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BHARAT HEAVY ELECTRICALS LIMITED, JHANSI

NOTE :

- VENDOR must submit complete information against clause No. 13 (Qualifying condition). The offer meeting this clause would only be processed.
- The " offered" Column and where applicable, the " Deviations" Column of this format shall be filled in by the Vender and submitted along with the offer. Technical details also submitted with the offer. Inadequate / incomplete, ambiguous, or unsustainable information against any of the clauses of the specification / requirements shall be treated as non - compliance.
- The offer and all documents enclosed with offer should be in English language only.

SCOPE :

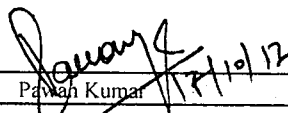
DESIGN, MANUFACTURING, TESTING, PACKING AND SUPPLY OF 11 kv. ,3 Core x 240 sq. mm Al. Cable

SPECIFICATION CUM COMPLIANCE CERTIFICATE OF 11 kv. ,3 Core x 240 sq. mm Al. Cable

S.No.	DESCRIPTION FOR BHEL REQUIREMENT	VENDOR TO CONFORM/ SPICIFY	OFFERED	DEVIATIONS
1.0	SCOPE			
1.1	This specification governs the quality requirements of design,	VENDER TO CONFIRM		
2.0	REQUIREMENT			
2.1	6.35/11KV Grade, Standar Compacted Circular Aluminium Conductor, Conductor Screen Of Extruded Semi Conducting Compound, Extruded XLPE Insulated, Insulation Screen of Extruded Semi Conductind Compound (Through Triple Extrusion Process), Followed by Metallic Screen of Copper Tape (Earth Fault Current 0.3 KA for 1 Second collectivly for all three cores), Cores laid up, Extruded PVC Type ST-2 Inner Sheathed, Galavanised Steel Flat/round Strip Armourd and Overall Extruded FR PVC Type ST-2 Outer Sheathed Cables Confirming to IS-7098 P-2	VENDER TO CONFIRM		
2.2	No. of core, size and quantity of cable			
2.2.1	11 kv. ,3 Core x 240 sq. mm Al. Cable, Quantity - 2000 METER	VENDER TO QUOTE		
3.0	APPLICABLE STANDARDS			
3.1	H.T.Cable for working voltage 11 KV (E) as per IS 7098 part II	VENDER TO CONFIRM		
3.2	Conductor for insulated electric cable and flexible cords - IS 8130	VENDER TO CONFIRM		
3.3	PVC insulated and sheat of electric cables - IS 5831	VENDER TO CONFIRM		
3.4	The cable shall also conform to the provision of Indian Electricity Rules and other statory requirement as applicable.	VENDER TO CONFIRM		
4.0	CONSTRUCTIONAL REQUIREMENTS			
4.1	Voltage grade : 11KV (E)	VENDER TO CONFIRM		
4.2	Conductor : Standard EC grade High conductivity Aluminium class 2 as per IS 8130	VENDER TO CONFIRM		
4.3	Conductor screening- extruded semi - conducting compound	VENDER TO CONFIRM		
4.4	Insulation material : Cross Linked Polythylene (XLPE)	VENDER TO CONFIRM		
4.5	Insulation screening : Extruded semi conducting compound followed by helically wrapped copper tape	VENDER TO CONFIRM		
4.6	PVC filler	VENDER TO CONFIRM		
4.7	Inner sheath : Extruded PVC Type ST-2 PVC of IS 5831	VENDER TO CONFIRM		
4.8	Armouring : Galvanized flat/round strip	VENDER TO CONFIRM		
4.9	Outer sheath : Extruded FR PVC Type ST-2 PVC of IS 5831	VENDER TO CONFIRM		
4.10	Core identification : as per IS 7098 P-2	VENDER TO CONFIRM		
5.0	SITE CONDITION AND SYSTEM DATA			
5.1	HT power cable shall be designed and to be suitable for the following site & system condition	VENDER TO CONFIRM		
5.1.1	Maximum ambient temperature. : 50 degree C	VENDER TO CONFIRM		
5.1.2	Minimum ambient temperature : 1 degree C	VENDER TO CONFIRM		
5.1.3	Maximum relative Humidity : 82%	VENDER TO CONFIRM		
5.1.4	Minimum relative humidity : 10%	VENDER TO CONFIRM		
5.1.5	Environmental condition : Dust, Laden atmosphere	VENDER TO CONFIRM		
6.0	POWER SYSTEM DATA			
6.1	Voltage : 11KV (3 phase +10% - 12.5%)	VENDER TO CONFIRM		
6.2	Frequency : 50HZ (+2% - 3%)	VENDER TO CONFIRM		
6.3	System earthing : Grounded	VENDER TO CONFIRM		
7.0	TESTS			
7.1	All acceptance and routine test shall be carried out on all cables at vender's works in the presence of BHEL representative. Type test reports of similar cables shall be furnished.	VENDER TO CONFIRM		
8.0	GENERAL			
8.1-	Cable shall be delivered in maximum possible length of not less than 500-750 meter length.	VENDER TO CONFIRM		

