


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	
	<b>PARTICULARS</b>		<b>2 C X 6</b>
<b>SR. NO.</b>	<b>Description</b>	<b>Unit</b>	<b>Confirmation/Commitment by the Supplier/Bidder</b>
1	Name of Manufacturer.		CHANDRESH CABLES LTD(BRAND NAME-AVOCAB)
2	Applicable Standard.		IS : 1554 (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 Uneathed System		Both
6	SIZE	SQ.MM	2 C X 6
7	Type.	Drawing approval subject to valid vendor registration AYWY( FRLS & C2 TYPE )	
8	Conductor :		
a.	Material		H2 GRADE ALUMINIUM AS PER IS 8130 : 2013
b.	Nominal Size (Phase / Neutral)	SQ.MM	6
c.	Number of wires in each conductor (Phase / Neutral)	Nos.	7
d.	Diameter of Each Wire (Phase/Neutral) (Before Stranding) Minimum	mm	1.05
e.	Direction of lay of conductor		RIGHT HAND LAY
f.	Shape of conductor		STRANDED CIRCULAR
g.	DC Resistance at 20°C (MAX.) PHASE/NEUTRAL	Ohms/Km	4.61
h.	AC Resistance at 90°C (MAX.)	Ohms/Km	5.90
9	Insulation		
a.	Material.		EXTRUDED PVC TYPE A
b.	IS Reference		IS : 1554 (PART-1) 1988
c.	Nominal Thickness. (Phase / Neutral)	mm	1.00
d.	Coers identification		RED, BLACK (As per IS:1554-1/1988)
10	Inner Sheath		
a.	Material.		EXTRUDED PVC TYPE ST-1
b.	IS Reference		IS : 5831 - 1984
c.	Minimum Thickness	mm	0.30
d.	Mimimum Fictitious Diameter over Inner Sheath	mm	10.20
e.	Colour of inner sheath		Black
11	Armouring		
a.	Material & Type		GALVANIZED STEEL ROUND WIRE
b.	Extruded OR Wrapped		Wrapped
c.	IS Reference		IS: 3975/1999
d.	Nominal Diameter	mm	1.40
e.	Mimimum Fictitious Diameter over Armour	mm	13.0
f.	Direction of lay of armour		LEFT HAND LAY
g.	DC Resistance of armour (Max.)	ohm/km	As per IS:1554(P-1)1988 Table no-6
12	Outer Sheath		
a.	Material.		EXTRUDED PVC
b.	Type.		ST-2 WITH FRLS PROPERTY
c.	IS Reference		IS : 5831 - 1984
d.	Minimum Thickness	mm	1.24
e.	Colour		BLACK
f.	Mimimum Fictitious Diameter of Cable		15.48

CHIEF ENGINEER/PROJECTS

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<b>13</b>	<b>FRLS PROPERTIES</b>			
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.Uneffected Portion (min.)		mm	50
	b. Flame Duration (Max.)		sec.	60
<b>14</b>	<b>Insulation Test</b>			
	d) Minimum volume resistivity at (ohm-cm)			
	(i) 27 deg. C.			$1 \times 10^{13}$
	(ii) 70deg. C.			$1 \times 10^{10}$
<b>15</b>	(i)Minimum tensile - strength of insulation		N/mm <sup>2</sup>	12.5(min)as per IS 5831:1984
	(ii) Minimum elongation at break			150(min)as per IS 5831:1984
<b>16</b>	(i)Minimum tensile - strength of sheath		N/mm <sup>2</sup>	12.5(min)as per IS 5831:1984
	(ii) Minimum elongation at break		%	150(min)as per IS 5831:1984
<b>17</b>	(i)Minimum tensile - strength of armour		Mpa	300-500 as per IS 3975:1999
	(ii) Minimum elongation at break		%	10(min) as per IS 3975:1999
<b>18</b>	<b>PVC Cable</b>			
	a) High voltage test			3KV(rms) for 5mint as per IS 1554(part-1):1988
	c) Short circuit current rating for armour		KA	KA/vt (K- 0.05Factor in Amp) (where A = Area of Armour in mm <sup>2</sup> & t = time in seconds)
<b>19</b>	<b>a)Current carrying capacity in air and corresponding</b>			As per IS :1255
<b>20</b>	<b>ELECTRICAL CHARACTERISTICS</b>			
a.	laying up of cable is accordance with			Confirming to : IS 3961-2
b.	Continuous Current Rating for Standard IS Condition			
	i. In Ground.at 30°C		Amps	As per IS 3961-2
	ii. In Air at 40°C		Amps	
	iii. In Air at 50°C		Amps	
c.	Short Circuit Rating for 1 Sec. Duration		KA	0.448
d.	Conductor Temperature allowed for Continuous			70
e.	Conductor Temperature allowed for the short circuit		°C	160
<b>21</b>	<b>GENERAL</b>			
a.	Standard drum length		Mtrs	500/1000 ( ±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	360
e.	Packing Material			NON RETURNABLE WOODEN DRUM
f.	Embossing on Cable	<b>CHIEF ENGINEER/PROJECTS APTRANSCO/VISVIJAYAWADA</b>		PROVIDE AS PER IS-1554 (PART-1)1988, Name of Customer, Year of manufacturing, FRLS, <b>APTRANSCO</b>
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
<p><b>NOTE: 1. Drawings Approval subject to valid type test reports, to be checked during acceptance tests.</b></p> <p><b>2.For EPC contractors only.</b></p>				



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