

## **ABRASIVE WHEELS**



### **Introduction**

Although not all Service areas will be involved in the use of abrasive wheels those that do will need to take all reasonable steps to ensure the health and safety of employees who work with machines which incorporate abrasive wheels. When properly used, abrasive wheels serve an important purpose however, Shropshire Council acknowledges that health and safety hazards may arise from use of such equipment. It is the intention of Shropshire Council to ensure that any risks are reduced to a minimum. This arrangement requires the total co-operation of all members of management and staff.

### **Record keeping**

Relevant Service areas must appoint a competent person to mount abrasive wheels and record the appointment. The competent person must be trained in all aspects of the mounting and use of abrasive wheels. A record of training in the safe mounting of abrasive wheels must be kept, showing the trainee's name and date of training. Persons appointed to mount abrasive wheels must be given copies of the record entry or a certificate.

Records should also be kept of training provided to those using abrasive wheels in the course of their work.

### **Arrangements for ensuring the Health and Safety of employees**

Service areas will, in consultation with employees and their representatives:

- carry out an assessment of the work activity
- so far as is reasonably practicable, take measures to reduce the risks found as a result of the assessment
- ensure that all equipment used for grinding operations is maintained in good condition and is suitable for the task
- advise all employees, who work or will work with abrasive wheels of the risk to health and safety and of the results of the assessment.

## **Procedures for dealing with Health and Safety issues**

Where an employee raises a problem related to health and safety in the use of abrasive wheels, the service area/establishment, as appropriate will:

- take all necessary steps to investigate the circumstances
- take corrective measures where necessary
- advise the employee of actions taken.

Where a problem arises in the use of abrasive wheels or machinery the employee must adopt the following procedure:

- inform a responsible person immediately, usually a supervisor or manager
- in the case of an accident or emergency, respond quickly to ensure effective treatment.

## **Information and training**

Service areas will give sufficient information, instruction and training to ensure the health and safety of employees who use abrasive wheels. This provision also applies to persons not in direct employment such as temporary staff and contractors.

## **Safe systems of work**

The main types of injury concerning the use abrasive wheels are those which result from flying particles, those which occur when abrasive wheel bursts and those which are caused by accidental contact between the wheel and the operator's hand. The risk of accident and injuries can be reduced by adhering to the regulatory requirements and by adopting the following precautions.

- All persons who are, or will be using abrasive wheels to be adequately trained.
- Ensuring that all grinding machines, cutting machines and abrasive wheels are maintained and in good working order.
- Selecting the right abrasive wheel for the job. The best advice can often be obtained from the manufacturer or supplier.
- Making sure that grinding wheels are not operated at excessive speed. Both spindles and wheels must be marked with their maximum operational speed. (Over speeding can cause wheels to burst or disintegrate).

- Faulty mounting can also cause wheels to burst. It must be ensured that all abrasive wheels are mounted by trained, competent persons. Damaged wheels are to be rejected.
- Guards are to be securely attached to the body of the grinding machine and be strong enough to withstand the impact of flying fragments, should a wheel burst.

Abrasive wheels are to be found in use in school CDT areas, Social Services Centres, ICS, Workshops, etc. and if handled properly and safely, they are an invaluable tool. However, to reduce the risk of accident and injury, these important steps should be followed.

- make sure that relevant personnel are adequately trained to mount abrasive wheels, and to anticipate hazards and to know the precautions to be taken.
- ensure that all machines and associated equipment, including rests, guards and abrasive wheels, are well maintained and in good working order
- ensure that any defect found is reported immediately to a responsible person.
- ensure adequate eye protection is provided and worn.
- Control measures to reduce dust from the grinding operations are provided and used.

### **Summary of statutory duties**

So far as is reasonably practicable, an employer must ensure the health and safety of employees whilst at work (s.2(1) of the Health and Safety at Work etc. Act 1974). The use of abrasive wheels falls under the requirements of regulation 3 of the Management of Health and Safety at Work Regulations 1992, which stipulates that an employer must assess the risks to the health and safety of employees arising from work activities.

Operations involving abrasive wheels produce dust and fumes and here the Control of Substances Hazardous to Health Regulations 2002 as amended will apply.

During grinding operations, particles are thrown off. As the risk of eye damage is high, operators must wear appropriate eye protection (Personal Protective Equipment at Work Regulations 1992).

Safety in the use of abrasive wheels (HSG17) and the Provision and Use of Work Equipment Regulations 1998 (PUWER 98) detail the training requirements for the safe use of grinding and cutting machines using abrasive wheels. Abrasive wheels must be suitable for their intended use i.e. the correct abrasive wheel must be selected. Every abrasive wheel must be properly mounted by a person who is trained and appointed in (writing) it carry out the

task. All training should be carried out under the immediate supervision of a competent person.

Machine guards must be provided (except where the nature or type of work makes this impracticable), they must, so far as is reasonably practicable, be constructed to contain a wheel if it fractures and must enclose the whole of the wheel except that part necessarily exposed for the work being done. Grinding machines must be fitted with efficient starting and stopping devices within easy access of the operator and work rests must be properly secured, of the correct design and adjusted to be as close as practicable to the wheel. Employees must use guards, rests and other items used in grinding operations correctly and safely and report any defects to their manager or supervisor.

Floors must be kept in good condition and free of loose material. The requirements of the Provision and Use of Work Equipment Regulations 1992 (PUWER) as amended, must also be complied with. These state that all work equipment, including grinding and cutting machines which use abrasive wheels, must be suitable for the work, well maintained and operated only by trained personnel.

Reviewed    October 2021