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8.2	Cables shall be neatly rolled on drums with both ends sealed with moisture proof sealing.	VENDER TO CONFIRM		
8.3	Sequential marking of the length of the type and size of cable, voltage grade cable shall be provided on the outer sheath at every one meter. The imbossing shall be legible and indelible.	VENDER TO CONFIRM		
8.4	On the flange of the drum necessary information such as manufacturer's name, type, size, voltage grade, length of the cable shall be printed. An arrow shall be printed on the drum with suitable instructions to show the direction of rotation of the drum.	VENDER TO CONFIRM		
9.0	DOCUMENTATIONS			
9.1	Technical data sheet shall be submitted in given format only (refer specification point No. 10.0)	VENDER TO SUBMIT		
9.2	QAP shall be furnished along with the offer	VENDER TO SUBMIT		
9.3	3 copies of test certificates and technical data.sheets with in one week after inspection	VENDER TO CONFIRM		
10.0	TECHNICAL DATA SHEETS:			
10.1	Make	VENDER TO SUBMIT		
10.2	Type	VENDER TO SUBMIT		
10.3	Applicable Standrad	VENDER TO SUBMIT		
10.4	Voltage grade	VENDER TO SUBMIT		
10.5	Suitable for system with:	VENDER TO SUBMIT		
	a) Service voltage	VENDER TO SUBMIT		
	b) Nature earthed/ unearthed	VENDER TO SUBMIT		
10.6	Maximum conductor temp.	VENDER TO SUBMIT		
	a) Continuous Deg. C	VENDER TO SUBMIT		
	b) Short Deg. C	VENDER TO SUBMIT		
10.7	Conductor	VENDER TO SUBMIT		
	a) Material	VENDER TO SUBMIT		
	b) Nominal cross sectional area	VENDER TO SUBMIT		
	c) shape of conductor	VENDER TO SUBMIT		
	e) Nominal diameter	VENDER TO SUBMIT		
	f) No.of wires & diameter of each wire (No/mm)	VENDER TO SUBMIT		
	g) DC resistance at 20 degree C (Ohm/km)	VENDER TO SUBMIT		
10.8	Conductor screening	VENDER TO SUBMIT		
	a) Material	VENDER TO SUBMIT		
	b) Thickness (nominal) mm	VENDER TO SUBMIT		
10.9	Insulation	VENDER TO SUBMIT		
	a) Material	VENDER TO SUBMIT		
	b) Type	VENDER TO SUBMIT		
	c) Thickness (nominal) mm	VENDER TO SUBMIT		
10.10	Insulation screening	VENDER TO SUBMIT		
	a) Material	VENDER TO SUBMIT		
	b) Type	VENDER TO SUBMIT		
	c) Thickness (nominal) mm	VENDER TO SUBMIT		
10.11	Inner sheath	VENDER TO SUBMIT		
	a) Material	VENDER TO SUBMIT		
	b) Type	VENDER TO SUBMIT		
	c) Thickness (nominal) mm	VENDER TO SUBMIT		
	d) Extruded Yes/ No	VENDER TO SUBMIT		
	e) Approx. outside dia over inner sheath mm.	VENDER TO SUBMIT		
	f) Colour	VENDER TO SUBMIT		
10.12	Armouring	VENDER TO SUBMIT		
	a) Material	VENDER TO SUBMIT		
	b) Size	VENDER TO SUBMIT		
10.13	Overall sheath	VENDER TO SUBMIT		
	a) Material	VENDER TO SUBMIT		
	b) Type	VENDER TO SUBMIT		
	c) Thickness (nominal) mm	VENDER TO SUBMIT		
	d) Colour	VENDER TO SUBMIT		
	e) FR Properties	VENDER TO SUBMIT		
	i) Oxygen Index -Min 29% as per ASTMD 2863	VENDER TO SUBMIT		
	ii) Temprature Index-Min 250 Degree C as per ASTMD 2863	VENDER TO SUBMIT		
	iii) Flammability Test Shall pass as per IEC 332 P-1	VENDER TO SUBMIT		

