

Quick Info



THE TRANSFORMER HAS BEEN USED FOR ELECTRIFICATION SINCE 100 YEARS



MORE MOISTURE IN SOLID INSULATION. ENSURE THE DRYNESS OF YOUR TRANSFORMER TO PROLONG ITS LIFE

Next Issue



AGEING OF TRANSFORMER INSULATION: HOW TO MITIGATE IT?

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TRANSFORMER LIFE MANAGEMENT : ENSURING THE POWER CONNECTION



Ageing of Power Transformer

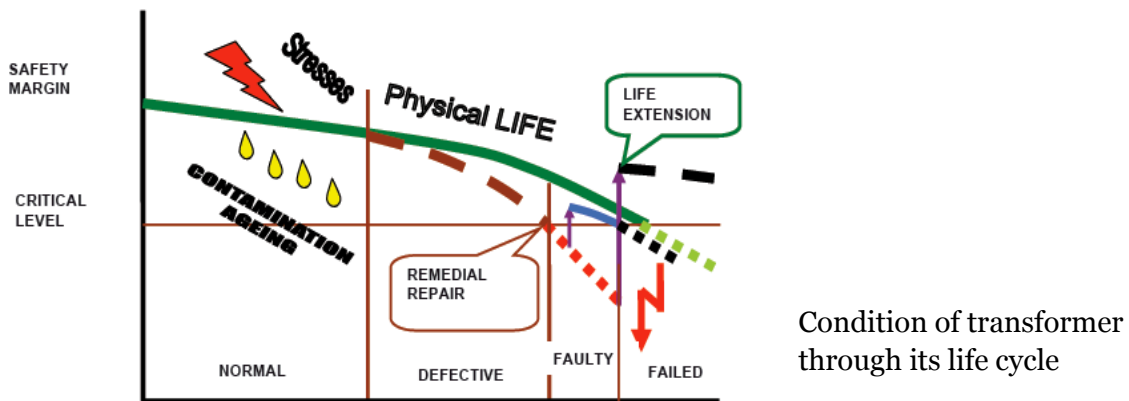
With the ageing population of power transformer, clearly determining the condition of in-service power transformer is tremendous importance to avoid the force outage and ensure the continuous of electricity supply. The asset operator face a challenges in managing the population of transformers; to reduce the maintenance costs and improve the transformer reliability and availability. The transformer life management nowadays has gained an increase acceptance and become important due to several reasons such as economic as well as technical and strategic factors. The key objective is to extend the service life of the transformer, maximising return on investment and lowering the operating cost.

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Through its service life, the transformers can be categorised into four basic conditions as its properties change with time under the impact of thermal, electric, electromagnetic and electrodynamic

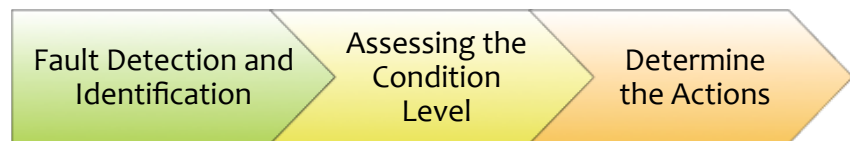
stresses and contamination. A failure or fault occurs when the withstand strength of the transformer with respect to its key properties is exceeded by operating stresses.

With a proper maintenance and testing program, it would be possible to determine when the circumstance were such that failure could occur and remedial action can be taken to improve condition and extend the life of the transformers.



The Effective Way in Managing the Ageing of Power Transformer

Life management of power transformer involves a chain of decisions made over through its service life and aimed at safe, reliable and cost effective transformer operation.



There are three important tasks that need to be address. The first is incipient failure detection, the second is the identification of transformer malfunction or faulty states and the third is strategic planning, includes among its goal efficient operation and maintenance scheduling, maintenance activities that are necessary to ensure high availability and consideration for the repair or replacement.

Through an effective maintenance management approach that deals with the dynamics of the ageing process, this issue can be addressed. The assessment combines input from the design assessment, historical loading, operational history, and also routine and advanced diagnostic data. A unit-based ranking that identified the risk of failure based on results of the design and condition assessment provides an accurate estimate of the risk of failure for the transformer. Once the status of a unit is known, recommendations for maintaining, improving the unit condition, or establishing a contingency can be prioritised. This will result in the elimination of high-risk units without increasing budget expenditures.

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Transformer Consulting Services

We provide condition assessment, laboratory diagnostics and electrical testing services to support your asset management program