



A QUESTION OF COMPLIANCE: ATEX 137 / DSEAR 2002

*Technical
Bulletin*

ATEX 137 was introduced as European Directive 1999/92/EC on 16th December 1999 and sets out the minimum requirements for maintaining the health and safety for the protection of workers potentially at risk from explosive atmospheres. All EU member states had to implement into national Health & Safety Regulations by no later than 30th June 2003. This was achieved in the UK by the introduction of DSEAR 2002 (Dangerous Substances and Explosive Atmospheres Regulations).

DOES THIS AFFECT ME?

Since the introduction of ATEX and DSEAR, Chilworth have been working closely with clients to achieve compliance. During this time we have discussed the impact of these health and safety regulations with many different process companies and have identified a number of popular misconceptions regarding compliance.



*ATEX & DSEAR Booklets available from
the Chilworth website at www.chilworth.co.uk*

THE MOST FREQUENT COMPLIANCE MISCONCEPTIONS

For existing plant, I don't have to do anything until 2006.

There are only certain parts of ATEX / DSEAR that do not apply immediately for existing plant and can be delayed until 2006. The need for Hazardous Area Classification and compliant equipment within zoned areas are the principal items that can be deferred until 2006. All other requirements should be in place **NOW** including risk assessments, definition of a basis of safety, identification of ignition sources, operator training, etc. Also, remember that revisions and modifications to existing plant after June 30th 2003 need to comply immediately.

I'm OK, my electrical equipment is already compliant.

Satisfactory electrical equipment designed for use in zoned areas is only half of the story. ATEX / DSEAR requires that both electrical and mechanical equipment be certified for use in explosive atmospheres. Therefore mechanical components will need to be assessed in line with current best practice. This will not necessarily be straightforward given that there has been no need for such certification in the past.

ATEX / DSEAR doesn't apply to me as my processes are not at ambient conditions.

ATEX applies to explosive atmospheres occurring at atmospheric conditions. However, the Chemical Agents Directive (CAD) and DSEAR cover both elevated temperatures and pressures. Remember also that explosive atmospheres are most often the result of unplanned escape of combustible substances which once released to atmosphere can be deemed to be at ambient temperature and pressure irrespective of their process conditions in confinement.

My Electrical or Instruments Engineer is sorting this out.

In many companies, the site electrical or instrument engineer has been made the project leader for ATEX / DSEAR compliance, particularly as they will have had experience with area classification. In the past when area classification related only to electrical equipment, this would have been fine. However, area classification is just one part of the legislation. ATEX / DSEAR specifically refer to other aspects of process hazards in addition to electrical and mechanical ignition sources such as electrostatic spark discharge. There is also a requirement to conduct risk assessments of mechanical handling equipment with regard to explosion safety and additionally, if the company processes or handles reactive chemicals, to conduct a chemical reaction hazard assessment. This is specifically a requirement of the CAD, which is incorporated within DSEAR in UK legislation. It is unlikely that the electrical or instrument engineer alone will have the necessary skills to demonstrate ATEX / DSEAR compliance and therefore it is

Safety Advice From The Experts in Process Safety

advisable to utilise in-company skills and outside resources as appropriate.

My material Safety Data Sheets (SDS) contain all the safety data I'll need.

In order to complete an effective Assessment of explosion risks as required under ATEX / DSEAR an operating company must understand the flammability properties of the materials it handles. Most SDS's don't contain any explosivity or flammability data especially with respect to dusts and reliance on them to demonstrate compliance may result in failure. A company must have accessible flammability data that relates to the materials they handle, the processes and operational conditions, not just generic explosivity data.

EMPLOYERS' OBLIGATIONS

The implications of ATEX 137 / DSEAR are that the employer shall ensure the health and safety of workers by taking all organisational and/or technical measures to prevent the formation of explosive atmospheres, or where the nature of the activity precludes this to remove sources of ignition, and mitigate the detrimental effects of an

explosion. Where necessary these measures shall be combined and/or supplemented with measures to prevent the propagation of explosions.

THE PATH TO COMPLIANCE

The employer's obligations under ATEX / DSEAR are clearly stated however the implications to their site are not always understood. So what do you need? You will need to undertake an explosion risk assessment and hazardous area classification. You will also need to ensure equipment meets the safety standard for the zone it is used in, suitable warning signs are put in place and that adequate documentation, possibly by means of an Explosion Protection Document (EPD) is available to demonstrate compliance.

For further advice talk to Chilworth Technology who have already undertaken ATEX / DSEAR audits for many international companies and have developed specific techniques for ensuring operating companies can demonstrate compliance with the requirements of their national legislation.

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My particular interests are:-

ATEX / DSEAR Audits Dust/Gas/Vapour Explosion.....

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