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# Chapter 1

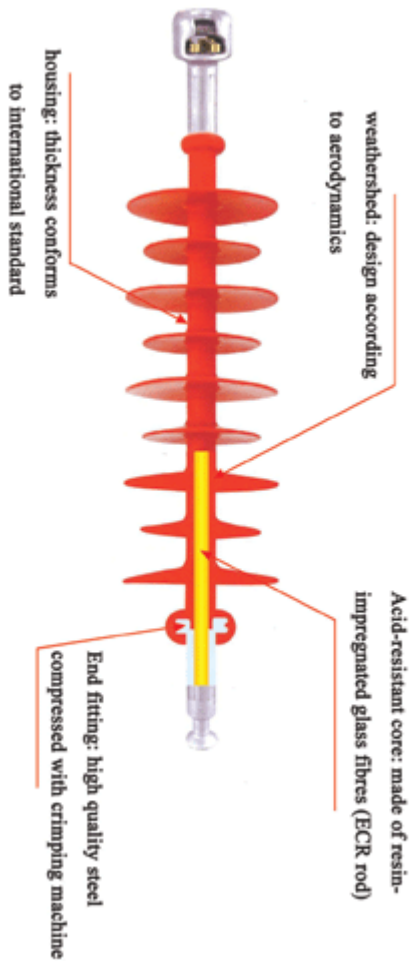
## Composite Insulator Definition

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### 1.1 Composite Insulator Components

By Orient Power

# Composite Insulator Components



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## Composite insulator components

A composite insulator is made of at least two insulating parts – a core and housing. It is equipped with end fittings.

- ◆ **Core.** The core is the internal insulating part of a composite insulator. It is intended to carry the mechanical load. It consists mainly of glass fibers positioned in a resin matrix so as to achieve maximum tensile strength.
- ◆ **Housing.** The housing is external to the core and protects it from the weather. It may be equipped with weathersheds. Some designs of composite insulators employ a sheath made of insulating material between the weathersheds and the core. This sheath is part of housing.
- ◆ **Weathersheds.** Weathersheds are insulating parts, projecting from the housing and sheath, intended to increase the leakage distance and to provide an interrupted path for water drainage.
- ◆ **End fittings.** End fittings transmit the mechanical load to the core. They are usually made of metal.

Each part of the composite polymer insulators is important for the product quality. Such as the silicone rubber quality decides the life-span of the insulator when in heavy pollution areas, and also the interfaces of each component are much more important too. If vapor goes in an insulator, the insulator will lose performance gradually.