STER-ACSR™/ AS or STER-ACSR™ / AW

Aluminium Conductors, Aluminium Clad Steel Reinforced (ACSR/AS or ACSR/AW) are concentrically stranded conductors with one more layers of hard drawn 1350-H19 aluminium wires on Aluminium Clad steel wire core. The core can be single wire or stranded depending on the size.

APPLICATION

High voltage overhead transmission & distribution lines and coastal regions.

ADVANTAGES

A higher UTS can be achieved by increasing core and higher current carrying capacity by increasing Al content. The mechanical properties of ACSR/AS conductors are similar to ACSR conductors but they offer improved ampacity and resistance to corrosion beacause of the presence of aluminium clad steel wires in the core. These conductors are better replacement for ACSR conductors where corrosive conditions exist.

MANUFACTURING CAPABILITY

SR. NO.	DESCRIPTION	RANGE	
01	Conductor Area	10.6 mm^2 to 1393 mm^2	0.0164 in^2 to 2.1592 in^2
02	Conductor construction	6AI/1ACS to 84AI/19ACS	
03	Conductivity of Aluminium	61%	
04	Conductivity of ACS Wire	20.3%	

PHYSICAL PROPERTIES

At a temperature of 20°C (68°F), the density of hard-drawn aluminium has been taken as 2.703 g/cm^3 (168.74 lb/cf) and aluminium clad steel wires 6.59 g/cm^3 (411.40 lb/cf)

SR. NO.	CONDUCTOR CONSTRUCTION	MODULUS OF ELASTICITY*		LINEAR COEFFICIENT*	
		MPA	KSI	/°C	/°F
01	6AI/1ACS	74000	10733	19.3 X 10^{-6}	10.7 X 10^{-6}
02	26AI/7ACS	71000	10298	19.1 X 10^{-6}	10.6 X 10^{-6}
03	30AI/7ACS	74000	10733	18.0 X 10^{-6}	10.0 X 10^{-6}
04	54AI/7ACS	65000	9427	19.5 X 10^{-6}	10.8 X 10^{-6}

SR. NO.	DESCRIPTION	RANGE	
01	Permissible Temp in continuous operation	75°C	167°F
02	Temp in a short circuit (duration up to 5 s)	200°C	392°F

STANDARDS

IEC, BS, ASTM, CAN-CSA, DIN, IS, AS and relevant national and international standards.