Common Violations in Manufacturing

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Objectives

• In this course, we will discuss the frequently cited serious violations in Manufacturing.
• OSHA Data (federal, nationwide)
• My Experience performing Audits
• Understand Risk Involved
Hazard Communication

• Developing, implementing and maintaining a written hazard communication program.
  
  (i) A list of the hazardous chemicals known to be present using a product identifier that is referenced on the appropriate safety data sheet (the list may be compiled for the workplace as a whole or for individual work areas); and,
  
  (ii) The methods the employer will use to inform employees of the hazards of non-routine tasks (for example, the cleaning of reactor vessels), and the hazards associated with chemicals contained in unlabeled pipes in their work areas.
  
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The methods the employer will use to inform the other employer(s) of any precautionary measure

  The methods the employer will use to inform the other employer(s) of the labeling system used in the workplace.
Hazard Communication 1910.1200

- Maintaining Safety Data Sheets and keeping them readily accessible.

This part is performance based
  Computer files
  Paper Copies
  Over the phone
Hazard Communication

• Employee information and training

  • Employers shall provide employees with effective information and training on hazardous chemicals in their work area

    • At the time of their initial assignment

    • Whenever a new physical or health hazard is introduced into their work area
RESPIRATORY PROTECTION

• Medical Evaluation (tight fitting facepiece)

• Establishing and implementing a written respiratory protection program
RESPIRATORY PROTECTION

• Fit testing prior to first use, whenever a different facepiece is used, and annually
• Permitting employees to voluntarily use their own respirators if such use will not create a hazard
• Identifying and evaluating respiratory hazards
RESPIRATORY PROTECTION 1910.134

Permitting employees to voluntarily use their own respirators if such use will not create a hazard

- Must still perform medical evaluation, and train the employee on how to select, clean and store.

Dust mask

- Provide a copy of Appendix D of the standard
Lockout/Tagout

• Establishing and training employees on energy control procedures
  • Anytime (almost) an employees is exposed to hazardous energy.
    • Electrical Shock
    • Unintentional startup of Machine
    • Plug in equipment partially exempt

• Energy Control Program
  • More than one energy source
  • Method to control is not “obvious”
Lockout/Tagout

Periodic Inspection

• Employer shall conduct a *periodic inspection* of the energy control procedure *at least annually* to ensure that the procedure and the requirements of this standard are being followed

• Employee Training on purpose and function of energy control program

• Lockout or Tagout Device application
Powered Industrial Trucks

• Ensuring competency of operators

• Evaluation at least every 3 years

• Removing unsafe trucks from service until repaired

• Operator Certification

• Pre shift inspection
Ladders

• Must be maintained in good usable condition at all times

• Ladder base must be placed with a secure footing

• Ladders near electrical circuits
Electrical Wiring Methods

• Flexible cords and cables not used as a substitute for fixed wiring of a structure.

• Unused openings in cabinets, boxes and fittings shall be effectively closed

• Strain relief for flexible cords to fittings
Electrical Wiring Methods

1910.305

• All pull boxes, junction boxes and fittings shall be provided with covers identified for the purpose

• Conductors entering cutout boxes, cabinets, fittings, shall be protected from abrasion.

• Damaged cords, cords attached to walls, run through walls etc.

• Relocatable Power Taps
Machine Guarding 1910.212

• General requirements

  • One or more methods of machine guarding must be provided to protect the operator and other employees in the machine area from hazards such as:

    • Point of operation
    • Ingoing nip points
    • Rotating parts
    • Flying chips and sparks
Machine Guarding

• Guards
  • Fixed
  • Interlocked
  • Adjustable
  • Self-adjusting

• Aids
  • Awareness barriers
  • Protective shields
  • Hand-feeding tools and holding fixtures

1910.212(a)(1)
Machine Guarding

• Devices
  • Presence sensing
  • Pullback
  • Safety controls
  • Gates

• Location/distance

1910.212(a)(1)

NCDOL Photo Library
Machine Guarding

• Anchoring Fixed Machinery

• *Drill Presses issues*
Machine Guarding

- Exposure of blades
Machine Guarding

• Abrasive wheel machinery requires adjusted protector (exposure adjustments)
  
