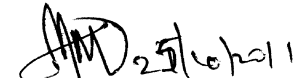


TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED
STANDARDISED GUARANTEED TECHNICAL PARTICULARS FOR
7/3.15 MM HIGH TENSILE GALVANISED STEEL WIRE

Sl. No	Description		Technical Parameters / Values.
1	Material	-	G.S.Earth Wire 7/3.15 mm
2	Name & Address for supply of raw materials.	-	Raw Materials are to be procured directly from the Primary Producers so as to ensure the quality of raw materials. The test certificates of raw materials and invoices shall be produced at the time of inspection.
a)	Wire Rod.	-	i) Tata Iron & Steel Company, West Bengal. ii) Steel Authority of India Ltd, West Bengal. iii) Rashtriya Ispat Nigam Ltd, West Bengal.
b)	Zinc.	-	i) Hindustan Zinc Ltd, West Bengal. ii) Sri Arihant Metals, Kolkata, West Bengal. iii) Other Secondary Sources.
c)	Drum	-	As per IS:1778/1980.
3	Particulars of raw materials.	-	
a)	Steel Wires/Rods.	-	
	i) Carbon	-	0.55% Maximum
	ii) Manganese.	-	0.40 to 0.90%
	iii) Phosphorus.	-	0.040% Maximum
	iv) Sulphur	-	0.040% Maximum
	v) Silicon	-	0.15 to 0.035%
4	Particulars of Single wire before	-	
a)	No. of strands	-	7
	Diameter	-	-
	a) Standard	-	3.15 mm
	b) Maximum	-	3.21 mm
	c) Minimum	-	3.12 mm
	c) Standard Sectional area	-	7.79 Sq.mm
	d) Minimum ultimate tensile	-	8.57 kN
	e) Minimum breaking load (Strand)	-	8.57 kN
	f) Final stress in steel wires (Strand)	-	8.80 kN
	g) Minimum elongation (Percentage)	-	4%
5	a) Uniformity of coating of (number and duration of each dip)	-	3 No. dips each time 1 Minute. Dip., and 1 No. dip with 1/2 Minute.
	b) Minimum weight of coating	-	275 gm/m ² .
	c) Quality of zinc	-	99.95%
	d) Process of galvanizing	-	Hot Dip process.
6	Standard overall diameter of stranded wire	-	9.45 mm
7	Area of cross section of stranded wire	-	54.52 Sq.mm

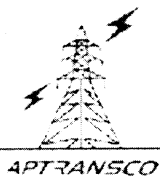
STD/GTP-DWG/Approval No. 5 / Revision No. 0

APPROVED FOR TURNKEY PROJECTS


 CHIEF ENGINEER / CONSTRUCTION 1
 APTRANSCO/MIDYUTH SODHANA YD

Sl. No	Description		Technical Parameters / Values.
8	Direction of lay of outer layer	-	Right Hand.
9	Guaranteed ultimate tensile strength of wire	-	56.98 kN
10	Maximum working tension	-	62 kN
11	Resistance in Ohms per Km at 20 Deg C of stranded wire	-	3.41 Ohms/kM.
12	Tolerance if any of standard length.(Percent of standard length)	-	Plus/Minus 5%
13	Co-Efficient of linear expansion	-	11.50 X 10 ⁶ Per Deg.C
14	Modulus of elasticity of wire	-	19330 kG/Sq.m
15	Weight of wire	-	430 kG/kM (Approx)
16	Tensile strength of joints expressed as a percentage of the strength of wire	-	No joint.
17	a) Standard length of wire in each drum for 7/3.15 mm size	-	3.0 kM (Plus/Minus 5%)
18	Maximum single length which can be manufactured if requested by APTRANSCO.	-	3.0 kM
19	Standard weight of HTGS wire in each drum	-	1290 kG(Approximately)
20	Weight of drum in Kg with lagging	-	250 kG (Approximately)
21	Gross weight of the drum	-	1540 kG (Approximately)
22	Standard according to which the conductor will be manufactured and tested. However if any amendments are there they shall also to be taken into consideration.	-	IS:12776/2002.
The type tests should have been conducted not earlier than 5 years in the Standard third party laboratory. The Manufacturer shall produce the type test reports at the time of acceptance tests.			
23	Standard according to which the drum is manufactured	-	IS:1778/1980/2002.
24	Quality of material & standard to which conform		BIS

The Manufacturer shall produce the valid BIS certification at the time of acceptance tests.

	Standardised Guaranteed Technical Particulars for 7/3.15 mm HTGS Earth wire.
	STD/GTP-DWG/Approval No. <u>5</u> / Revision No. <u>0</u>
	Prepared & Approved during October - 2011

STD/GTP-DWG/Approval No. 5 / Revision No. 0

APPROVED FOR TURNKEY PROJECTS


 CHIEF ENGINEER / CONSTRUCTION-1
 APTRANSCO/VIDYUTH SOUDHA/HYO.