WRC Conference- Jan 2019
Common Hazards in Garment Industry

- Ergonomics
- Machine Guarding
- Spot Remover/Spray Booths
- Fire Safety/Emergency Egress
- Temperature
- Air Quality
- Electrical
- Chemical Storage and Use
- Work Areas and Walkways
- Tagging Guns
- Hot Surfaces
- Asbestos
- Sanitation

ERGONOMICS

Musculoskeletal

Awkward positions

Same position for long duration

Twisting bending

In depth evaluation

Variety of controls

Common MSIs

- Carpal tunnel syndrome
- Tendinitis
- Trigger finger
- Raynaud's phenomenon
- De Quervain's disease
- Rotator cuff tendinitis
- Herniated spinal disc
- Low back pain

Signs of MSIs

- Less strength for gripping
- Less range of motion
- Loss of muscle function
- Inability to do everyday tasks

Ergonomics

- People-Machine or task interface
  - Muscular-skeletal effects
    - Repetition
    - Contact pressure
    - Cold
    - Awkward posture
    - Vibration
    - Static posture
    - Force
  - Information processing
    - Access to controls
      - Control distinctions and miss-readings

- Symptoms
  - Numbness
  - Tightness
  - Tingling
  - Swelling
  - Pain
  - Stiffness
  - Redness

Engineering Controls

- Work station layout
- Selection and use of tools
- Work methods

Administrative Controls

- Change in procedures
- Job rotation
- Rest breaks
- Training
- Exercises


brother
brother


55

MACHINE GUARDING

- Moving Parts
- Moving/Stationary Parts
- Machine purpose
- Point of Operation guarding
- Power Transmission guarding
- E stops
- Normal Operation (machine guarding)
- Abnormal Operation (service, adjust & repair-Lockout Tagout

Lock out Tag out

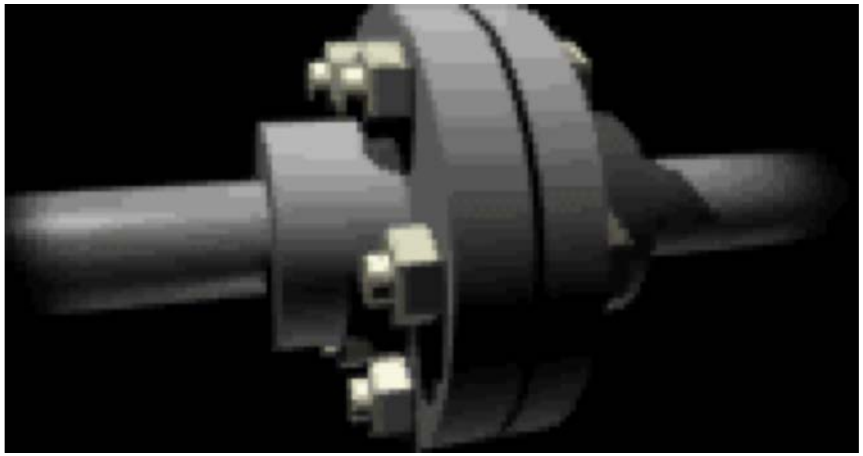
- Abnormal Operation (service, adjust & repair-Lockout Tagout
  - Hazardous Energy (ability to cause injury or death)
  - Procedural based
  - Sequential physical isolation of all sources of energy
  - Lock out tag out devices

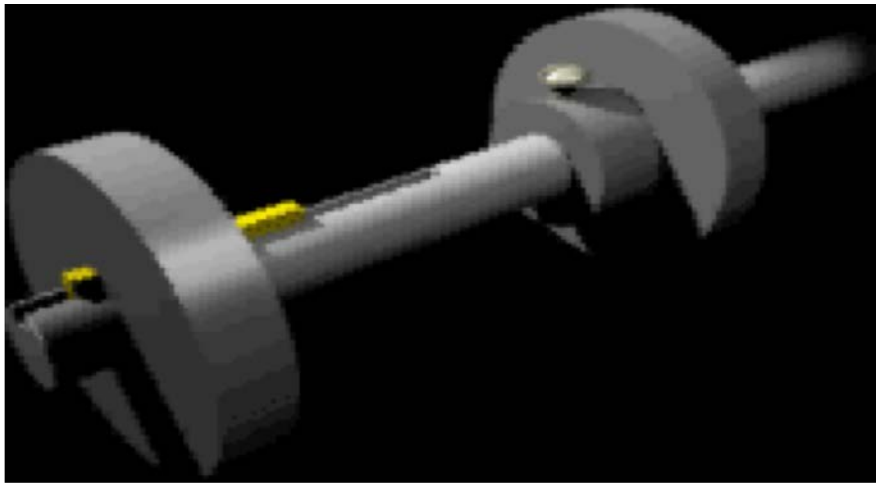
Definitions

Danger Zone. Any place in or about a machine or piece of equipment where an employee may be struck by or caught between moving parts, caught between moving and stationary objects or parts of the machine, caught between the material and a moving part of the machine, burned by hot surfaces or exposed to electric shock.

Rotating Parts

- Even slowly rotating parts can grip hair and clothing, and through minor contact can force body parts into a dangerous position.
- The danger increases when there are projections on the rotating part.

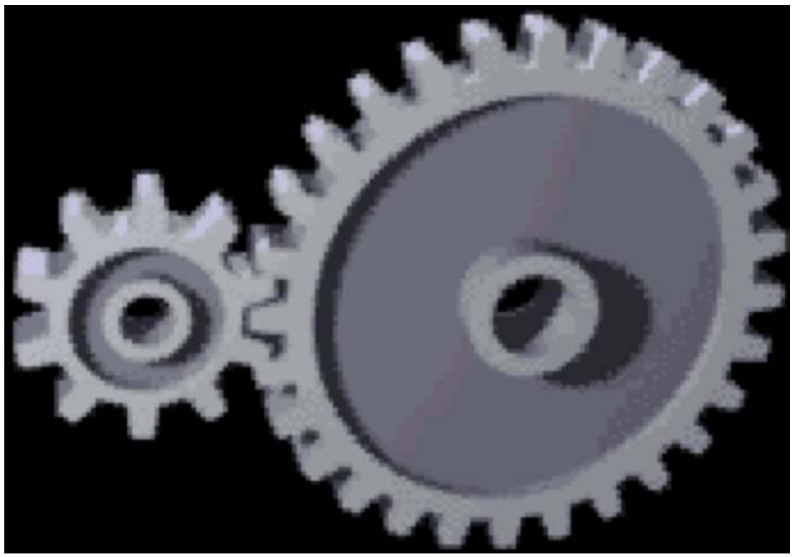


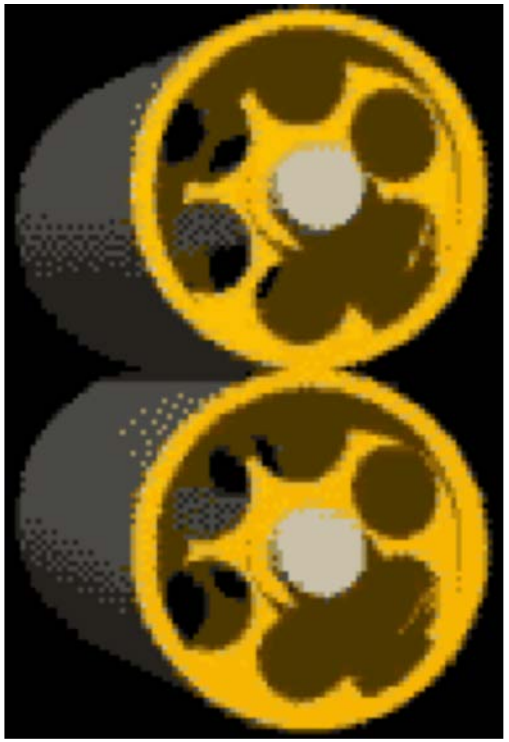


In Running Nip Points

- In running nip points are hazards caused by rotating parts on machinery. Three types:

