



CUPROPLEX*

Fast, flexible and safe unplugging of water-cooled stator bars

There is a natural tendency for oxides to build up in the copper hollow conductors of water-cooled generators. This oxide plugging reduces cooling efficiency, eventually leading to stator bar overheating.

When this happens, to continue operating while waiting for a scheduled maintenance opportunity, power output has to be limited. Left uncorrected, this condition will shorten component life and ultimately lead to unplanned unit shut down and damaged equipment.

GE's CUPROPLEX state-of-the-art cleaning service resolves this problem by safely removing oxide deposits without attacking other materials of the cooling water system.

CUPROPLEX can be applied while the generator is online or during an outage.



Cross Section of Stator Bar Hollow Conductors with Oxide Deposits

Successfully applied more than 260 times since 1980 on 10 different Original Electrical Manufacturers' machines.

CUPROPLEX helps maintain availability while cutting costs associated with forced outages and load losses.

Application

- Water-cooled generators with hollow copper conductors
- Any Original Electrical Manufacturers' generators
- In response to a known problem or as routine preventive maintenance

How does it work ?

CUPROPLEX uses a chelating chemical that dissolves copper oxides without affecting the base copper. The copper oxide is removed together with the chelant through the ion exchanger.

Alternative chemical treatments attack base copper as well as oxides, removing as much as 40 kg of copper for every 2 kilos of oxides. Therefore, frequent application of such treatments poses a risk to the integrity of the system.

On-line application

During CUPROPLEX on-line application the stator water conductivity is carefully monitored and controlled to stay within safe operating limits. This allows for continued availability.

Application during an outage

CUPROPLEX can also be applied off-line using higher concentrations. Virtually all copper oxides are removed within a few days.

Environmentally sound

With CUPROPLEX, there is little liquid waste, avoiding disposal problems and environmental restrictions.

Scope

Full service cleaning and system restoration by a GE dedicated CUPROPLEX service team.

Besides cleaning the hollow conductors, CUPROPLEX cleans the entire system, including pumps, filters, valves, and pipes.

Information contained in this document is indicative. No representation or warranty is given or should be relied on. Information provided is subject to change without notice.

© 2017 General Electric Company. All rights reserved.
GEP194463 5/2017

fact sheet

* Trademark Of General Electric Company