



SIEMENS

Ingenuity for life

Charlotte Energy Hub

Exciter Product Line and Generator Electrical Testing

www.siemens.com/generators

Excitation of the generator rotor is achieved through a brushless exciter or static excitation with collector rings. Brushless exciters are comprised of a multitude of individual components, requiring extensive inspection and testing to assure reliable operation. All new, modernized and repaired generators, brushless exciters, and collectors are thoroughly tested at the Siemens Charlotte Energy Hub prior to shipment to the customer.

Exciter Product Line

The Siemens Charlotte Energy Hub offers comprehensive exciter services that help decrease cycle time and increase performance.

We maintain a comprehensive inventory of replacement exciter components, which can include, for example, rectifier components and permanent magnet generators.

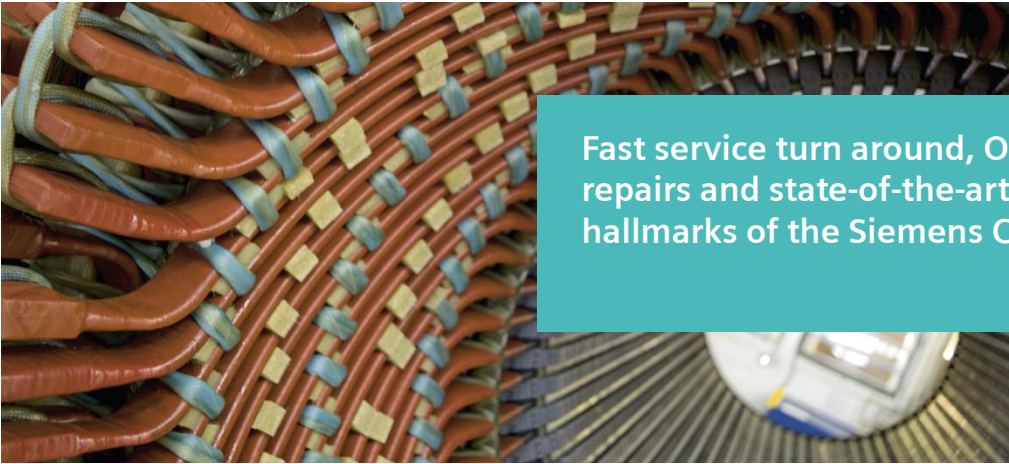
Specific exciter services offered range from inspection and cleaning to rotor and exciter stator rewinds. An accelerated exciter rewind can be accomplished in as little as six weeks with the proper pre-planning.

Collector services offered include inspection and cleaning, collector ring insulation replacement, collector ring replacement, collector rotor balance, and reassembly.

Performance Capabilities Include:

- Accelerated exciter rewind
- Industry spare "seed" refurbished exciters
- Consolidated exchange program
- Core-to-shaft assembly pit
- Exciter rotor disassembly station
- Consolidated winding and banding station with 2 and 4-pole winding, banding and curing cell
- Dedicated work cell creation to support single piece flow





Fast service turn around, OEM quality parts and repairs and state-of-the-art manufacturing are hallmarks of the Siemens Charlotte Energy Hub

Electrical Testing

Another service of the Siemens Charlotte factory is the inspection and qualification of generator and exciter electrical components. These inspections are done to verify performance and the reliability of every Siemens generator and brushless exciter. Siemens electrical tests and associated test levels are performed to proprietary Siemens specifications developed over many years and meet or exceed industry standard test specifications.

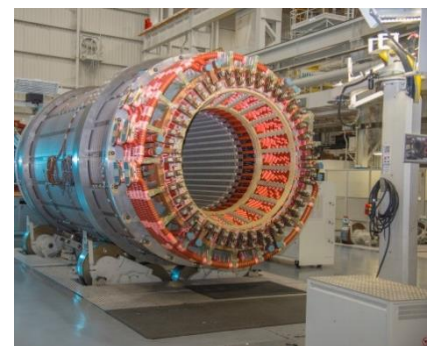
Testing Capabilities include:

- Hi-potential testing for all stator, generator rotor and brushless exciter components
- Thermographic inspections of the generator stator cores and brushless exciter armature cores
- Power factor, partial discharge and EI-CID testing for generator stators
- Complete inspection and qualification testing of brushless exciter diode wheel components
- Verification testing during final balance operations for generator rotors and brushless exciter rotors
- Final acceptance testing and inspection for all generator line products

The Charlotte Advantage

The Siemens Charlotte Energy Hub has the capacity to manage large and complex projects with service being our differentiator. With the ability to manufacture and service components for gas turbines, steam turbines, and generators, we strive to serve as the primary service center for gas turbine, steam turbine and generator equipment for the Americas. All functions necessary for a seamless process – from initial bidding to transport for delivery – are located on site. Our extraordinary depth of skill and experience enable us to service not only the Siemens fleet, but also components originally designed and manufactured by all large equipment manufacturers.

We continually focus on the next generation of power plant management through innovative product and process development and skilled workforce development.



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