



APEX Industrial Gas Services

Helium leak detection

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Following new plant construction or routine maintenance, process plant integrity will frequently require verification particularly for those process units handling high value or high toxicity gas. Process leaks can occur from many

different sources such as poorly mating flanges, gasket failure, insufficient tightening, relief valves passing or bonnet seals leaking.

Helium Leak Detection Service

For many systems a strength test that proves the mechanical integrity of all the components will be carried out. Prior to recommissioning the system, Air Products normally charge the system to working pressure with a mixture of 99% nitrogen and 1% helium. The helium is used as a trace gas and should a leak be present in any part of the system it can easily be traced and quantified using a portable mass spectrometer and sampling probe.

Acceptable leaks are normally set in the range 50-100 SCF (1.5 - 3.0m³) per year. If greater sensitivity is required, leaks down to 1 SCF (0.03m³) per year can be traced.

In addition, APEX Industrial Gas Services is able to perform valve integrity tests with nitrogen and ensure that all emergency shutdown and equipment isolation valves are leak tight. Our technicians are skilled in the use of ultrasonic detectors for locating passing valves.

Nitrogen and helium are both dry inert gases so the system is left totally leak-tight and ready to accept hydrocarbons or other process streams.

Air Products is able to offer the services of a specialist team that can pre-engineer, alongside your own commissioning engineers, a procedure customised to the requirements of your project.



Shutdown de-commissioning and re-commissioning

Process unit shutdowns usually require detailed programme planning to meet a very tight schedule. Air Products engineers will work closely alongside your process operators to establish the most cost-effective means to remove all hydrocarbons or oxygen from the system. A variety of low- or high-pressure purging

techniques from volume displacement to pressure recycling would be utilised. During this time Air Products' technicians would monitor hydrocarbon and/or oxygen levels as required. Following maintenance work and after leaks have been rectified, Air Products would re-commission the units for service.

Why APEX industrial gas services?

The APEX team has a unique position in the industry. With over 35 years' experience in nitrogen-related services, not only can it offer a wide range of nitrogen pressure and

temperature supply options, but as part of Air Products it has a secure product supply capability from a large network of gas plants located around Europe.

24 hour call-out service

APEX Industrial Gas Services offers an emergency nitrogen service. Its staff are available on call 24 hours a day and their knowledge and experience in dealing in various

chemical and process industry applications enables them to mobilise the right equipment, labour and product supplies at short notice.

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