ABB Ability™ Predictive Maintenance for synchronous motors and generators

Higher uptime with optimized maintenance planning

ABB Ability™ Predictive Maintenance optimizes the maintenance of high voltage 4- and 6-pole synchronous motors and generators (AMS and GBA). Taking a condition-based approach, it combines customer input with advanced analytical techniques to create the optimal maintenance program. This ensures that the right service actions are taken at the right time and for the right reasons.

Optimized maintenance strategy
Keeping motors and generators operating trouble-free can be a complex task. Demanding duty types, intermittent loading, high ambient temperatures, corrosive atmospheres and many other factors impact performance and reliability. Add the criticality of your process, and natural aging and wear, and it becomes very difficult to work out what maintenance activities should be done – and when.

ABB Ability™ Predictive Maintenance makes maintenance planning easy. It brings together ABB's condition monitoring, in-situ visual inspection and life expectancy analysis program to create a detailed long-term maintenance plan.

First steps
One of our specialists will audit your motors and generators and associated spares holding, and gather historical maintenance and operational data. A simple questionnaire will help us better understand the factors driving your business – both now and into the future. Depending on the results of the audit, we may recommend additional condition assessment tests.

Creating the optimal plan
Once we have gathered sufficient information, the ABB Ability™ Predictive Maintenance program will suggest a long-term maintenance plan. This identifies key actions and periodic non-invasive or minimally

invasive inspections. We then meet with you to review the plan together, clearly explain our reasoning behind the recommended actions and agree with you on the final plan.

Summary
ABB Ability™ Predictive Maintenance provides a custom condition-based maintenance plan for your synchronous motors and generators. Downtime will be minimized by applying non-invasive monitoring processes and minimally invasive advanced inspections. The plan will help you determine the most appropriate time for service by grouping required maintenance tasks into urgency classes and aligning these with equipment duty cycles and outage schedules.

Benefits
- **Higher uptime**
  - Minimized unplanned outages
  - Longer intervals between rotor removals
  - Avoidance of secondary damages
  - Alignment of maintenance tasks with planned plant stoppages
- **Reduced maintenance costs**
  - Maintenance is only done when necessary
  - Parts are only replaced when needed
  - Visual inspection of the stator core, rotor core and windings without the need to remove the rotor

ABB Ability™ Predictive Maintenance process
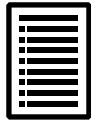
Review operations and maintenance
We ask you to complete an initial business driver and historical data questionnaire and provide relevant maintenance history. We review any past service history undertaken by us.

Audit asset condition and spares
A local ABB technician carries out an on-site audit and base condition assessment. The content may differ depending on whether the asset is running or stopped.

Address critical issues
If we find a critical condition during our initial audit, we will alert you and recommend a course of action.

Analyze collected data
The ABB Ability™ Predictive Maintenance program analyzes all the gathered data and our expert center validates the recommended maintenance and condition surveillance plan.

Co-create the plan
This is the core of the process. We meet with you to go through the recommended plan in detail. Working together, we agree on a final long-term plan that matches your specific needs and budget.

Follow the plan
Undertake periodic non-invasive condition techniques and planned maintenance activities to the agreed schedule. Sustain high reliability and uptime by only doing the right actions at the right time.

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For more information, please contact
your local ABB representative or visit:

new.abb.com/motors-generators/service