SGT-A35 VIGV Stroking

Reliability Upgrade

Siemens-Energy.com

Increased Fault Tolerance, Better unit Reliability and Availability.

A35 VIGV Stroking SW Change Overview

Siemens Energy has introduced automated stoking of the SGT-A35 Variable Inlet Guide Vanes (VIGVs) to verify correct operation of the system and increase unit reliability.

Additionally, some of the VIGV systems trip limits have been relaxed to reduce the number of spurious trips.

Technical Description

Siemens have developed a software modification for embodiment in the Engine Control system (ECS) that introduces an automated VIGV stroking routine.

This routine is enabled at every unit start-up to sweep the VIGVs across their movement range to ensure the system is moving freely and the closed loop feedback measurements are responding correctly.

This prevents the units from tripping at later stages of the operation when the VIGVs are actuated the first time to increase air mass flow though the engine.

In addition, the VIGV transient position error trips in the SW have been relaxed to allow a safe amount of temporary of deviation to reduce the occurrence of spurious trips.

Features and Benefits

Pre-start stroking of the VIGVs allows users identify any issues and perform corrective maintenance activities where required thus avoiding the unit form tripping due to VIGV faults whilst in operation.

Additionally, VIGV position error limits are relaxed to prevent sporous engine trips during transient manoeuvres.

Overall, the VIGV SW changes provide added unit reliability and availability.

Applicability

All Siemens SGT-A35 Gas Turbines with FT125 Control Systems.

Implementation

Software modification and validation of the SGT-35 VIGV Stroking modification is performed at a Siemens Energy facility and sent to site ready for installation by a Field Service Representative.

Siemens Energy
Industrial Services - AGT

Iceni Centre
Warwick Technology Park
CV34 6DA, United Kingdom

Siemens-Energy.com