Tool Box Talk | Grinder Safety

Surface Grinder Safety Tips

A surface grinding machine is needed to create smooth accurate finish on materials that are either metallic or non-metallic. This machine makes use of a round stationary abrasive grinding wheel that rotates as the feed table runs in a left and right motion.

Surface Grinding Benefits

- You can grind abrasive or hard materials.
- It has very good dimensional accuracy.
- It produces high finish textures.
- Tooling is more affordable.
- It can be performed automatically.

Surface Grinding Safety Rules

- To avoid injuries, follow the security precautions for using surface grinders listed below:
- If the grinding wheel is allowed to go over the maximum safe speed, it's going to disintegrate and may injure the operator.
- Always wear safety goggles when dealing with any grinding machine operations.
- Before mounting, inspect the grinding wheels for cracks.
- Do not operate the machine at a speed higher than the recommended speed in your instructions manual.
- Do not modify anything once the machine is running.
- Do not go over the recommended cut depth for the machine particularly the grinding wheel.
- Before turning the machine off, remove the workpiece from the grinding wheel.
- Always use the proper wheel guards.

Here are the most important DON'Ts you need to know about when it comes to the use of surface grinding machines and other similar equipment:

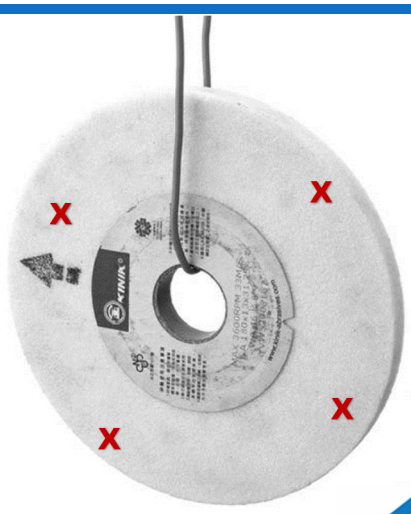
- If the grinding wheel was subject to impact (i.e. it was dropped), do not use it.
- Do not use a grinding wheel that has any abnormality.
- If the grinding wheel's hole diameter does not match the machine, avoid forcing the wheel into the machine.
- Do not go beyond the maximum operating speed as indicated on the grinding wheel.
- Do not over-tighten the nuts when mounting onto the flanges.
- Do not start the machine prior to installing the cover of the grinding wheel.
- Do not press the workpiece against the wheel using excessive force.
- Do not touch the grinding wheel directly when rotating.
- Don't stand in front of the wheel during a test operation.
- Do not place the grinder onto a workpiece, floor, table or any surface before the grinding wheel has stopped completely.
- Unless you have received the necessary training, do not change the grinding wheels. You should also not perform any test operations.

This test will give you an indication of any internal damage that may not be obvious during a visual inspection.

To perform a ring test:

1. Make sure the wheel is clean and dry; otherwise, you may get false results.
2. Hang the wheel in the air with a piece of cord or string looped through the hole in the center, as shown.
3. At the locations shown at **X**, gently tap the wheel with a light non-metallic device such as the handle of a screwdriver or a wooden mallet.

An undamaged wheel will emit a clear metallic ring or "ping" sound in each of these spots. A damaged wheel will respond with a dull thud that has no clear tone. If you determine from the ring test that the wheel is damaged, **DO NOT use it!**



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