# Job Hazard Analysis

**JHA Name:** Mounted Bench Grinder  
**Assessment Date:** 07-25-13  
**Building or Location:** Faribault and North Mankato Campuses  
**Revision Date:** 05-09-17  
**Department or Program:** Varied

### Description of Individual Tasks or Assignments:
- Grinding Tasks (e.g., Grinding, Sanding, Sharpening, and Polishing Objects; Correcting Surface Defects; Preparing Surfaces for Further Finishing, etc…)

### Tools, Equipment, or Machinery Used when Performing Task:
- Bench Grinder

<table>
<thead>
<tr>
<th>Hazard Type(s) Associated with Task or Assignment:</th>
<th>Check for Exposure:</th>
<th>Specific Hazard Exposure:</th>
<th>Check if Exposure Recommends or Requires a Style of PPE?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Impact</td>
<td>X</td>
<td>Potential exposure to flying fragments, particles and debris generated from grinding (e.g., injuries to eyes and face)</td>
<td>X</td>
</tr>
<tr>
<td>2 Penetration or Cut</td>
<td>X</td>
<td>Potential exposure to cuts and abrasions when handling metal pieces with rough or sharp edges, and from accidental contact with grinding wheel/disk (e.g., hand and finger injuries).</td>
<td>X</td>
</tr>
<tr>
<td>3 Crush or Pinch</td>
<td>X</td>
<td>Potential exposure to crushing and pinching hazard from dropping metal pieces and fixtures (e.g., injuries to feet)</td>
<td>X</td>
</tr>
<tr>
<td>4 Chemical or Harmful Dust</td>
<td>X</td>
<td>Potential exposure to hazardous dusts (dependent on type of materials or metals being ground surface coatings, wire/hard wheels used; as well as, the amount of ventilation) (e.g., respiratory illness)</td>
<td>X</td>
</tr>
<tr>
<td>5 Heat</td>
<td>X</td>
<td>Potential exposure to flying sparks generated from grinding (e.g., injuries to eyes/face, fire hazards)</td>
<td>X</td>
</tr>
<tr>
<td>6 Light (optical) Radiation</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>7 Electrical Contact</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>8 Ergonomic/ Human Factors</td>
<td>X</td>
<td>Potential exposure to repetitive movements, lifting light to moderately heavy loads, and bending (e.g., Back and other Muscular Skeletal Disorders)</td>
<td>X</td>
</tr>
<tr>
<td>9 Environmental</td>
<td>X</td>
<td>Potential exposure to loud/prolonged noise (grinding process)</td>
<td>X</td>
</tr>
</tbody>
</table>
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#### Personal Protective Equipment Requirements:

<table>
<thead>
<tr>
<th>Eyes &amp; Face</th>
<th>Head &amp; Ears</th>
<th>Whole Body</th>
<th>Feet</th>
<th>Hands</th>
<th>Respiratory</th>
<th>Other</th>
</tr>
</thead>
</table>
| Safety Glasses with Side Shields (Required when operating bench grinders) | Hearing Protection Devices (Required when operating bench grinders) | | Safety Shoes (Required when handling heavy metal parts/pieces) | Leather Gloves (Required when handling metal pieces with rough or sharp edges) | N95 Particulate Masks (Optional/Available when working around nonhazardous levels of grinding dusts), Appropriate 1/2 Mask, Full Face, Supplied Air, etc… | "Note: Keep Loose Clothing Away From Moving Grinding Wheels"

### Personal Protective Equipment (PPE) Requirements

- **Personnel should receive:**
  - Hearing Conservation training (e.g., regarding respiratory hazards), and fit-testing prior to wearing respirators.
  - Local Exhaust Ventilation (LEV) and dust collection systems should be provided/maintained to reduce exposure levels of grinding dusts in all grinding areas.
  - Respirator training (e.g., regarding respiratory hazards), and fit-testing prior to wearing respirators.

### Other Control Measures or Requirements (Engineering & Administrative Controls):

- **#4) Chemical or Harmful Dust Hazards:** Personnel should receive Right-to-Know training (e.g., regarding chemical & physical hazards). SDS should be provided/available for all hazardous chemicals. Grinders should be selected in anticipation of the operator’s need (e.g., type of material or part being ground) and physiological stature (e.g., ergonomic/human factors considerations).

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- **#6) Other Control Measures or Requirements:** Personnel should receive Ergonomics training (including warning signs and conditions of ergonomic/human factors hazards). When possible set up workstation or immediate job site to help minimize reaching, and/or sitting or working in awkward positions to prevent strains, soreness, and other discomfort. Grinders should be selected in anticipation of the operator’s need (e.g., type of material or part being ground) and physiological stature (e.g., ergonomic/human factors considerations).

- **#7) Coordination:** Movement from place to place on the job, considering distance and speed

- **#8) Endurance:** Ability to handle 50lbs+ objects, considering frequency

- **#9) Environmental Hazards:** Personnel should receive Hearing Conservation training (e.g., regarding noise hazards), and be included in the Hearing Conservation Program when potentially exposed to a TWA of 85dB.

### Physical Effort Definition/Examples

1. **Physical Mobility**: Movement from place to place on the job, considering distance and speed
2. **Physical Agility**: Ability to maneuver body while in place or in static position
3. **Physical Strength (Light to Moderate)**: Ability to handle 50lbs+ objects, considering frequency
4. **Physical Strength (Moderate to Heavy)**: Ability to handle 50lbs+ objects, considering frequency
5. **Dexterity**: Skill and ability in using hands, fingers, and feet
6. **Physical Balance**: Ability to maintain balance and physical control
7. **Coordination**: Harmonious functioning of body parts (e.g., eye/hand, hand/foot, etc…)
8. **Endurance**: Ability to sustain a prolonged stressful effort or activity with limited opportunity to rest

### Certification

**Name:** Al Kluever  
**Date:** 05-09-17

Note: "This JHA only covers the hazards or exposures that are most likely to be encountered. Nothing within this JHA bars or restricts personnel from requesting higher degrees of PPE or control to mitigate workplace hazards. In addition, South Central College personnel (e.g., employees and students) are required to complete any applicable safety or on-the-job trainings required prior to performing their positions or participating in their programs of study. Finally, South Central College personnel should consult their supervisors/instructors, the college’s written safety programs/policies, and/or the Security & Safety Director whenever they have questions or concerns."