WHAT KEEPS YOUR TRANSFORMER OPERATING?

PAPER!

That's right, paper provides the mechanical strength holding your transformer together, be it a small distribution transformer or a giant generator transformer!

Paper provides Mechanical Strength, Dielectric Strength and Dielectric Spacing.

So what if my transformer is held together by paper?
It can't be under any stress since it has no moving parts ? **WRONG !**

Other than load tap changes, a transformer has no mechanically moving parts, but it does move due to mechanical vibration, switching surges, line surges and limited short circuits.
The paper insulation and spacers withstand this movement when your transformer is new but as the transformer ages, it losses this ability.
IEEE defines your transformer's end of life when there is a 75% loss in paper tensile strength.

WHAT PROVIDES DIELECTRIC STRENGTH, PROVIDES COOLING AND PROTECTS THE PAPER INSULATION ?

MINERIAL OIL !

Before the oils' ability to provide Dielectric Strength and Cooling is reduced and before oxidising compounds become established and decay the paper, the oil must be maintained in order that the Transformer Life is not reduced.
Oil is an organic compound, which naturally oxidise and decay.

Oil in a Transformer is encouraged to oxidise by the presence of acids, moisture, gases, lacquers and other contaminants. The same oxidants which exist in the oil also take up residence in the paper since the paper acts like a filter and absorbs these decaying products, destroying the transformer's paper insulation !.

SLUDGES !

If allowed to continue unchecked, oil decay products will form sludge deposits in the transformer which acts to trap heat in the transformer, degrades the insulation and reduce dielectric gaps increasing the risk of failure.

Sludge can only be removed by Hot Oil Cleaning, preferabilly whilst the Transformer is Energised.
Filterall equipment offers the facility to redissolve oil decay products and remove them in order that clean **as new** Oil is returned to the transformer. This provides a thorough cleaning of the transformer internals; the insulating papers, the cooling fins and ducts by providing a continuous redissolving action of the oil decay products.

Since the process also cleans the transformer internals, not just the oil, the ageing process is very much reduced providing for **Extended Transformer Life.**

Alternate ?

Yes, you can switch off your transformer, remove the contaminated oil and re-fill with new oil again; but what do you achieve ?. Exposing the windings to the atmosphere and removing the support the oil provides encourages further paper deterioration. Also what becomes of the decaying products held in the paper?. They gradually leech out into the new oil until equilibrium is achieved so a few months down the road your oil is back to being contaminated and the oxidisation process continues.
All this requires that the transformer be de-energised !. Messy job or what !. What do you do with the old contaminate oil, it's still mineral oil which during the Filterall de-sludging process is re-claimed to the same standard as demanded for new un-used oil.. Why buy oil when you already have oil on site in your transformer ? Even new oil requires purification once it is in the transformer before the transformer can be safely energised so is it not better to regenerate and do the job properly !.

Not only does early action maximise the Life of your Transformer's Insulation (and hence the Life of your Transformer !), it also maximises the life of your Transformer Oil.
There is no way to prevent the formation of oxidation decay products in your transformer, this is a fact of life !. However, Modern Processes Exist at Filterall, which can greatly reduce the effect of it on your transformers.
Greater Efficiency and Reduced Operating Costs appeal to you ?.

Then PLEASE VISIT OUR WEBSITE www.FILTERALL.com *FOR MORE INFORMATION..*

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