

Electronic diaphragm leakage detection system

DKM, which first filed in 1971 for a patent on a system for detecting the rupture of a sandwich type diaphragm, has since measured the limits of this system, particularly for thick or viscous liquids.

To supplement its product offering, DKM has now developed a system for detecting such rupture based on the variation of the resistivity of an intermediate safety liquid.

A probe is implanted in the intermediate plate, which enables, with its associated electronics, measuring the resistivity in real time.

A threshold alarm incorporated in the electronics monitors the variations of this parameter. The only role of the intermediate liquid is to hydraulically transmit the diaphragm movements. The resistivity threshold is adjusted on the latter.

Pollution of the intermediate liquid by diffusion through, perforation, or destruction of the process diaphragm leads to variation of its resistivity. This fact is immediately detected by an alarm module, whether the resistivity has decreased or increased.

- Explosion-proof and CE in accordance with the INERIS certificate no. 98.D5070X
- Test report: CE 14 152 - 3/1999
- Classed: Eexd [ia] ia II CT 6



Photo: DKM

*Explosion-proof probe connected to the intermediate plate.
The electronics are situated inside a sealed and Explosion-proof box.*