

RT61X

SGT-A35 Power Turbine Upgrade

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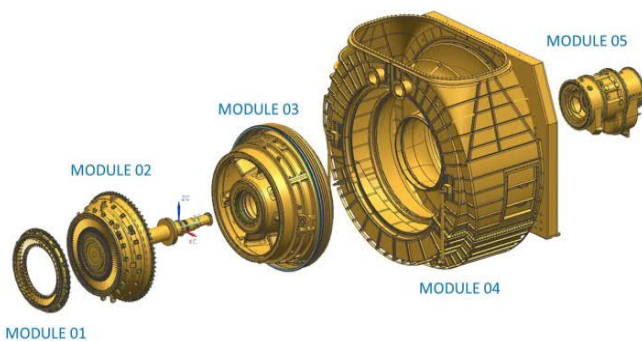


Reduce scheduled outages with this increased life power turbine upgrade

Product Overview

The RT61X power turbine is designed as an upgrade to the legacy RT61 power turbine installed on Siemens Energy SGT-A35 GT units. The primary benefit of RT61X power turbine is the increased Time Between Overhaul (TBO) to 100,000 hours as compared to RT61 legacy TBO of 50,000 hours.

This upgrade involves conversion of customers' existing RT61 unit into an RT61X by replacement and application of Siemens Energy proprietary coatings to the 50,000 hours life limited components.



Technical Description

Currently the RT61 power turbine requires a Duct and Turbine (D and T) module overhaul at 50,000 hours due to life limitations of the first stage nozzle vanes and rotor blades. Due to the modular construction of the RT61, these components are changed out for new during overhaul at a Siemens Energy authorized facility. can face penalties for non-compliance with certain requirements.

The upgraded RT61X turbine design incorporates enhanced airfoil components and a modified assembly procedure, to allow achievement of TBO of 100,000 hrs. This is accomplished through the application of Siemens Energy proprietary coatings on the power turbines 1st stage vanes and blade tip seal. These coatings have been tried and tested on Siemens Energy Large Gas Turbine (LGT) products, primarily on the SGT6-500F units since the 90's.

The RT61X is designed to work as a drop-in replacement with no change to geometry or performance. Except the application of coatings, form, fit, and function remains the same

Features and Benefits

- Increased TBO from 50,000 hours to 100,000 hours
- Ability to match power turbine overhaul schedule with SGT-A35 GT gas generator schedule
- Reduced scheduled outages over the lifecycle of the unit
- No interim inspections required before reaching 100,000 hours
- Reduced overhaul costs due to extended life of components and reduced scheduled outages
- Option to upgrade existing RT61 to RT61X or purchase new RT61X T and D modules
- Modular design allows for easy upgrade at Siemens Energy overhaul facility

Applicability

All Siemens Energy RT61 legacy power turbines

Support Services & Implementation

The running hours of customers' existing or installed RT61 power turbine would need to be determined prior to offering of the upgrade. A unit approaching its 100,000 hours overhaul mark would typically require additional parts replacement than a unit approaching 50,000 hours. Hence, it is advisable to determine the running hours in order to ensure accurate scope and lead time for the upgrade is provided.

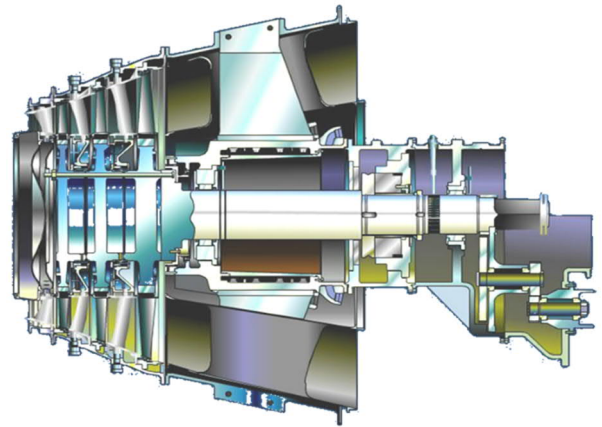
Implementation of the RT61X power turbine upgrade is treated in the same manner as a standard RT61 power turbine overhaul, whereby the T and D modules of the power turbine are sent to the Siemens Energy authorized facility.

Scope of Work

The upgrade involves components within the power turbines T & D modules. The scope of work is contingent on the running hours and condition of the power turbine. In general, the scope can be categorized as in-service or un-run/spare.

For an in-service unit, the upgrade involves replacement of hot section components and the application of proprietary coating to the critical life limited components.

For an un-run/spare unit, the upgrade involves strip and inspect (S&I) and the application of proprietary coating to the critical life limited components.



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