

Fact File

Low Voltage Switchgear Service Maintenance

Electrical switchgear and power distribution systems such as MNS or MNS *iS* require permanent maintenance for technical and economic reasons. To provide highest value and minimized effort of maintenance to customers, different maintenance practices (from reactive in case of sudden failure to condition-based) are applied.

Preventive maintenance of switchboards is typically carried out as a part of a routine shut down in process industry plants.

Periodically the following checks are mandatory as described in the MNS Service Manual:

- Visual check of the switchgear
- Check of busbar connection
- Check of cable connection terminals
- Cleaning of the modules
- Check of the electrical components
- Check of the contact system
- Electrical function test
- Insulation test of the switchgear

Predictive maintenance is one of the innovative features for intelligent switchboards.

Electronic protection relays are monitoring not only motor current, they are capable of collecting more maintenance relevant data.

These data are analyzed and a detailed status report of the values together with a maintenance program will then be proposed to the customer.



Condition-based maintenance is not only looking at actual data, it analyses the information as part of on-site condition monitoring packages like the MService for MNS *iS*. The MService system collects detailed information from the switchgear installation. This information not only contains electrical parameter, it also includes maintenance values such as contact temperatures or insertion cycles of a functional unit.

The recorded data will be used by the condition monitoring package to provide focused information to prompt the correct operator actions:

- What is the problem
- Where is the problem
- Which type of severity the present message has
- What was the cause of the problem
- What specific actions are needed to solve the problem

For more information, contact your local ABB representative or visit: www.abb.com/mns

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