KSU Facilities Safety Bulletin

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Machine Guarding

Machines that are not properly safeguarded can cause serious injury, such as crushed or severed fingers, hands and arms, eye injuries, and even blindness.

If you've ever seen the gruesome result of a complex machinery accident, then you will appreciate the need for machine safeguards. When we talk about safeguards, we're talking about simple devices or methods that protect make it difficult for workers from to injuring themselves while working on a machine, like a shield or guard to protect from sparks, or a grate that keeps them away from the churning part of a rotary blade.

Shortcuts around machine safety features are a frequently cited cause for many machine related accidents, occurring when workers decide to forego the normal protocol of working with a safeguard and bypass it altogether, leaving them with considerable risk of harm and injury. Workers should never ignore the engineered controls or safety features of machinery—these devices exist for a reason.

OSHA requires that one or more methods of machine guarding be provided to protect the operator and other employees in the machine area from hazards created by moving parts, as well as preventing contact with other hazards such as heat, non-ionizing radiation, sharp edges, etc. Additionally, safeguards must remain securely in place, protect against falling objects, create no new hazards or interference, and allow for safe maintenance and lubrication of the machinery. Maintenance of machinery is a situation commonly related to machine accidents, so awareness in those situations is critical to personal safety, as is recognition of safeguards and proper protocol, like shutting down equipment, and locking out operation.

Source: https://hsi.com/course-library/safety-compliance/osha/machine-guarding

August Vivid Courses

All: Machine Guarding

Operations: Hot Work

Hot Work

The term 'hot work' refers to any labor involving open flames or produces sparks or can start a fire by other means. This typically includes welding, wheel or torch cutting, brazing, soldering, and grinding, but it can include other work.

Because this type of work poses such a unique combination of both safety and health hazards to workers, it requires a substantial amount of controls. Thankfully, by following proper procedures and using the controls that are in place, these hazards can be greatly reduced.

First, employees exposed to the hazards created by hot work operations need to be protected by personal protective equipment (PPE). For body protection, employees performing hot work need to wear fire retardant long-sleeved clothing without cuffs.

Sleeves and collars should be kept buttoned. Avoid clothing with tears, snags, rips, or worn spots that could easily be ignited by sparks. Welding "leathers" that include jackets, sleeves, aprons and gauntlet gloves are proven protective equipment.

Also, feet should be protected with high top leather shoes, preferably safety shoes. If low shoes are worn, the ankles should be protected by fire resistant leggings. Hot work employees and helpers should wear suitable protection for their heads, faces, and eyes depending on the particular job. You have to consider sparks and bits of hot metal and the damage they can cause in these scenarios; sparks can be more distracting than directly dangerous and may present new risk associated with inattention.

Again, a reminder here to make sure the personal protective equipment (PPE) used by the workforce is well-maintained and in working order. Welding helmets and hand shields protect the eyes, face, neck, and ears from the harmful radiation produced by the arc. Never use a welding helmet or shield if the filter plate or cover plate is cracked or broken. A flame-proof skull cap is recommended to protect the hair and head. Transparent face shields and ventilated goggles provide insulation from heat.

Source: https://hsi.com/course-library/safety-compliance/osha/hot-work