

# PENETRATING LIQUIDES METHOD TO SHOW DANGEROUS CRACKS ON CERAMICS POST INSULATORS STRUCTURE

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The presented work introduces a quick method to analyze and display the dangerous cracks and other hidden defects in the structure of Ceramics Cylindrical Post Insulators, which are incorporated in the 110 KV High Voltage Disconnecting Switches.

Deep and large, penetrated cracks and other defects like small cracks, pores, lack of material, thermic points etc are at the origin of Ceramics Post Insulators Damage, so that a professional examination of their conditions in current work is very much desirable from economic reasons.

This Method is a very practical one as it may offer a first image about presence of cracks in the Ceramic Post Insulators and its metallic Cups, directly at the Electric Fields, where they are mounted on the Disconnecting Switches.

Some of the Examination Results acquired by applying this Method are forward used from other nondestructive laboratory investigation methods and really complete a professional evaluation about the functional state of these specific Ceramics Post Insulators.

## **Conclusions:**

- Taking off from the electric power of the disconnecting switches, is possible to examine the Ceramics Insulators 'integrity', at the place, where they are mounted in a structure, by applying Penetrating Liquids Method, to put in evidence cracks, holes, pores, lack of materials and so on, which may have correspondence with deep inner defects.
- In spite of its length of time, more than 30 minutes for each case, this method is very practical and may be complimentary to the thermography in infra-red by impulses method.

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