



Government of India  
Bhabha Atomic Research Centre  
Nuclear Recycle Group  
Technology Development Division

Ref.: NRG/TDDS/JJ/2018/ 111306

Date: 05/06/2018

*TENDER No.:* NRG/TDDS/JJ/2018/

Sub: Supply, testing and laying and termination of 550 meters of 4 C, 16 sq mm Copper Armored Cable for replacing old cables in Hall -1 and Hall-2 in CDCFT Building BARC Trombay as per attached annexure .

Dear Sir,

In connection with the above mentioned work you are requested to submit your lowest quotation on the basis of terms and conditions and detailed scope of work mentioned in annexure attached.

Notes:

1. Your offer shall be valid for minimum 90 days from the date of opening. Quoted price shall be inclusive of all taxes; duties etc and remain firm during the period of execution of the order.
2. Any deviations from specification shall be clearly mentioned in your offer.
3. Payment will be made within thirty days of supply, installation and successful completion of work at our site.

Tender offers will be accepted up to **2 pm on 20/06/2018**. **The tenders will be opened at 3 pm** on the same day in presence of a nominee of Accounts Division, BARC.

Jyoti Jha  
Technology Development Division, TDD (NRG),  
CDCFT Building,  
BARC, TROMBAY, MUMBAI – 85.

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Email- jyotijha@barc.gov.in

The offer shall clearly indicate the time required for completing the entire work.

Thanking you.

*Jyoti Jha*  
5.6.18  
(Jyoti Jha)  
Scientific Officer, F

## Technical Specifications (NRG/TDDS/JJ/2018/)

**1. Scope of work** Supply, testing and laying and termination of 550 meters of 4 C, 16 sq mm Copper Armored Cable for replacing old cables in Hall -1 and Hall-2 in CDCFT Building BARC Trombay as detailed below:

**1.1** Supply and installation of 4 core X 16 sq mm copper armored cable.

S.No	Specification	Technical Data
1-	<b>Conductor Cross Section area</b>	<b>16 Sq. mm</b>
2-	Applicable Standard	IS 7098/ Part-1/88
3-	Voltage Grade	1100 Volts
4-	Conductor material	99.995 pure copper conductor
5-	Number of Core	<b>3 x ½ Core</b>
6-	Type of Core	Compact Circular/Stranded
7-	Max DC Resistance of Conductor	As per IS
8-	Insulation	XLPE
9-	Inner Sheath	PVC
10-	Outer Sheath	FRLS
11-	Nominal Thickness of XLPE insulation	As per standard
12-	Thickness of Outer sheath (Minimum)	As per standard
13-	Current rating in Air (With standard conditions)	89 Amps
14-	Types of armoured	GI round armoured
15-	<b>Quantity Required</b>	<b>550 Meters</b>
16-	Inspection & Testing	<p>1- Routine &amp; Acceptance tests as per relevant standards with following tests for FRLS properties.</p> <p>a-) Oxygen Index (As per ASTM-D-2863)</p> <p>b-) Temperature Index (As per ASTM-D-2863)</p> <p>c-) Flammability (As per IEC 332 (PT-1) &amp; S5 424 14 75, Class F3)</p> <p>d-) Smoke Density (As per ASTM-D-2843)</p> <p>e-) Acid Gas Generation (As per IEC-754-1)</p> <p>2- Routine &amp; Acceptance test for XLPE insulation as per relevant standards.</p> <p>All above test shall be conducted at manufacturer's works with the presents of PURCHASER'S Engineers.</p>
17	Make- Standard	
18-	<b>Information to be submitted by BIDDER</b>	
18.1	Continuous Current rating of cable in air 40°C	18.2
18.2	Derating factors	18.3
18.3	Overload capacity Amps & Duration	18.4

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18.4	Reactance @ 50 Hz
18.5	Capacitance

## 2. Completion Period

The work covered by this order shall be completed within 120 days from the date of issue of Work Order.

## 3. Materials

Supplier has to arrange all the materials and components required for the execution of this work. No material will be issued as FIM by BARC.

## 4. Inspection

BARC Engineer will carry out the stage wise as well as final inspection during the execution of work at all the places. However, inspection by the purchaser shall not relieve the contractor from his responsibilities of the requirements specified.

## 5. Guarantee

The item covered under this work order shall be guaranteed for satisfactory performance against manufacturing defects and faulty workmanship, for a period of 12 months from the date of installation. If the item becomes defective during this period, the contractor shall be responsible for making arrangement for repair/ replacement at his own cost.

6. **Validity** The offer shall remain valid for 90 days.

Admittedly  
05.06.18.

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