### A Member of The Linde Group

# │ **ÅGÅ** Risk and Safety Services



Safety requirements imposed on plant owners of both fixed and mobile gas installations and equipment are high and the regulations for gas use are extensive. Plant owners who handle gas must make a risk assessment and the regulations can be difficult to overview. AGA therefore offers several services to ensure the safe handling of gas plants.

AGA's safety engineers have extensive experience in gas safety and are constantly updated on current laws. We always work with the customer to get the most effective, safe and profitable plant.

A risk assessment or safety audit starts with a review of the plant and how the plant is handled. The results are documented and compared with existing laws and regulations. This leads to a report and a proposed action plan.

## Safety Audit – Control of current regulations

A safety is an examination of the gas system according to current regulations. This is documented in a report and results are outlined in a suggested list of measures. The audit and the report can be brief or detailed depending on the needs and requests of the customer. The purpose of the audit is to get a good overview of the gas plant and to adress any deviations.

### Examples of what may be requested in a safety audit:

- → Risk assesments of gas handling
- → Delegation of responsibility and authority
- → Documentation of the gas system
- → Construction control of the gas system
- → Controls and inspections
- → Documented classification of explosive atmospheres
- → Training
- → Maintenance

Risk analysis/risk assessment - systematic analysis risks

At all handling and use of gas, there has to be some form of documented risk review. AGA perform risk assessment of gas handling and pressure devices. The requirements for risk assessment are retroactive and have to be updated when changes or incidents occur. At a risk assessment, the plant is reviewed and potential events are graduated in how likely they are to occur and the consequences the event would have. This is done from a personal, environmental and economic perspective.







Risk analysis



Documentation



Construction control



Inspection/control



Explosion documentation



Educations



Maintenance



# Documentation classification of explosion atmospheres

At a plant where flammable substances are handled the risks have to be documented and minimized. The flammable substance may be gas, liquid or dust. If this can cause an atmosphere that can be ignited a documented classification should be established.

#### Such a document includes:

- → The substances that create a dangerous atmosphere and their properties
- → Classification with extent of zone a description (drawings and tables) how widespread the possible flammable atmosphere would be
- → Ignition source analysis, what could create an ignition of a flammable atmosphere
- → Procedures for handling the flammable product and instructions for other work in the hazardous areas

#### Documentation

Handling of gas, especially in fixed systems, requires documentation. For example, a flow chart over plant parts is required in order to be able to do safe maintenance on gas systems.

#### We can assist the facility owner with:

- → Risk assesment
- → Classification and documentation of explosive atmospheres
- → Flow chart and component specification
- → Program for maintenance and supervision
- → Instructions for handling of gas

Do you want to know more about our services, please contact us!