



Concrete Reinforcements, Inc.

SAFETY MANUAL

Revised June, 2017

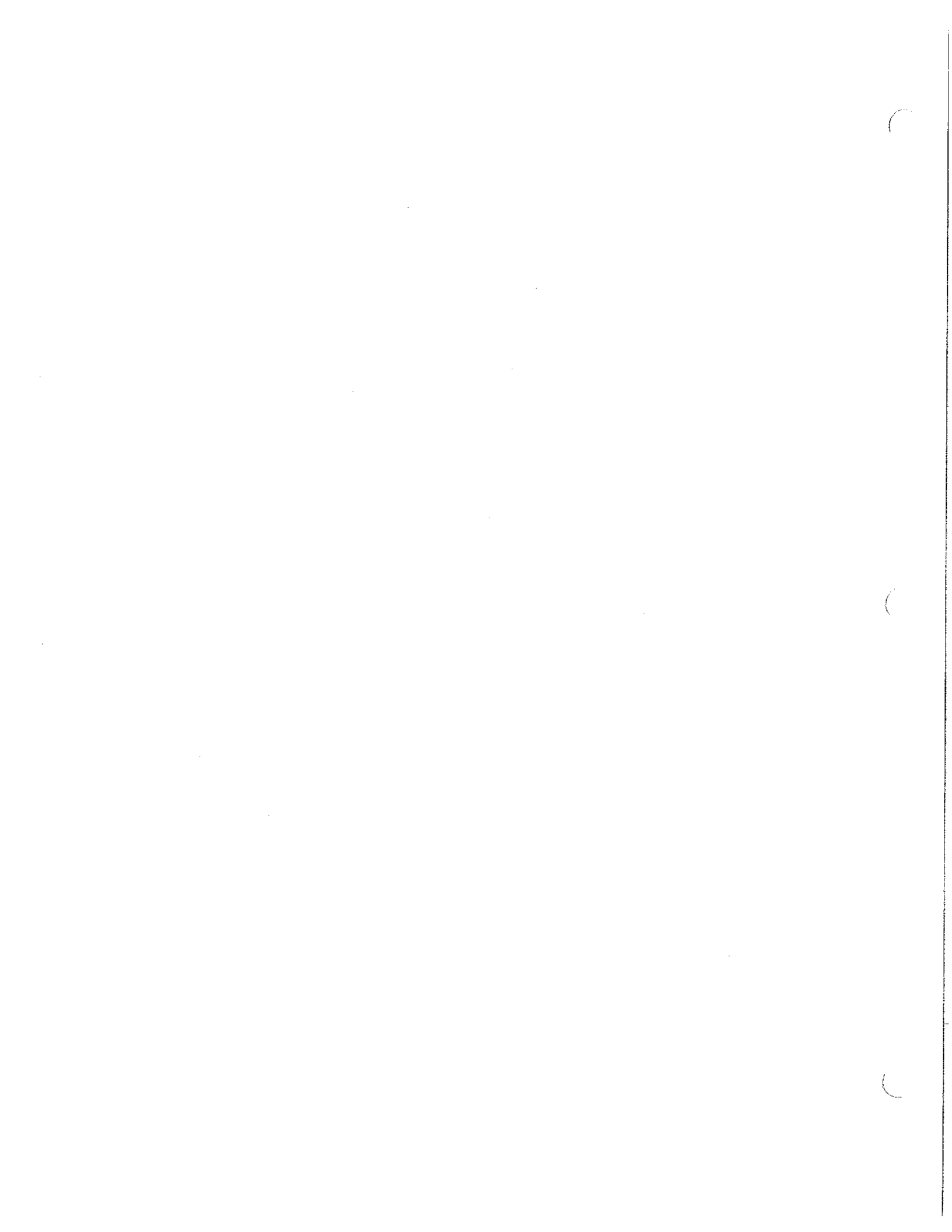
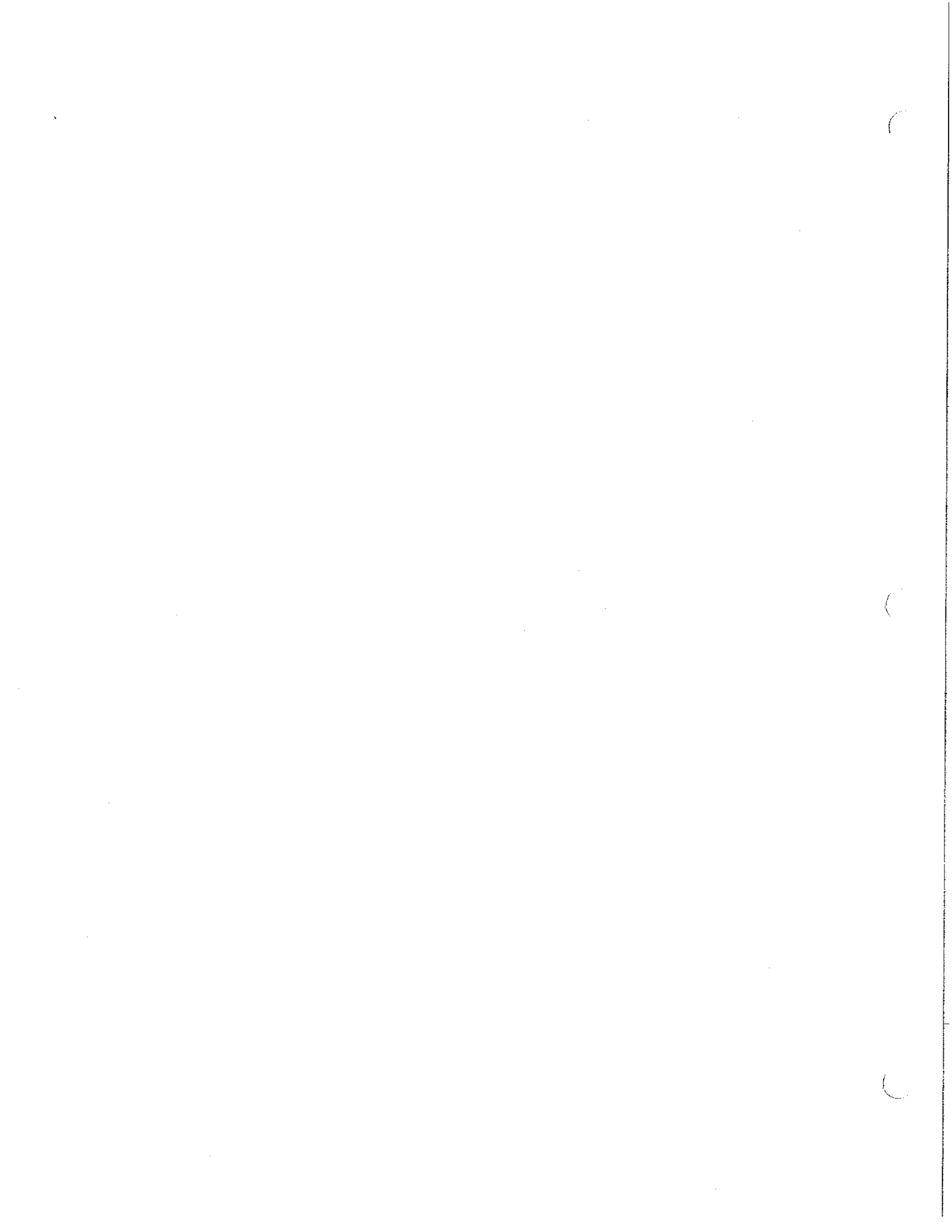


