

ALG Memo 2/04
Asbestos Licensing Unit

To: Members of the Asbestos Liaison Group

From: Jim Skilling
Head of the ALU

Date: 24 February 2004

Subject: Use of asbestos removal equipment in potentially explosive or flammable environments

1 Background

1.1 An ordinary asbestos decontamination unit (DCU) was found in use in a hazardous area, where it could have acted as a source of ignition (space restrictions had prevented its location elsewhere), during an inspection of asbestos removal work on an offshore oil production platform.

1.2 The issue had been considered during the risk assessment procedure and some controls had been put in place including the issue of a permit to work, and the use of gas detectors. However, the aim should always be to reduce the risk of fire or explosion by locating equipment in a non-hazardous area where reasonably practicable, or consider whether it is possible to temporarily re-classify the area by removing or reducing the hazard for the duration of the work. When this is not possible, equipment must be suitable for the environment in which it is to be used.

1.3 Following this inspection, the Health and Safety Laboratory were asked to survey the suppliers of DCUs and other asbestos equipment (eg negative pressure units) to establish whether they supplied specific equipment for use in potentially flammable or explosive environments.

2 The problem

2.1 Preliminary findings indicate that some suppliers were uncertain about the requirements of equipment for use in potentially flammable or explosive environments. In some cases, it appeared that the equipment that was deemed to be suitable was not.

2.2 Consequently, there is a risk that unsuitable equipment or inappropriate advice is being provided, not only to contractors working offshore, but also to those working in similar environments onshore. This will include sites such as chemical works, anywhere a flammable atmosphere may exist (such as a solvent storage area or petrol station) or where there is the potential for an explosive dust cloud, such as a large-scale bakery.

3 Legal requirements

3.1 The following are the main legal requirements concerning the use of equipment in flammable atmospheres:

- a) The Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 1996 (as amended) place duties principally on manufacturers (or importers if manufacturers are outside the EU) to supply equipment and protective systems that are suitable for use in explosive atmospheres. These Regulations apply to all types of equipment - not just electrical equipment.
- b) Other legislation: (Electricity at Work Regulations, 1989 and Dangerous Substances and Explosive Atmosphere Regulations, 2002 - DSEAR) requires that equipment (electrical or otherwise) for use in flammable or explosive environments must be suitably constructed and protected for use in the above circumstances.

3.2 In addition, Section 6 of the Health and Safety at Work etc Act 1974 and the Supply of Machinery (Safety) Regulations 1992, amended in 1994, (these regulations apply to machinery supplied after 1 January 1993) will require the suppliers to ensure that such equipment is safe to operate for all foreseeable uses. Accompanying instruction manuals should detail the safe use of the equipment and how it should be maintained.

4 Action required

4.1 Where a project is to be undertaken on a site with a potentially flammable atmosphere or other hazardous environment this must be considered in the risk assessment and method statement, in addition to the usual asbestos risks. Where reasonably practicable, equipment should be located outside these areas. When this cannot be done, you should ensure that any necessary equipment intended for use in the above environment meets the existing standards detailed below. You should also take specialist advice on whether additional measures need to be taken (e.g. use of suitable gas detection equipment which shutdown DCU ventilation fans and provide an alarm signal).

4.2 Details of existing standards:

A) BS EN 60079: 2003 - Electrical apparatus for explosive gas atmospheres

- Part 10. Classification of hazardous areas - zoning of equipment 0,1 or 2;
- Part 14. Electrical installations in hazardous areas (other than mines) – how such equipment should be built to be safe for use;

- Part 17. Inspection and maintenance of electrical installations in hazardous areas (other than mines) – how the equipment should be inspected, maintained and put back together safely;

In the 'Guide to the application of BS EN 60079-14', the introduction includes the following advice: "It should be remembered that in any industrial installation, irrespective of size, there may be numerous sources of ignition apart from those associated with electrical apparatus. Precautions may be necessary to ensure safety in these instances but is outwith the scope of the above standards." This refers you back to DSEAR to consider non-electrical sources of ignition.

B) BS EN 13464:2001 – Non-electrical equipment for potentially explosive atmospheres – Part 1: Basic method and requirements

4.3 The above standards will form part of the decontamination Chapter in the new consolidated asbestos guidance due for publication later in 2004.

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