

SOP: Safety Protocols During Equipment Maintenance and Repairs

This SOP details **safety protocols during equipment maintenance and repairs**, covering steps for hazard identification, lockout/tagout procedures, proper use of personal protective equipment, safe handling of tools and machinery, communication and coordination among maintenance personnel, and emergency response actions. The goal is to prevent accidents, injuries, and equipment damage by ensuring maintenance tasks are performed safely and efficiently.

1. Purpose

To establish systematic safety protocols for equipment maintenance and repairs to minimize risk of injury, property damage, and process interruption.

2. Scope

This SOP applies to all personnel involved in the maintenance and repair of facility equipment and machinery.

3. Responsibilities

- **Maintenance Personnel:** Follow all safety procedures outlined in this SOP.
- **Supervisors:** Ensure personnel receive proper training and all safety measures are enforced.
- **All Employees:** Report hazards or unsafe practices immediately.

4. Definitions

Term	Definition
Lockout/Tagout (LOTO)	Procedures to ensure equipment is safely shut down and cannot be re-energized during maintenance.
PPE	Personal Protective Equipment (e.g., gloves, goggles, helmets) used for safety.

5. Procedure

1. **Hazard Identification**
 - Conduct a risk assessment prior to starting maintenance.
 - Identify electrical, mechanical, chemical, and physical hazards.
 - Ensure all safety data sheets (SDS) are reviewed for chemicals involved.
2. **Lockout/Tagout (LOTO) Procedures**
 - De-energize and isolate equipment before work begins.
 - Apply lockout devices and tags as per procedure.
 - Attempt to operate controls to confirm isolation.
 - Document and communicate LOTO status to all affected personnel.
3. **Personal Protective Equipment (PPE)**
 - Select appropriate PPE based on hazard assessment (gloves, goggles, respiratory, etc.).
 - Inspect PPE for damage before use.
 - Wear PPE at all times during maintenance tasks.
4. **Safe Handling of Tools and Machinery**
 - Use the correct, well-maintained tools for the task.
 - Return tools to designated storage after use.
 - Report defective tools for repair or replacement.
5. **Communication and Coordination**
 - Notify all affected departments before beginning maintenance.
 - Coordinate multi-person tasks to avoid misunderstandings.
 - Document maintenance activities and sign off when complete.
6. **Emergency Response**
 - Know the location of emergency shutoffs and first aid kits.
 - Report all incidents or near misses to supervisors immediately.
 - Follow the company's emergency procedures in case of accidents.

6. Documentation

- Complete maintenance logs and inspection forms as required.
- Maintain records of all lockout/tagout activities.
- Document PPE inspections and replacements.

7. Training

- All maintenance personnel must receive initial and periodic refresher training on these safety protocols.
- Training should cover hazard identification, LOTO procedures, PPE use, and emergency response.

8. Review & Revision

This SOP should be reviewed annually or after any incident to ensure effectiveness and regulatory compliance.

9. References

- OSHA 29 CFR 1910.147 - Control of Hazardous Energy (Lockout/Tagout)
- Company Safety Manual
- Equipment Manufacturer Guidelines