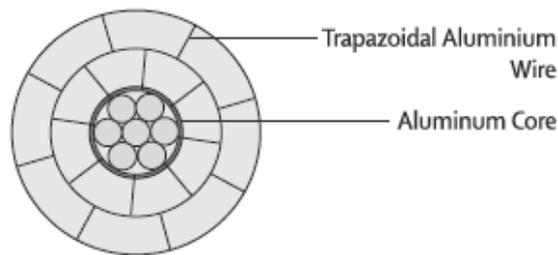


STERLITE® Low Loss Conductor Series Eco Conductor



Project Description

Eco Series conductors consist of trapezoidal shaped special aluminium alloy containing magnesium, silicon and copper stranded with round core. The trapezoidal shape provide compactness to the extent of 96%.

Product Application

Eco series conductors are an innovative, efficient, low loss and most importantly an economical solution for re-conductoring new lines. The higher efficiency of Eco series conductors enables significant savings when substituted in grid systems for normal ACSR or ACCC conductors. Also for delivery of same power to the customers, Eco Series conductors enables power generator to reduce the amount of power they must generate and hence lesser emission.

Product Benefits

- Up to 30% less I^2R losses for same sized conductor.
- For same output runs cooler by 5-10°C, hence lower carbon emissions.
- Contributing to greenhouse gases.
- Can be deployed with existing structural designs.
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Product Specification

Properties	TACSR (ACSR Moose Equivalent)
Typical Factors	10TW/6TW/7/2/37mm
Reference Specifications	SS 4240813,14
Total Cross Section Area (sqmm)	314.11
Conductive Wire	Al 59 wire
Core Wire	Al 59 wire
Conductor Diameter (mm)	20.5
Weight (Kg/km)	866
Ultimate Tensile Strength (kgf)	7429.65
DC Resistance (ohms/1000ft) @ 68°F Temperature	0.0948
Maximum Operating Temperature, °C	95
Current Carrying Capacity (Amp) at Maximum Operating Temperature	750
Conductor Sag in feet at Maximum Operating Temperature	8.47

Ruling Span (Mtrs)	325
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Assumptions: Ampacity is calculated based on Wind zone coefficient as 2, reliability level coefficient as 2, terrain category coefficient as 2, 0.2006 lbs/in as wind pressure for Moose equivalent conductors, 0.1938 lbs/in as wind pressure for 2 Zebra equivalent conductors, 0.1824 lbs/in as wind pressure for Panther equivalent conductors, starting condition for calculation of Sag tension for ACSR Moose as 22% of UTS at 89.6 °F, no wind and for ACSR Zebra & Panther as 25% of UTS at 89.6 °F, no wind, constant of mass temperature coefficient of resistance of conductor per °K as 0.0039 for Al59 otherwise 0.004, the values of Sag for conductors other than ACSR are calculated by maintaining the tension of ACSR conductor at 89.6 °F full wind, 113°F ambient temperature, 1.97 ft/s wind velocity, 0.5 as coefficient of solar absorption, 0.6 as coefficient of emmissivity and 0.7742Wt/sqin coefficient for solar radiation, at sea level.

Supply Length

As per customer requirements.

Manufacturing Process

To ensure the accuracy and precision of the manufacturing process, Sterlite has a state of the art plant with top of the line machines enabling control of critical process and quality parameters. All Sterlite production lines are backed up with strong quality assurance systems. This is done by ensuring that all process and test equipments are periodically calibrated with defined benchmarks.

International Standards

These conductors comply with IEC62004 specification standards.

Service USP's

- Complete range of power transmission conductors.
- World-wide sales support.
- Web-based order tracking & customers support.
- Specialised technical support.

Technical Specifications

The above designs are only a sample of the options available from Sterlite Power. Contact our sales team for a cable designed to your exact specifications.

Disclaimer

Sterlite Power's policy of continuous improvement may result in a change in specification without prior notice. Any warranty of any nature relating to any Sterlite Power products is only contained in the written agreement between Sterlite Power Transmission Limited and the direct purchaser of such products(s).