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INTRODUCTION

As a *CRI* associate you have the responsibility to comply with O.S.H.A. Safety and Health rules as well as *CRI*'s Safety and Health policies. You are expected to work safely and follow *CRI*'s Safety and Health work practices given to you in writing or verbally. Our goal is to work safely without associate injury, and by working safely we can achieve this goal. You are very important to *CRI* and we are serious about your safety, health and welfare.

GENERAL SAFETY AND HEALTH

Associates must be physically qualified to perform their duties. Factors to be considered are strength, endurance, health, agility, coordination, visual and hearing acuity. A person whose ability or alertness is impaired by fatigue, illness, injury, or other factors will not be permitted to work.

Unauthorized person(s) are not allowed on company property.

Visitors shall be warned of hazardous areas such as forklift traffic and machinery and shall be properly escorted.

Hard hats, safety glasses, and steel toe shoes are mandatory on the plant floor. Bracelets, rings and bulky necklaces are not allowed. Associates may wear earrings that are no longer than the wearer's earlobe-no hoops, dangling or hanging earrings of any kind are permitted. Shirts must be tucked in.

DRUG-FREE WORKPLACE

We are committed to providing a drug-free workplace. The use of alcohol, legal or illegal drugs in any manner that adversely affects, or could adversely affect an associate's behavioral work subjects the company and all the associates with whom the user comes into contact to unacceptable risk.

Therefore, we insist that our associates function at work entirely free of the effects of illegal drugs and the abusive use of legal substances. Violation of this rule may result in disciplinary action, up to and including termination.

HEALTH AND SANITATION

Keep drinking fountain clean; do not spit in drinking fountain.

Break Area/Lunchroom:

Keep clean and in a sanitary condition. Use trash receptacles that are provided.

Bathroom Facilities:

Bathrooms are to be kept clean and in a sanitary condition.

Towels, soap, and water are provided for associate use.

CLEAN-UP AND HOUSEKEEPING

All work areas are to be kept clean. Clean up of working areas will be on a daily or weekly basis as necessary to keep working areas clean.

Please do not bring your meals into the shop environment. Please eat your meals in the breakroom provided. We have provided a food prep area, microwave oven, and refrigerator.

Keep passageways and walking areas free from tripping hazards such as tools, electrical cords, hoses, and grease or oil that may result in associate injury.

Report any chemical spill to your manager immediately. Clean up shall be per material safety data sheet(s). The Material Safety Data Sheet (MSDS) book is on the wall inside the Production Office. Dispose of hazardous materials as per MSDS, and *CRI* procedures. A copy of *CRI's* Hazardous Communication Program is available in Human Resources.

FIRST AID AND MEDICAL

If any accident or injury occurs during working hours, please notify your immediate supervisor/foreman immediately. If the accident or injury occurs after hours, you will be required to report your injury to the Human resource Dept. on the next business day. An accident report must be completed within 24 hours of the accident or injury.

Report ALL injuries or accidents to your supervisor.

Only trained associates who have been designated to render first aid shall respond to associate injury. A listing of these associates is posted in the production office.

BLOODBORNE PATHOGENS

CRI's Bloodborne Pathogen policy will be strictly enforced. Designated associates will be offered hepatitis vaccinations.

Associates are directed not to touch, pickup, or replace equipment that is covered with blood or body fluids. Associates are to report any cuts, abrasions, or puncture wounds to their manager. The manager will take corrective action (BBP) exposure.

A copy of *CRI's* Bloodborne Pathogens control program is available in the first aid room.

PERSONAL PROTECTIVE EQUIPMENT

All associates and guests shall comply with *CRI's* personal protective equipment policies. Associates working in production are to wear steel toe shoes.

FIRE PROTECTION AND PREVENTION

Fire prevention program is designed to prevent fires at the jobsite.

LOCATION OF FIRE EXTINGUISHERS

Fire extinguishers are located throughout the plant site. Please see the attached fire escape plan for exact locations.

IDENTIFICATION

All extinguishers are marked with a red and white "FIRE EXTINGUISHER" sign hanging directly over an extinguisher.

