DT cooling system with Data Logger. Keeps the transformer cool to normal temperature or shut down through ACR / Contactor, to save guard the DT.

Temperature rise occurs because of over loaded circuit result in insulation break, transformer damage, life of transformer.

In nutshell: the controlled temperature increases the efficiency of transformer and minimise the core losses.

Overloading Transformers are designed to work at a given load to exceed that rating and due to harmonic loads will result in an increase in temperature. This increase in temperature will cause a rapid deterioration in the coil insulation and cause a complete failure of the transformer coil.

Cooling The winding copper maintains its mechanical strength up to a few hundred degrees Celsius. The transformer oil does not degrade considerably below around 140°C however paper insulation deteriorates greatly if its temperature rises above about 90°C. The cooling oil flow is must, consequently, guarantee that the insulation temperature is kept below this temperature as much as possible. It is by all means possible, often times with little effort, to lower the average temperature through a well-targeted intervention into the cooling system control forced air is better remedy, with the effective reduction in transformer temperature by >25°C.

Conclusions The review was made by analysing and discussing the existing studies with effect of temperature rise and factors influencing on oil-transformer aging. A condition monitoring system is considered to be essential to ensure reliability and sustainability of the transformer, the temperature is a limiting factor that should not exceed from a predetermined value.

Our Microprocessor based Controller have the required feature of data logging of operational parameters and control as per requirement.

Features:

1. Precise temperature measurement. Three stages to operate the exhaust fan at various DT temperature.
2. Closing of transformer through ACR or other tripping mechanism.
3. 1000 times Data logging with time and date when and which fan was operated. This feature provides the data for timely maintenance and life of transformer, before abrupt failure of DT.
4. System can be used upto 2000 kVA Distribution Transformer.
5. Customised solution for individual Distribution Transformer.

DT Transformer unit, closed

DT Transformer unit, open

Cooling fan installation

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