EnPro Learning System

Weekly Safety Briefings

Week 19 – May 4 - May 8, 2020

Lathe Safety

Introduction

Even during a global pandemic, many of us are still working and doing so in the safest manner possible. It is important to stay safe and healthy now more than ever. Many machinist jobs are considered essential because the operations they perform play a vital role in the overall operations of a business.

A lathe is a vital piece of equipment for many machinists and if not operated properly, a lathe has the potential to cause serious injury or even death. This week we will discuss risk assessments, the recommended guarding and tooling guidelines, proper PPE and safety attire, and the training required to safely operate a lathe.

Monday - Lathe Risk Assessment

Operating a lathe is a high-risk operation and can lead to injury if not performed correctly by trained personnel. Performing a risk assessment can greatly assist in identifying high-risk operations and provides guidance on creating and implementing corrective actions. Here are six recommended steps for conducting an effective risk assessment.

1. Identify all risks and hazards. Witness the operation, survey operators, and observe any surrounding factors.
2. Determine the consequences of the risks and hazards.
3. Rate each category of risk to determine the priority of corrective actions. The higher the risk rating, the more important it is to address it first to prevent injury. The priority categories are:
    - The frequency at which the risk or hazard could occur.
    - The probability of the hazard causing an injury.
    - The severity of the probable injury.
4. Develop corrective actions to eliminate or minimize risk.
5. Assign a responsible person or team to complete corrective actions.
6. Determine target date to complete corrective actions.

Tuesday – Recommended Minimum Guarding

Machine guarding is an OSHA requirement. Though there are no specific guarding requirements for lathes, OSHA does require at least one method of machine guarding in order to protect the operator and any nearby employees from hazards created by the machine.

Here are six recommended minimum standards to follow regarding lathe guarding and safety features:

- Chuck Guard (interlock recommended)
- E-Stop
- Recessed Start Controls
- Lockable Motor Disconnect
- Magnetic or sliding cutting shields
- Lead screw guard

Wednesday – Tooling Guidelines

Having the correct tools on hand may not seem safety related, but having proper tools prevents operators from having to fabricate their own tooling that does not meet safety standards. Additionally, this makes tools readily available if they are needed for an emergency.

Here are five recommended tools to have available for lathe operation:

- Tool Shadow Board – encourages proper 5S in the workplace.
- Chip Hook or Rake – used to remove stringers and chips and are designed to prevent being caught up in the machine.
- Long Nose Pliers – used to remove chips that may become lodged in the machine.
- Brush – eliminates the need for using your hands which can be injured by small shards of metal or other debris.
- Spring Loaded Chuck Key – spring loaded to prevent the chance of getting left in the machine and becoming a hazard.

Thursday – PPE/Safety Attire Requirements

Having the correct personal protective equipment and safety attire could mean the difference between going home safe and having a permanent or life-threatening injury.

Below are four basic PPE and safety attire requirements for preventing injury while operating a lathe:

- Safety glasses or face shield to protect against flying debris.
- No loose clothing.
- No jewelry (rings, watches).
- No gloves when working on rotating equipment.

Friday – Training

This week we've discussed several aspects of creating a safe lathe operation. Lastly, let's talk about training. As we discussed earlier in the week, operating a lathe is high-risk. Having proper training and fully understanding all of the safety requirements provides operators with the knowledge they need to keep themselves and their co-workers safe in the workplace.

Below are recommended safety topics to cover regarding lathe operations:

- Electrical Safety
- Lockout/Tagout
- Personal Protective Equipment Requirements
- Safety Attire Requirements
- First Aid
- Job Specific Procedures