



All DeLong's Facilities

Procedure #:
CS-017

Portable Grinder &
Abrasive Wheel Safety

Rev 1

1. Purpose:

1.1 The purpose of this procedure is to protect employees from hazards associated with the use of portable abrasive wheel machinery and ensure compliance with applicable standards.

2. Responsibility:

- 2.1 The Environmental Health and Safety (EHS) Manager is the program coordinator, with overall responsibility for the program, including reviewing and updating this plan as necessary.
- 2.2 The EHS Manager and/or Supervisors are responsible for implementation of this procedure and training all employees with regard to this procedure.

3. References:

3.1 29 CFR 1910.243 Guarding of Portable Powered Tools.

4. Procedure:

4.1 Preparation

- 4.1.1 Remove flammable materials from the work area.
- 4.1.2 Ensure the work area is clean, and free from slip, trip, and fall hazards.
- 4.1.3 Keep the power cord/air supply hose away from the grinding wheel and the material being ground.
- 4.1.4 Have personnel not involved in the immediate work step away a safe distance from the grinding area.

4.2 Inspection

- 4.2.1 Unplug cord from power supply or disconnect air supply line before inspecting, adjusting, or replacing parts.
- 4.2.2 Abrasive wheels shall be used only on machines provided with safety guards.
- 4.2.2.1 Guard Requirement:
- Safety guards shall have a maximum exposure angle of 180 degrees.
 - The guard shall be located between the operator and the wheel during use.

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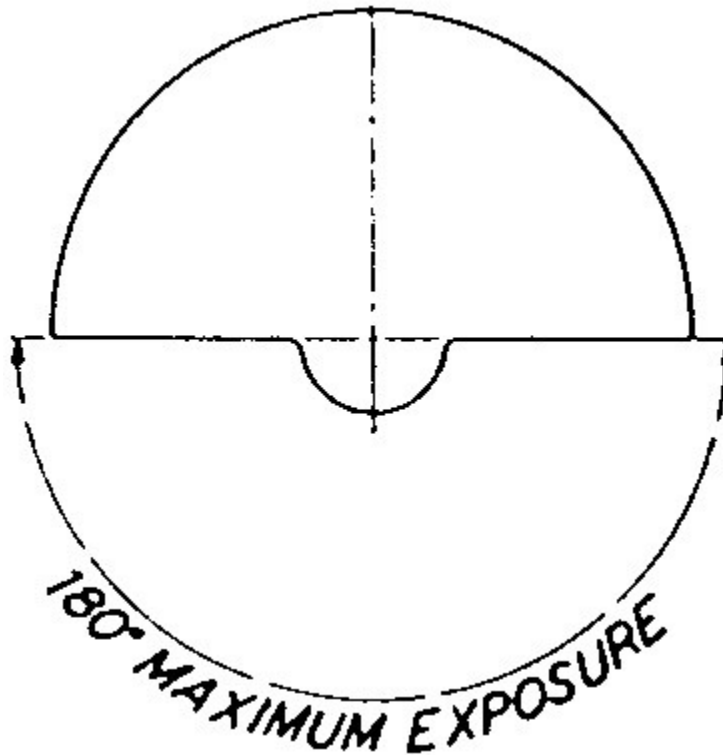
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- Adjustment of guard shall be such that pieces of an accidentally broken wheel will be deflected away from the operator.
- **DO NOT** modify or remove guards.
 - Any grinder that has damaged or missing guards will be tagged out and given to maintenance.



4.2.2.2 Guard Exemptions:

- Wheels used for internal work while within the work being ground.
- Mounted wheels used in portable operations 2 inches and smaller in diameter.

4.2.3 Check abrasive wheel for cracks or flaws and replace if necessary.

4.2.4 When using a grinder that can switch between left-handed and right-handed operation, remember to move the blade guard when you move the handle.

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- 4.2.5 Tag out grinder if a deficiency is found.
- 4.2.6 **DO NOT** use grinder until the deficiency has been corrected

4.3 Replacing the Wheel

- 4.3.1 The abrasive wheel should not be forced onto a grinder nor should the mounting hole size be changed. To control cracking of the abrasive wheel, it must fit freely on the spindle and be tightened to hold the wheel in place without distorting the flange.
- 4.3.2 The mounting nut should not be tightened excessively.
- 4.3.3 Run a newly mounted wheel at operating speed for one (1) minute before grinding.
- 4.3.4 Always follow the manufacturer's instructions.

4.4 Personal Protective Equipment (PPE) and General Safety

- 4.4.1 Safety goggles and face shield required when using a portable hand grinder.
- 4.4.2 Gloves required when using a portable hand grinder. **CAUTION:** Wear snug fitting gloves to avoid snagging on abrasive wheel or wire brush.
- 4.4.3 Do not wear jewelry or other items that could become entangled in moving parts.
- 4.4.4 Avoid wearing loose clothing or secure loose clothing.
- 4.4.5 Tuck or secure long hair.

4.5 Operation

- 4.5.1 Use both hands to maintain hold of the grinder.
- 4.5.2 Allow grinder to reach full rpm before grinding.
- 4.5.3 Position yourself to avoid overbalancing.
- 4.5.4 When grinding avoid placing excessive pressure on abrasive wheels.
- 4.5.5 Only grind objects with the face of grinding wheels.
- 4.5.6 Ensure the floor around the work area is clean.
- 4.5.7 Do not use wheels that are cracked or those that excessively vibrate.
- 4.5.8 Do not operate grinder on wet floors.

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