GENERAL RULES

- 1) Once a fire extinguisher is used or pin is pulled, it needs to be brought to maintenance. If maintenance has a spare, they temporarily replace the used extinguisher until it is refilled and inspected.
- 2) After using an extinguisher for any reason, the employee involved must see his/her foreman to complete the "EXTINGUISHER DISCHARGE REPORT".
- 3) Do not take fire extinguisher to any unmarked area and rehang or sit it on the floor, in cabinets, etc.
- 4) Do not tamper with fire extinguishers for any reason other than an emergency!

USING FIRE EXTINGUISHER

Only trained and authorized personnel should attempt to use a fire extinguisher. The company trains associates on a yearly basis with the help of the Fire Department.

Emergency phone number is 911 for emergency response teams.

MATERIAL HANDLING

When handling materials, use well-planned and controlled movements.

Do not jerk or twist with load.

Flex knees and keep back and neck straight while lifting or releasing load.

Size up the load prior to handling.

Grip materials (palming) with your hands prior to lifting.

For large or bulky objects, use a material-handling device such as a hand truck or forklift, or overhead crane.

When in doubt about lifting heavy objects, always find someone to assist.

TOOLS-HAND AND POWERED

Use only tools that are designated for the work intended. Do not use defective tools.

Do not pick up or lower power tools with the electrical cord. Report any faulty or defective tools to your supervisor.

Return all tools to their designated storage location after using.

MACHINE GUARDING

Where machinery has a rotating part, or pinch point, hand trips shall be guarded.

Guard unused portion of dies as well as ends of dies with enclosure guards.

Associates are instructed not to reach into point of operation while equipment is working.

Use hand tool to remove jammed part(s). Turn equipment to off position.

Associates are not to by-pass a safety device.

Drilling and tapping operations are to be carried out with caution; where possible physical barrier guards, hand protection, eye, or face protection must be worn to prevent puncture wounds to associates.

Belt sander and disc sanders are to be guarded with approved guards.

Do not alter controls.

Controls must be pressed at the same time to complete electrical or pneumatic closure for safe operation.

Report all malfunctioning guards to the shift foreman.

MECHANICAL POWER PRESSES

Mechanical power press shall be equipped with point of operation guards, two hand controls, two hand trips, or other devices such as physical barrier to prevent from reaching into the point of operation.

Note: All equipment must be locked out/tagged out during servicing and maintenance of the equipment. Mechanical power presses shall utilize blocks to safe guard the operation and comply with die setting standards.

WELDING

Associates must be qualified to use mig and tig welding equipment.

Qualifications can be by experience, on the job training, or through education systems, such as vocational schools.

Welder must wear appropriate personnel protective equipment. Welders welding on zinc must wear respirator.

Personal protective equipment can be leather apparel, cotton clothing, a face shield, leather gloves, and eye protection.

Do not attempt to strike an arc during set-up procedure for welding without wearing proper personal protective equipment.

Welding equipment with defects shall not be used.

Positive and negative taps must be covered with rubber insulation.

Welding rod holder must be insulated and free of defects.

LADDERS

Ladders must be designed to meet standard designs for strength and placement.

Ladders must be equipped with base plates (feet) to prevent ladder from sliding when in use.

Ladders are to be placed approximately 25 percent of ladder length from base of building, etc. Proper placement, i.e., (20 foot ladders should be 5 feet from base of structure), placed 3 feet above its landing and tied in place.

Climb ladder with both feet, hands, and face ladder while ascending or descending.

Do not use ladder for work platform.

Do not place ladder near exposed electrical wires.

ACCIDENT PREVENTION

CRI's safety policies for lockout/tagout are designed to prevent associate injury due to a sudden release of stored energy such as electrical, hydraulic, pneumatic, or any other energy source that has stored energy such as an auto battery.

Only qualified associates are to place locks on equipment or machinery that has a potential energy release.

Associates will be trained in lockout/tagout procedures.

ELECTRICAL SAFETY

Only qualified associates are to work on electrical systems. Identify all circuit breakers for the service that is used.

Identify all disconnect boxes for the services in use.