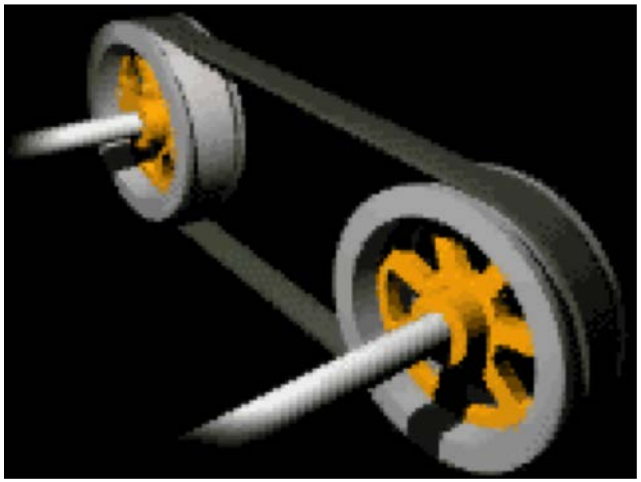
1. Two rotating components

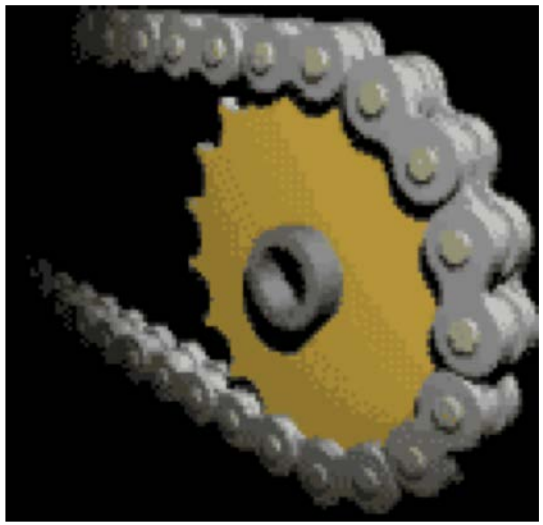


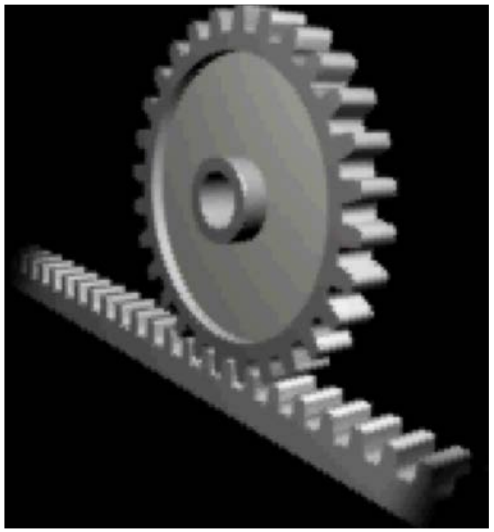


In Running Nip Points

2. A rotating part and a part moving longitudinally.

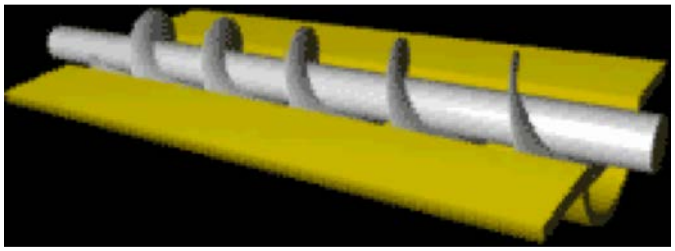


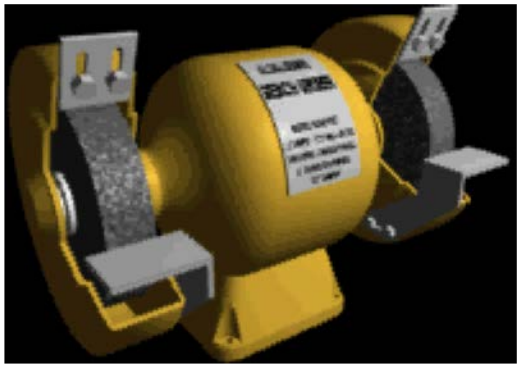




In Running Nip Points

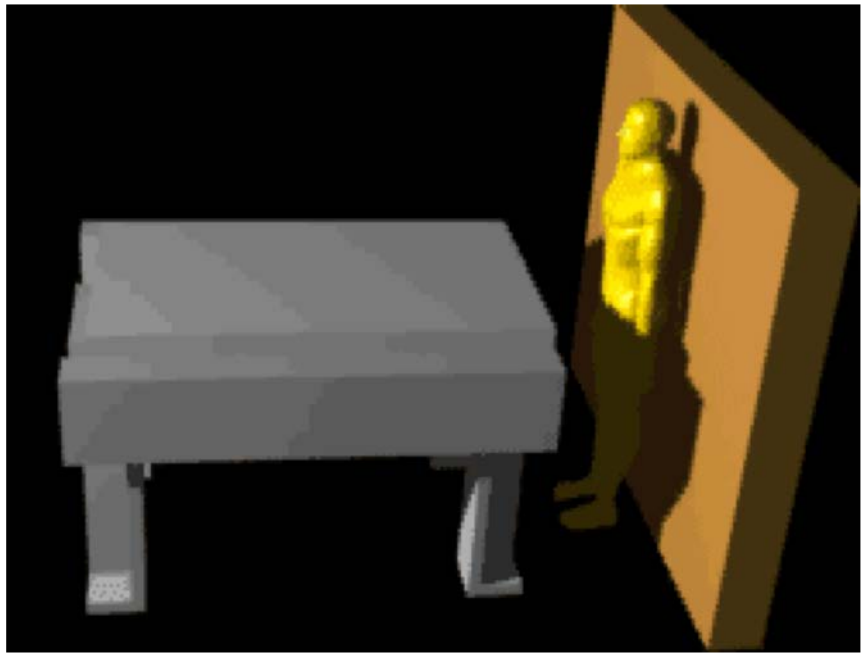
3. Between a rotating part and a fixed component.



