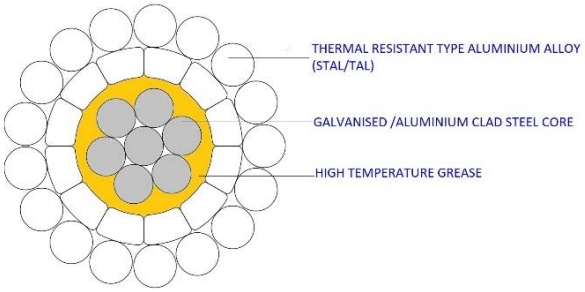
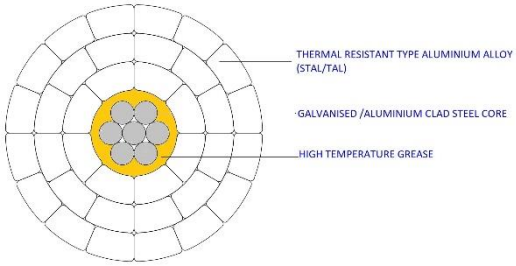
EMPOWERING HUMANITY BY ADDRESSING THE TOUGHEST CHALLENGES OF ENERGY DELIVERY

Gap-Type Super Thermal Resistant Aluminium Alloy Conductor Steel Reinforced (GTACSR/GZTACSR)

Gap-type aluminum conductor steel reinforced (GZTACSR) uses heat-resistant aluminum over a steel core. A small annular Gap is maintained between a high-strength steel core and the first layer of aluminum alloy strands. The gap between the first layer trapezoidal shaped aluminum strands and the steel core is filled with high thermal resistant grease.





APPLICATION

- No modification or reinforcement required for existing towers, Hence Ideal for Reconductoring Projects.
- Can be Deployed in Existing Structures or can reduce strain on structures, increasing life.
- Double the current-carrying capacity for the same size conductor.
- At the time of sagging, all tension is applied to the steel core by a special stringing method. As a result, the thermal expansion is that of steel core, Lower Thermal Expansion of Steel Core maintain small sag in high temperature.

BENEFITS

- GTACSR can carry 1.6 times higher current than ACSR of equivalent size.
- GZTACSR can carry 2 times higher current than ACSR of equivalent size.
- Maintaining the mechanical strength of the conductor with continuous operating temperature up to 150°C & 210°C
- Low Sag at high temperatures
- Low thermal knee point
- Tension the core and the external layer independently to have the knee-point at the installation temperature
- Reduced cost due to no expensive materials being required.
- A very cost-effective solution for enhancing the power transfer capacity of existing lines

TECHNICAL SPECIFICATIONS

PROPERTIES	UNIT	GAP PANTHER	GAP ZEBRA	GAP MOOSE
Appropriate System Voltage	kV	132 kV	220 kV	220 kV / above
Equivalent ACSR		PANTHER	ZEBRA	MOOSE
Reference Standards		IEC 62004, IEC 60888/IEC 1232/, IEC 62420 , other ASTM/EN Std.		
Conductor diameter	mm	20.60	27.10	29.90
Weight	kg/km	974	1621.0	2004
Ultimate tensile strength	KN	95.7	145.8	165.62
DC resistance at 20°C temperature	Ohm/km	0.1224	0.06760	0.05134
Current carrying capacity at maximum operating temperature (210)	A	1051	1523	1787

Note: The Catalogue conductor Parameter are informative and can be customized as per Project Requirements.

Assumptions: Ampacity is calculated based on, 45°C ambient temperature, 0.56 m/s wind velocity, 0.8 as coefficient of solar absorption, 0.45 as coefficient of emissivity and 1045 W/sq.m coefficient for solar radiation, 0 m Elevation.

Non-Specular (NS) Dull Finish Conductor can be available on special requirement.

Disclaimer:
** Parameters mentioned in the document are indicative and can vary subject to different standards*
** Customizations are available on select products. Please indicate your interest by reaching out to the sales team*

Contacts us for more details:
Saurabh Mahajan, VP Exports & Sales (saurabh.mahajan1@sterlite.com)
Amit Charan, VP, Sales and BD (amit.charan@sterlite.com)