Basic Machine Guarding
Requirements:
OSHA’s Approach

James L. Unmack, PE, CIH, CSP
General Industry Standards
Subpart O

- 1910.211 DEFINITIONS
- 1910.212 GENERAL REQUIREMENTS FOR ALL MACHINES
- 1910.213 WOODWORKING MACHINERY REQUIREMENTS
- 1910.214 Reserved
- 1910.215 ABRASIVE WHEEL MACHINERY
- 1910.216 MILLS AND CALENDARS IN THE RUBBER AND PLASTICS INDUSTRIES
- 1910.217 MECHANICAL POWER PRESSES
SOURCE of STANDARDS
Occupational Safety and Health Act, Sec. (4)

- Existing Federal standards
  - Walsh-Healey Act of June 30, 1936
  - Service Contract Act of 1965
  - National Foundation on Arts and Humanities Act
- Regulations promulgated under rules of procedure (after 1973)
Approach

- Specific machines
- Specific guarding requirements
  - Point of operation
  - Power transmission
- Specific control options
- Specific hazards addressed for each machine
Deny access to the point of operation and/or power transmission using fixed interlocked barrier guards such as fences and enclosures.
OSHA’s Goal

- Guard all machinery and equipment against
  - point of operation,
  - ingoing nip points,
  - rotating part and
  - flying chips and sparks hazards.
Types of OSHA Guards

- **Fixed guard**
  - Specified opening size and distance from hazard

- **Interlocking guard**
  - Stops operation if guard not in place

- **Automatic guard**
  - Stops operation if hand enters danger zone
Mechanical Power Presses

- Very specific and detailed requirements for mechanical power presses
  - Presence Sensing Device Initiation (PSDI)
  - Sweeps
  - Hand retraction/withdraw
General Requirements

- Protect employees from:
  - point of operation
  - in-running nip points
  - rotating parts
  - Flying chips and sparks
- Special handtools for placing parts
- Guard fan blades less than 7 feet from floor
- Anchor fixed machinery
Normal Operation

- Guarding for normal, routine operations
- Does not address
  - Installation
  - Set up
  - Clearing jams
  - Maintenance
  - Repair
Specific Types of Machines to be Guarded

- Woodworking Machinery
- Abrasive Wheel Machinery
- Mills and Calenders in the Rubber and Plastics Industries
- Mechanical Power Presses
- Forging Machines
- Mechanical Power Transmission Apparatus
Specific Machines

- OSHA machine guarding regulations do not address
  - Metal saws
  - Drill presses
  - Riveting machines
  - Buffers
  - Uncommon or unique machines
Lack Flexibility

- Specific requirements for specific machines
- Stifle innovation
- Do not prioritize on basis of risk or severity
- Do not provide rationale for guarding
- Do not provide guidance for guarding hazards not specifically addressed.