Using the Abrasive Wheels

1. Wear your protective equipment including goggles, helmet and dust mask.
2. Check that the abrasive wheel is fitted correctly and securely, and that the guard is properly adjusted.
3. Do not use abrasive wheels on machines without the safety guards fitted. Regularly check that the guards and the abrasive wheel are still secure.
4. Do not use abrasive wheels to cut asbestos or materials containing asbestos.
5. Check that the abrasive wheel is clear of any obstruction before starting the machine. Let the wheel run up to speed before starting work. Be prepared for the reactive force when the wheel contacts the work surface.
6. Keep the wheel running at speed: if the machine starts to labour and slow down do not force it so hard. Firm but steady pressure keeping the wheel speed up will be more effective and safer than using aggressive force.
7. Abrasive wheels can only cut in straight lines. Do not try to go around corners.
8. Lift the abrasive wheel clear of the work before switching off, or stopping the engine.
9. Do not put the machine down until the wheel has completely stopped.
10. Do not slow the wheel deliberately by applying pressure to it while it is slowing down.
11. If your equipment does not work properly, do not attempt to repair it. Contact the hire company.
12. You may want to read this leaflet again. Please keep it until you finish work.

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Abrasive Wheels

The rules and procedures in force where people are at work may require the person responsible for this equipment to carry out a specific risk assessment.

It is important to read all of this leaflet BEFORE you use the Abrasive Wheels

1. This leaflet should be read together with safety instructions applying to the machine you fit these wheels to.
2. You must be competent before you can mount abrasive wheels. This leaflet is no substitute for proper training.
3. Abrasive wheels are designed to grind, cut and smooth metal, concrete, stone and similar materials. You must use reinforced wheels of the correct grade for each job. The maker's label attached to the wheel will have BF or REINFORCED marked upon it. You must not use wheels that are not reinforced on any hand held machine.
4. The abrasive wheel rotates very fast and can cause injury or damage if the machine is not used in a careful and controlled way.
5. If you have not used abrasive wheels before, familiarise yourself with their correct fitting and use before you start on the main task. If you are not sure ask the hire company.
6. Plan your work and think ahead to make sure you will always be working safely.
7. You must have at least the following items of personal protective equipment: goggles: EN166 or BS2092; dust mask- a minimum of EN149 - 2001FFP3 protection; ear muffs or plugs giving protection for levels up to 89dB(A); Safety boots to EN345 or BS1870/4972; industrial gloves.
8. A personal first-aid kit should be available.
9. Machines that use abrasive wheels must not be used by minors, or by anyone under the influence of drugs or alcohol.
10. Machines that use abrasive wheels are designed for operation by an able bodied adult. Anyone with either temporary or permanent disability must seek expert advice before using them.

Before Starting Work...

WORK AREA

1. Do not use abrasive wheels where there is a danger of explosion. Sparks from grinding will ignite petrol or fuel vapour, and can ignite upholstery and other fabrics.
2. Make sure that the area is clear and safe and that no-one is near to you or could distract you. Warn others to keep away, put barriers around your work area.
3. Protect other people from the dust. Set up an exclusion zone around the area where the abrasive wheel is being used with physical barriers, barrier tape and signs. Keep children and animals away when using this equipment.
4. Work should stop immediately should anyone, other than those directly assisting with the work, enter the exclusion zone.
5. Make sure your work area is clear, well lit and well ventilated.
6. Clear the area of trip hazards such as rubble, rubbish etc.
7. If you are using an abrasive cutting disc to cut into a floor or fixture check that there are no hidden electric cables, gas or water pipes where you are going to cut. **Ask the hire company for HAE leaflet no.1415 – cable location and signal generator**.
8. Any work that is not part of a fixture should be securely clamped or held in a vice.
9. Cutting certain materials makes a large amount of dust - cover any surfaces or objects that may be damaged, or difficult to clean.

