



SAFETY UNLIMITED, INC.

Weekly Safety Meeting

Grinder Safety

Abrasive wheel machines are used in general industry, construction, and maritime operations, but the small "fixed bench" or pedestal grinders can be found in just about every maintenance and machine shop in America.

This adds up to a lot of workers exposed to serious risks for eye injuries, hand or finger injuries or amputations, inhaling grinder generated dusts and fumes, and hearing problems caused by the grinding noise.

OSHA Requirements:

Protective devices keep operators from contacting the sharp metal-removing wheels or debris. OSHA-required protections include:

- Wheel guards are heavy metal hood-like enclosures in alignment with the wheels that cover the spindle end, nut, and flange protections.
- Machine-opening guards protect the operator as the wheel diameter becomes smaller.
- Work rests support the piece being ground and prevent jams or broken wheels. They should be no more than 1/8" from the wheel.

Inspection and Maintenance Prevent Accidents:

- Operators should inspect the wheels for damage before mounting them. A wheel should be evenly worn without a lot of nicks or scrapes. Check for cracks by tapping the wheel: a clear "ping" means it's not cracked; a dull thud means it is cracked and shouldn't be used.
- Check to see that the grinder and the wheel are securely mounted. Be sure electrical cords are properly grounded, the plug has a good connection, and the power transmission motor cover is in place.

Test the wheel before you use it without using materials. Stand off to one side to observe it in use.

Personal Protective Equipment:

For your safety, employees working on grinders should wear:

- Safety glasses with side shields or a full-face shield to protect eyes from flying chips and particles;
- Gloves to protect the hands from sharp edges and flying particles;
- A dusk mask to protect your respiratory system should you inhale dust or fumes; and

- Hearing protectors to protect from hearing damage.

Clothes, hair, and jewelry should not be worn loose because they could get caught in the machine.

Abrasive Wheel-Equipped Grinders Checklist:

Hand, arm, body, and eye injuries, hearing damage, and even respiratory problems can result from unsafe usage of abrasive wheel equipped grinders.

This checklist highlights some of the safety precautions that should be taken when working with these useful but potentially dangerous tools.

1. Is the work rest used and kept adjusted to within 1/8 inch of the wheel?
2. Is the adjustable tongue on the topside of the grinder used and kept adjusted to within 1/4 inch of the wheel?
3. Do side guards cover the spindle, nut, flange, and 75 percent of the wheel diameter?
4. Are bench and pedestal grinders permanently mounted?
5. Are approved goggles or face shields always worn when grinding?
6. Is the maximum RPM rating of each abrasive wheel compatible with the RPM rating of the grinder motor?
7. Are fixed or permanently mounted grinders properly connected to their electrical source?
8. Does the grinder have an individual on/off switch?
9. Is each electrically operated grinder effectively grounded?
10. Before mounting new abrasive wheels, are they visually inspected and ring tested?
11. Are dust collectors and powered exhausts provided on grinders used in operations that produce large amounts of dust?
12. To prevent coolant from splashing workers, are splashguards mounted on grinders that use coolant?
13. Is cleanliness maintained around grinders?

Remember:

Grinders are powerful, useful tools, but they are also potentially dangerous because users take them for granted. Serious injury and even death can result from improper handling, installation, or use of abrasive wheels. Cracked or defective grinding wheels can "explode" when in use.

ONE BAD DAY AT THE GRINDER COULD RUIN YOUR WHOLE LIFE!!!

Safety Meeting Sign-In Sheet

<i>Supervisor:</i>	<i>Subject:</i>
<i>Location:</i>	<i>Date:</i>
<i>Conducted By:</i>	<i>Trainer Signature:</i>

Name (print clearly)	Signature	Comments / Safety Concerns / Training Requests

