NOMEX® transformer winding retrofit
Increase the availability of your transformers

Aging equipment increasingly raises the “remanufacture/repair or replace” question. When considering repair, the transformer performance is matched to the original specifications because of fixed core limitations. However, what if system conditions, risk elements, or needs have changed since the original installation? ABB offers a retrofit remanufacturing technology option that can extend asset life, boost reliability and which maximizes the return on the repair investment.

NOMEX® thermal protective technology, rated 222°C, is a family of synthetic paper and pressboard insulation material which provide high levels of electrical, thermal, mechanical, and chemical integrity. The strategy is to protect the insulation system in the hottest parts of the winding by selectively replacing cellulose with NOMEX® technology to capitalize on its thermal strength and expand design choices.

The following are some options ABB offers using hybrid NOMEX®/cellulose insulation systems:

I) Retrofit with an increased rating:
- added capacity or higher overload
- reduced losses at original rating (depending on the type of the former design)
- can provide an average increase in power or overload capability of 50%

II) Retrofit with the same capacity rating but reduced coil size:
- added reliability due to the high temperature insulation used
- possibility of cost reduction using (less copper and labor)
- fast execution

III) Retrofit with the same rating and coil dimension:
- allows increased overload capability of the transformer
- adds reliability and ensures higher oil quality over time

Advantages of using NOMEX® thermal protective technology in transformers:
- Possibility to delay investment in the purchase of new equipment
- Added reliability for transformers operating in critical conditions
- More operational system flexibility from increased overload capacity
- Increased power for a given unit size or available space
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