

BRITTLE FRACTURE OF GRP ROD USED IN POLYMERIC INSULATORS AN EXPERIMENTAL STUDY

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ABSTRACTS

In this paper, a detailed study has been carried out on the failure of Glass reinforced polymers (GRP) used in composite insulators. Different GRP rods were tested in inclined plane test and a portion of the sample of GRP rods were tested to obtain brittle fracture in the laboratory. The severity of HNO₃ solution used in the tests were 0.1N and 0.5N. Two different electrode materials of copper and stainless were used in the experiment. After obtaining the erosion of the material, the rod was subjected to mechanical tensile load test. A sample rod has yielded prior to specified mechanical load.

This experimental work has been carried out in laboratory in order to simulate the brittle fracture.

KEYWORDS: Corona Effect, Glass Reinforced Polymers (GRP), HNO₃

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