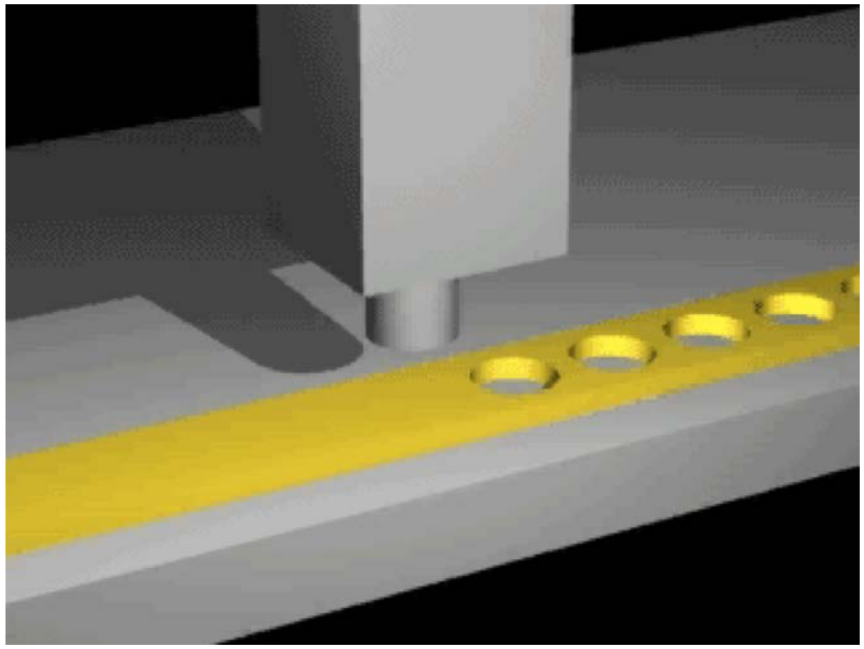


Reciprocating and Transverse Motions

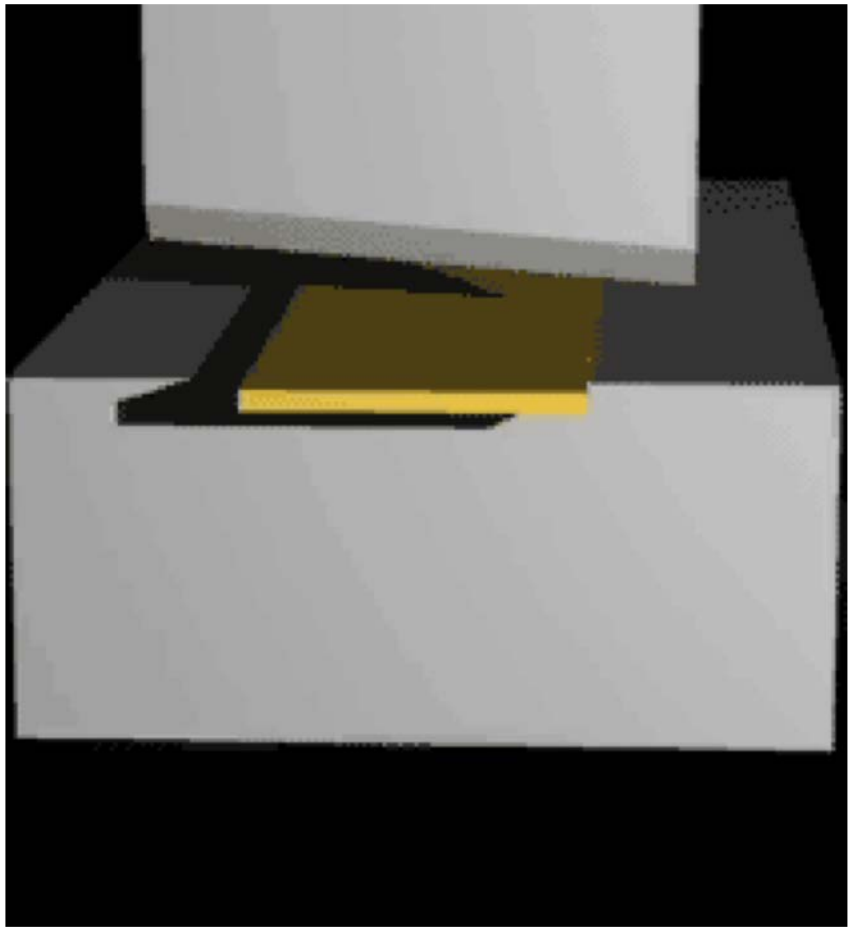
- A back-and-forth or up-and-down motion, or movement in a straight, continuous line.
- A worker may be struck by a moving part.
- A worker may by caught between a moving and a stationary part.



