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to be checked during acceptance tests.
2.For EPC contractors only.

THERMOCABLES LIMITED, HYDERABAD**TRANSMISSION CORPORATION OF ANDHRA PRADESH LTD.****Contractor Name: As Applicable**

Drawing approval subject to valid vendor registration

Project Name : As Applicable**Purchase Order No. : As Applicable**

STANDARDISED GUARANTEED TECHNICAL PARTICULARS FOR ARMoured POWER CABLES		
1	Material Description	POWER CABLE
2	a) Type and description of the cable with size	Aluminium conductor PVC insulated Armoured cables as per IS:1554 (part-1)
	b)Standards which they conform to	IS 1554 Part-1
3	CONDUCTOR (Sq.mm)	3.5C X 95
	a) Material	Stranded Sector Shaped Aluminium conductor of H2 Grade as per IS:8130
	b) Whether stranded	Yes
	c) shape of conductor	Sector shaped
	Main conductor (sq.mm)	95
	Neutral conductor (sq.mm)	50
	d)If so, number of strands main conductor	19
	Number strands Neutral conductor	7
	e)Diameter of each strand before stranding(mm) Main conductor	2.52
	Diameter of each strand before stranding(mm) Neutral conductor	3.02
	f) Max.Conductor resistance at 20 Deg.C(Ohms/Km) Main	0.32
	g) Max.Conductor resistance at 20 Deg.C(Ohms/Km) Neutral	0.641
4	INSULATION	
	a) Material	PVC Type A as per IS:5831
	b)Nominal thickness(mm) Main conductor	1.6
	Nominal thickness(mm) Neutral conductor	1.4
	Minimum Thickness (mm) Main/ Neutral	T min= Tnom.- (Tnom x 0.1 +0.1)
	c)Minimum tensile strength without ageing (N/mm ²) and maximum % variation after ageing	12.5
	d)Minimum elongation at break without ageing (%) and maximum % variation after ageing.	150
	e)Minimum volume resistivity at	
	i) 27 DegC (Ohm-Cm)	1 x 10 ¹³
	ii)Max.rated temperature of 70 Deg.C(Ohm-Cm)	1 x 10 ¹⁰
	f)Minimum insulation resistance constant at	
	i) 27 Deg C(Mega ohm-Km)	36.7
	ii)Max.rated temperature of 70 Deg.C (Mega ohm-Km)	0.0367
	iii)Whether application of insulation is by way of extrusion	Extrusion
5	INNER SHEATH	
	a) Material	PVC ST1 as per IS:5831/84
	b)Minimum thickness inner sheath(in mm)	0.5
	c)Whether method of application is by way of extrusion	Extrusion
	d) Colour	Black
6	Interstices(or fillers)	Yes if required
7	ARMOURING	
	a)Material	Galvanised steel Strip As per IS 3975
	b) Size	4 x 0.8

8	OUTER SHEATH	
	a)Material	PVC ST1 as per IS:5831/84
	b)Minimum thickness(mm)	1.56
	c)Minimum tensile strength without ageing (N/mm ²) and maximum % variation after ageing	12.5
	d)Minimum elongation of break(%) and maximum variation after ageing (%)	150
	e)Whether method of application is by way of Extrusion	Extrusion
	f)Whether the PVC suitably treated for withstanding the working conditions.	Yes
	g)Inner & Outer Colour	Black
	i) Physical parameters	
	a)Overall dia of core(mm)	Not applicable for being Sector Shape
	b)Calculated diameter over Inner sheath(mm) (Approx.)	33.2
	c)Calculated diameter under the outer sheath (mm) (Approx.)	34.8
	d)Overall diameter of the finished cable(mm)	38.4 +/- 2.0
	e)Drum length(mtrs)/tolerance (%)	1000/500 +/-10% ingeneral or as per the requirement incase of short length
	f)Approx Cable weight(Kg/Km)	2370
	g)Approx Gross weight of the complete drum with cable(Kg/km)	2570
10	Electrical parameters	
	a)Rated voltage(volts)	1100
	b) Voltage grade(volts)	1100
	c)Whether suitable for earthed/Uneathed system	Both
	d) Continuous current carrying capacity(Amps)	
	i) In Air at 40 Deg C	155
	ii) In ground at 30 Deg C	165
	e) Short circuit current capacity for 1 sec. Duration	7.22
	f) Max. conductor temperature during short circuit condition.	160 Deg C
11	Marking	3.5C 95 SQ.MM ELECTRIC 1100V AYFY Thermocables Year of manufacturing APTRANSCO ISI MARK
		As per IS 1554 PART 1 & APTRANSCO to be embossed with an interval of 1 meter throughout the cable. Sequential marking by printing only
12	Identification (Main & Neutral cores)	RED,YELLOW,BLUE & BLACK
13	Inner & Outer sheath is done in separate operation & the material intended for outer Sheath is as per IS 1554 Part 1	Confirmed