Do not remove faceplate from outlets, breaker boxes, disconnect boxes, and plug on knockout hole on electrical system.

Grounding pin shall be on all cord and plugged equipment. Grounding pin shall be on all grounded (3rd wire) tools.

Double insulated power tools are not normally equipped with grounding pin.

Report all defective tools, cords, or any other apparent violation of electrical system to the Maintenance Department.

A copy of *CRI's* written energy control program is available in Human Resources.

MEANS OF EGRESS

Company policy is to evacuate the plant in the event of a fire, explosion, or other disasters. Associates are to follow designated route to safe area outside the building.

Only trained associates are to use portable fire extinguishers.

All other associates are to vacate the work area and follow designated exit paths to a safe area.

CRI annually will hold evacuation drills. *CRI's* evacuation plan is posted on the associates' bulletin board.

A copy of *CRI's* written emergency response program is available in Human Resources.

CONFINED SPACE

A confined space is described as an area large enough to enter which has limited means for entry or exit.

No confined space is to be entered without the permission of the confined space Coordinator.

A copy of *CRI's* confined space program is available in Human Resources.

FORKLIFTS/AERIAL LIFTS

Only associates who have received training from *CRI* will operate forklifts and aerial lifts.

A listing of these associates is posted on the associates' bulletin board.

A copy of *CRI's* forklift and aerial lift program is available in Human Resources.

GASES/PROPANE/DIESEL

Only associates trained in gases and propane shall use gases or fill propane tanks. A written copy of both programs is available from Human Resources.

CONCLUSION

This manual has presented some of the basic rules for maintaining a safe and healthy workplace. If you have any questions about this manual or safe work practices, ask your manager.



Concrete Reinforcements, Inc.

13450 W. Peoria Ave.

Surprise, Arizona 85379

What YOU Need To Know about The Hazard Communication Standard

What to do to protect yourself:

- Read labels and Material Safety Data Sheet.
- Follow warnings and instructions.
- Use correct protective clothing and equipment provided.
- Learn emergency procedures and use them when needed.

What you should look for on labels

Every container of chemicals must be labeled by the manufacturer. Labels may differ in appearance, and may use words or symbols. But they must state such information as:

- The name of the chemical
- The name, address and emergency phone number of the manufacturer.
- Special handling and storage information.
- Health hazards (Is it an irritant or poisonous)
- Physical hazards of the chemical (Can it explode or burn)
- Recommended protective measures (Such as clothing or equipment) when working with the chemical.

Using the Material Safety Data Sheet (MSDS)

The MSDS is your guide to the basic information about each chemical in your work area. It provides the information you need to identify and work with or around hazardous substances. The OSHA Hazard communication Standard requires an MSDS (or reasonable facsimile) for each chemical in your work area. Moreover, you have a right to look at the MSDS if you feel you need more information about a chemical you're working with. Ask your coordinator or group leader to let you see it. Here is the information that an MSDS must provide:

1. Identity -- its chemical and common names, who made it and where you can where you can call for more information.
2. Hazardous Ingredients/Identity Information -- what's in it, how much of each ingredient.
3. Physical/Chemical Characteristics -- its boiling point, appearance, odor, vapor pressure and density, solubility in water, and other specific characteristics.
4. Fire and Explosion Hazard Data -- flash point, fire fighting equipment and procedures.
5. Reactivity Data -- is it stable/unstable? Conditions to avoid so it won't react.
6. Health Hazard Data -- permissible exposure limits, what bodily part it may affect (skin, eyes, respiratory system, etc..) and emergency first aid procedures to treat excessive exposure, should it occur.
7. Precautions for Safe Handling and Use -- waste disposal methods, handling precautions, personal protective equipment such as respirators, goggles, and gloves.
8. Control Measures -- handling, storage, spills, leaks.

Who's affected by this "Right to Know" rule?

The Occupational Safety and Health Administration (OSHA) has developed the Hazard Communication Standard. It is for YOUR protection and establishes your "Right to Know" about chemical hazards you may face on the job.

