XINLAN®

All Aluminum Conductor (AAC) Cables

BS 215-1

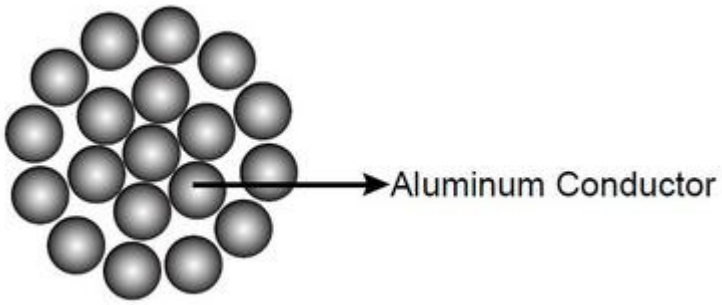
Application

AAC conductor is also known as aluminium stranded conductor. It is manufactured from electrolytically refined aluminium, with a minimum purity of 99.7%.

Standard

Basic design to BS 215-1 standards

Cable Construction



Concentric lay stranded Aluminium Conductor (AAC) is made up of one or more strands of hard drawn 1350 aluminum alloy. These conductors are used in low, medium and high voltage overhead lines.

AAC has seen extensive use in urban areas where spans are usually short but high conductivity us required. The excellent corrosion resistance of aluminium has made AAC a conductor of choice in coastal areas.

Because of its relatively poor strength to weight ratio, AAC had limited use in transmission lines and rural distribution because of long spans utilized.

All aluminium conductors are made up of one or more strands of aluminium wire dep.

Electrical Properties

Density@20ºC	2.703 kg/dm
Temperature Coefficient@20°C	0.00403 (°C)
Resistivity@20°C	0.028264
Linear Expansivity	23 x10-6 (°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%

Technical Data

Numbers of Wires	Final Modules of Elasticity		Coeficient of linear Expansion	
AL	Kg/mm²	lb/in²	1/Cº	1/Fº
7	6000	8.5 x106	23.0 x10-6	112.8 x10-6

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

19	5700	8.1 x106	23.0 x10-6	112.8 x10-6
37	5700	8.1 x106	23.0 x10-6	112.8 x10-6
61	5500	7.8 x106	23.0 x10-6	112.8 x10-6
91	5500	7.8 x106	23.0 x10-6	112.8 x10-6

Construction Parameters

BS 215 Part 1

Code	Nominal Area		Stranding	Overall Diameter	Weight	Rated Strength	Electrical Resistance	Current Rating*
	Nominal	Teorical						
/	mm2	mm2	No./mm	mm	kg/km	KN	ohm/Km	A
Midge	22	23.33	7/2.06	6.18	64	3.99	1.227	106
Gnat	25	26.8	7/2.21	6.6	73.8	4.83	1.0643	122
Mosquito	35	37	7/2.59	7.8	102.1	6.27	0.7749	141
Ladybird	40	42.8	7/2.79	8.4	117.9	7.28	0.6678	157
Ant	50	52.83	7/3.1	9.3	145	8.28	0.5419	175
Fly	60	63.55	7/3.4	10.2	174	9.9	0.4505	196
Wasp	100	106	7/4.39	13.17	290	16	0.2702	268
Hornet	150	157.6	19/3.25	16.25	434	25.7	0.1825	342
Charfer	200	213.2	19/3.78	18.9	587	35.4	0.1349	412
Cockroach	250	265.7	19/4.22	21.1	731	40.4	0.1083	471
Butterfly	300	322.7	19/4.65	23.25	888	48.75	0.08916	530
Centipede	400	415.2	37/3.78	26.46	1145	63.1	0.06944	616
Maybug	475	486,1	37/4,09	28,6	1342	0.05571	0,05900	740
Skorpion	500	529,8	37/4,27	29,9	1460	0.04916	0,05400	887
Cicada	600	628,3	37/4,65	32,6	1733	0.03423	0,04500	1056

Note: *The values of current rating mentioned in above Table are based on wind velocity of 0.6 metre/second, solar heat radiation of 1200 watt/metre2, ambient temperature of 50^{0}C & conductor temperature of 80^{0}C .

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