

Performance Review for high power rectifiers Getting more from your investment



ABB has created a Performance Review program for high power rectifiers to increase the reliability of your assets. The Performance Review helps you to gain a better insight of your rectifier systems performance and life cycle expectancy.

Benefits

- ABB expert advice and recommendations
- Ensuring the correct and safe operation of your system
- Minimizing risk exposure to unexpected downtime

Scope of supply

We assess your system including critical spare parts and evaluate the life cycle status. Furthermore, we help you identifying those components which are susceptible to aging and ought to be replaced at appropriate intervals. This program ensures the correct and safe operation of the system by testing all critical protection devices and system settings under various operating conditions.

The identification of possible improvements such as upgrades and replacements can increase the overall performance of your system. The Performance Review is available during all phases of the life cycle. We also provide support to define an optimal life cycle strategy based on the results of the Performance Review.

We offer two versions:

- Performance review BASIC
- Performance review EXTENDED

Depending on the your request you can choose from a one day inspection or a more detailed version that can take up to three days.

Both versions of the performance review can be customized with additional activities to meet your requirements (standard duration may vary).

Performance review BASIC

The Performance Review BASIC is a site inspection in which the rectifier system will be inspected visually with the aim of providing our customers with advice and recommendations. The main target is to keep the equipment running in a safe and reliable way thus mitigating the risk of an unwanted shutdown. This version does not include tests or measurements. The performance review BASIC is recommended for those customers who need to check the status of the equipment by getting professional advice/information on the following topics:

- Condition of the installed equipment
- Corrective and preventive maintenance
- Life cycle management, existing plant/load/current increase, control upgrade, rectifier group upgrade (requires separate study)

Duration

- one day per rectifier system
- rectifier shut down for maximum five hours to check the facilities

Report

A brief report will be handed over to the customer including:

- Status on the system components, risk of unwanted/unexpected shutdown, recommended immediate, medium and long term actions to keep the equipment in an optimal state, estimated repair time (in case a component repair is needed).
- Maintenance history / operational history/ problems history (if available)
- Summary based on check list data

Performance review EXTENDED

The Performance Review EXTENDED includes tests and measurements besides the visual inspection. It is recommended for customers who would like to have an in-depth view to the state of their system. This version includes the Performance Review BASIC visual inspection and additional tests and measurements as mentioned below:

- Protection relays: check of protection relays by voltage supply or current injection and re-confirm relay setting as per setting document
- Trip concept: check of normal-, backup- and common trips
- Reverse current relay and arc detection (if applicable): functional testing with current if possible or trip by simulation
- End to end test of all alarm and trip signals: oil level, DIW level, oil temperature, etc.
- End to end test of important trips with main breaker: Buchholz, pressure relief valve, emergency stop, etc.

Duration

- up to three days per rectifier system
- shut down for a minimum time of eight hours to check facilities

Report

A detailed report will be delivered to the customer. The scope of this report includes the Performance Review BASIC tasks with an extra in-depth insight into the protection system, alarms and trip signals.

Scope of supply*	Performance review BASIC	Performance review EXTENDED	Preventive maintenance
Component replacement			☑
Component tighten and cleaning			☑
Advanced tests			☑
Basic tests		☑	☑
Measurement		☑	☑
Record reading	☑	☑	☑
Visual inspection	☑	☑	☑

*The report content will depend on the amount of activities performed

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