

## **Grinder Injury**

**Situation:** Risk Services forwarded a scanned incident report to EHS. Because this incident was filed in hard copy, there was a delay between when the incident occurred, and when EHS was notified.

An employee had a small piece of metal go into his eye which had to be removed at UNM Hospital. An investigation was conducted by an EHS Safety Specialist.

The employee was utilizing a grinder to cut off a welded nut from the base plate of an outdoor bench. In order to reach the nut, he had to lay down on the ground, placing his face at a similar level of the nut. While operating the grinder in this position, a small metal particle came off of the nut and landed on his eye.

The EHS Safety Specialist spoke to the employee about the incident and performed an inspection of the equipment and PPE that was being utilized. He found that the grinder was in good working order, with all guards in place, and that the employee was utilizing safety glasses at the time of the injury. However, upon researching the manufacturer's recommendations, he determined that safety glasses were not an adequate or acceptable PPE for use with the grinder; instead, a face shield or goggles should have been utilized.

The Safety Specialist also determined that lying down to remove the bolts was not an ergonomic working position, and placed the employee at higher risk of injury.

### **Conclusions:**

Angle grinders, also called side or disc grinders, are one of the most common and dangerous hand tools. Due to the high speeds at which the tool operates, and the microscopic particles that are created when cutting into metal, safety glasses alone are not adequate protection for the eyes. Instead, the employee should have utilized a full-face shield, or goggles, to prevent any debris from moving past the glasses and entering the eye.

Additionally, EHS believes a different order of operations could have been utilized to reduce the hazards that the employee was exposed to. Instead of lying down to cut off the bolts, removing the bench seating or slats first would have allowed easier access to the bolts.

### **Causes:**

1. Inadequate PPE used.
2. Lying down instead of removing the bench seat or slats for easier access.

3. Inadequate hand tool training.

**Corrective Action:** Memo to department heads outlining the investigation and conclusions.

**Prevention:**

1. Departments should have their team trained on hand tool safety. EHS can provide the following training at the request of the department:
  - a. Hand Tool Hazard Awareness training (1 hour)
  - b. Personal Protective Equipment (PPE) Certification training (4 hour)
  - c. OSHA 10 General Industry certification (10 Hour)
2. Departments should notify all employees that face shields or goggles must be utilized when operating grinders, and should ensure that such PPE is readily available.
3. Departments should research alternative work practices to limit the hazards present when removing benches. EHS is available to assist with research and review.

**References:**

[Ergonomics :: Environmental Health and Safety | The University of New Mexico \(unm.edu\)](#)

[Training :: Environmental Health & Safety | The University of New Mexico \(unm.edu\)](#)