XINLAN®

Aluminum Conductor Steel Reinforced (ACSR) Cables

JIS C 3110

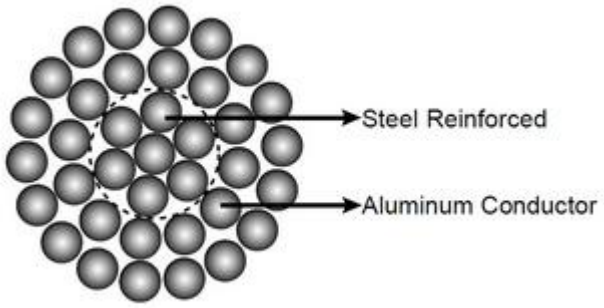
Application

ACSR conductors are widely used for electrical power transmission over long distances, since they are ideal for long overhead lines spans. They are also used as a messenger for supporting overhead electrical cables.

Standard

Basic design to JIS C 3110 standards

Cable Construction



ACSR conductors are formed by several wires of aluminium and galvanized steel, stranded in concentric layers. The wire or wires which form the core, are made of galvanized steel and the external layer or layers, are of aluminium. Galvanized steel core consist normally of 1, 7 or 19 wires. The diameters of steel and aluminium wires can be the same, or different.

By varying the relative proportions of aluminium and steel, the required characteristics for any particular application can be reached. A higher U. T. S. Can be obtained, by increasing steel content, and a higher current carrying capacity by increasing aluminium content

Electrical Properties

Density@20ºC	Aluminium: 2.703 kg/dm
	Galvanised Steel: 7.80 kg/dm
Temperature Coefficient@20°C	Aluminium: 0.00403 (°C)
Resistivity@20°C	Aluminium: Should not exceed 0.028264
Linear Expansivity	Aluminium: 23 x10 (°C)
	Galvanized Steel: 11.5 x10 (1/°C)

Service Conditions

Ambient Temperature	-5°C - 50°C
Wind Pressure	80 – 130kg/m²
Seismic Acceleration	0.12 - 0.05g
Isokeraunic Level	10 – 18
Relative Humidity	5 – 100%

XINLAN GROUP CO.,LTD
No.278,Wei 15 Road,Yueqing Economic development zone, Wenzhou City,Zhejiang, China 325600
Fax: (86)-577-62669009 / Tel: (86)-577-62660022 / Mob: (86)-15827450068
E-mail: ttianrran@foxmail.com xinlan@xhcable.com / Skype: ttianrran

XINLAN®

Technical Data

Numbers of Wires		Final Modules of Elasticity		Coefficient of linear Expansion	
AL	Steel	Kg/mm²	lb/in²	1/C°	1/F°
6	1	81	11.5 x106	19.1 x10-6	10.6 x10-6
6	7	77	11.0 x106	19.8 x10-6	11.0 x10-6
12	7	107	15.2 x106	15.3 x10-6	8.5 x10-6
18	1	67	9.5 x106	21.2 x10-6	11.8 x10-6
24	7	74	10.5 x106	19.6 x10-6	10.9 x10-6
26	7	77	10.9 x106	18.9 x10-6	10.5 x10-6
28	7	79	11.2 x106	18.4 x10-6	10.2 x10-6
30	7	82	11.6 x106	17.8 x10-6	9.9 x10-6
30	19	80	11.4 x106	18.0 x10-6	10.0 x10-6
32	19	82	11.7 x106	17.5 x10-6	9.7 x10-6
54	7	70	9.9 x106	19.3 x10-6	10.7 x10-6
54	19	68	9.7 x106	19.4 x10-6	10.8 x10-6

Construction Parameters

JiS C 3110

Nominal Sectional Area	Sectional Area			Stranding		Overall Diameter	Weight	Breaking Load	Electrical Resistance @20℃
	AL	Steel	Total	AL	Steel				
mm²	mm²	mm²	mm²	No./mm	No./mm	mm	Kg/Km	KN	Ω/Km
25	24.9	4.2	29.1	6/2.30	1/2.30	6.9	101	8.89	1.15
32	31.9	5.3	37.2	6/2.60	1/2.60	7.8	129	11.17	0.899
58	57.7	9.6	67.3	6/3.50	1/3.50	10.5	233	19.40	0.497
95	95.4	15.9	111.3	6/4.50	1/4.50	13.5	385	31.16	0.301
120	124.7	29.1	153.8	30/2.3	7/2.3	16.1	574	54.29	0.233
160	159.3	37.2	196.5	30/2.6	7/2.6	18.2	733	68.40	0.182
200	198.2	46.2	244.4	30/2.9	7/2.9	20.3	912	84.67	0.147
240	241.2	59.3	300.5	30/3.2	7/3.2	22.4	1110	100.06	0.120
330	326.8	52.8	379.6	26/4.0	7/3.1	25.3	1320	107.31	0.0888
410	413.4	67.3	480.7	26/4.5	7/3.5	28.5	1673	136.32	0.0702
520	519.5	67.3	586.8	54/3.5	7/3.5	31.2	1969	152.88	0.0559
610	612.4	79.4	691.8	54/3.8	7/3.8	34.2	2320	179.83	0.0474
810	814.5	56.3	870.8	45/3.8	7/3.2	38.4	2700	181.10	0.0356

XINLAN GROUP CO.,LTD
No.278,Wei 15 Road,Yueqing Economic development zone, Wenzhou City,Zhejiang, China 325600
Fax: (86)-577-62669009 / Tel: (86)-577-62660022 / Mob: (86)-15827450068
E-mail: ttianrran@foxmail.com xinlan@xhcable.com / Skype: ttianrran