

Portable abrasive wheels have most of the hazards of the wheels mounted on fixed stands. The fact that they're portable makes them more hazardous in some ways. They have to take lots of punishment because they get banged around and dropped. Unless the wheel has already stopped before it's dropped, it's apt to jump around some and that's not so good.

If portable wheels are properly mounted and used right, you won't get hurt, but if you misuse them, you may get hurt. The biggest danger is that the wheel may explode. It's probably running at 2,000 or 3,000 rpm's, and if you bang it into something or give it a good blow it's apt to let go. Don't forget that those chunks from an exploding wheel are plenty hard and have sharp corners. They can crack your skull and tear your flesh.

Over speed can explode a wheel, too, but you can hardly over speed a motor-driven wheel unless you mount an oversized wheel on the grinder, for instance, put an 8-inch wheel on in place of a 4-inch one. You'd get twice the rim speed that way, and the wheel would probably let go. Of course, you'd have to take the guard off to put the 8-incher on, and that would be a fool thing to do. It's been done though.

You never should use a portable grinder on any ordinary grinding job without a guard. The guard should cover at least half the wheel. See that it's secure and set to give you the best possible protection if the wheel should let go. Always handle the grinder and yourself to keep the guard between your face and the wheel. That can mean the difference between getting a chunk of wheel in the face and merely hearing it zip past you. The guard will turn a lot of the dust and sparks away from you, too. Without a guard you'd eat plenty of it.

Suppose we run through the safe way to do a job with a portable grinder. First, check the tool over carefully. Is the cord in good condition? Is the guard on tight? Are the washers full size? Does the trigger work right? Does it cut off the power when you take your finger off? Does the wheel run smoothly and without vibration?

If the answer to each of these is "yes," you're ready to get on with the job. Or are you? How about your goggles? Safety shoes, too? You shouldn't drop that grinder, but you might, and a grinder dropped on your toes would make them plenty sore for a while.

Next, check the area around the job. If there's anything loose underfoot, pick it up. If there's anything you can't pick up that you might trip over — like a pipe — notice where it is and keep clear of it. Then decide where you want to run the extension cord. You don't want anyone to trip over it or interfere with it, and you don't want to get your feet tangled in it. The record shows that an extension cord which isn't safely out of the way is practically a sure-fire device for causing injury. If the cord isn't long enough to run where it's safe, get another and hook it up. Don't take chances with that kind of trouble.

## Proper PPE:

- Safety Glasses
- Face Shield
- Hearing Protection
- Appropriately Fitted Work Clothing
- Steel Toe Work Boots

## Identifiable Hazards:

- Absence of Safety Guards
- Damaged Electrical Cords
- Excessive wear
- Incompatible abrasive wheels
- Signs of water damage

**NOTE: All work involved with the operation of portable abrasive wheels shall not be permitted on-site without the acquisition of the host facilities required "Hot Work Permit". Work shall continue when all the criteria within the permit is satisfied.**