1. Chemical Manufacturers – they must evaluate the hazards of each chemical that they manufacture, and then let users know about them by using labels and Material Safety Data Sheets (MSDS).
2. Employers who use the chemicals – They must develop a written Hazard communication program, tell their associates about it and explain how it works. They will also have to tell you about safety procedures and equipment you will use when working with hazardous substances.
3. You the temporary associate – If you are assigned to work with or around chemicals in your work area, please be alert, read the labels and Material Safety Data Sheets. Then follow instructions carefully.



Concrete Reinforcements, Inc.

MATERIAL SAFETY DATA SHEET

I. Material Identification:

Manufacturer: Concrete Reinforcements, Inc.
13450 W. Peoria Ave.
Surprise, AZ 85379
(602) 975-2970

Material Name: Welded Wire Fabric

Chemical Family: Alloy

Based Metal: Iron

Issue Date: June 1998

II. Hazardous Ingredients

<u>Element</u>	<u>Case No.</u>	<u>Max Content Part per Million</u>	<u>Permissible Concentration OSHA 8 hr. TWA (MG/M3)</u>
Iron	7439-89-6	Balance	10 as iron oxide fume
Nickel	7440-02-0	1500	1
Chromium	7740-47-3	2000	1
Manganese	7439-96-5	6000	5
Silicon	7740-21-3	2000	5 as respirable dust
Copper	7440-50-8	2000	0.1 as fume
Carbon	7440-44-0	1000	3.5 as carbon black
Lead	7439-92-1	5	0.15
Magnesium		100	0

III. Physical Data

Appearance and odor: Odorless solid with metallic luster
Boiling Point: 5400 F
Melting Point: 2800 F
Specific Gravity: 7.8
Vapor Pressure: None
Vapor Density: None
Solubility in Water: None
Percent Volatile: None
Evaporation Rate: None

Associates are encouraged to wear comfortable, clean clothing that is suitable to their particular job. Extremes in dress or hair styles are not permissible. Hair that is longer than shoulder length must be braided or pinned up. Shorts are not permissible.

You will be issued:

1. Ear plugs – mandatory on the plant floor.

2. Safety glasses – mandatory on the plant floor.

3. Work gloves – Each associate will be issued, by the Team Leader or Manager, a pair of work gloves appropriate to the type of work performed as determined by CRI. Each associate is expected to maintain the gloves in good working condition as the performed work permits. Gloves are not intended for personal use outside of the plant. As the gloves wear out through normal usage, they will be replaced. Lost gloves or gloves damaged through misuse are not subject to free replacement and the associate will have to replace them at their own expense.

4. Safety helmet – mandatory on the plant floor.

5. Steel toe shoes are required for all persons working greater than 50% of the time in the factory.

No rings, bracelets, or long necklaces (or necklaces with large pieces).

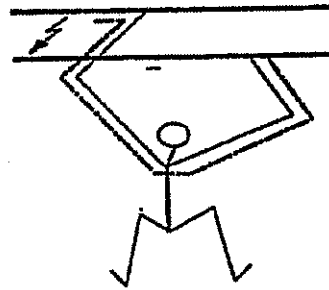
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1. Electricity

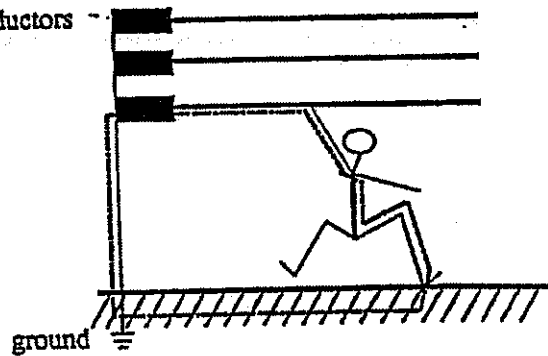
Currents of more than 50mA and voltages of more than 50V
ARE DANGEROUS TO LIFE !