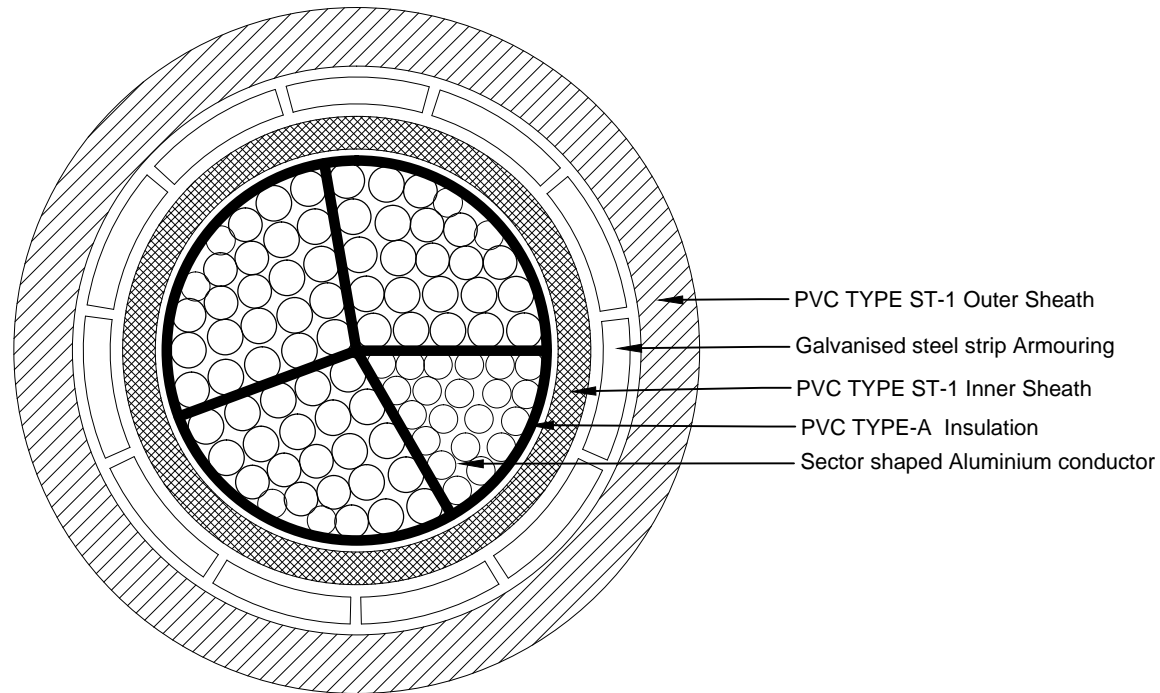
CHIEF ENGINEER/PROJECTS
APTRANSCO/VS/Vijayawada

RESTRICTED

PRODUCT SPECIFICATION DRAWING


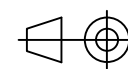
3.5C X 95 SQ.MM – Armoured Power Cable

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- PVC TYPE ST-1 Outer Sheath
- Galvanised steel strip Armouring
- PVC TYPE ST-1 Inner Sheath
- PVC TYPE-A Insulation
- Sector shaped Aluminium conductor

CHIEF ENGINEER/PROJECTS
APTRANSCO/VS/Vijayawada

PROJECT: AS APPLICABLE				
CUSTOMER: AS APPLICABLE				
PO AS APPLICABLE				
FIRM		 THERMO CABLES LTD. PLOT NO.28, NAGARJUNA HILLS, PUNJA GUTTA, HYDERABAD-500082 (TELANGANA)		
	NAME	SIGN	DATE	TITLE:
DESIGN	C.T		10.04.23	3.5C x 95 SQ.MM ARMoured CABLE
DRAWN	C.T		10.04.23	PART NO:
CHECKED	M.S		10.04.23	
DEPT. HEAD	M.S		10.04.23	ALL DIMENSIONS ARE IN MM
RELEASED FOR	PRELIMINARY		SCALE: NTS	SHEET: 1 OFF 1
	APPROVAL	✓		SIZE: A3
	ENGINEERING			DRG.NO.
	CONSTRUCTION			REV.
				00