DALEMANS GAS DETECTION

MOST IMPORTANT APPLICATIONS

AGRICULTURE

Agricultural products need to be stored, often in silos. In these cases monitoring for biochemical phenomena or latent combustion is vital. Emissions of carbon dioxide, methane, ammonia or hydrogen sulphide can be tracked as appropriate for the application. Some cultures growing in controlled atmospheres and under glass call for control of carbon dioxide levels.

BREWERIES

Brewing is based on a biochemical reaction, fermentation. This reaction releases significant quantities of carbon dioxide onto the shop floor. Other asphyxiating gases such as nitrogen are also used in breweries.

BATTERY CHARGING SPACES

Battery charging spaces are susceptible to emissions of various gases of which hydrogen is the most dangerous.

BOILER ROOMS AND AIR HEATERS

Boiler rooms and air heaters for many buildings and halls are supplied with mains natural gas. There is a risk of leaks and cracks in various elements of the gas distribution system. Inadequate maintenance of burners can also produce carbon monoxide.

KITCHENS

Industrial kitchens often use fuels like natural gas, butane or propane. Occupational safety and hygiene requirements require suitable equipment. Extractor hoods are the critical points for preventive detection.

REFRIGERATION

Refrigeration units use large quantities of coolants such as ammonia, Freon and carbon dioxide.

MEDICAL FACILITIES

Medical laboratories store and use many toxic and inflammable substances. Hydrogen, oxygen, natural gas and asphyxiating gases such as nitrogen, argon and helium are regularly used for lab work. These sites often also have cooling installations, underground car parks, natural gas boilers and emergency generators.

PRINTERS

Print works often use solvents such as toluene in their processes. Storage conditions for these products are often critical.

FOOD INDUSTRY

There is plenty of awareness in the food industry of the requirements for the storage of foodstuffs. To meet these they use large quantities of refrigerants like ammonia, Freon and carbon dioxide.

DALEMANS
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CHEMICAL INDUSTRY

The chemical industry handles large quantities of flammable and toxic gases in their processes or as by-products. These industrial sites often have storage for raw materials or finished products. Hydrogen, oxygen, natural gas and asphyxiating gases such as nitrogen, argon and helium are regularly used for lab work.

LABORATORIES

Medical laboratories store and use many toxic and inflammable substances. Hydrogen, oxygen, natural gas and asphyxiating gases such as nitrogen, argon and helium are regularly used for lab work.

METAL INDUSTRY

The iron and steel industry uses an arsenal of gases of which the following are the most important:
- Oxygen: oxidant often used in blast furnaces and oxygen furnaces.
- Hydrogen: a reliable reducing agent.
- Nitrogen: used alone as an inert gas and carrier medium in order to ensure safety and maintain product quality.
- Argon: generally used to prevent contact and thus interaction between liquid metal and the environment.
- Carbon dioxide: generally used to protect the environment.

CAR PARKS AND TUNNELS

Underground parking and tunnels are enclosed spaces where monitoring and ventilation of exhaust gases is necessary. The toxic fumes primarily consist of carbon monoxide and nitrogen dioxide. If vehicles running on natural gas or LPG are permitted, specific detection for these flammable gases is necessary.

SWIMMING POOLS

Ozone is a very effective disinfectant for treating swimming pool water. This method can complement the use of chlorine- and bromine-based chemical products. A low dose of these products is not dangerous but a technical problem could generate a concentration that could be toxic for users.

ENERGY PRODUCTION

Natural gas-fired power stations are classic applications for methane or hydrogen detection. The critical points are the boilers, burners and the whole turbine assembly. Other types of energy production also present risks related to the presence of toxic gases as combustion by-products: carbon monoxide, SOx and NOx.

STORAGE

The storage of hazardous products for industrial use or for transport is a common application for gas detection. These high risk handling areas require monitoring.

WATER PURIFICATION

Water treatment plants produce methane and hydrogen sulphide as by-products. The critical points are at anaerobic digesters, pumps, sumps and filters.