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10.14	Approx. overall diameter (mm)	VENDER TO SUBMIT		
10.15	Standard drum length with tolerance (m)	VENDER TO SUBMIT		
10.16	Net weight of cable (Kg/ Km)	VENDER TO SUBMIT		
10.17	Continuous current rating for standard IS condition laid direct :Amps			
	a) In ground	VENDER TO SUBMIT		
	b) In duct	VENDER TO SUBMIT		
	c) In air	VENDER TO SUBMIT		
10.18	Short circuit current for -1 sec.(KA)	VENDER TO SUBMIT		
10.19	Electrical parameters at maximum operating temp.(ohm/km)	VENDER TO SUBMIT		
	a) Resistance	VENDER TO SUBMIT		
	b) Reactance at 50 hz	VENDER TO SUBMIT		
	c) Impedence	VENDER TO SUBMIT		
10.20	Recommended minimum bending radius	VENDER TO SUBMIT		
10.21	Dearating factor for following ambient temp. in air ground.	VENDER TO SUBMIT		
	a) At 30° C	VENDER TO SUBMIT		
	b) At 35° C	VENDER TO SUBMIT		
	c) At 45 ° C	VENDER TO SUBMIT		
	d) At 50 ° C	VENDER TO SUBMIT		
10.22	Cable identification code	VENDER TO SUBMIT		
10.23	List of routine and type tests certificates enclosed.	VENDER TO SUBMIT		
11.0	INSPECTION AND TESTING			
11.1	Inspection and testing of cables shall be done at manufacturer works. All necessary test as per relevant Indian standards to ensure the quantity & performance of HT, XLPE power cable shall be carried out by the supplier at his own cost.	VENDER TO CONFIRM		
11.2	15 days advance information shall be given so that BHEL representative can be deputed for inspection and testing.	VENDER TO CONFIRM		
12.0	GUARANTEE			
12.1	The cable shall be guaranted against any manufacturing and design defect for the period of 24 months from the date of receipt.	VENDER TO CONFIRM		
13.0	QUALIFYING CONDITION			
13.1	Only those vender, who are in the line of cable manufacturing or authorised agents of cable manufacturer (Authorisation certificate must be enclosed) shall quote. The following informations are to be submitted with the offer. This is required from venders for qualifications of their offers.	VENDER TO SUBMIT		
14.0	BHEL reserves the right to verify information submitted by vender. In case the information is found to be false/ incorrect, the offer shall be rejected.	VENDER TO CONFIRM		
  				
	Y.K.Dhingra	Sujeet Sharma	Pawan Kumar	
	Dy.Manager (WE&S)	Manager (WE&S)	Sr.Manager (WE&S, MOD)	