

Case Studies: Leak testing

Fuel Pipe Helium Leak Test System

Client: Leading Global Aerospace Technology Company

Part: Fuel Pipes for the Aerospace Sector

Machine supplied: Helium leak test system

Overview: This pressure and leak test system is used for production acceptance testing of composite fuel pipes, in a range of types, diameters and lengths. TQC supplied this pressure testing and helium leak testing solution to meet an overall production rate of 15 parts per hour

This leak test fixture is based around the standard Series 20 drawer concept, this type of solution is suitable for automatic leak testing of small to medium-sized parts. The benefits of using a high vacuum helium leak test are that it is more accurate, more sensitive, a faster test and uses less helium test gas.



This system allows the operator to load the tooling with a fuel pipe, securing 2 off end clamp units, followed by automated testing. The fixture is advanced into the test chamber, a door then closes and seals the test chamber. The automated test begins with a high pressure proof test and if successful moves onto the helium leak test. On completion of the testing the chamber and part vent to ambient followed by opening of the chamber door and transfer of the test piece ready for manual unloading.

Fixture with Multi-Variant Tooling and Leak Test Chamber



Key features:

- Floor standing leak test fixture with manual load/unload
- Light guard access
- Multi-variant tooling with end clamping
- Fixture on automated carriage to move test part between a load/unload position and a test position
- Test chamber with automated door
- High pressure proof test upto 210bar
- High vacuum Helium leak test unit
- Mass spectrometer for leak detection
- Test part tracking using RFID and barcode data
- PC based control and data handling. Circuit mimic display on PC monitor.

TQC has in the past also provided helium leak test solutions for other parts, for example fuel tanks, automotive suspension parts and gas fittings

If you have an application that could benefit from TQC's expertise in helium leak testing, please contact us by email or phone via the contact details

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