

A study on the dielectric properties of RBDPO olein under low temperature thermal ageing

ABSTRACT

A number of studies have been carried out previously to investigate the suitability of palm oil as dielectric insulation fluid in transformers. Among the important studies is the ageing performance of palm oil. In this paper, a study was carried out to investigate the dielectric properties of Refined Bleached and Deodorized (RBDPO) Olein after subjected to thermal ageing. A low temperature ageing was carried out at 85°C for 5 days. The AC breakdown voltage, dielectric dissipation factor, relative permittivity and resistivity of RBDPO were examined throughout the ageing duration. It was found that the RBDPO performs reasonably well under low temperature ageing.

Keywords: AC breakdown voltage; Dielectric dissipation factor; Dielectric insulating fluid; Palm oil; permittivity; Resistivity; Thermal ageing