## Solar Turbines

A Caterpillar Company

Powering the Future Through Sustainable, Innovative Energy Solutions

# **EQP FIRE DETECTION SYSTEM**

The EQP fire detection system is the latest offering in our line of package system upgrades for Solar Turbines Switzerland's (STCH - Turbomach) packages. This compact, cost-effective upgrade solution is ideal for those interested in converting their existing obsolete Siemens fire detection systems. The fire detection system monitors the enclosed turbomachinery package for the presence of fire. If fire is detected, the system triggers the turbomachinery control system to shut down and gives the command to release the fire suppression agent. On the package exterior, indicator lights, strobe lights and an alarm horn provide system status. The system is designed for use in hazardous locations and meets the requirements of approval agencies around the world.

#### **EQP Controller**

Monitoring and detection are provided by the Eagle Quantum Premier (EQP) controller manufactured by the Detector Electronics Corporation (Det-Tronics) of Minneapolis, Minnesota, USA. The controller interfaces with the turbine control system via discrete signals, granting compatibility with all vintage controls.

#### **MIR Detectors**

The primary fire detection system uses multi-spectrum infrared detectors (MIR) which provide superior protection in enclosed gas turbine applications. They sense flame through three separate portions of the IR spectrum, thus reducing the false trip rate and making voting between detectors unnecessary. MIR detectors require less maintenance and are less susceptible to oil and smoke "blinding" than UV and UVIR devices.



EQP Controller



**MIR Detector** 

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#### **Thermal Detectors**

The secondary fire detection system consists of thermal detectors (TDs) which combine fixed temperature and rateof-rise detection. They indicate if a specified temperature value or rate of rise in temperature is exceeded.



**Thermal Detectors** 

#### **Industry Codes and Standards**

The NFPA 72 standard has been used as a reference for the design of the EQP fire detection system.

#### Installation

The new system is designed to fit and replace the Siemens/Cerberus fire detection unit.



EQP Controller Installation

#### Suitability

The EQP fire detection system is currently suitable for:

- All Turbomach legacy packages with Siemens/ Cerberus fire detection systems originally supplied by Turbomach and not requiring VdS or APSAD certification.
- All Turbomach legacy control systems.

#### **Additional Information**

For additional information, please contact your local Solar Account Manager.