



**THE EUROPEAN DIRECTIVE FOR THE PROTECTION OF
WORKERS POTENTIALLY AT RISK FROM
EXPLOSIVE ATMOSPHERES**

Each year of the 120 million workers within the European Union, 10 million are the victim of work-related accidents or disease and 8000 die. Over the past 30 Years, the need to improve conditions in the work place has been one of the European Commission's primary objectives.

Within the European Community an EC treaty was agreed by all member states which provides both the legal and general principle:

'Member states shall pay particular attention to encouraging improvements, especially in the working environment, as regards the health and safety of workers, and shall set as their objective the harmonisation of conditions in this area, while maintaining the improvements made'.

Consequently, on the 12th June 1989 Directive 89/391/EEC (the Framework Directive) was adopted.



The Framework Directive represents the core of the Commission's strategy on health and safety and is intended to be supplemented by individual directives, specifying minimum requirements and covering areas such as the use of work equipment, personal protective equipment and manual handling.

The ATEX 137 Directive sets out to improve the health and safety protection of all workers potentially at risk from explosive atmospheres. It was published in the official journal of European Communities on 28th January 2000 as Directive 99/92/EC. It is the 15th individual directive of the Framework Directive (89/391/EEC).

94/9/EC versus 99/92/EC - Who is Responsible?

99/92/EC (ATEX 137) is intended to complement 94/9/EC (ATEX 100a). These two directives cover different areas and are intended to achieve different objectives. Responsibilities and duties are shared between the manufacturer and user (employer).

99/92/EC (ATEX 137)

- Covers health and safety protection of workers.
- Duties are placed on the employer.
- Intended to ensure that workers enjoy a minimum level of protection throughout all member states.

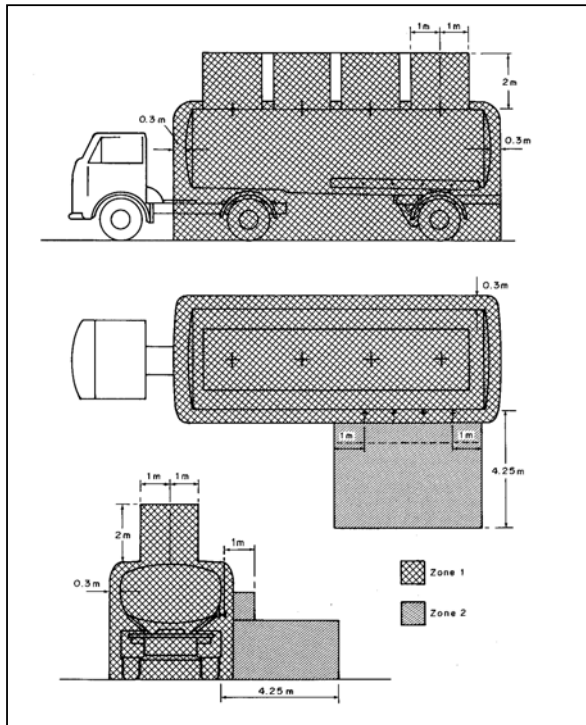
94/9/EC (ATEX 100a)

- Covers products intended for use in hazardous areas.
- Duties are placed on the manufacturer/supplier of the product.
- Intended to facilitate the free movement of goods within the EU.

Special Requirements for Hazardous Areas in Accordance with ATEX 137

As on 1st July 2006, ATEX 137 became fully mandatory. All hazardous areas must now conform to the Directive.

The employer must take the necessary steps to ensure all modifications to hazardous area from now on comply with the appropriate minimum requirements of ATEX 137.



**Fig 1 – Example of Area Classification.
A road tanker parked for unloading**

DSEAR Regulations

The Dangerous Substances and Explosive Atmospheres Regulations (DSEAR) sets minimum requirements for the protection of workers from fire and explosion risks related to dangerous substances and potentially explosive atmospheres in the workplace.

DSEAR is the 'framework' adopted by UK Government and the Health & Safety Executive (HSE) to facilitate compliance to ATEX 137 within the UK.

Other European countries will not adhere to DSEAR specifically, however, there will be similar frameworks in place as a vehicle towards ATEX 137 compliance.

Responsibilities and Requirements of DSEAR & ATEX 137

It is the responsibility of the employer to minimise the risks to their employees that can result from potentially explosive atmospheres (i.e. where there is presence of gases, vapours, liquids or dusts).

DSEAR calls upon several requirements to facilitate this:

Conduct risk assessments of non-electrical equipment already installed on-site.

Carry out competent risk assessments on any work activities involving dangerous substances.

Provide equipment and procedures to deal with accidents and emergencies.

Provide instruction and training to employees.

Classify the site into zones of risk (Area Classification).

Use appropriate (certified) equipment in hazardous areas.

Co-ordinate site health and safety for all users of the site, including subcontractors, maintenance crews, security staff etc.

Furthermore, any measures taken must be reviewed regularly, particularly when any significant changes are made to the hazardous area workplace.

The Risk Assessment

The employer is already required to carry out a risk assessment under the requirements of the framework directive (89/391/EEC). The risk assessment is not therefore an additional requirement.

