


acceptance tests.

2.For EPC contractors only.

		Customer : Transmission corporation of Andhra Pradesh Limited (APTransco)	
		PROJECTNAME:- AS APPLICABLE	
		PO:-	
		Contractor: AS APPLICABLE	
		TITLE: Power Cable	
SR. NO.	PARTICULARS		3.5 C X 300
	Description	Unit	Confirmation/Commitment by the Supplier/Bidder
1	Name of Manufacturer.		CHANDRESH CABLES LTD(BRAND NAME-AVOCAB)
2	Applicable Standard.	Drawing approval subject to valid vendor registration IS : 7098 (PART-1) 1988	
3	Voltage Grade.	Volts	1100
4	Permission variation in a)Voltage	%	±10
	b)Frequency	%	±5
	c) Combined	%	±10
5	Wheather Suitable for Earthed or Uearthed System		Both
6	SIZE	SQ.MM	3.5 C X 300
7	Type.		A2XWY (FRLS & C2 TYPE)
8	Conductor :		
a.	Material	CHIEF ENGINEER/PROJECTS	
b.	Nominal Size (Phase / Neutral)	SQ.MM	H2 GRADE ALUMINIUM AS PER IS 8130 : 2013
c.	Number of wires in each conductor (Phase / Neutral)	Nos.	300/150
d.	Diameter of Each Wire (Phase/Neutral) (Before Stranding) Minimum	mm	37/19
e.	Shape of conductor		3.22/3.18
f.	DC Resistance at 20°C (MAX.) (Phase / Neutral)	Ohms/Km	STRANDED SECTOR SHAPE
g.	AC Resistance at 90°C (MAX.) (Phase / Neutral)	Ohms/Km	0.100/0.206
h.	Direction of lay of Conductor		0.128/0.264
9	Insulation		Right Hand Lay
a.	Material.		EXTRUDED XLPE
b.	IS Reference		IS : 7098 (PART-1) 1988
c.	Nominal Thickness. (Phase / Neutral)	mm	1.8/1.4
d.	Cores identification		RED,YELLOW,BLUE & BLACK
e.	Cores identification		Confirming to : IS 7098 (P-1)1988
10	Inner Sheath		
a.	Material.		EXTRUDED PVC TYPE ST-2
b.	IS Reference		IS : 5831 - 1984
c.	Minimum Thickness	mm	0.60
d.	Mimimum Fictitious Diameter over Inner Sheath	mm	53.20
e.	Colour		BLACK

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11	Armouring			
a.	Material & Type		GALVANIZED STEEL ROUND WIRE	
b.	Extruded OR Wrapped		Wrapped	
c.	IS Reference		IS: 3975/1999	
d.	Nominal Diameter	mm	2.50	
e.	Mimimum Fictitious Diameter over Armour	mm	58.20	
f.	Direction of lay of armour		LEFT HAND LAY	
h.	DC Resistance of armour (MAX.)	Ohms/Km	As per IS:7098(P-1)1988 Table No-7	
12	Outer Sheath			
a.	Material.		EXTRUDED PVC	
b.	Type.		ST-2 WITH FRLS PROPERTIES	
c.	IS Reference	CHIEF ENGINEER/PROJECTS	IS : 5831 - 1984	
d.	Minimum Thickness	APTRANSCO/VIS/VIJAYAWADA mm	2.36	
e.	Colour		BLACK	
f.	Mimimum Fictitious Diameter of Cable	mm	62.92	
13	FRLS PROPERTIES			
a.	Oxygen Index	Minimum	%	29
b.	Temperature index	Minimum	Deg C	250
c.	Smoke Density	Maximum	%	60
d.	Acid Gas Generation (HCL%)	Maximum	%	20
e.	Flamibility Test	a.Unefected Portion (min.)	mm	50
		b. Flame Duration (Max.)	sec.	60
	Insulation			
	d) Minimum volume resistivity at (ohm-cm)			
	(i) 27 deg. C.			1×10^{14}
	(ii) 70 deg. C.			NA
	(iii) 90 deg. C.			1×10^{12}
	Minimum tensile - strength of insulation	N/mm ²		12.5(min)as per IS 7098(Part-1):1988
	Minimum elongation at break	%		200(min)as per IS 7098(Part-1):1988
	Minimum tensile - strength of sheath	N/mm ²		12.5(min)as per IS 5831:1984
	Minimum elongation at break	%		150(min)as per IS 5831:1984
	Minimum tensile - strength of armour	Mpa		300-500 as per IS 3975:1999
	Minimum elongation at break	%		10 (min) as per IS 3975:1999
	High voltage test and duration (PVC cables)			

Drawing approval subject to valid vendor registration

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	a) At room temperature		NA
	b) Under water		NA
	XLPE Cable		
	a) High voltage test		3KV for 5mint as per IS 7098:1988
	Short Circuit Rating for 0.12Sec. Duration of Armour	KA	45 KA
	b)Current carrying capacity in air and corresponding assumptions/conditions of installation		As per IS : 1255
14	ELECTRICAL CHARACTERISTICS		
a.	laying up of cable is accordance with		Confirming to : IS:3961-2-6
b.	Continuous Current Rating for Standard IS Condition when Laid.		
	i. In Ground.at 30°C	Amps	As per IS:3961-2-6
	ii. In Air at 40°C	Amps	
	iii. In Air at 50°C	Amps	
c.	Short Circuit Rating for 0.12 Sec. Duration	KA	45 KA
d.	Conductor Temperature allowed for Continues Operation condition (Max.)		90
e.	Conductor Temperature allowed for the short circuit condition (Max.)	°C	250
15	GENERAL		
a.	Standard drum length	Mts	500(±5 %)
b.	Cable - Drum		Shall confirm to IS 10418 only
c.	Recommended min. Bending radius of cable	mm	12 X OVERALL DIA OF A CABLE
d.	Recommended Max. Safe pulling force		
	i) When Cable Pulled by pulling eye	N	31500
e.	Packing Material		NON RETURNABLE WOODEN DRUM
f.	Embossing on Cable		PROVIDE AS PER IS-7098 (PART-1)1988 , Name of Customer, Year of manufacturing, FRLS,APTRANSCO
g.	Cable should be ISI Marked		Yes , All cable furnish with ISI - Marked only
h.	Sequential marking of length(Printing)		PROVIDE EVERY METER
i	End cap		Provided both end of cable

CHIEF ENGINEER/PROJECTS
APTRANSCO/VISVIJAYAWADA