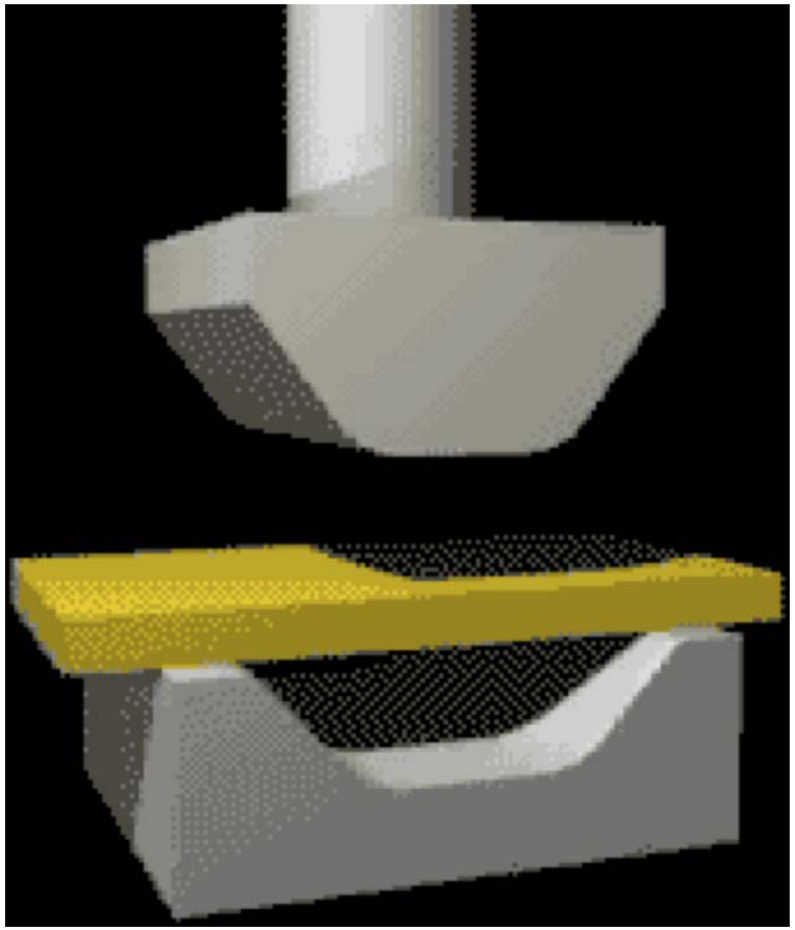
Punching Actions



Shearing Actions



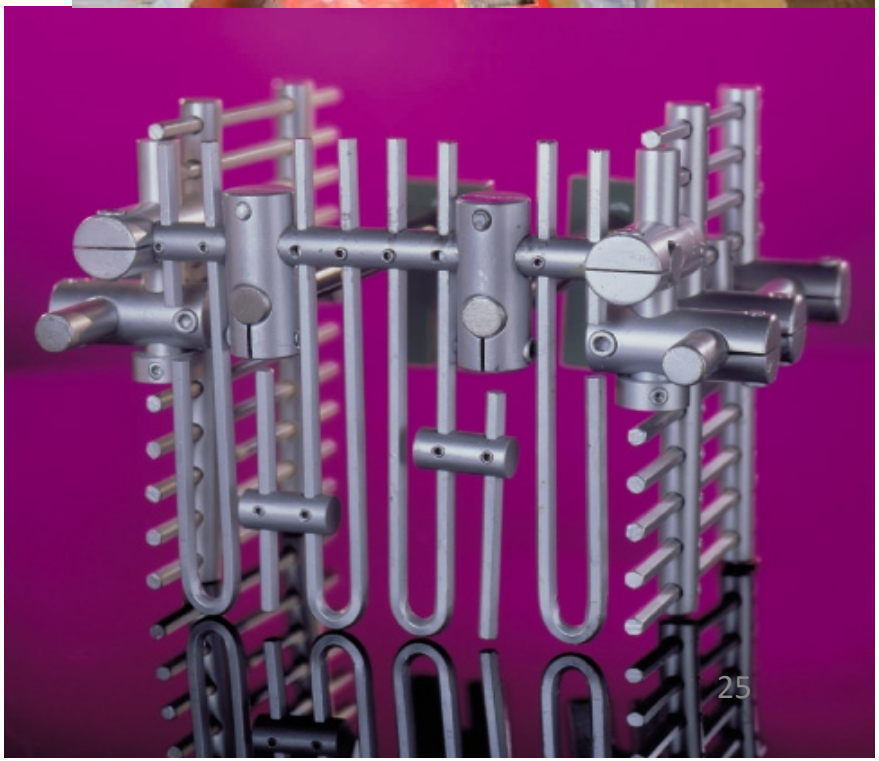
Bending Actions



Types of Point of Operation Guards

- Fixed
- Adjustable
- Self-Adjusting
- Interlocked guards

Adjustable & Self-Adjusting Guards

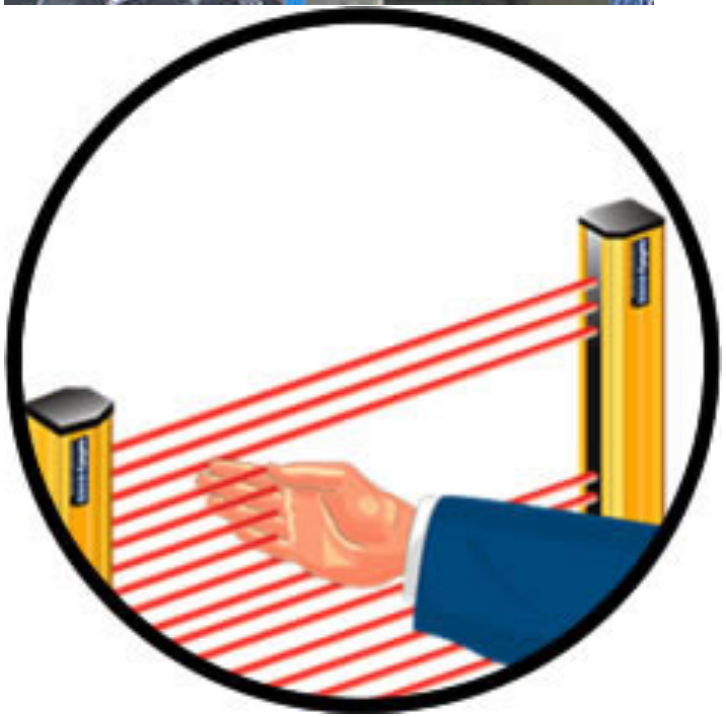


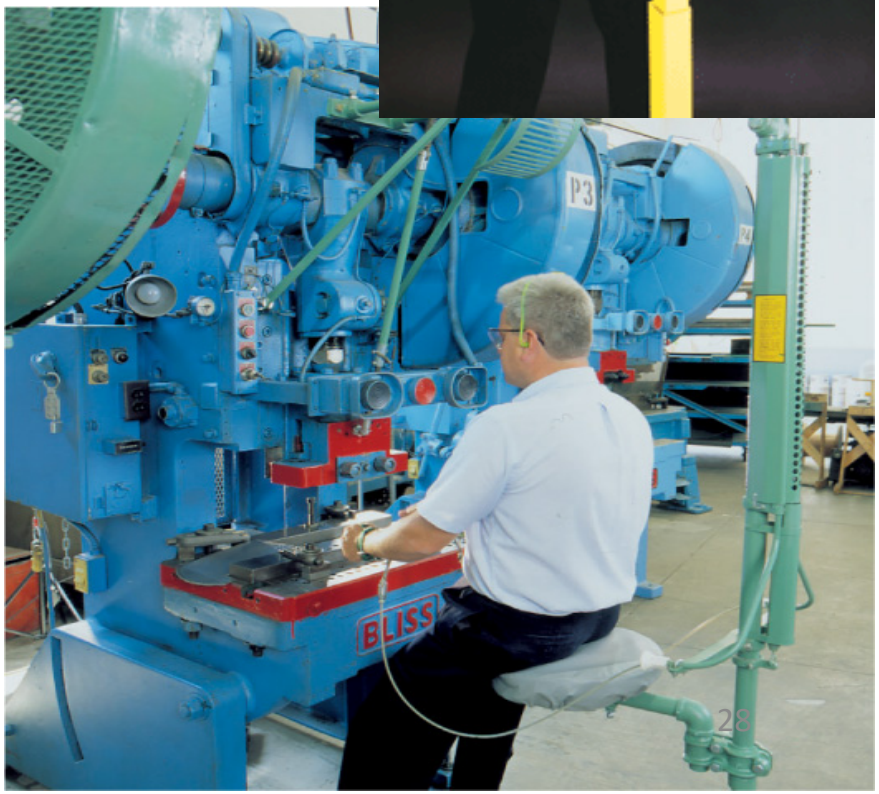
Interlocked Guards

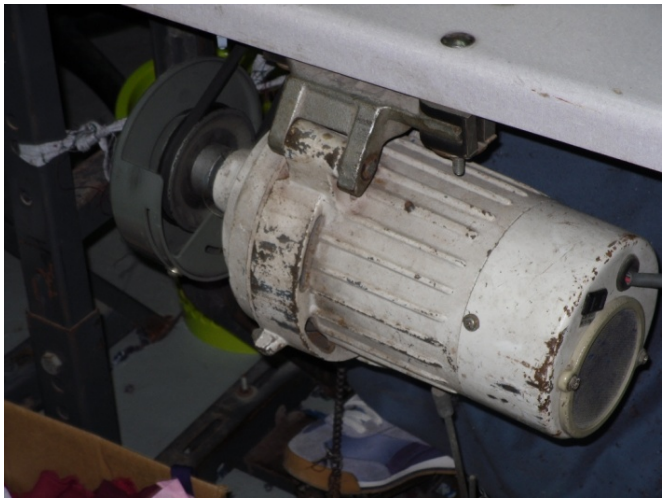
Types of Point of Operation Devices

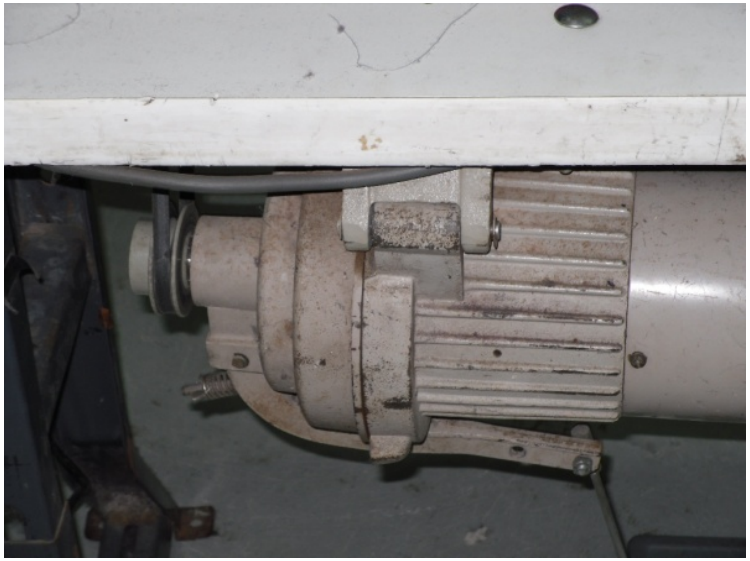
- Presence sensing devices
- Pull-outs
- Holdout or restraint devices
- Two-hand control

