

From:**Name of Office** : Executive Engineer**Office Address** : EHV (O&M) Division, Panvel, Takka Colony, Panvel, Dist – Raigad - 410 206.**CIN No.** : U40109MH2005SGC153646**Contact No.** : 022- 2746 5410**Email ID** : ehvpanveln1@gmail.com/ ee7210@mahatransco.in**Web site** : www.mahatransco.in**Ref.No.:** EE/EHV/O&M/DIVN/PNL/Tech/61/No. 1373**DATE:-** 23.10.2024**Sub:-** E-Enquiry for work of repairing of R-phase underground cable insulation puncture of 220kV Ulwe-Waghivali-2 line under EHV Lines S/Dn. Panvel-2 under EHV (O&M) Division Panvel.**Dear Sir,**

Please offer reasonable rates for the subject work as per the enclosed schedule 'A'. The detailed scope of works are given below.

Please note the following.

1.DUE DATE: The quotations complete in all respects, duly sealed and super scribed should be submitted to this office between the period of **23.10.2024 to 28.10.2024, upto 11:00 hrs.** positively.

Estimated Cost	: Rs. 18,50,664/- including taxes
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Contact Person :- The Addl. Executive Engineer, (O) : Phone No. 022-27465410

2. SCOPE OF WORKS: As detailed in Scope of Work 'A'

3. QUOTED RATES: The quoted rates should include the cost of material, all skilled and unskilled labour and also the requisite T&P, incidental charges, Lodging Boarding Transportation, etc.

4. COMPLETION TIME: Time is essence: : The Successful bidder will have to complete the entire work in all respect within a month from date of handing over of site. The contractor shall, in coordination with in charge, plan, propose and follow up to carry the work.

5. PAYMENT : On completion of the job, the bill should be submitted to the Engineer in charge. The payment will be effected by this office within a reasonable time as per actual work done."GSTR1 and GSTR3B copies should be submitted by vendor along with bill".

6. SECURITY DEPOSIT : The successful bidder will have to pay an amount Equivalent to 10% of the Basic contract value towards security deposit in this office, otherwise same will be deducted from your bill.

7. VALIDITY OF OFFER: The offer should be valid for our acceptance for period of 120 days from the date of opening the same.

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Bandra (E), Mumbai – 400 051

8. Documents required to be attached along with offer:-

- 1) Following are the list of qualifying documents required for qualifying in the Techno- Commercial Bids for opening of the Price Bids.
 - a. Registration under GST (if yes Please Attach GSTN Certificate).
 - b. Scan copy of Pan card indicating PAN Number (if yes Please Attach).
 - c. Up to date Income Tax Return Certificate for last 2 years. (if yes Please Attach).
 - d. The contractor should have minimum of 2 years' experience in field of MSETCL or any other Government or private undertaking (Experience/completion certificate covering 2 years should be submitted).
 - e. As per Circular No. MSETCL/E.D (Trans.)/No. 1312 dt. 20.02.2020, Bidders have to submit an undertaking in the attached Proforma ANNEXURE-G declaring that their Firm is not Debarred/ Blacklisted by Government/Semi-Government/Other Power Utilities, anywhere.

9. SITE VISIT : Information about the work given in specification is purely tentative and may change during actual execution as per site requirement. The Bidder is advised to visit and examine the sites of work and their surroundings and obtain for himself, at his own risk and cost, all information that may be necessary for preparing the bid and entering into the contract for the works. The cost of visiting the site shall be at the Bidder's own expense.

10. Right to cancel/alteration/calling deviation any or all the tender offers without assigning any reason thereof is reserved by the undersigned.
11. Rate quoted should be excluding taxes and taxes should be quoted separately.
12. The contractor shall be responsible for all the liabilities as per statutory requirements for the labour/workers employed by him for the said work and the contractor shall indemnify MSETCL in the event of any untoward incident till the completion of the work.
13. All safety gear as per standard requirements is to be provided to his personnel working on site by the contractor to avoid any accident.
14. It is the responsibility of the contractor to provide insurance of all the labour/workman working at site valid for the complete period of contract.

15) WORKMEN'S COMPENSATION INSURANCE

This insurance shall protect the Contractor against all claims applicable under the workmen's compensation Act 1948 or any amendment thereof. This policy shall also cover the Contractor against claims for injury, disability, disease or death of his or his sub-contractor's employees, which for any reason are not covered under the Workmen's compensation Act 1948. The liabilities shall not less than workmen's Compensation as per statutory provisions. As per Maharashtra Govt. GR and Company letter No.8450, it is compulsory for Contractor to have Insurance from Directorate of Insurance, Mumbai. (The Bidder Should Provide the insurance policy as per mention above). If insurance copy not provided then 1% will be deducted from 1st RA bill.

