

Ultraviolet Visible Spectroscopy Analysis on Transformer Oil by Correlating It with Various Oil Parameters

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Abstract : Power transformer is one of the most important devices that are used in power station. Due to several fault impending upon it or due to ageing, etc its life gets lowered. So, it becomes necessary to have diagnosis of oil for fault analysis. Due to the chemical, electrical, thermal and mechanical stress the insulating material in the power transformer degraded. It is important to regularly assess the condition of oil and the remaining life of the power transformer. In this paper UV-VIS absorption graph area is correlated with moisture content, Flash point, IFT and Density of Transformer oil. Since UV-VIS absorption graph area varies accordingly with the variation in different transformer parameters. So by obtaining the correlation among different oil parameters for oil with respect to UV-VIS absorption area, decay contents of transformer oil can be predicted

Keywords : breakdown voltage (BDV), interfacial Tension (IFT), moisture content, ultra violet-visible rays spectroscopy (UV-VIS)

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