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Chapter 2

Composite Insulator Types

2.13 Grading Ring

By Orient Power

Grading Ring



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Definition of grading rings for insulators:

- Grading ring is used on high voltage equipment.
- A grading ring is used to ensure a uniform voltage distribution along the length of an electrical device.
- The main purpose of the grading ring is to reduce the potential gradient along the insulator, preventing premature electrical breakdown.

Properties for composite insulator grading ring:

- The grading ring surrounds the end of the insulator next to the high voltage conductor.
- It reduces the gradient at the end, resulting in a more even voltage gradient along the insulator, allowing a shorter, cheaper insulator to be used for a given voltage.
- Grading rings also reduce aging and deterioration of the insulator that can occur at the HV end due to the high electric field there.
- There are also two important factors that can influence the function of the grading rings, that is the position of the grading ring and the diameter of the grading ring.