Generator Stator Winding Bar Repairs*

A fast solution to help our customers increase availability

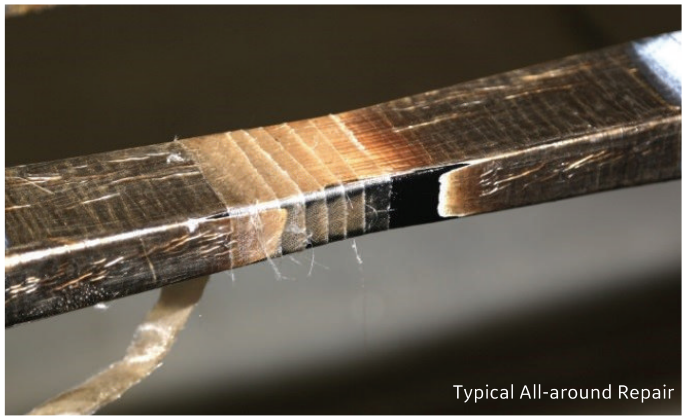
Background and Solutions

Generator loss statistics show that the highest number of failures which occur are as a result of the stator windings, resulting in loss of generation and revenue.

The most common failure mechanisms in stator windings are loose bars in the slot, stator bar insulation thermal deterioration and thermal cycling.

Operators decide to repair the existing stator winding due to the downtime involved with long lead items, allowing them better planning for a stator bar replacement, a partial rewind or a full stator rewind in a future outage.

Different repair solutions are available by GE: a Spot Repair or an All-around Repair.



Typical All-around Repair

Spot Repairs can be applied in case of limited failures in the ground insulation, where the failed insulation is locally removed and a narrow hole is observed as a consequence of the failure.

All-around Repairs is the solution of choice when bar insulation damage is such that some of the bar insulation needs replacement.

Either in the straight part of the stator bar or in its end winding parts, some repairs can be implemented without removing the stator winding bar.

The GE Advantage

GE is capable to offer Customers a full range of services for generator stator windings, from repairs to full stator rewinds.

Either a quick fix of the existing stator winding or a full stator rewind, GE solutions deliver just what Customers need to restore reliability and meet cycle time requirements, while keeping costs under control.

Working experience of several winders have been built in the processes and materials chosen for generator stator winding bar insulation repair solutions.

Key Features

The key to these benefits is the solid return of experience on insulation materials & processes as well as winders' working experience at site and in the workshops.

It includes:

- Repairs of stator bars rated up to 27kV and 3kV/mm field strength
- Stator bars with defects observed in the straight part or in the end winding parts
- All materials EHS proven
- Voltage endurance tests during development phase in order to evaluate remaining lifetime
- Tooling taking into account implementation constraints i.e. limited space when repairing a stator bar in place
- Tooling configuration allowing fast dispatch to the plants

*Applicability: Full Micadur stator bars and Micarex stator bars with Duritenax in the involutes only

To learn more about this product please contact your GE Sales Representative.

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fact sheet