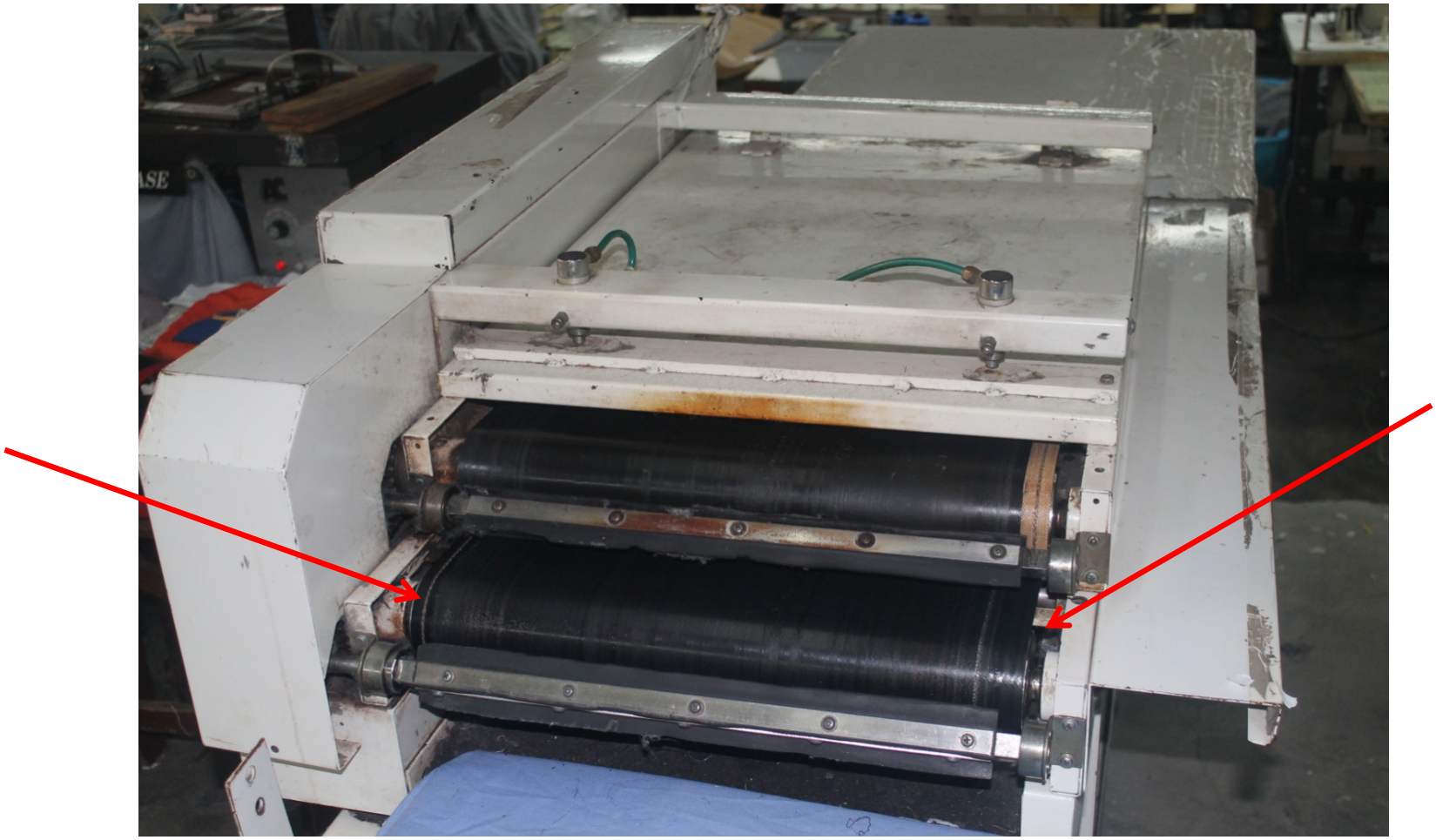
POO Guard Devices







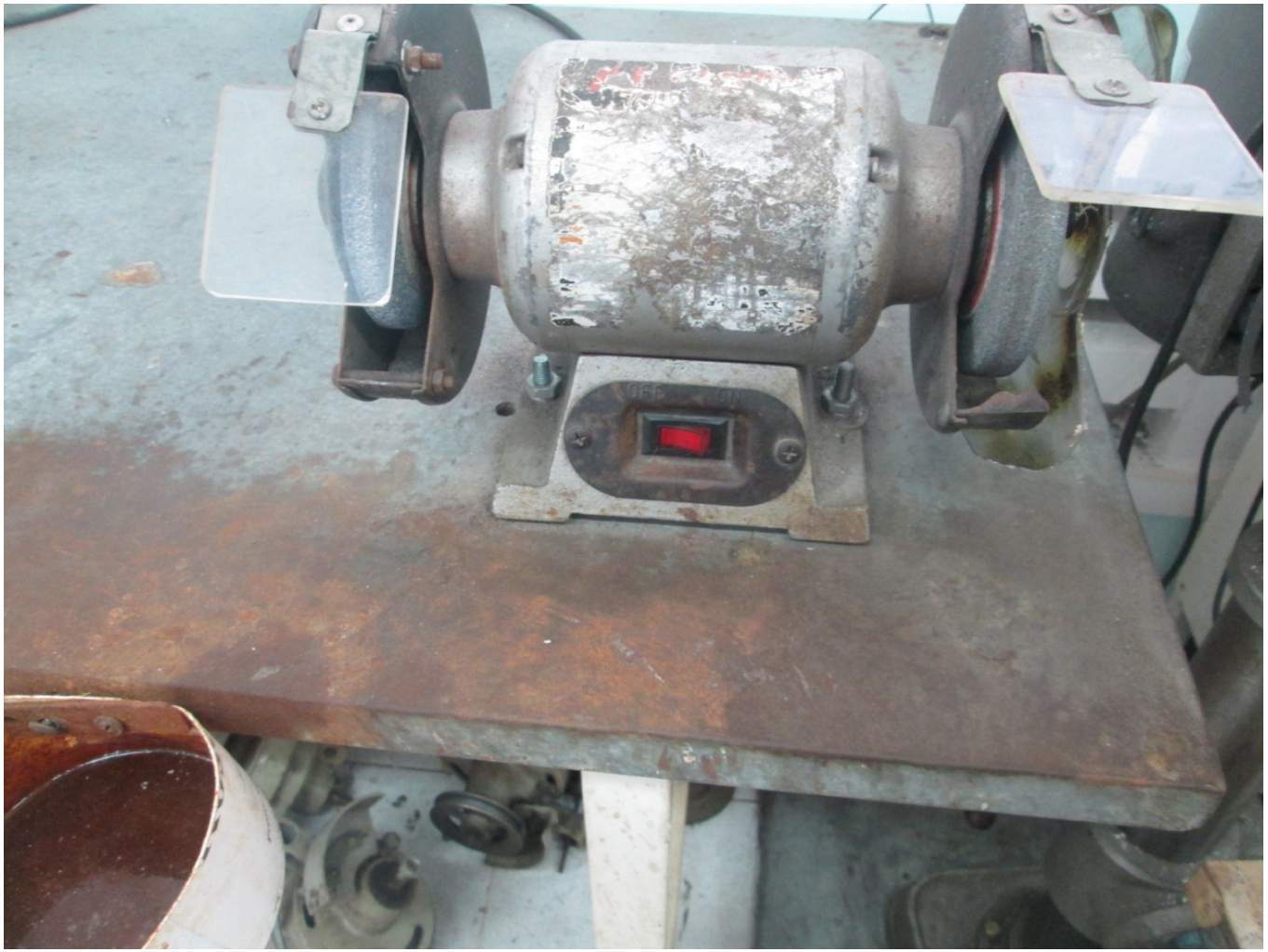





JUKI
CXY

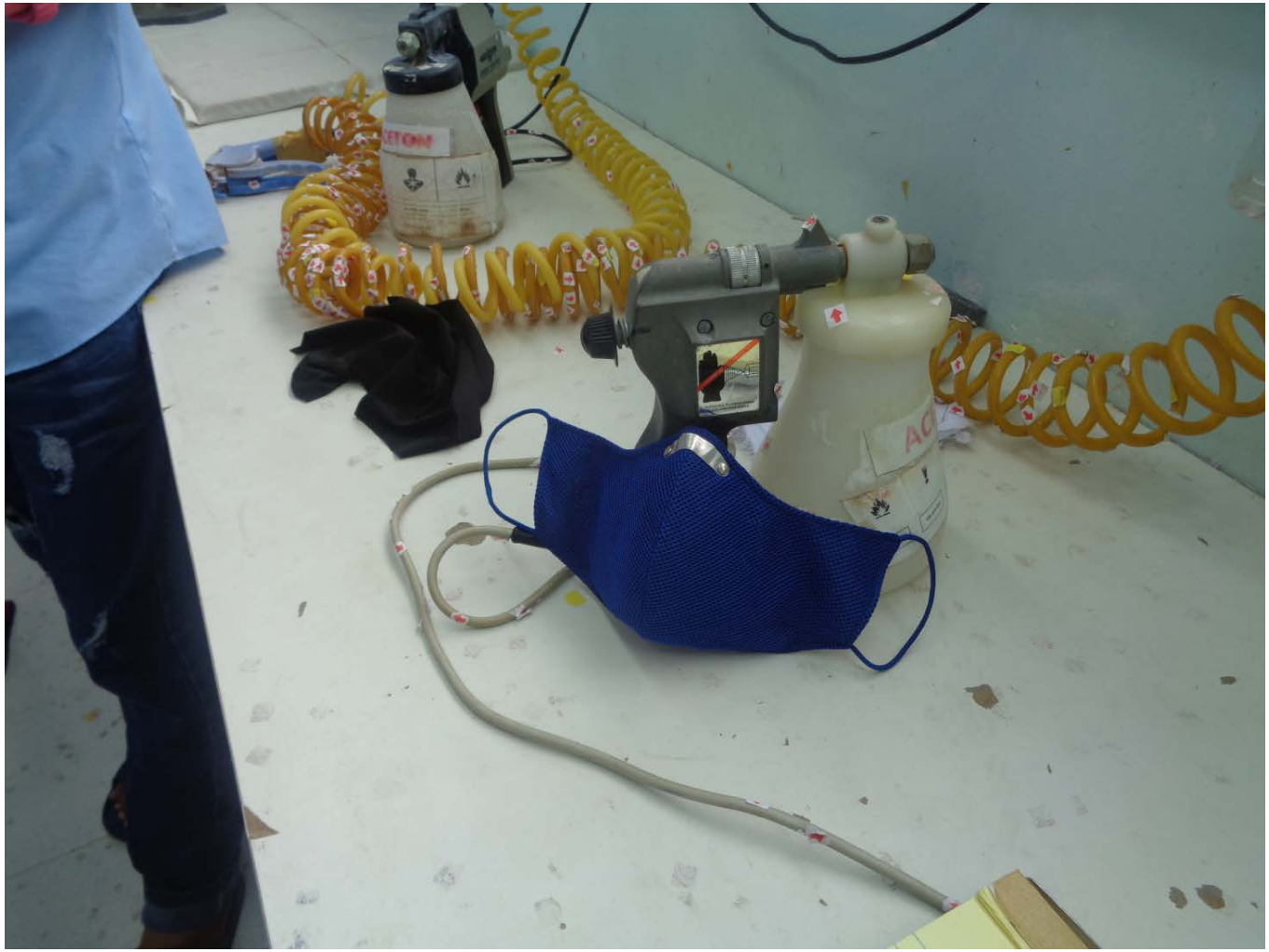

EXIT
NYC


HG 200
MAK
HG 200


OFF
ON

SPOT REMOVER/SPRAY BOOTHS

- Usually solvents
- Flammability
- Toxic over time
- Information regarding health hazards
- Storage & Use
- PPE
- Ventilation
- Substitution




FL-601
ON
OFF

FIRE SAFETY/EMERGENCY EGRESS

- Fire Prevention Plan
- Sufficient number of exits
- Unimpeded path to emergency exits
- Distance to exits
- Exit door hardware (UNLOCKED)
- Fire suppression equipment, i.e. fire extinguishers
- Fire alarm systems