Article 4 of directive 99/92/EC obliges the employer to carry out an assessment of the risks arising specifically from explosive atmospheres. The risk assessment must take account of the following:



- The likelihood that an explosive atmosphere will occur.
- The likelihood that potential ignition sources will be present.
- The intended process, installation, substances used and any possible interaction between them.
- The scale of the anticipated effects.

The Explosion Protection Document (EPD)

The EPD is based on the risk assessment. Once the risk assessment has been carried out and identified a likelihood that workers may be exposed to an explosive atmosphere, an EPD must be drawn up. This must be done before commencing work and it must be revised in the event that the workplace, work equipment or organisation of the work undergoes significant change. Existing documents or other equivalent reports may be utilised to satisfy this requirement to avoid unnecessary duplication.



Any workplace which contains locations where an explosive atmosphere may occur must be verified before it is put into operation for the first time. This verification must be carried out by persons competent in the field of explosion protection. This competence must be demonstrable in the form of experience and/or professional training. The EPD must demonstrate that all explosion risks have been determined and assessed. Those locations or areas which have been identified as "hazardous locations" shall be identified in the EPD.

The Warning Sign

The requirement for a warning sign is in line with the EC Safety Signs Directive. The purpose of this directive is to encourage the standardisation of safety signs throughout the member states so that signs, wherever they are seen, have the same meaning.

Directive 99/92/EC requires that, where necessary, locations where explosive atmospheres may occur shall be marked with warning signs at their point of entry. The warning sign must have certain distinctive features. It must be triangular in shape, utilise black lettering on a yellow background with black edging.

The yellow background must constitute at least 50% of the area of the sign. Other explanatory data may be added to the sign.



Fig 2 - Warning Sign for Locations where Explosive Atmospheres may occur (Directive 99/92/EC).

Summary of Main Duties on Employers:

- Prepare an explosion protection document (EPD)
- Classify the workplace into Zones where applicable
- Select ATEX 100a products according to Zone
- Identify, using warning signs, locations where explosive atmospheres may occur.

Conclusion

Directive 99/92/EC introduces specific legal requirements aimed at protecting workers from the potential dangers of explosive atmospheres. Directive 94/9/EC and directive 99/92/EC are complimentary. Although they both address the same risks they are aimed at different sectors. Users and operators will therefore need to ensure they are fully aware of the new requirements.



How Sira can help you with DSEAR & ATEX 137 Compliance?

Sira provides a range of technical services relating to DSEAR & ATEX 137 Compliance:

A Total Compliance Solution

Sira can offer a complete ATEX 137 & DSEAR package, helping you achieve and maintain compliance. From gap-analysis projects, to full programmes of work including risk assessment, area classification and inspection.

Training

Sira can offer public or in-house courses. These will give staff the ability to understand and prepare Area Classifications to various codes of practice.

Consultancy

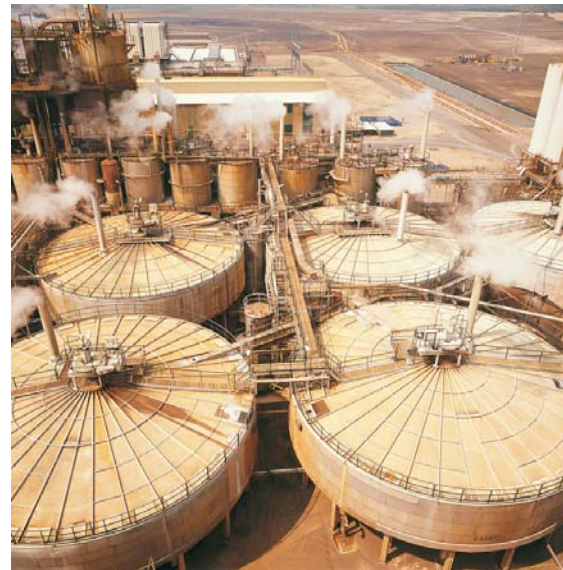
Sira can provide consultants to undertake the work for you. We will provide a detailed report; complete with marked up site drawings and a rationale for how we have arrived at our conclusions.

Project Management

Sira can project manage a team that includes our own experts and the client's staff. This allows a combination of our expertise and project skills with the customer's local knowledge and resources, so ensuring that future maintenance can be carried out in-house.

Support

Sira can be somebody to talk to when there is a difficulty, or to come in and give advice on solving a problem. As safety is involved, many clients appreciate having an external expert look over the work and give it their 'seal of approval'. Often this service is provided after a client's staff have attended a Sira training course.



Life after the Deadline

Even though the deadline has now passed, it does not mean that all the hard work is now finished. Far from it! There is now the task to continuously monitor and maintain the site, continuously check the appropriateness of the area classification, and continuously improve the competence of your employees and work practices.

And of course, several sites (including those not yet operational) may still not yet be fully compliant, meaning the need to achieve compliance is now more important than ever.

If you are not sure of your continued responsibilities, contact Sira for guidance.

More Information?

To discuss any issues arising from this document, or for additional information regarding DSEAR & ATEX 137 please contact us:

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