



# Application Article 218

Advanced Gas Sensing Technologies

## SF<sub>6</sub> LeakCheck P1:p Detects Switchgear Leaks During Quality Control Procedures

**Industry:** Switchgear Manufacturer

**Application:** Monitoring of SF<sub>6</sub> leaks in switchgears

**Location:** Dubai

### Introduction

A large switchgear manufacturer, based in Dubai, has selected the SF<sub>6</sub> LeakCheck P1:p for the rapid and accurate detection of SF<sub>6</sub> leaks.



### Application

The SF<sub>6</sub> LeakCheck P1:p was required to detect SF<sub>6</sub> leaks in switchgears during the organisation's quality control processes. The instrument was used to identify gas leaks at a sensitivity level of  $1 \times 10^{-8}$  cc/sec, 0.001 gm/year.

### Why detect SF<sub>6</sub>?

SF<sub>6</sub> is a colourless, odourless, man-made gas that can go easily undetected. It is relatively low in toxicity, but left undetected, its primary health hazard is asphyxiation.

The Occupational Safety and Health Administration (OSHA) Permissible Exposure Limit (PEL), or Maximum Allowable Concentration (MAC) limit is 1,000 ppm.

SF<sub>6</sub> is a well known greenhouse gas. Its global warming potential is 23,900 times greater than that of CO<sub>2</sub>, due in part to its atmospheric lifetime of 3,200 years. Due to its destructive potential, SF<sub>6</sub> gas was included in the Kyoto Protocol under which emission reduction targets apply.

An expensive gas, SF<sub>6</sub> gas leakages are also costly.

### Why SF<sub>6</sub> LeakCheck P1:p was selected

The SF<sub>6</sub> LeakCheck P1:p was chosen due to its high level sensitivity, accuracy, reliability and its ergonomic, robust design. Its ability to provide a choice of measurement units in both ml/sec, gm/yr and ppm offered the flexibility the customer required. Another selection factor for the SF<sub>6</sub> LeakCheck P1:p was the quantification of detected leaks, important when monitoring conformance to leak minimisation targets.

The transportation and training of the instrument was made easy due to the non radio active source. The instrument's ability to save, store and download data enabled information to be easily shared and communicated. a key advantage for the business.



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