

Information Sheet : University Cryogenic Workshops

If you can't identify the hazards you can't assess the risks

Why delegates need to have received safety awareness training prior to attending a practical liquid nitrogen decanting workshop

The Health And Safety At Work Act 1974 etc requires organisations to provide whatever training, instruction, information and supervision is needed to ensure, so far as is reasonably practicable, the health and safety of its employees.

In addition, The Management of Health and Safety at Work Regulations 1999 place a statutory requirement on organisations to assess the risks to the health and safety of anyone who may be affected by their activities.

The principle hazards when using cryogenic gases and vessels are:

- Lack of knowledge concerning the hazards posed by the cryogenics being used
- Misuse of vessels and equipment by operators
- Complacency
- The pressure of gas inside the vessel (up to 20 bar)
- Lack of knowledge as to how different vessels and dewars operate
- Incorrect work practices
- Possible oxygen enrichment when transferring liquid nitrogen
- Oxygen deficiency (asphyxia)
- Lack of ventilation
- Gas leakages from vessels and relief devices
- Incorrect selection and use of equipment
- Use of poorly maintained and/or old vessels and dewars
- Lack of knowledge of how pressurised vessels work
- Unauthorised repairs or modifications by operators
- Incorrect handling operations
- Poor storage facilities and practices
- Improper or no use of personal protective equipment
- Lack of emergency control procedures

British Compressed Gases Association (BCGA) CP30 that covers the safe use of liquid nitrogen in dewars states that the user of the container must ensure that all staff are fully conversant with the properties of liquid nitrogen.

It also states that all personnel who are involved in either the filling, handling use or transportation of liquid nitrogen must:

- Be aware of, and trained in the hazards of liquid nitrogen
- Wear appropriate hand, eye, feet and body protection when handling full or empty dewars
- Not fill, use or transport any damaged dewar
- Ensure that dewars are correctly and clearly labelled for nitrogen service before filling
- Use only dewars which are correctly and clearly labelled
- Be adequately trained in the handling of liquid nitrogen dewars
- Avoid ice plugs by ensuring that protective caps are always used and that dewars are fully emptied before being taken out of use or put into storage
- Know what actions to take in the event of a liquid spillage
- Know what actions to take if an incident results in a cold burn or asphyxia casualty
- **Training should be carried out regularly under a formalised system and records kept**

Gas Safety in Universities

If you can't identify the hazards you can't assess the risks

First step - have your delegates received gas safety awareness training?

After carrying out our own risk assessment of the potential hazards and risks when undertaking a practical training workshop on a client's site, we have identified a significant risk if any of the delegates have not been trained in the topics covered by health & safety legislation and BCGA CP30.

Consequently prior to undertaking a practical training workshop Gas Safe need to understand whether the delegates attending the session have been trained in the above areas and whether they are able to identify potential hazards when using cryogenic gases and vessels.

This may be achieved by:

- Written confirmation from your organisation that all delegates have received formal training in the above topics and photocopies of the delegates individual training records
- Delegates undertaking and successfully completing our on line **e-Learning** safety awareness session prior to our undertaking a practical workshop
- Or undertaking an Instructor-led half day safety awareness workshop prior to conducting a practical workshop

Do you have compressed gas cylinders on site?

If the answer is yes then all users should complete the following workshops;

- **e-Learning** 'Using Gas Cylinders Safely within Universities'
- Once complete delegates can then attend the following practical workshop;
- Instructor-led 'University Connecting Regulators Practical Workshop'

Contact us...



If you know or wish to discuss your requirements;

Call one of our training advisors on **01270 758890**

Visit **www.gassafeconsultants.co.uk** and complete an enquiry form

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