



ABB Life Expectancy Analysis Program (ABB LEAP) for stator windings of high voltage rotating machines

Power and productivity
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ABB LEAP facilitates the management of machine maintenance



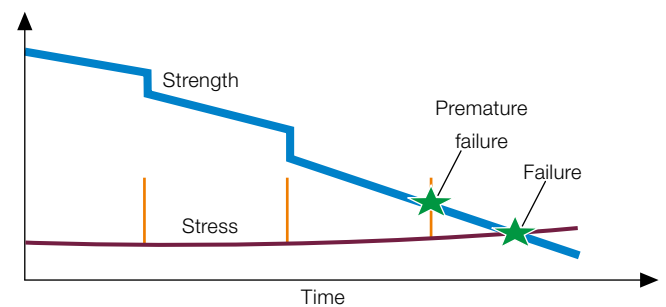
ABB LEAP is much more than just a package of inspections: it is a systematic approach to maintenance management.

The materials and components of electrical machines are subject to thermal, electrical, ambient and mechanical stresses. This leads to a process of degradation as materials lose strength over time (blue curve).

Operating stresses – both steady state and transient – are also present (red curve). At the point where the two curves cross, failure becomes imminent.

ABB LEAP provides the information needed for timely action to re-position the red and blue curves.

Appropriate maintenance can help to re-draw the red, and possibly even the blue curve, preventing premature failure and extending the life of the machine.



What makes ABB LEAP special is its ability to track the development of defects over time. As a result ABB LEAP can be directly integrated into a maintenance plan.

Analysis is performed at four levels depending on the opportunities for data collection over the machine's lifetime.

