Topic Areas & Learning Objectives

➢ **Standards and Regulations:**

- History of Occupational Safety & Health Administration (OHSA)
- National and state level OSHA
- History of American National Standards Institute (ANSI)
- Identify how the two are related

➢ **Risk Assessment:**

- Job Hazard Analysis (OSHA)
- Objectives of ANSI B11.0 & B11.TR3
- Apply learned concepts to case studies & actual practice in the field

➢ **B11.3 Overview:**

- Standard organization and effective dates
- Scope and definitions
- General requirements
- Control reliability

➢ **Individual Responsibilities:**

- Supplier responsibilities
  - Design and construction
  - Specific requirements for mechanical brakes (including Servo driven brakes)
  - Specific requirements for hydraulic brakes
  - Specific requirements for pneumatic brakes
- Modifier Responsibilities
  - Reconstruction and modification
- Personnel Responsibilities
- User Responsibilities

➢ **Installation, Set-up and Maintenance:**

- Layout, installation, testing and start-up
- Set-up requirements
  - Written user plan
- Maintenance
  - Maintenance Procedures
  - Lock-out Tag-out
- Set-up and Operation Requirements
  - Die set-up and operation (written SOP)
  - Backgauge operations
  - Standard operating procedures
  - Supervision

➢ **Press Brake Operation, Application and Uses**:

- Machine types & uses
- Tooling variants

➢ **Training and Control Reliability**:

- Control Reliability
- Safeguarding of the rear of the machine
- Safeguarding the backgauge
- General elements and guidelines for training
- Maintenance training

- **Definitions of Press Brake Safeguarding**:

  - Risk assessment
  - Correct holding of material
  - ¼" stroke safeguarding
  - Safe distance safeguarding
  - Safe speed safeguarding
  - Engineered methods – safety devices

- **Applications of Press Brake Safeguarding**:

  - ¼" stroke safeguarding
  - Safe distance safeguarding
  - Safe speed safeguarding
  - Pull-backs and restraints
  - Two hand control devices
  - Light curtains (presence sensing devices) for mechanical brakes
  - Light curtains for hydraulic brakes
  - Close proximity point of operation (AOPD) safeguarding (laser devices)

- **Appropriate usage**:

  - Machine considerations
  - Operator considerations
  - Compliance considerations
  - Identify best practices in case studies