Fire Prevention Plan 3221

Elements. The following elements, at a minimum, shall be included in the fire prevention plan:

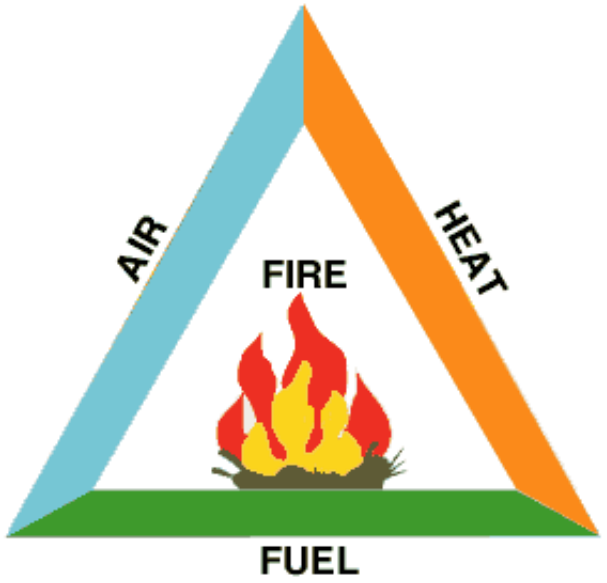
Potential fire hazards and their proper handling and storage procedures

Potential ignition sources (such as welding, smoking and others) and their control procedures

Types of fire protection equipment or systems which can control a fire involving them

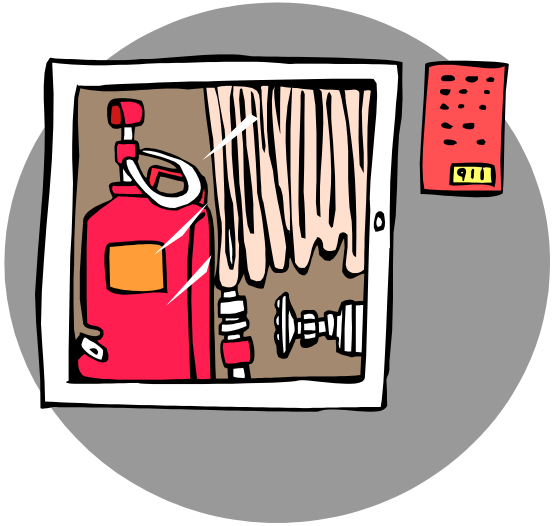
Names or regular job titles of those responsible for maintenance of equipment and systems installed to prevent or control ignitions or fires

Names or regular job titles of those responsible for the control of accumulation of flammable or combustible waste materials.



Fire Prevention Plan 3221

Housekeeping. The employer shall control accumulations of flammable and combustible waste materials and residues so that they do not contribute to a fire emergency. The housekeeping procedures shall be included in the written fire prevention plan.



Training. The employer shall apprise employees of the fire hazards of the materials and processes to which they are exposed.

Portable Fire Fighting Equipment

- Not less than 2A Fire Extinguisher
- Travel distance 75 ft.
- Visually inspected monthly
- Annual Maintenance check

Fire Extinguisher-PASS

- Using a portable fire extinguisher
  - P- Pull the pin
  - A- Aim nozzle at base of flames
  - S- Squeeze the trigger
  - S- Sweep the extinguisher from side to side, covering the area of the fire with the extinguishing agent

Portable Fire Extinguishers

General Requirements.

The employer shall provide portable fire extinguishers and shall mount, locate and identify them so that they are readily accessible to employees without subjecting the employees to possible injury

Employee Alarm Systems

The employee alarm shall be capable of being perceived above ambient noise or light levels by all employees in the affected portions of the workplace. Tactile devices may be used to alert those employees who would not otherwise be able to recognize the audible or visual alarm.

Hotwork Risks

Hot work, such as welding, brazing, torch cutting or grinding in areas that are not designed for the operation of equipment that produces flames or sparks can cause an accidental fire because:

- Flames can contact combustible material
- Spark can ignite combustible material, often through a hole in the wall or floor
- Heat transmitted through pipes, ducts or pipes to combustible materials far from the welding area
- Ignition of flammable vapors or dust in the air.

Safety Precautions for Hotwork

- All fire suppression systems must function properly.
- Obtain a hot work permit and assign a person (firewatch) skilled in the fire monitoring.
- All flammable and combustible materials kept at a distance of 10 meters from the workspace.
- The combustible material that can not be moved must be protected and covered with fireproof blankets.

Firewatch Responsibilities

- Have fire fighting equipment available for immediate use and be prepared to turn the fire alarm.
- Be alert to unsafe conditions and stop the hot work for potential fire hazards.
- Continuously monitor all areas where a fire start: downstairs and upstairs, and the opposite sides of walls and partitions.
- Keep all combustibles covered with fireproof tarps and blankets.
- Be constantly vigilant (even during breaks and lunch) and remain on watch for 30 minutes after completion of the work.

Means of Egress

In every building or structure where a fire may not itself provide adequate warning to occupants, fire alarm facilities or procedures, including an evacuation plan, shall be provided to warn occupants of the existence of fire so that they may escape or to facilitate the orderly conduct of fire exit drills.

Emergency Action Plan

(b) Elements. The following elements, at a minimum, shall be included in the plan:

1. Emergency escape procedures and emergency escape route assignments;

2. Procedures to be followed by employees who remain to operate critical plant operations before they evacuate;

3. Procedures to account for all employees after emergency evacuation has been completed;

Emergency Action Plan

(b) Elements. (cont.):

4. Rescue and medical duties for those employees who are to perform them;

5. The preferred means of reporting fires and other emergencies; and

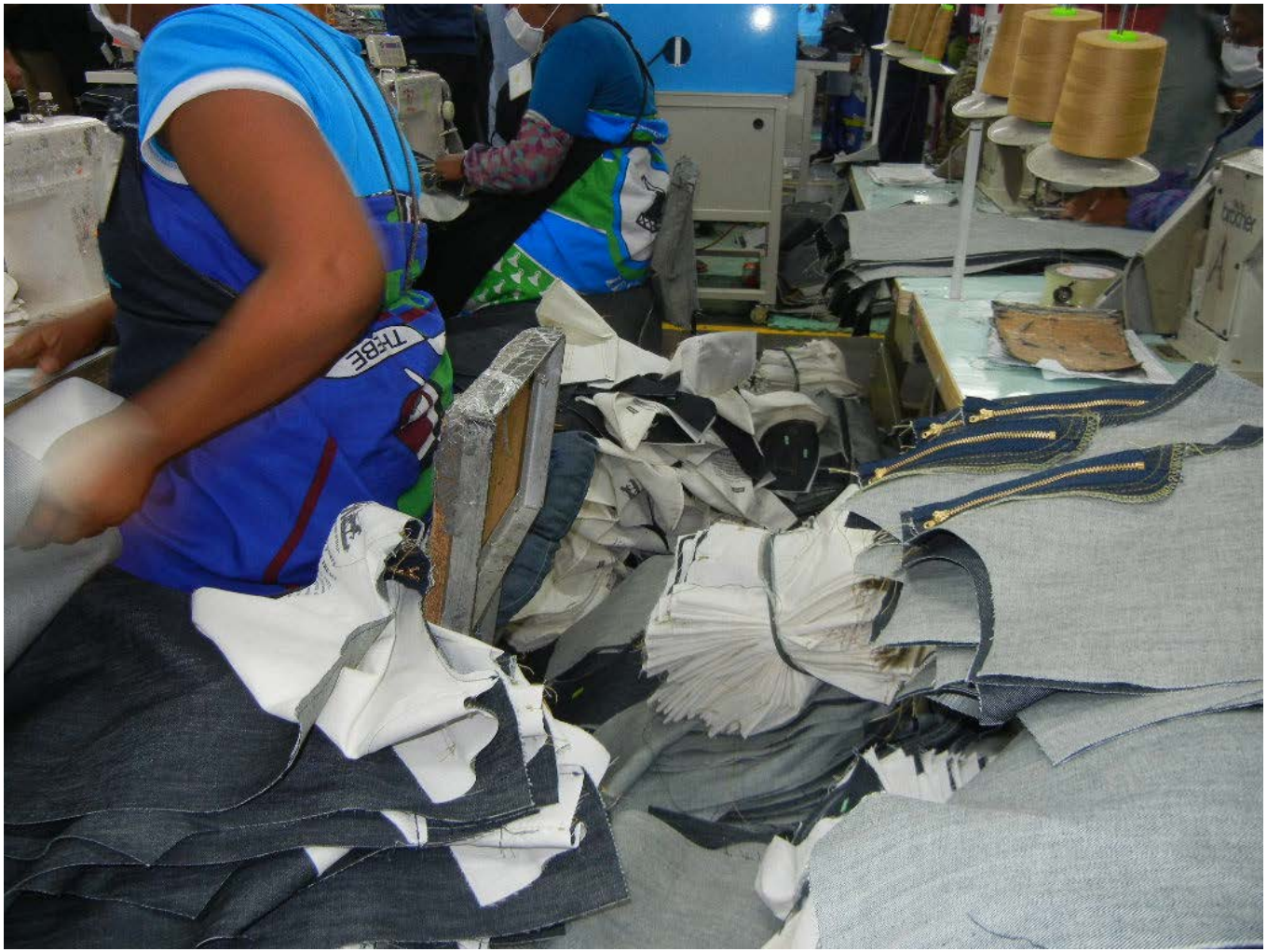
6. Names or regular job titles of persons or departments who can be contacted for further information or explanation of duties under the plan.


