

## (19) Safety Operation of Grinding Wheels [3]

### Safe Operation

- Every piece of equipment comes with an owner's manual. The operator is advised to read the owner's manual to become familiar with the machine. Familiarization with the grinder will help you to know what the parts of the grinder, the uses of the grinder, the limitations of the grinder and warnings pertaining to the grinder. Before installing an abrasive wheel you should inspect it for damage and then use the ring test to listen for faults in the wheel.

### Ring Test

- The ring test is used to test the integrity of the wheel. Faulty wheels can disintegrate and since they are rotating at high speeds can cause great damage and physical harm. To ring test, tap the wheel lightly with a non-metallic instrument, such as a screwdriver handle or plastic mallet. There should be ringing sound. If you hear more of a dead thud, then the wheel is probably faulty and should not be used.

The OSHA regulation 29 CFR 1910 sets the safe standard for "portable grinder" operation. Though these regulations pertain to operators of the grinder in the work force, they are good standards in the private sector as well. One of the biggest hazards of the operation is the wheel and its protections. The guard is designed to keep the operator safe from flying debris, from getting self or clothing caught in the wheel and to keep the operator safe if the wheel should prove faulty and come apart.

### Personal Protective Equipment

- When operating the grinder several pieces of personal protection is recommended. Always protect your eyes. The eyes are some of the most sensitive and easily damaged organs of the body.

OSHA recognizes safety glasses that have Z87.1 on the lenses or inside leg. These glasses have passed rigorous testing and will not shatter when struck. Use a face shield if the operation will have a high probability of injuring your face. Protect your hearing. Grinding can be very loud. It is always a good idea to use hearing protection during loud operations.

## Working Environment

- When working with a hand grinder you should consider the environment in which you work.

(1) Make sure that you have good lighting in order to see your work.

(2) Make sure that the area is free from hazards and clutter. Most accidents are from slips, trips and falls.

(3) Make sure that your clothing is not loose. Tuck in your shirt and have tight sleeves or roll them up. Be sure you are not wearing jewelry or other items like lanyards that can be caught in your work.

(4) Make sure that the area around you does not have slippery surfaces or fuels that may ignite. Be mindful of others around you. The wheel should be up to full speed before applying it to the work.