15. The contractor shall be responsible for quality of material and workmanship. Low grade quality material will not be accepted and should be approved from the undersigned or his designated representative before starting the work.
16. The subject work/ part of the work shall not be sublet else the contract will be cancelled.
17. Income tax, Labourcess & GST as applicable will be deducted from your bills.."GSTR1 and GSTR3B copies should be submitted by vendor along with bill"

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18. All disputes, difference related to enquiry / tender, shall be subject to exclusive jurisdiction of Raigad District Court.

19. Notwithstanding anything stated herein, the MSETCL's general terms and conditions of contract shall be applicable to this work also.

20. Guarantee :

- a) The contractor shall warranty/guarantee that, the material will be new and in accordance with contract documents & will be free from defects in material and workmanship for a period of 12 months from the date of final acceptance/commissioning of works by MSETCL. Any defects developed due to defective materials and / or workmanship during testing and commissioning of equipment's or during the guarantee period of 12 months from the date of final acceptance of work by MSETCL, shall be rectified or made good by the contractor at his own cost.
- b) The contractor's liability shall be limited to repair / replacement of any defective part in the equipment of his own manufacturer or those of his sub-contractor and arising from faulty design, materials and / or workmanship. All cost for the repair and / or replacement of defective part such as dismantling, re-erection, supply, transportation etc. shall be to the account of contractor.

Thanking you,

Encl: 1) SCOPE OF WORK 'A'
2) GTP of Cable

Yours faithfully,

Sd/-
(J. S. Waghmode)
EXECUTIVE ENGINEER,(I/C)
E.H.V.(O&M),DN. PANVEL

**MAHARASHTRA STATE ELECTRICITY TRANSMISSION CO. LTD.
EHV. (O&M), DIVISION, PANVEL.**

SCOPE OF WORK 'A'

Sub :- E-Enquiry for work of repairing of R-phase underground cable insulation puncture of 220kV Ulwe-Waghivali-2 line under EHV Lines S/Dn. Panvel-2 under EHV (O&M) Division Panvel.

Sr. no.	Service No	Description	Unit	Qty.	Remark
		Supply Part			
1		Normal straight through joint suitable for above cable sizes with all accessories(Suitable for 500sqmm to 1200 sqmm)	EA	2	
		Service Part			
2		220 kV Cable Straight Through Joint for 220 kV single core, 1200sqmm Cu XLPE Copper cable with all consumables at site complete.	EA	2	
3		Sand bedding in excavated trench laying of all sizes of single core 220 kV XLPE cable along with approach cable (FOC) in excavated trench (including jointing and installation of Approach cable with suitable termination arrangement).	RMT	30	
4		Providing and service pf scaffolding, tent, fan, DG Set power tool, QC watering pump etc for 220kV Cbale joint work	Set	2	
5		Service of 220kV 1C X1200 Sq mm cable and transport laying work in RCC trench	Mtrs	30	
6		Cable trench excavation with back filling	Cum	90	
7		RCC tiles removing and fixing	Nos	175	
8		Finding of EHV cable of 1200sqmm with High pressure test along with excavation and transportation charges.	EA	2	

Note: 1) Taxes should be quoted separately.
2) Quantity may vary as per actual.

Sd/-
(J. S. Waghmode)
EXECUTIVE ENGINEER,(I/C)
E.H.V.(O&M),DN. PANVEL

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Annexure - 'G'

(As per circular No. MSETCL/E.D.(Trans)/1312 dt. 20.02.2020)

Undertaking to be submitted by the Bidder declaring that Bidder is not Debarred/Blacklisted by Government/Semi-Government/Other Power Utilities

I/We hereby declare that I/We is/are participating in MSETCL's Tender No._____

As on date of submission of this Tender, I/We hereby declare that My Firm/We is/are not Debarred/Blacklisted by Any Government/Semi-Government/Other Power Utilities, anywhere.

The above declaration is true to the best of My/Our knowledge and belief.