• Peripheral protecting member (tongue guard) must be provided and adjusted within $\frac{3}{8}$ inch of the wheel
  
• To contain and deflect fragments away from the operator
Machine Guarding

• Abrasive wheel machinery

  • On offhand grinding machines, work rests must be used to support the work
    • *Work rest must be kept adjusted closely to the wheel with a maximum opening of \( \frac{3}{8} \) inch*
    • *Work rest must be securely clamped after adjustment*
    • *Work rest cannot be adjusted with wheel in motion*
Abrasive Wheel Machinery

1910.215(a)(4)

- Tongue guard
- ¼ in.
- ⅛ in.
- Work rest

NCDOL PHOTO Library
Abrasive Wheel Machinery

Work rest is out of adjustment

1910.215(a)(4)
Abrasive Wheel Machinery

180 degree guard
Can only remove if the piece guards the operator

1910.215(a)(4)
Electrical General Requirements

• Everything must be Listed and Labeled
Electrical General Requirements

1910.303
Electrical General Requirements 1910.303

- All circuit disconnects must be labeled as to their function unless the purpose is evident
Electrical General Requirements

1910.303

- 1910.303(g)(1) Space about electric equipment. Sufficient access and working space shall be provided and maintained about all electric equipment to permit ready and safe operation and maintenance of such equipment. Minimum of 30 inches wide.

- 1910.303(g)(1)(ii) Working space required by this standard may not be used for storage.

<table>
<thead>
<tr>
<th>Nominal voltage to ground</th>
<th>Minimum clear distance for condition$^{2,3}$</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Condition A</td>
</tr>
<tr>
<td></td>
<td>m</td>
</tr>
<tr>
<td>0-150</td>
<td>$^{1}0.9$</td>
</tr>
<tr>
<td>151-600</td>
<td>$^{1}0.9$</td>
</tr>
</tbody>
</table>
Electrical General Requirements

Condition A
- Exposed live busbar
- Wall not grounded i.e. plasterboard on wood studs
- 3.0'

Condition B
- Exposed live switch and conductors
- Grounded cabinets or wall
- 3.5'

Condition C
- Motor Control Center with live parts of relays and conductors exposed
- 4.0'

1910.303
Walking – Working Surfaces

Floor and Wall Openings, and Holes

• Guarding open-sided floors or platform 4 feet or more above adjacent level
Personal Protective Equipment

• General requirements

  • Use appropriate eye or face protection when exposed to eye or face hazards

    • Hazards from flying particles
    • Molten metal
    • Liquid chemicals
    • Acids or caustic liquids
    • Chemical gases or vapors
    • Potentially injurious light radiation

• Hearing Protection 1910.95

  • Hearing Conservation Program
Personal Protective Equipment

• Hazard Assessment

• The employer shall assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE).

• This is usually not cited as serious
Storage Racks

• Load Rating based on ANSI MH16.1 2008 owner is responsible for displaying a permanent plaque which shows the maximum permissible load limit.
Fire Extinguishers

- Must be inspected annually by a qualified person
- Must be visually inspected monthly
- Employees trained annually
Cranes

• Inspections
  • Annual
  • Periodic
  • Crane Operator before use

• DOCUMENT
Spray Finishing Flammable Materials

• Spray in a Booth or Designated Spray Area

  • Spray area
    • No ignition source electrical equipment, hot work etc. within 20 feet
    • No combustibles within 20 feet
    • Combustible residue (issue with water based paints)
OSHA Emphasis Programs

- Amputations (machine guarding)
- Silica also local on Cut Stone and Slab
- Lead
- Hexavalent Chromium
- Combustible Dust
- LEP Wood manufacturing and Process Facilities comprehensive both health and safety
OSHA Citation & Penalties
August 1, 2016

- Other Citation & penalty up to $12,471
- Serious Citation & penalty up to $12,471
- Repeat/Willful Citation & penalty up to $124,709
- Failure to Abate Citation & penalty up to/day $12,471

- Criminal Willful Jail - Department of Justice
Thank You For Attending!

Questions?

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