

Processing of photoinitiators in chemical industry Filter damage monitoring with Dusty Ex

Application

A chemical manufacturer producing photoinitiators. Photoinitiators are chemical compounds, which disintegrate after the absorption of light in a photolytic reaction. They produce reactive compounds, which are able to initiate a chemical reaction (for example a polymerisation). In praxis these initiators are used to harden lacquers and paints under the influence of UV-light.

Photoinitiators are mixed and milled to produce granules. Filter cassettes contain dust emissions, which could impact on the ambient atmosphere. On the clean side a several filters are connected in series, to improve the integrity. The escape of contaminated air could cause severe impacts. The plasticizer which is contained in the granule form, can for example damage paint work on cars and other vehicles. On the internals of the pipework there is an Ex-atmosphere.



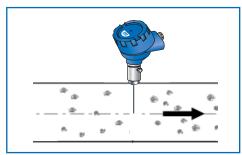
Process data

Customer: Chemical manufacturer (Switzerland)

Material: Photoinitiators

Installation place: After filter cassettes in clean gas channel

Amount of material: 20 mg/m³ Ex-zone: Ex 3G/D



Solution

The Dusty was specially developed to reliably monitor clean sides after filters for filter leaks instantly.

The Dusty is used in metal channels, where dust particles are detected in flowing gas.

In the described application the Dusty is used as an expansion to the "police filter", to monitor filter failure before dust being emitted to the atmosphere. Dusty can be used in hazardous areas (dust zone 22/gas zone 2). On this application the Dusty complies with environmental requirements, to avoid environmental damages and issues.



- Monitoring filter leakage on clean gas side
- Compliance of standards for environmental protection, avoidance of environmental issues.
- Dust monitoring in ATEX and Ex-zones

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