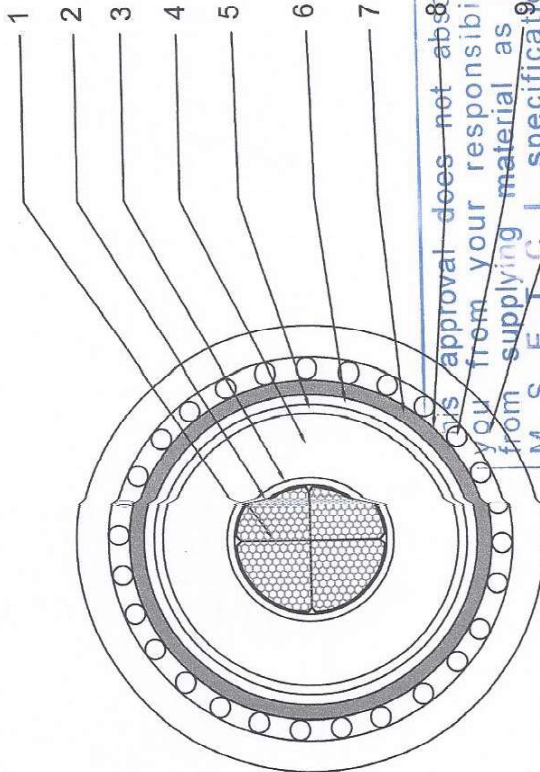
I/We hereby agree that in case My Firm/We are Debarred/Blacklisted by Government/Semi-Government/Other Power Utilities, anywhere, My/Our Offer is liable for rejection at any stage of Tendering process as per Tender Conditions.

Further, I/We, hereby understand and agree that in case My/Firm/We, are Debarred/Blacklisted by Government/Semi-Government/Other Power Utilities, anywhere, My/Our order is liable for termination at any stage of Order execution process and My Firm/We shall be solely responsible for the consequences arising out of it.

Yours Faithfully,

Seal of the Firm

Authorized Signatory



My approval does not absolve you from your responsibility from supplying material as per M S E T C L specifications and relevant standards / requirements

APPROVED

Executive Engineer (D&E-S2)
Design & Protection Dept.
M.S.E.T.C.L. "Prakashganga"
BKC, Bandra (East), Mumbai -51.

Dimension Detail of 127/220kV (EHV) Cable			
Si. No.	Particulars	Description	Dimension
1	Conductor	Segmented Milliken plain annealed Copper Conductor	1200 Sq.mm
		Conductor Diameter	41.8 mm (Approx)
2 & 3	Conductor Screen	Layer of Semi conducting Tape followed by Extruded Semiconducting Conductor Screen	1.0 mm (Min)
4	Insulation	XLPE Insulation (Super Clean compound)	As per type tested cable 20.0 mm (Nom) 18.0 mm (Min)
5	Insulation Screen	Extruded Thermosetting Semiconducting Insulation Screen	1.0 mm (Min)
6	Longitudinal water Barrier	Layer of Semiconducting water Swellable Tape	0.3 mm (Approx.)
7	Metallic Sheath	Lead Alloy 'E' Sheath	Nom 2.1 / Min 1.9 mm
8	Tape	Layer of Semiconducting Tape	--
9	Metallic Cu-Wire Screen	Cu-Wire screen	Helically Applied Plain Copper Wire With Gap followed by Open Helix Of Plain Copper Tape as binder
10	Over Sheath	Extruded HDPE Outer Sheath (ST-7) With Graphite Coating	4.0 mm (Nom)
		Over All Diameter	3.30 mm (Min.) 109.0 mm (Approx)

LS CABLES

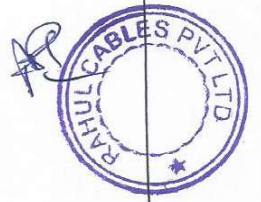
DRAWN	Chaitanya Kumar	APPROVED	P.C.Gururani
DATE	31-07-2019	DATE	31-07-2019
CHECKED	Ajay Mishra	SCALE	= NTS
DATE	31-07-2019		
DRAWING NO. LSCI 18-241-CSD-01			