1.1 Causes of electrical accidents

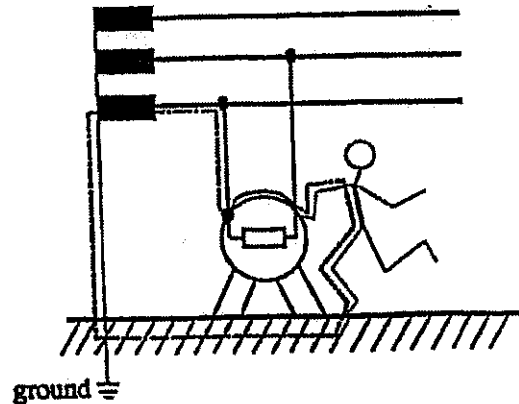
Touching not insulated conductors



Touching neutral to ground conductors

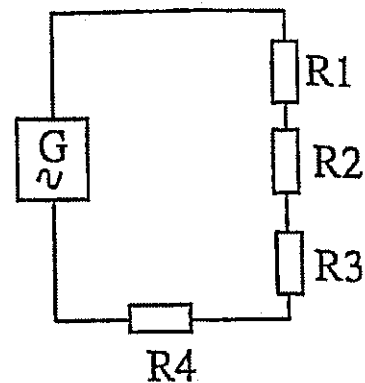
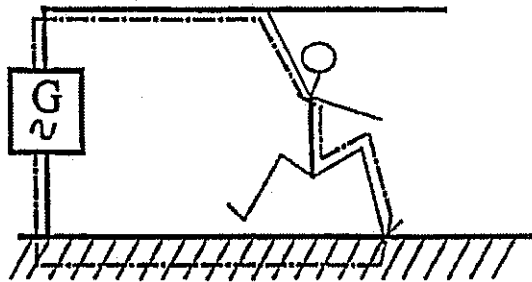


Short to frame



SAFETY

1.2 Effects of current



- R1: Resistance between conductor - body
- R2: Internal body resistance
- R3: Resistance between body - floor
- R4: Resistance between floor - earth

1.3 Perception of current intensity

Range 1:

- DC up to 80mA
- AC up to 25mA
- Perception over 1.2mA : Itching
- Perception between 9 - 15mA: Cramp in hand muscle
- Perception over 20mA : Clenched respiratory ducts

Drink a lot of water - if necessary consult a Doctor

Range 2:

- DC 80 - 300mA
- AC 25 - 80mA
- A current flow in cardiac region can cause irregular heartbeat or even interrupt temporary the heart function.

Consult immediately a Doctor !

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2. Mechanics

The handling of wire and meshes has his own rules.

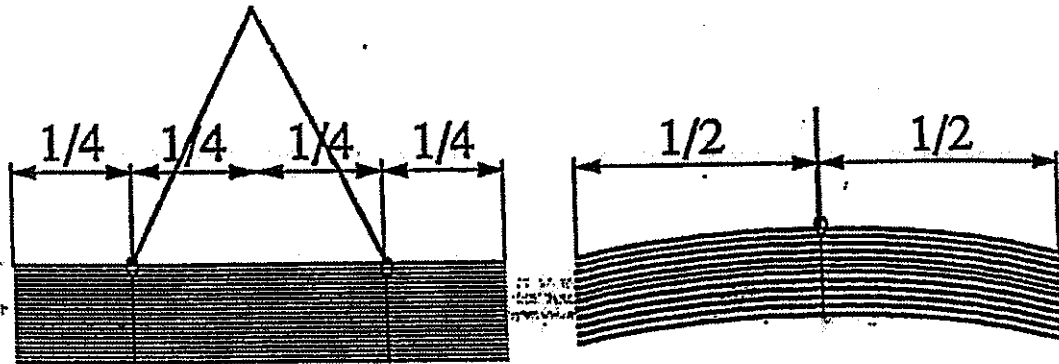
Rolled wire on coils has a high mechanic tension, which can be like a whip when you undo the coil the wrong way.

