COMPRESSED AIR

Legal Requirements

The health and safety aspects of work with compressed air are mainly covered by the Health and Safety at Work Act 1974, the Pressure Systems and Transportable Gas Containers Regulations 1989 and the Provision and Use of Work Equipment Regulations 1992. See also HSE Guidance Note – Compressed Air Safety.

Note: Specific guidance for those people who undertake work in compressed air, such as in tunnelling and other construction work, is specifically provided in the Work in Compressed Air Regulations 1996. These Regulations address such issues as medical surveillance, compression, decompression etc. This policy does not cover the requirements of this legislation.

Academy Policy

Introduction

Compressed air is used in a number of areas, and for a variety of tasks within the Academy. It is used for driving a number of tools, such as staple guns, spray units, with the air being supplied from both fixed and portable systems.

Workshop uses compressed air for a variety of tasks including:

- stapling

The emphasis in this policy is to provide general guidance as to the safe use of compressed air.

HSE Guidance Note – Compressed Air Safety provides specific guidance on the component parts of compressed air systems and covers in detail: compressor plant; air receivers; portable pneumatic plant; and circuit design; inspection and maintenance; and training.

Those seeking detailed coverage of the above items should refer to the Guidance Note.

Risk Areas

The main ways in which compressed air can be dangerous are as follows:

1. It can enter body orifices such as the mouth, ears and anus, causing severe and often fatal injuries.

2. At high pressure it can penetrate the skin.
3. Particles or oil carried in an air jet can damage the eyes.

4. Oil-coke deposits in a system can spontaneously ignite and cause an explosion.

5. Vessels containing compressed air, even at comparatively low pressure, can explode violently once their integrity is lost.

6. Dirty or wet air can cause a system to fail, e.g. by blocking safety-related valves.

7. The sudden rupture or parting of compressed air lines or connections can result in persons being struck by the hose, being knocked off balance, or being struck by flying particles or objects.

8. Excessive noise.

**Risk Assessment**

Managers will ensure that:

1. All plant and equipment, both fixed and portable, used in conjunction with compressed air complies with the requirements of the Safety Policy – Provision and Use of Work Equipment.

2. Compressed air equipment is only used by personnel who have been trained in the use of that equipment. Managers will ensure that they are instructed to follow and are issued with the general guidance given in Appendix 1 – Working with Compressed Air Tools.

3. Hand-held tools that use compressed air as a source of power comply with the requirements of the Safety Policy – Hand and Arm Vibration.

4. Where compressed air equipment is used, an assessment of noise levels is made and the necessary procedures put into place in accordance with the Safety Policy – Control of Noise at Work.

**Inspection, Maintenance and Records**

All compressed air plant and equipment will be inspected and examined in accordance with either the manufacturers’ instructions or a schedule approved by a competent person. It should be noted that where component parts of a compressed air system are subject to the Pressure Systems and Transportable Gas Containers Regulations, they will require a written scheme of examination drawn up or certified by a competent person.

**Training**

Managers must ensure that all personnel under their control who, in the course of their work, use compressed air, are adequately trained safely to use the plant and equipment involved. In particular, the Safety Precautions outlined in Appendix 2 must be adhered to at all times. Written records of training should be available if required.
Supporting Information

HSE Guidance Note PM 56 – Noise from Pneumatic Systems
HS(G) 39 – Guidance Note – Compressed Air Safety

Safety Policies

Abrasive Wheels
Hand and Arm Vibration
Provision and Use of Work Equipment
WORKING WITH COMPRESSED AIR TOOLS

Note 1: The information provided below should be read as additional information to the guidance provided in the Safety Policy – Hand and Arm Vibration (Vibration White Finger).

Users of compressed air tools should:

1. Ensure that the hose is clear of dirt or moisture before starting work. Hose and hose connections for compressed air supply to portable pneumatic tools should be:
   (i) designed for the pressure and service for which they are intended; and
   (ii) fastened securely to the pipe outlet and equipped with a safety device, as appropriate.

2. Ensure that tools are in good condition before use and that matching connections are used.

3. See that, where applicable, the proper protective guard is correctly fitted and in place.

4. Always use attachments that are safe for the speed of the tool.

5. Wear all other designated personal protective equipment – ear, eye, face protection and gloves.

6. Before disconnecting any air tool, turn off the compressed air supply on the main air pipe to which the air hose is connected. The air should be exhausted in the line at the tool end.

7. The air control lever should be released before moving the tool to another piece of work.

8. All defects should be reported immediately.

9. Never use an air hose to blow down overalls; this is a dangerous and forbidden practice.
COMPRESSED AIR – SAFETY PRECAUTIONS

Supervisors should ensure that the following hazards are highlighted to all of those who may be required to work with compressed air:

1. Compressed air should never be used for cleaning clothing.
2. Horseplay with compressed air is extremely dangerous and is strictly forbidden. Young people in particular may require special supervision to make sure that they behave properly.
3. When using compressed air tools the exhausting air should be directed away from the body.
4. Compressed air should never be used near a naked flame.
5. Any defects found in equipment should be reported at once.
6. Safety and monitoring devices should never be misused or abused.