



# Achieving and Maintaining DSEAR Compliance

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

DSEAR came into full force on 1<sup>st</sup> July 2006, meaning that all new and existing installations must now be compliant.

Despite the fact that DSEAR has been around for several years, some people have taken the “transition period” (1<sup>st</sup> July 2003 – 1<sup>st</sup> July 2006) to mean that nothing needs to be done until now, resulting in installations that perhaps aren't yet fully compliant.

Furthermore, there are also questions about what happens next, after the deadline, and what's required to ensure that the site stays compliant.

In this article, Sira's DSEAR Compliance Manager Peter Murdoch, outlines a 'checklist' of the main elements that make up DSEAR, and looks ahead to how industry can 'live' with the guidelines.

## The Requirements of DSEAR

The principal requirements of DSEAR are that risk from dangerous substances are assessed and eliminated or reduced. This is facilitated by the following checklist:

- Risk Assessments are in place and include fire and explosion risks
- Hazardous area classification report and drawings are up to date
- Instrument and Electrical installations are inspected and maintained
- Non-electrical equipment risk assessments have been developed
- Permit to Work system is in place
- Portable ignition sources are controlled
- Static electricity is controlled
- Warning signs are adequate
- Information is provided to contractors
- Appropriate training is provided
- Anything else specific to your business/industry



## The Risk Assessment

The risk assessment is the vital first step for DSEAR compliance. Assessments should be focused on fire and explosion risks and involve a simple process including identification and examination of hazards to decide who might be harmed and how. You should then evaluate the risks and decide whether your existing precautions are adequate, or if more should be done. You should consider both seriousness and likelihood.

Consideration should not only be given to your day-to-day planned running of the site, but also to foreseeable events, including plant start-up and shutdown and maintenance systems. You also need to evaluate the risks to contractors and the public, as well as your own employees.

Risk assessments should now be in place, and should be constantly reviewed and updated for correctness and relevance.

## Area Classification

Hazardous area classification is a process for identifying areas that have potential to cause loss from ignition of flammable atmospheres by equipment.

Undertaking area classification requires a team approach, using people with plant knowledge and experience and further training may be required.

The process can be broken down into eight logical steps as follows:

- Identify material's properties
- Confirm layout of plant
- Identify sources of release
- Assess the degree (zone) of risk
- Assess the extent of the zone
- Write a report of findings and comments
- Define the results on a drawing
- Check the 'as-built' conditions

Different methods of classification have evolved, but the 'Source of Hazard' method, supported by guidance from appropriate industry codes, is most commonly used. Technical standards, industry codes and published books all assist in the assessment process to enable a safe result to be defined.

An important feature is that classification is an assessment; it is not an absolute science and the team has to be comfortable with the results.

## Maintenance and Inspection

Equipment must be maintained to prevent danger, and regular inspection of equipment is an essential part of any preventive maintenance programme.

The results of the maintenance programme can be integrated into your management systems and be used to improve performance.

Identifying and ensuring that all repairs are carried out within the declared timescale, and completing the repairs fully is the only way to get the true value of the inspection process.

## Non-Electrical Equipment

DSEAR calls upon the formalisation of risk assessments for existing non-electrical equipment.

The objectives will be to analyse the equipment and prepare a report that will cover all equipment within your inventory. The information should be retained and used to improve areas of concern.

## Signage

The need for signs should be based on the outcome of the risk assessment, but review your existing signs first and if necessary, provide additional signs at entry to hazardous areas only if they will add further value. The triangular 'Ex' sign is stated as the minimum requirement under DSEAR.

## Training

It is the competence and attitude of people in the workplace that has a positive influence on improved performance. Knowledge and experience influence competence.

The best way to achieve continued training is to link it into your management of change process and ensure that it is 'needs driven'. Consider technical training for your technicians and practical talks for other staff, as far as they have control of the danger.

Always remember to refresh the training periodically.

## Living with DSEAR

So now that the deadline is over, what comes next? What is required to maintain compliance and what support is out there to help you achieve it? In essence,

what does industry need to do to enable them to 'live' with DSEAR?

Sira believes that in the coming year there needs to be emphasis put on the maintenance of the guidelines, processes and systems you have recently put in place.

Keeping maintenance records up to date, reviewing risk assessments and checking the area classification of your site are all things that will ensure sustained compliance.

A continuous defined training programme is also vital to ensure that your staff are kept up to date with legislative requirements.

And remember - DSEAR is not new – it has been around for some time and responsible organisations should already have processes and procedures in place.

## Help is at Hand

In our experience, the most effective approach to ensure that you are applying the directive in the right way is to use the services of an independent third party, who has in-depth knowledge of DSEAR requirements.

Often formal, independent reports are issued, giving you an idea of 'where you are now' and 'where you need to be' and can form the basis of strategies to achieve sustained compliance.

## The Risks Involved in Doing Nothing

In the immediate aftermath of the deadline, companies now must take a step back and review what they have put in place. They need to be responsive to any problems highlighted, and adopt a proactive approach to dealing with sustained compliance.

The worse thing that could happen would be for industry to do nothing, and assume that what has been put in place will stand the test of time.

The final report concerning the Buncefield incident is yet to be published, and dependent upon the findings, may result in knee-jerk reactions involving unplanned expenditure to put in place strategies that attempt to improve health and safety.

A far better approach is to be proactive and make efforts to anticipate areas of concern and implement processes to resolve problem areas, planning for safety and demonstrating continued commitment to continued compliance.

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