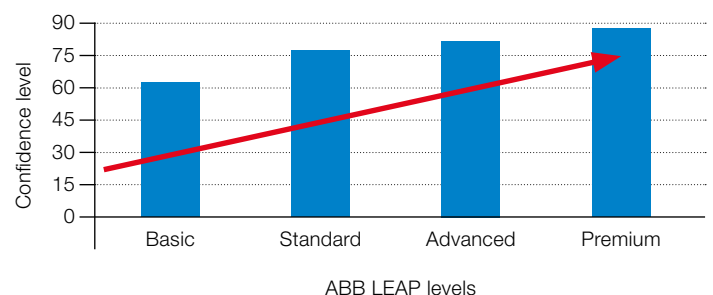
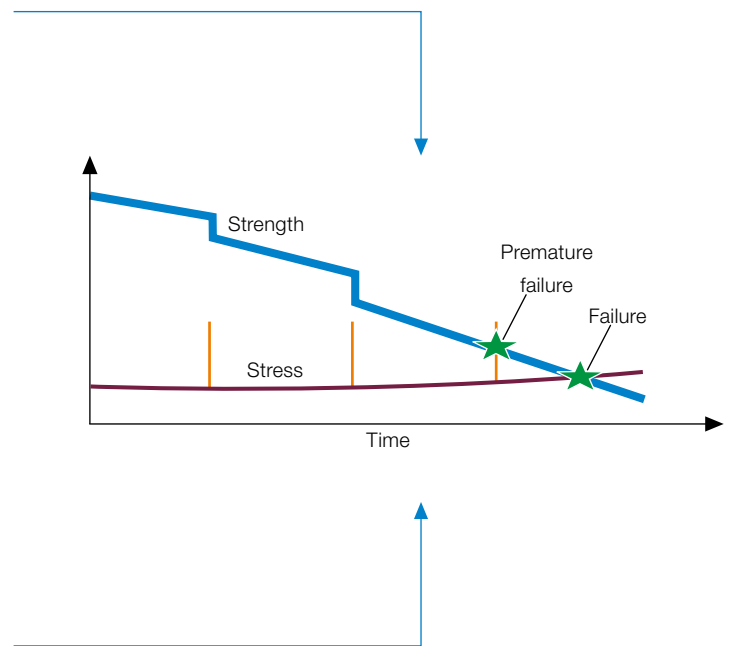
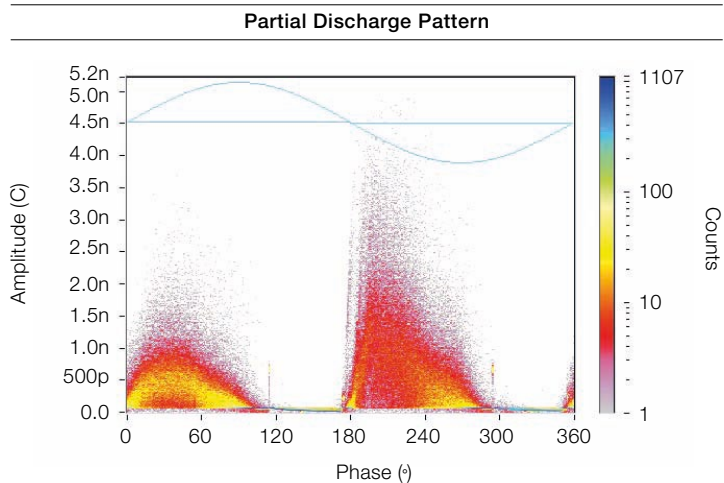
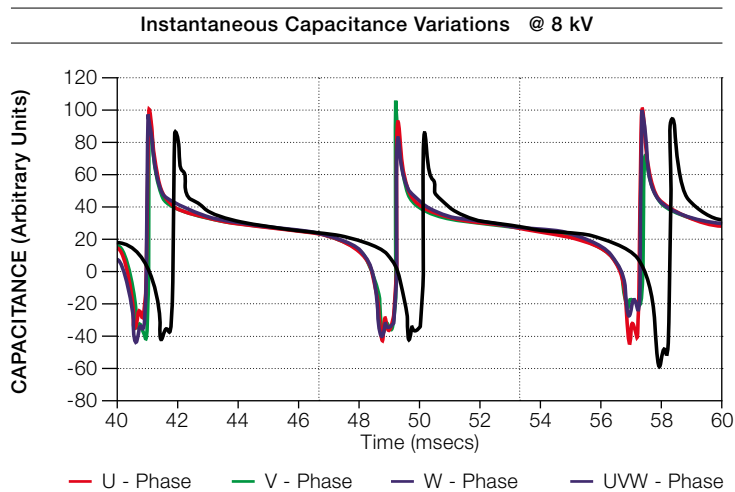
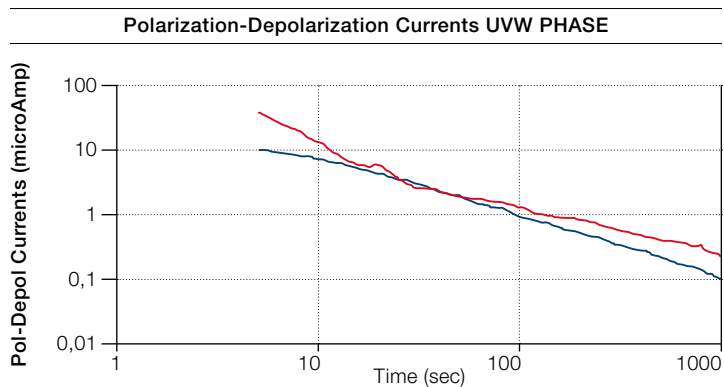


ABB LEAP offers real benefits

- Optimizes maintenance planning for electrical machines
- Supports efforts to extend machine lifetime, boosting Return On Investment
- Facilitates decision making for long and short term maintenance and run-replace decisions, even when data can only be collected once
- Minimizes downtime at lower risk levels
- Provides inputs for life cycle cost estimation

ABB offers a package of DC (PDCA) and AC (Non-Linear Insulation Behaviour, Partial Discharge and Tan Delta & Capacitance Analysis) measurements, to assess the condition of the stator winding.



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