NƠI ĐỂ BÌNH GAS


ACETON
HÀNG B


4. SWEEP
SafeGuard


EXIT
EXIT



Heat Illness Prevention Elements

- Access to Water
- Access to Shade
- Weather Monitoring and Acclimatization
- High Heat Procedures
- Employee and Supervisory Training
- Written Procedures Including Emergency Response

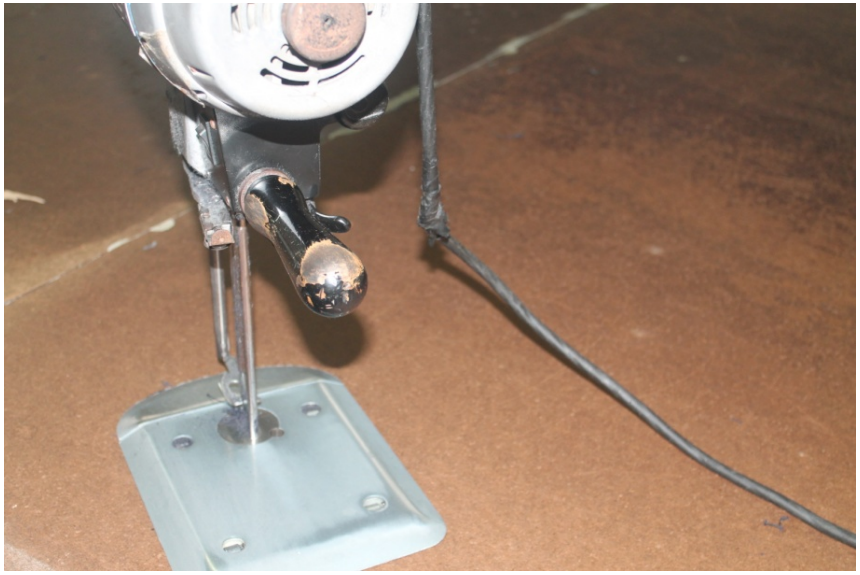
AIR QUALITY

- Dusty environment
- Combustible dusts
- Hazardous gas, vapors, mists

ELECTRICAL

- Electricity not visible
- Fire
- Burns, electric shock, electrocution
- Covered, isolated, de-energized


PELIGRO
ALTO
VOLTAJE
F3



WORK AREAS/WALKWAYS

- Slips and trips
- Falls (elevated locations)
- Housekeeping
- Space between equipment

CHEMICAL STORAGE & USE

- Types of chemicals
- Specific hazards of chemicals
- Incompatible chemicals
- Degree of hazard
- Engineering & Administrative controls
- PPE

"Right to Know" Law

- Ensures all employees' right to know the hazards
- of chemicals they work with at their job

- Mandates that employees must be provided with
- information about chemicals they work with
- through:
  - Information on chemical labels
  - Safety Data Sheets (SDSs)
  - Training on hazard communication
  - Written HAZCOMM plan
  - Current inventory log

Label Information

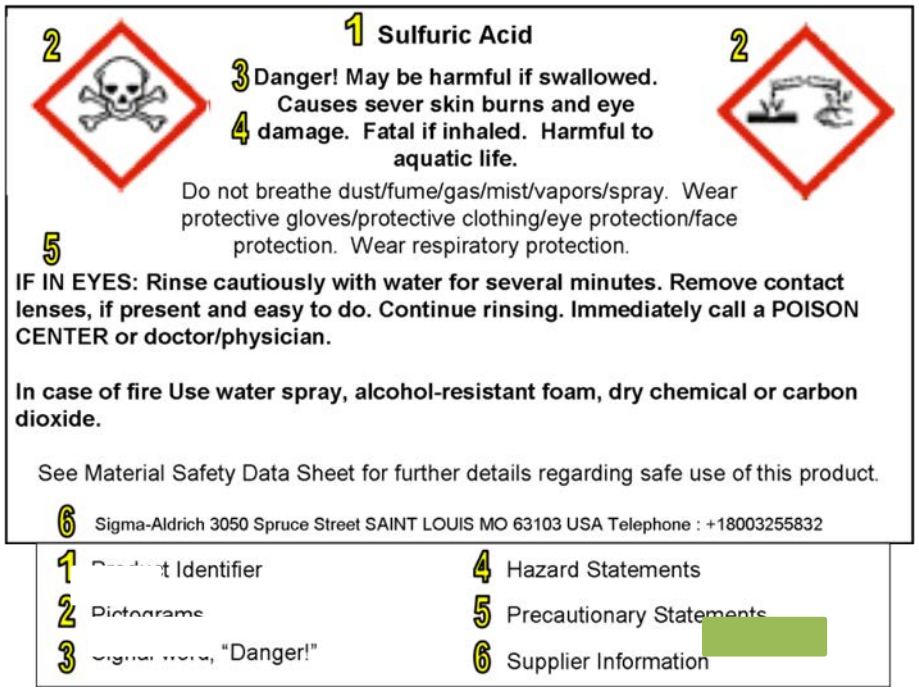
Chemical manufacturers and importers must provide a label that includes:

- Harmonized signal word
- Pictogram
- Hazard statement for each hazard class and category
- Precautionary statements must also be provided as well as product identifier and supplier information

Labels

Information required on a GHS label:

1-Product identifier
2-Pictograms
3-Signal word
4-Hazard statement
5-Precautionary statement
6-Supplier information