CUSTOMER

MSETCL

CROSS SECTIONAL DRAWING OF
1 CORE X 1200 SQ.MM ,220kV, CABLE

Dimensions: As per Technical Particulars

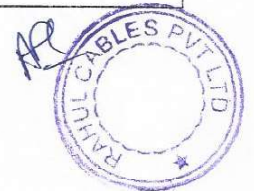




GENERAL TECHNICAL PARTICULARS FOR 220KV CABLE

S. No.	Particulars	1C X 1200 X 220kV
	Cable	Single Core, Copper Conductor XLPE cable
1	Applicable standard	Conforming to IEC 62067
2	System voltage & frequency	220 ± 10% kV, 50 Hz ±3%
3	Rated & Highest System Voltage	245 kV
4	Suitable for earthed system	YES
5	CONDUCTOR	
i)	Material	Annealed Plain Copper to IEC 60228
ii)	Nominal cross-sectional area	1200 Sq.mm
iii)	Construction of conductor/flexibility class	Class-2, IEC 60228
iv)	Max. DC Resistance at 20°C	0.0151 Ohms per km
v)	Max. AC Resistance at 90°C	0.0201 Ohms per km 0.0203
vi)	Shape and formation	Stranded Milliken very well compacted circular conductor
vii)	Approx overall diameter of conductor (mm)	41.8 (Approx.)
6	CONDUCTOR SCREENING	
i)	Material & type	Extruded, semi conducting compound layer.
ii)	Grade	As per IEC: 62067
iii)	Thickness	1.0 mm (Min.)
iv)	Resistivity of semiconducting screen	Max. 1000 ohm mtr
7	INSULATION	
i)	Material	Cross linked polyethylene (XLPE)
ii)	Special Super clean grade	As per IEC: 62067 As per type tested cable
	Nominal thickness of insulation	Nom 20.0 mm / Min 18.0 mm (as per type test)
iii)	Dielectric power factor at rated voltage	0.001 (Tan δ) shall be inline with IS 7098 Part 3 / IEC 62067
8	INSULATION SCREENING	
A	Non-metallic part(extruded)	
i)	Material	Extruded semi conducting compound layer.
ii)	Grade	As per IEC
iii)	Min. thickness.	1.0 mm (Min.)
iv)	Resistivity of semiconducting screen	Max. 500 ohm mtr
B	Non-metallic part (taped) longitudinal water barrier over insulation screen.	
i)	Material	Semi conducting water swellable tape
ii)	Min. thickness	Approx 0.3 mm As per standard
C	METALLIC SHEATH	
i)	Material	Lead alloy 'E' Sheath
ii)	Min. Thickness(mm)	Nom 2.1 mm Min 1.9 mm As per type tested cable
iii)	Short Circuit Current Withstand of Lead alloy sheath combined with Cu-wire screen	40 kA for three Second
iv)	Metallic screen	Area of helically applied plain copper wire shall be suitably selected to meet the required short circuit current of 40 kA for 3 Sec Combined with Lead sheath
9	OUTER SHEATH	
i)	Material	Extruded Layer of Black HDPE Type ST-7 As per IEC 62067
ii)	Min. thickness of outer sheath (mm)	Nom 4.0 / Min 3.30 3 mm
10	Conducting layer over outer sheath	Graphite coating
11	Approx overall diameter of cable (mm)	109.0
12	Approx. weight per meter of cable (kg/km)	26800.0
13	Recommended minimum installation radius.	20 X Overall Diameter of cable 20 X D
14	Maximum D.C. Resistance of conductor at 90 deg C in ohm/km.	0.0193 As per standard
15	Minimum continuous current rating for each circuit when laid in ground in trefoil formation and other condition given in specification.	Single Circuit Live: 1141 Amp* Cable laid in Flat formation 1048 Amp* Cable laid in Trefoil formation Double Circuit Live: 1024 Amp* Cable laid in Flat formation 972 Amp* Cable laid in Trefoil formation

This approval does not absolve you from your responsibility from supplying material as per M S E T C L specifications and relevant standards / requirements
APPROVED
 Executive Engineer (D&T-S2)
 Design & Protection Dept.
 M.S.E.T.C.L. "Prakashganga"
 BKC, Bandra (East), Mumbai - 5



GENERAL TECHNICAL PARTICULARS FOR 220KV CABLE

S. No.	Particulars	1C X 1200 X 220kV
16	Maximum allowable temperature for cable and accessories.	
i)	At rated full load and at site conditions.	90°C
ii)	Safe overload capacity at site conditions.	10% for short duration
iii)	Emergency Overloading temp for 3 Hrs	105°C <i>130°C</i>
iv)	The conductor temperature after a short circuit for one second shall not exceed (with conductor temperature at start of short circuits as 90°C).	250°C
17	Basic impulse insulation level (1.2/50 micro second wave) (kV)	1050 kV
18	Power frequency withstand voltage (kV)	318 kV AC for 30 minutes <i>As per standard</i>
19	Symmetrical Short circuit rating for one second duration for metallic sheath combined with Cu-wire screen	40 kA for 3 Sec.
20	Short circuit current for conductor	171.7 KA for 1 sec
21	Capacitance of cable $\mu\text{F}/\text{Km}$	Nom 0.22
22	Drum Length	500-600 mtr. or as per Approved route length <i>As per requirement</i>
23	Expected cable life.	35 years.

* Laying condition:

- a) Ground temperature: 35°C
- b) Maximum conductor temperature: 90°C
- c) Depth of burial: 946mm from center of the cable or 1000mm from bottom surface of the cable
- d) Thermal Resistivity of soil: 120 °C. cm/W
- e) Sheath bonded at cross bonded sheath
- f) Laid in flat formation with 2D spacing

Embossing on the cable:-

LS CABLE 220KV 1C X 1200SQ.MM Year of mfg. "MSETCL"

This approval does not absolve you from your responsibility from supplying material as per M S E T C L specifications and relevant standards / requirements

APPROVED

[Signature]
 Executive Engineer (D&E-S2)
 Design & Protection Dept.
 M.S.E.T.C.L. "Prakashganga"
 BKC, Bandra (East), Mumbai -51.