OPERATORS

1. The following items of personal protective equipment (PPE) are the minimum that should be worn whenever you use this cut-off saw. Particular jobs or environments may require a higher level of protection.
2. You must wear goggles (EN166 or BS2092) when you are working with this machine.
3. This equipment is likely to cause noise levels up to 93 dB(A) - wear appropriate ear muffs or plugs giving hearing protection for this level as a minimum.
4. Vibration from using this machine can be hazardous. Warm your hands up before you start work, and wear industrial quality gloves to keep your hands warm while you are working. Find out more about the effects of vibration - **Ask the hire company for a copy of the HAE leaflet no. 2150 – Hand-arm vibration or visit www.hse.gov.uk/vibration**.
5. Anybody who is working near to you will also need to wear identical personal protective equipment.
6. Do not wear nylon clothing such as overalls; sparks from grinding may set it them on fire.

SELECTING ABRASIVE WHEELS

1. Check the abrasive wheels, if any are found damaged, distorted or badly worn do not use them - contact the hire company.
2. Treat all wheels carefully. Store them flat, in their original packing. Do not allow them to get wet or frozen.
3. Handle wheels carefully because they will crack easily if dropped. A cracked wheel is extremely dangerous and must not be used.
4. For any grinding work with hand held machines you must use reinforced depressed centre grinding wheels.
5. For any cutting work with hand held machines you must reinforced cut-off wheels, these may be depressed centre or flat.
6. The label on the wheel will have BF or REINFORCED marked on it. You must not use any other wheels.
7. Only use wheels that are the correct fit for the machine you are using.
8. The abrasive wheels must have the correct bore (hole) size to fit the spindle on your machine. Do not try to fit an abrasive wheel that is too loose, or too tight on the shaft.
9. Check the diameter of the abrasive wheel, do not use the wheel if it does not fit comfortably inside the guard of your machine.
10. Make sure that you use the correct type of abrasive wheel recommended by the hire company for the material being ground or cut.
11. Always check that the rotational speed marked on the wheel label is greater than the rotational speed marked on the machine.

FITTING WHEELS

1. You must not fit or change any abrasive wheel unless you are competent to do so.
2. Only fit abrasive wheels at your work area - do not transport the tool with the wheel fitted.
3. Always switch off and remove the plug, or stop the engine, before changing or adjusting an abrasive wheel.
4. Check the wheel for damage before starting to fit it. Do not use it if there is any sign of damage, such as cracks, or bits missing from the rim.
5. When fitting depressed centre wheels make sure that the central depression is closest to the machine.
6. Only use the wheel flanges that were supplied with the machine and are correct for the wheel you are using. Do not use any other flanges or fittings or improvise in any way.
7. Some machines have a reversible front flange to take thick or thin wheels. Make sure this type of flange is fitted the correct way for the wheel in use. A thin wheel will slip round on the spindle, even though the flange nut is tight, if the flange is fitted for a thick.
8. The blotters (paper discs) are used to absorb any irregularities between the surfaces of the cutting wheel and the flange.
9. The blotters are either stuck on the wheel or supplied separately. If the separate ones have been crushed, for example used once, they must not be used again.
10. Make sure that the flanges are tightened just enough to drive the wheel – normal hand force on the correct tools is sufficient. The wheel may be damaged if the flange is done up too tightly.
11. Use the tools supplied with the machine.
12. When you have fitted the abrasive wheel, make sure that the guards around the wheel are in place and adjusted correctly to suit the wheel and the job you are doing.
13. Rotate the wheel by hand to ensure that it does not foul the guard. Then, holding the machine in a safe position, start the machine and run the wheel at full speed for at least one minute to check that everything is running correctly.
14. If there is any excessive vibration or other sign that the wheel is not fitted properly stop the machine and check what is causing the problem.
15. If you think something is wrong do not use the machine. Switch off and unplug, or stop the engine, before making adjustments.
16. Dispose of used wheels carefully.

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