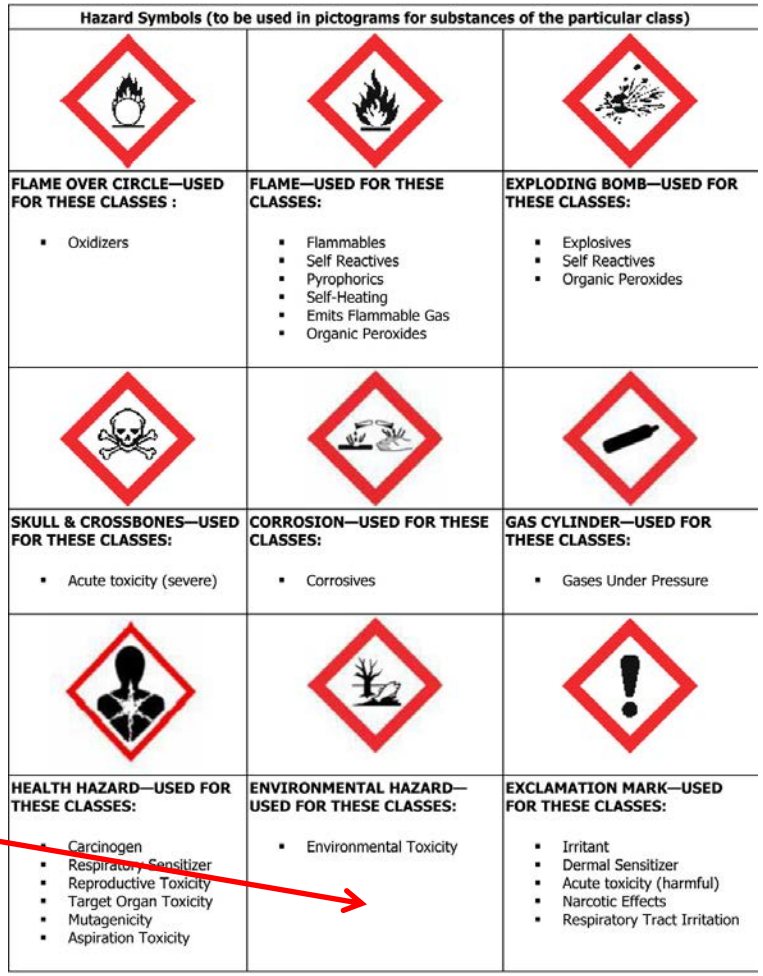


Pictograms

Different symbol on white background with red square frame set on point

Eight pictograms are required by OSHA

The ninth one dealing with the environment is not within OSHA's jurisdiction



Hazard Symbols (to be used in pictograms for substances of the particular class)		
FLAME OVER CIRCLE—USED FOR THESE CLASSES : ▪ Oxidizers	**FLAME—USED FOR THESE CLASSES:** ▪ Flammables ▪ Self Reactives ▪ Pyrophorics ▪ Self-Heating ▪ Emits Flammable Gas ▪ Organic Peroxides	**EXPLODING BOMB—USED FOR THESE CLASSES:** ▪ Explosives ▪ Self Reactives ▪ Organic Peroxides
SKULL & CROSSBONES—USED FOR THESE CLASSES: ▪ Acute toxicity (severe)	**CORROSION—USED FOR THESE CLASSES:** ▪ Corrosives	**GAS CYLINDER—USED FOR THESE CLASSES:** ▪ Gases Under Pressure
HEALTH HAZARD—USED FOR THESE CLASSES: ▪ Carcinogen ▪ Respiratory Sensitizer ▪ Reproductive Toxicity ▪ Target Organ Toxicity ▪ Mutagenicity ▪ Aspiration Toxicity	**ENVIRONMENTAL HAZARD—USED FOR THESE CLASSES:** ▪ Environmental Toxicity	**EXCLAMATION MARK—USED FOR THESE CLASSES:** ▪ Irritant ▪ Dermal Sensitizer ▪ Acute toxicity (harmful) ▪ Narcotic Effects ▪ Respiratory Tract Irritation

SDS Categories

Section 1: Identification

Section 2: Hazard identification

Section 3: Ingredients

Section 4: First-aid measures

Section 5: Fire fighting measure

Section 6: Accidental release measures

Section 7: Handling and storage

SDS Categories

Section 8: Exposure controls and personal protection
Section 9: Physical and chemical properties
Section 10: Stability and reactivity
Section 11: Toxicological information
Section 12: Ecological information*
Section 13: Disposal considerations*
Section 14: Transport information*
Section 15: Regulatory information*
Section 16: Other information

*OSHA indicated that since other agencies regulate sections 12-15, OSHA will not be enforcing them


HYPO


Soda
Ash


Potassium Permanganate
高錳酸鉀
Makhona tsohle
Hazard Class: 5.1
Dangers:


DEPILASE F1 MAX
RISIKO
> Memudaratkan jika ditelan.
> Merengsa kepada kulit dan mata.
KESELAMATAN
> Jangan menyedut habuk.
> Jika bersentuhan dengan mata, basuh segera dengan menggunakan air yang banyak dan dapatkan nasihat perubatan.
> Pakailah perlindungan mata/muka, sarung tangan dan pakaian perlindungan yang sesuai.
RISKS
> Harmful if swallowed.
> Irritating to skin and eyes.
SAFETY
> Do not breathe dust.
> In case of contact with eyes, rinse immediately with plenty of water and seek medical advise.
> Wear eye/face protection, protetive gloves and clothing.
Denim Care
"Denim Care Protects What Nature Creates"
腾大有限公司
DENIM CARE SDN BHD (673790-P)
Lot 29, Lorong Perusahaan 6A,
Kulim Industrial Estate,
09000 Kulim, Kedah, Malaysia.
Tel : +604-489 1899
Fax : +604-489 1698
E-mail : sales@denimcare.net
Batch No. FM413836B40
Nett Weight : 25.00 kgs
Gross Weight : 26.40 kgs
MADE IN MALAYSIA
Production Date : 03 / 05 / 2018
Expired Date : 02 / 11 / 2018


hth
Granular
Chlorine
CAUTION


Chemical storage Personal Protective Equipment SET
In case of SPILLAGE
Goggle
Overall
Gum Boots

MISC.

- TAGGING GUNS
- HOT PIPES AND OTHER SURFACES
- ASBESTOS
- SANITATION


I STRAUSS & CO.
SAN FRANCISCO
CAL.
QUALITY
CLOTHING


Salida de Emergencia
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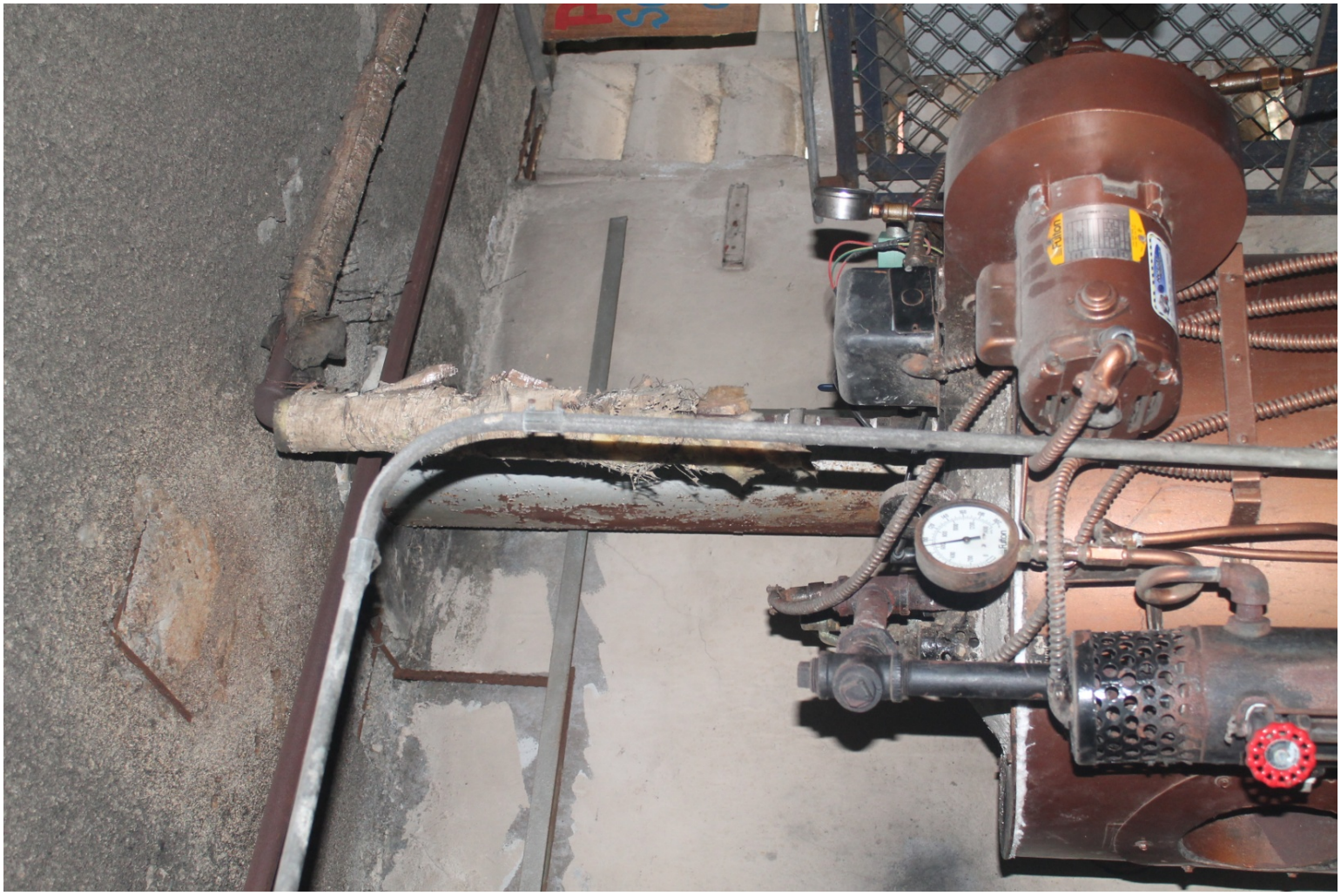


Fulton
Fulton
Caution
Operational Safety
Warning!
Water Treatment


Supervisores
Supervisoras
Caballeros