

How to monitor natural gas micro-leakage?

At present, most of gas detectors widely used in the market for the real-time monitoring natural gas micro-leakage are based on three kinds of principles, which are the catalytic combustion, infrared absorption and laser spectroscopy (Wang et al., 2021; Chen et al., 2018; Li et al., 2011).

What is a micro-leakage monitoring probability simulation model?

A micro-leakage monitoring probability simulation model was built based on fully investigating the leakage detectors and micro-leakage monitoring methods in the well site of salt cavern gas storage.

How to detect micro-leakage in a well site?

In order to realize the real-time monitoring and intelligent early warning of well site micro-leakage, a micro-leakage monitoring data processing software and an online real-time concentration display platform are developed. Combined with domestic and foreign standards and our simulation results, three-level alarm thresholds are proposed.

Which laying way is best for gas micro-leakage monitoring?

All in all, the simulation results of five laying ways under different wind direction and wind speed shows that: the laying way that passes through the wellhead and the valve group center is the best, as shown in Fig. 18, which can make the successful monitoring probability of gas micro-leakage reach 75%.

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Serious leakage will cause environmental pollution and safety problems, so strict leakage measurement is necessary for sealed products before leaving the factory. In this article, a semantic ...

The greater the pressure of a hydraulic system is, the faster it evolves from micro-leakage to failure, and the greater the damage is. It means that early detection and repair of micro-leakages ...

The casing leakage phenomenon seriously affects the safety and economic problems of oil and gas production and transportation. In this paper, the numerical simulation study of the casing's micro ...

Then, UAV- and GIS-based natural gas micro-leakage vegetation stress identification model was constructed to obtain the leak points of natural gas micro-leakage. Finally, the recognition ...

The flow rate can considerably be affected by leakage in the system, often this happens in the connecting points. Leakage can also occur in case of delamination of the chip, or when cracks ...

In order to study the characteristics of micro-leakage flow field with high-pressure underground gas wellbore, the model of flow field is built. Using numerical simulation methods, the flow fields of micro ...

Predicting leakage on a sealing surface is challenging, encompassing various factors such as characterizing the leakage channel, analyzing changes in interface micro-morphology, and ...

Thanks to specialised algorithms and many years of experience in monitoring energy supply systems, Gomero -- together with Trafag density sensors -- detects micro-leakages in highvoltage ...

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