved and discharged from all liabilities under this Surety Bond irrespective of whether or not the original Surety Bond is returned to the Insurer.

We, _____ Insurer, have power to issue this Surety Bond under law and the undersigned as a duly authorized person has full powers to sign this Surety Bond on behalf of the Insurer.

For and on behalf of

[Signature]

[(Name of the Insurer)]

[Official Address]

[Designation of Insurer Stamp]

Authorized vide Power of Attorney No./Staff Authority No. [Insert POA Number]

Dated.....

Place of Issue.....

- 1 NAME AND ADDRESS OF EMPLOYER i.e. Bharat Heavy Electricals Limited
- 2 NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.
- 3 DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE
- 4 CONTRACT VALUE

- 5 PROJECT/SUPPLY DETAILS
- 6 AMOUNT IN FIGURES AND WORDS
- 7 VALIDITY DATE
- 8 DATE OF EXPIRY OF CLAIM PERIOD

Notes:

1. Insurance Surety Bond should be refunded to the contractor without interest, after he duly performs and completes the contract in all respects but not later than 60 (sixty) days of completion of all such obligations including the warranty under the contract.
2. The Insurance Surety Bond should be on Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the Insurance Surety Bond is submitted or is to be acted upon or the rate prevailing in the State where the Insurance Surety Bond was executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Supplier/ Insurer issuing the Insurance Surety Bond.
3. The Insurance Surety Bond shall be from an Insurer as per guidelines issued by Insurance Regulatory and Development Authority of India (IRDAI) as amended from time to time.
4. Insurance Surety Bond for Performance Security shall be submitted to the Buyer in Original.
5. Insurance Surety Bond issued by Branches in India can be accepted subject to the condition that the Insurance Surety Bond should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.