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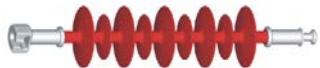
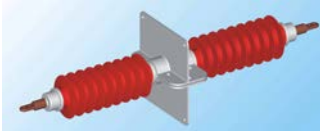
Chapter 1

Composite Insulator Definition

1.3 Composite Insulator Development

By Orient Power

Composite Insulator Development



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Composite insulator development

Why do we use the polymer materials to manufacture insulator?

- ◆ One of the reasons is the deposition of pollutants on the insulators which start conducting during foggy weather conditions resulting in flashover and interruption of power.
- ◆ Amongst the non-ceramic insulators, silicone rubber insulator is better equipped to deal with flashover problems due to its unique hydrophobicity property.

The development of composite insulators

- ◆ The development of composite insulators in world dates back to the 1800 onward. In the 1990's they have been used in insulators.
- ◆ The history of composite insulators began in the 1940s, then composite insulators were used to manufacture high voltage indoor electrical insulators from epoxy resins.
- ◆ Polymer insulators for outdoor use were made feasible by the discovery in the 1950s.
- ◆ However, polymer insulators for outdoor application on transmission lines were not developed until the late 1960s and 1970s.
- ◆ Polymer insulators finally came into general use on transmission lines in the 1980s.
- ◆ At present, up to 600000 composite insulators are operating on 35 to 500 kV ac overhead transmission lines.