

What happened?

A fuel gas leak occurred in gas turbine enclosure.

Forced ventilation was functional at the time and the point of detection was inside the enclosure via fixed gas detectors but was below trip level. The gas turbine was manually shut down in a controlled manner.

There were no injuries to people or plant damage.

A fuel gas system leak test revealed a failed SBT fitting/ elbow connecting a purge gas filter to a purge valve.

Investigation ongoing but possible contributing factor for the failure is thought to be fatigue induced failure mode due to lack of supports on either the purge gas filter or purge valve or both.

The failure occurred on a purge system of a dual fuel gas turbine where some of the system is pressurised with fuel gas when running on fuel gas.

Good practice guidance:

Ensure adequate inspection of small bore connections on gas turbine fuel systems and adequate support of the small bore connections and system components. It is possible original equipment manufacturers may not have installed adequate small bore tubing/component supports and cycle fatigue may mean failure can occur within the package design life.



Gas turbine small bore fitting failure

SAFETY ALERT

