CNSI Innovation Workshop Combination Sander User Outline

This guide may be found online through the Innovation Workshop and Microfluidics wiki.

Location

The combination belt/disk sander is located in 2448 Elings Hall on the bench next to Fume Hood #3.

Safety

- Follow the basic machine tool safety protocol: safety glasses, long pants, closed toe shoes, no loose clothing, jewelry or hair that may get caught in the moving machine
- Workpiece must be supported on the machine table so that it is not pulled out of your hand.
- Only sand on the downward-moving half of the disk sander where friction pushes the workpiece into the table.
- Connect a vacuum to the sander if you will be generating a lot of dust.
- Friction may heat workpiece to high temperatures - be careful not to touch hot surfaces.
- Keep body parts clear of sandpaper. Use a tool to hold small parts.
- Don’t wear bracelets, dangling articles of clothing, gloves or long sleeves while using the sander.

Training

Training is required before using the sander.

Training Outline

1. Explain parts of the tool
2. Review safety concerns
3. Demonstrate safe use of the tool
4. Show location of supplies
5. Demonstrate how to change belts/disks
6. Cleanup

Overview

The grinder is a benchtop sander with a 1“ wide x 42” long sanding belt, and an 8“ disk sander driven by a common motor. Each of these sanders has a separate vacuum port connection.

User Guide

Sequence of operation:

1. Wear proper PPE (safety glasses), face shield if needed
2. Turn on sander.
3. With workpiece resting on the table bring work into contact with the grinding wheel slowly and smoothly.
4. Move the work back and forth across the face of the sanding belt/disk to wear the abrasive evenly.
5. Use gentle pressure. Replace worn pads, or use a coarser sandpaper if more aggressive sanding is required.
6. Turn off the sander.
7. Use the shop vacuum to clean dust from work area.

Frequently Asked Questions

- What materials can I sand?
  - Aluminum
  - Wood
  - Plastics (be careful not to melt the plastic.
  - Very light sanding of steel is possible.

Accident Response

- In the event of injury, contact lab staff and emergency services if necessary (?)

Maintenance

- Use wire brushes to clear metal residue out of grinding wheel
- Adjust grinding wheel guide as wheel wears

Supplies (In drawer labeled “Grinder Accessories”)

- 1” x 42“ sanding belts
- 8” adhesive-backed sanding disks

Notes

- Please refer to the manual for instructions on changing belts and sanding disks.