

GRINDING – PORTABLE/STATIONARY

1. Task

Working safely with grinders.

2. Hazards

Eye and other body injuries - (struck by, cut by), flying debris, broken grinding disks.

3. Controls

Pre-Job Safety Assessment (PSA). CSA/ANSI approved equipment and guarding, adequately trained workers, inspection of tools before use, the use of adequate PPE (including a face shield), 4A40BC fire extinguisher, caution off areas.

Portable Grinding

- ❖ Inspect your tools before you use them. Look for things such as cracked or frayed electrical cords, cracked or broken grinding disks. If the cords are not in working condition, tag and take the tool out of service. If the disk is cracked or broken, replace the disk with an adequate one.
- ❖ Ensure that the guards are always in place and that they have not been modified.
- ❖ Check to ensure the housing of the grinder is not cracked.
- ❖ Use grinders according to manufacturer's recommendations.
- ❖ When grinding, workers **MUST** wear tight fitting safety glasses and a full-face shield. This is mandatory. Respiratory protection must be worn when required.
- ❖ Match rated wheel speed to equipment RPM's. Never exceed the maximum speed (RPM's) that is recommended by the manufacturer. Excessive speed may cause the grinding wheel to break apart and cause severe injury or death.
- ❖ Inspect all grinding wheels for cracks and defects before mounting using ring testing.
- ❖ Run newly mounted wheels at operating speed for one minute before grinding, this will let you know if there is any vibration or if grinder is running roughly.
- ❖ Protect adjacent materials and building components from damage due to grinding.
- ❖ Before grinding ensure work, area is free of flammable liquids and combustible materials.
- ❖ Side handles on grinders must be attached.
- ❖ **DO NOT** use grinders on flammable material, i.e. gas tanks.
- ❖ **DO NOT CLAMP** portable grinders in a vise or other devices, for handheld work.
- ❖ **DO NOT** use liquid coolant with portable grinders, i.e. water may cause electrical shock.
- ❖ **DO NOT** over tighten the mounting nut.
- ❖ **DO NOT** use grinder for jobs for which it is not designed for, i.e. cutting.
- ❖ **DO NOT** force grinding disc onto spindle of grinder.
- ❖ **DO NOT** apply side pressure to the cutting disc.
- ❖ **DO NOT** allow the disc to become trapped or pinched in the cutting groove created by the grinder.
- ❖ **DO NOT** handle the grinder by its power cable or lower the grinder by its cable to the floor.
- ❖ **DO NOT** use grinding disc older than 3 years.
- ❖ **DO NOT** apply excessive pressure onto the disc so that the driving motor slows down.
- ❖ **DO NOT** store discs in a damp atmosphere or in extreme temperatures.
- ❖ **DO NOT** overextend while working with a grinder and always use two hands.

Stationary/Bench Grinding

- ❖ Tight fitting safety glasses and a full-face shield **MUST** always be worn when grinding.
- ❖ Check the tool rest for the correct distance for the abrasive wheel.
- ❖ Replace the grindstone when adjustment of the rest cannot provide clearance.
- ❖ Bench grinders are designed for front face grinding. Do not grind the side of the wheel.



Best Personnel Safe Work Practices & Procedures Manual

- ❖ Do not stand directly in front of the grinding wheel when it is first started.
- ❖ Wear respiratory protection when grinding for extended periods of time.
- ❖ When standing for a long period of time, maintain your balance and posture to reduce fatigue and back problems, i.e. put one leg on a block that is 6" to 8" high, this will take some of the stress off your back.
- ❖ All factory guards must be in place.
- ❖ Stationary Grinders must be firmly affixed to bench, pedestal or another fixed surface.