

## PROPERTIES OF SEMI-CONDUCTING PLASTICS INSULATING MATERIALS

This interim report describes the electrical characteristics of carbon – and silicon carbide – filled resins, which are being developed as semi-conducting coatings for outdoor insulators.

It is shown that surface discharges that occur on 'dry-banding' on outdoor insulators can be suppressed if the insulator has a resistive surface layer. The limiting pollution layer current for suppression of discharges is determined by the current carried by the resistive surface layer, the ratio of the former to the later being typically 50 to 1. The purpose of the project is to investigate semi-conducting resin/filler systems, to evaluate their electrical characteristics and to produce resistive coatings of these materials that will suppress discharges on insulators used outdoors.