SAFEGUARDING IN MANUFACTURING

1. Overview and Terminology

Safeguarding is the first line of defence in ensuring the safety of workers operating powered machinery and equipment. It protects workers when machinery/equipment is in operation. Safeguarding should consider the Hierarchy of Safeguarding – choose the most effective option.

Steps to Effective Safeguarding

1. Recognize the **hazard (2)**
2. Assess the **risk (3)**
3. Develop and/or apply safeguarding to eliminate the risk to an acceptable level
4. Ensure required communication, orientation and training is performed
5. Evaluate safeguarding for its effectiveness and make adjustments as required.
6. Do not confuse safeguarding with lockout, which protects workers when machinery or equipment is shut down for maintenance (including repairs and clearing jams). Training and supervision are essential to ensure worker safety for any activity around machinery.

Terminology

Safeguards

This is the umbrella term for measures that give workers effective protection from harmful contact with hazardous moving parts or other harmful conditions. Safeguards include barrier guards, safety devices, shields, awareness barriers, warning signs, etc., used singly or in combination.

Guards/Barrier Guards

These are physical barriers or covers that are designed, constructed, and installed to prevent contact with moving parts, e.g., belts and drive chains. They are reliable and cost-effective solutions when access to moving parts is not needed during operation. They usually require low maintenance if properly designed and installed.

Alternatives to barrier guards are interlocked movable barrier guards, two-hand controls, and electronic presence-sensing devices, e.g., light curtains and pressure-sensitive mats. These solutions are more complex/technical but may be the only option when access to danger areas is required during normal operation, e.g., when materials are fed into a machine for processing.

Personal Protective Equipment (PPE)

Personal protective equipment may have to be used even when other machine hazards are effectively safeguarded. In some cases, such as operating a powered forging hammer, the only protection available to the operator, besides training and safe work procedures, may be eye and face protection, hearing protection, and hand protection.