

Health Assessment of Power Transformer Using Fuzzy Logic

Authors : Yog Raj Sood, Rajnish Shrivastava, Anchal Wadhwa

Abstract : Power transformer is one of the electrical equipment that has a central and critical role in the power system. In order to avoid power transformer failure, information system that provides the transformer condition is needed. This paper presents an information system to know the exact situations prevailing within the transformer by declaring its health index. Health index of a transformer is decided by considering several diagnostic tools. The current work deals with UV-Vis, IFT, FP, BDV and Water Content. UV/VIS results have been pre-accessed using separate FL controller for concluding with the Furan contents. It is broadly accepted that the life of a power transformer is the life of the oil/ paper insulating system. The method relies on the use of furan analysis (insulation paper), and other oil analysis results as a means to declare health index. Fuzzy logic system is used to develop the information system. The testing is done on 5 samples of oil of transformers of rating 132/66 KV to obtain the results and results are analyzed using fuzzy logic model.

Keywords : interfacial tension analyzer (ift), flash point (fp), furfuraldehyde (fal), health index

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