

# Application Article 210

## GasCheck used for monitoring Helium Leaks

**Product:** GasCheck G1

**Industry:** Manufacture of thermostatic control valves

**Application:** Checking the onsite production gas delivery system for helium leaks

### Introduction

Honeywell Control Systems, the international manufacturers of thermostatic control valves, have recently purchased a new GasCheck G1 gas detector system for use in their Scottish plant.

Honeywell Control Systems main areas of expertise are sensing and controls. Sensing and control involves collecting and integrating information from multiple points across a building in order to optimise the performance of critical systems such as; heating, air conditioning, lighting, video surveillance, access control and fire detection.



bottles outside automatic delivery

The GasCheck G1 is being used predominantly to check helium leaks in the gas delivery systems that are an integral part of the technology used in Honeywell Control Systems products. Specifically the GasCheck G1 is being used to check connections and valves in the onsite Helium gas delivery system, where it is possible that there may be potential weak points that would allow leakage of helium to occur.

### Challenges faced by the industry

Honeywell Control Systems had been experiencing issues whereby a significant amount of helium was leaking from the onsite gas delivery system that is used in the

thermostatic control valves. The source of the leak could not be detected by traditional methods, such as sound and a bubble test of potential weak points.

As a consequence, gas cylinders of helium were being used far quicker than would normally be expected. This in turn created inefficiencies and wastage in the system process and meant that additional costs were incurred too, as more helium gas was required than would normally be expected.

### Introduction to the GasCheck Series



GasCheck in use

GasCheck G1 is part of the GasCheck G range of gas detectors from Ion Science, and is the latest GasCheck to be introduced into the product portfolio.

The GasCheck G1 is the entry model in the series range - and was chosen as it can be easily upgraded with extra features, should these be needed in the future.

The GasCheck G1 is designed specifically for the search and location of gas leaks, making it ideal for Honeywell's particular application requirement. The GasCheck G has an advanced micro thermal conductivity sensor. This is important as it helps to facilitate the fast, effective detection of many different gases.

### How does the GasCheck work?

The GasCheck range of gas detectors will automatically zero to ambient air around it and is ready to detect immediately. The instrument has a graphical interface and intuitive keypad which allows simple function, selection and adjustment – all designed with ease of use in mind.

### Why the GasCheck G1 was chosen

Honeywell Control Systems are a long standing customer of Ion Science and the range of gas and leak detection equipment available is well known. However, the appeal of the GasCheck G was its ability to provide a cost effective and a quick, simple solution to the problems that had been



Inside the delivery system



experienced with the leakage of helium. This solution will improve efficiencies and have a cost saving benefit too.

### **Other Applications for the GasCheck**

Although GasCheck on this occasion has been used for the detection of helium leaks in gas delivery systems used in plant management, there are a number of other applications for the GasCheck which include the following:

- Industrial**
- Quality Assurance**
- Manufacturing**
- Laboratory**
- Medical**
- Research**

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