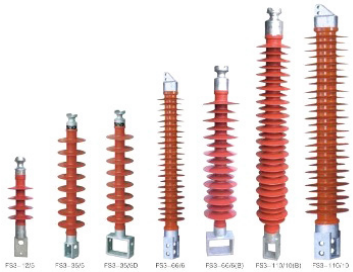
Composite insulator



Summary

The composite insulator consists of three parts: an insulating core rod, a silicone rod rubber sleeve, and connecting fittings at both ends.
The insulating core rod is the abbreviation of epoxy resin glass fiber pull rod. It is the skeleton of the composite insulator, which plays multiple roles such as supporting the umbrella cover, insulation, connecting the hardware at both ends, and bearing mechanical loads. It has a high tensile strength, generally up to 6 0 Mpaor more, which is twice that of ordinary steel and 5 to 8 times that of porcelain materials. It has good dielectric properties and chemical corrosion resistance, as well as good resistance to bending fatigue, creep and impact resistance. The silicone rubber umbrella cover mainly protects the core rod, blocks rain and snow, increases the creepage distance and the external insulation of the product. It is made of high molecular polymer silicone rubber as the matrix, supplemented by flame retardants, anti-aging agents, coupling agents and other fillers through high temperature and high pressure vulcanization. It has good hydrophobicity and migration, as well as good corrosion resistance,aging resistance, electrical insulation and other properties. It also has high pollution flashover voltage and crushing resistance, uniform voltage distribution, and its flashover voltage is less than 2 times that of porcelain under the same conditions.
The composite insulators produced by our company use hardware made of special steel. The hardware ends adopt the labyrinth design principle,multi-layer protection, and good sealing performance, which solves the most critical problem of insulators - interface electrical
breakdown. The connection between the hardware and the core rod adopts the most advanced computer-controlled coaxial constant pressure crimping process in the world, and is equipped with a fully automatic acoustic emission flaw detection system to ensure the reliability and stability of the connection between the hardware and the core rod. The core rod adopts ERC high-temperature acid-resistant rod, and the interface between the core rod andthe silicone rubber is coated with a special coupling agent. The umbrella sleeve adopts a one-time integral molding process under hightemperature and high pressure, combined with a two-stage vulcanization process monitored by a computer, which extends the service life of the product. Advanced production equipment and manufacturing technology, complete testing equipment and testing methods ensure that all technical indicators of the product meet the relevant domestic and international standards, becoming a new generation of insulators for high-voltage transmission and transformation lines.

Performance characteristics

>Small size and light weight, about 1/5~1/9 of the same grade porcelain insulator, easy to transport and install.
>Composite insulators have high mechanical strength, reliable structure, stable performance, and large safe operation margin, providing guarantee for line and safe operation.
>The composite insulator has excellent electrical properties. The silicone rubber shed has good hydrophobicity and migration, good pollution resistance, strong anti-pollution flashover ability, can operate safely in heavily polluted areas, does not require manual cleaning, and can be free of zero value maintenance.
>Composite insulators are resistant to acid, alkali, heat aging and electricity, have good sealing properties, and can ensure that the internal insulation is not affected by moisture.
>Composite insulators have good anti-brittleness performance and strong shock resistance, and will not have brittle fracture accidents.
>Composite insulators are interchangeable and can be used interchangeably with porcelain insulators.

Product type:

> FXBW-------Rod type suspension composite insulator
> FPQ--------Composite pin insulator
> FZSW------Composite post insulator
> FS ---------Composite cross-arm insulator
> FCGW------Composite dry wall bushing
> FQB--------Wrist composite insulator for electrified railway
> FQX--------Suspension composite insulator for electrified railway
> FQJ---------Roof composite insulator for electrified road

Environmental adaptability requirement:

> Ambient temperature: -40°C~+40°C;
> Altitude: no more than 1500 meters;
> AC power frequency: no more than 100Hz;
> Max wind speed: no more than 35m/s;
> Earthquake intensity: no more than level 8