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Aluminium Conductor Cables

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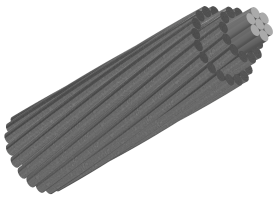
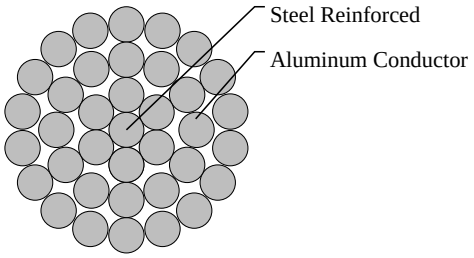
Aluminum Conductor Steel Reinforced (ACSR) Cables

Hen





APPLICATIONS

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.

STANDARDS

ASTM B 232/B 232M

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.

PHYSICAL AND THERMAL PROPERTIES

Ambient Temperature: -5°C - 50°C
Isokeraunic level: 10 - 18
Relative Humidity: 5 - 100%

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)
Galvanised Steel: 11.5 x10 (1/°C)

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MECHANICAL PROPERTIES

Wind Pressure: 80 - 130kg/m²

Seismic Acceleration: 0.12 - 0.05g

CONSTRUCTION PARAMETERS

Code	Nom. Area (AL)	Nom. Area (Steel)	Nom. Area (Total)	Stranding (AL)	Stranding (Steel)	Overall Diameter (Total)	Weight	Breaking Load	Electrical Resistance @20°C	Current Rating
	mm²	mm²	mm²	no x mm	no x mm	mm	kg/km	kN	Ω/km	A
Hen	241.27	56.3	297.57	30/3.2	7/3.2	22.4	1110.6	98.3	0.12	453