sales@composite-insulator.com
http://www.composite-insulator.com

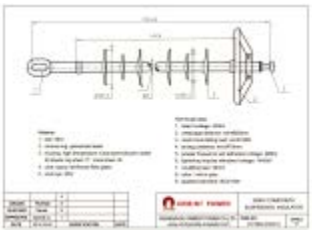
Chapter 5

Composite Insulator Design

5.2 Main Parameters for Design

By Orient Power

Main Parameters for Design



Composite polymer insulators consist of reinforced fiberglass rod core, silicone rubber sheds, and metal end fittings.

- ✧ Core is the internal insulating part of a composite insulator, and it is intended to carry the mechanical load.
- ✧ Sheds are insulating parts, projecting from the housing or sheath, intended to increase the leakage distance.
- ✧ End fitting transmit the mechanical load to the core.

Main parameters for design composite insulator:

- ✧ Rated voltage
- ✧ Section length
- ✧ Arcing distance
- ✧ Creepage distance
- ✧ Rated failing load
- ✧ End fitting designation
- ✧ Power frequency withstand voltage
- ✧ Impulse withstand voltage

After knowing the above value of composite insulators, then we can choose the size of the core rod to meet the specified mechanical load, suitable size of the end fitting and its coupling size.
Calculate the shed diameter and shed spacing and see whether to choose alternative sheds or equal sheds to meet the arcing distance and Creepage distance and to suit the section length.

If the composite insulator voltage is above 110kv, we should consider adding grading rings on the insulators, one for 110kv, two for 220kv and above.

More composite insulator information can be found in Orient power website.

Orient Power
sales@composite-insulator.com
http://www.composite-insulator.com