

RG3-S

SPPA-E3000 Brushless Excitation Systems

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Brushless excitation systems (BES)

are excitation systems for generators with (brushless) exciters, using cutting-edge technology. They are suitable for all performance classes from 1 over 1000 MVA generator output in gas, hydroelectric and steam power plants and are characterized by absolute reliability and maximum efficiency.

The Task

Sooner or later, the existing excitation system will reach the end of its service life. This may be because some modules have been discontinued, or simply because they can no longer operate economically. This is the case if, for example, spare parts are only available at high cost, or grid operators impose new requirements for control dynamics which the systems are unable to meet, or for some other reason the statistical risk of failures exceeds an acceptable level.

What is then required is a solution that perfectly fits the existing situation and ensures reliable, continuous, operation based on innovative technology.

Our Solution

BES is a tried-and-tested solution for all generators with exciters. For many years now, more than 1700 brushless excitation systems have been demonstrating the highest levels of reliability and robustness.

The solution can be adapted to conditions in each individual power plant due to the high degree of flexibility of the supply concepts.

The excitation system is independent of which generator with exciter you choose to employ, which power supply is present, which I&C system you use or whether the I&C system is being replaced at the same time.

Another particularly important point: Regardless of which redundancy concept is required, Siemens Energy will implement a customized concept, covering everything up to comprehensive full redundancy concepts. This flexibility is achieved solely using standard industrial components, which is why no "custom-made products" and no costly storage of spare parts are necessary.

The switchover to the latest generation of SPPA-E3000 BES also benefits user friendliness, due to ergonomic and transparent presentation of the operating status and excellent interaction with the generator protection and I&C systems.

Of course Siemens Energy ensures smooth replacement, encompassing everything from project planning through to commissioning, and then provides ongoing service support for BES. The "Plug out – Plug in" replacement of the excitation system requires minimal conversion time.

Your Benefits

- Highest possible availability and reliability due to robust and tried-and-tested technology
- Standardized design
- Minimum conversion time courtesy of "Plug out – Plug in" replacement of the existing excitation system
- Low maintenance costs through the use of proven industry components and modular structure
- Ultra-simple and thus fault-free operation due to transparent representation of the operating status

Published by

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