

An Investigation of Vegetable Oils as Potential Insulating Liquid

Authors : Celal Kocatepe, Eyup Taslak, Celal Fadil Kumru, Oktay Arikan

Abstract : While choosing insulating oil, characteristic features such as thermal cooling, endurance, efficiency and being environment-friendly should be considered. Mineral oils are referred as petroleum-based oil. In this study, vegetable oils investigated as an alternative insulating liquid to mineral oil. Dissipation factor, breakdown voltage, relative dielectric constant and resistivity changes with the frequency and voltage of mineral, rapeseed and nut oils were measured. Experimental studies were performed according to ASTM D924 and IEC 60156 standards.

Keywords : breakdown voltage, dielectric dissipation factor, mineral oil, vegetable oils

Conference Title : ICPESE 2015 : International Conference on Power and Energy Systems Engineering

Conference Location : Paris, France

Conference Dates : August 27-28, 2015