



Advanced Stability Margin Controller for Siemens Gas Turbines

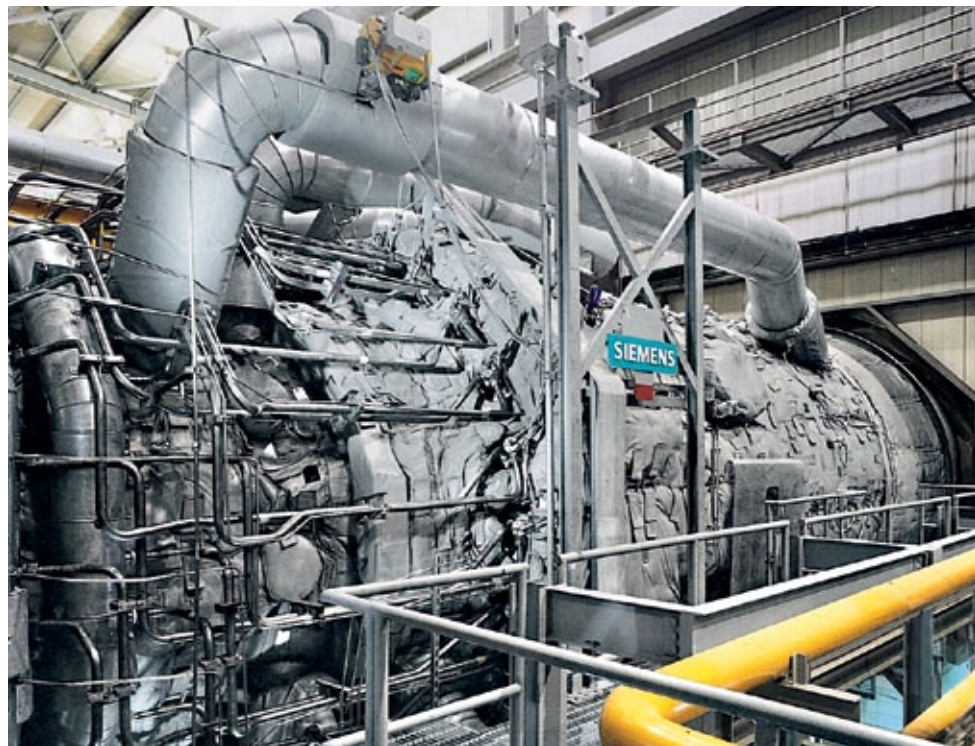
The worldwide demand for power continues to grow at a rapid rate. As part of our ongoing commitment to support the changing requirements of your operating assets, Siemens offers you a wide range of solutions to help improve the performance of your gas turbine as well as your competitiveness. One of the innovative solutions we offer to help you enhance your operating plant flexibility and availability is the Advanced Stability Margin Controller Upgrade.

Our product

The Advanced Stability Margin Controller Upgrade is intended to prevent the engine from high combustion chamber acceleration events. By modulating the pilot gas

amount and the turbine outlet temperature, the product is designed to increase the combustion stability during part and base load operation, to allow more flexible operating conditions or a faster reaction on grid code fluctuations.

The Advanced Stability Margin Controller Upgrade features a closed loop control of the combustion acoustics, with the capability to simultaneously evaluate control parameters, to result in a real time adjustment to changing gas quality, ambient conditions and power output.

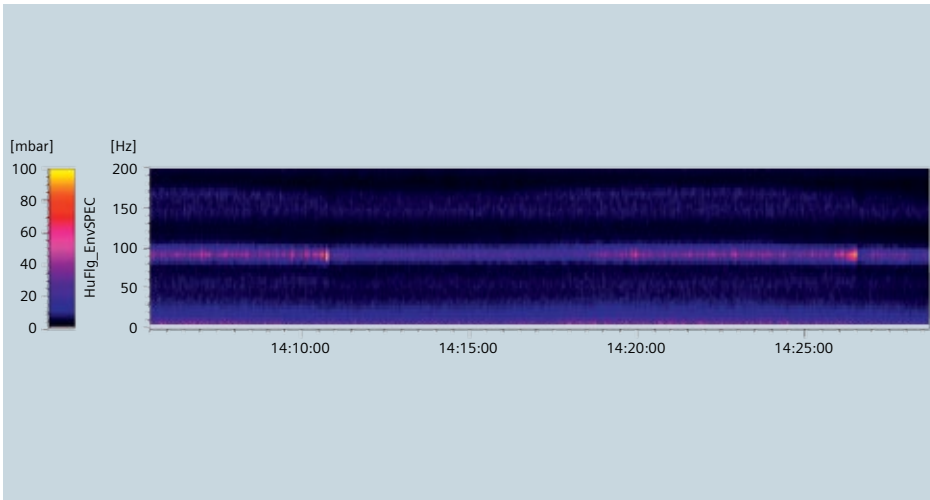


Gasturbine SGT5-4000F (V94.3A)

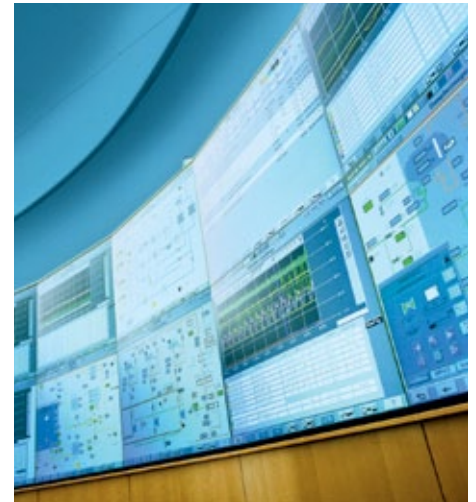
Performance Enhancement – Gas Turbine

Answers for energy.

SIEMENS



Combustion acoustics under active Advanced Stability Margin Controller during operation



Plant Monitoring

Your benefits

The Advanced Stability Margin Controller Upgrade can help make your unit more flexible as well as more reliable and competitive in the continuously growing F-class market.

Benefits may include:

- Increased availability
- Prevention of combustion instability related trips and unloading events
- Prevention of low frequency dynamics and related stress to exhaust diffuser and boiler

Scope of supply

The Advanced Stability Margin Controller Upgrade is just one of the many innovative modernization packages available.

The scope of this upgrade includes:

- Installation or upgrade of combustion dynamic monitoring system (Argus)^{*)}
- Installation of five dynamic pressure transmitters at burner flanges
- Instrumentation and control modification

We recommend the installation of this upgrade at a major outage. We offer a full range of field service capabilities to help you manage your maintenance and outage schedules.

The Advanced Stability Margin Controller Upgrade with the above designated scope of supply is available for SGT5-4000F (V94.3A) and SGT6-4000F (V84.3A) and may be combined with other modernizations.

References

The development of the Advanced Stability Margin Controller Upgrade is based on Siemens' extensive knowledge and experience in combustion acoustics. Siemens Energy has successfully retrofitted SGT5-4000F gas turbines. More than 150 units are equipped with the Argus system worldwide and have accumulated more than 3,400,000 equivalent operating hours (EOH).^{**)}

^{*)} Depending on site specific conditions

^{**)} As of September 2012

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**For more information please contact
your local Siemens sales representative.**

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