Always hold the wire in your hand, BEFORE you cut it off the coil !

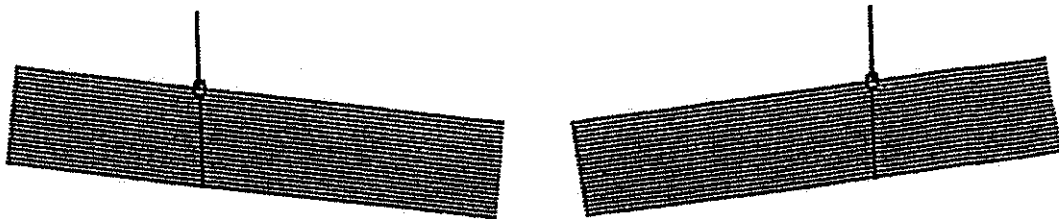
Precut and straightened wires are transported by crane in bundles. If the bundles are not properly tightened on the crane, the wires can slip off the bundle. The falling wires can have a spear-effect!

Correct loading of wire bundles

OK



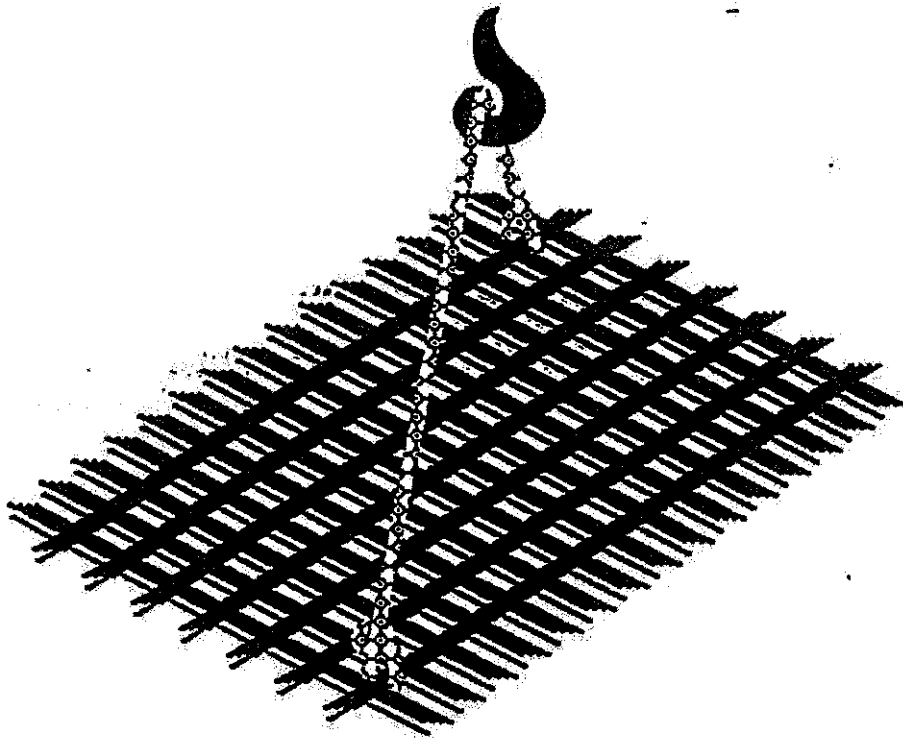
WRONG !



SAFETY

Never take the top mesh only -

always the WHOLE STACK to be tightened on the crane !



The mesh stacks are of heavy weight ! Therefore make sure that the stacks are properly tightened on the crane.

SAFETY

3. Safety on the MG 215 Mesh Welder

The Schlatter Mesh Welders are as secure as you treat them.
Therefore a regular electric and mechanic maintenance is necessary to avoid accidents by mechanic distortion or electric failures !

Further the operating of the machines should be done by qualified and instructed persons only!

Basically the Mesh Welders have 3 modes.

1. Machine in hand function mode
2. Machine in initializing mode
3. Machine in automatic mode

3.1. Hand function mode

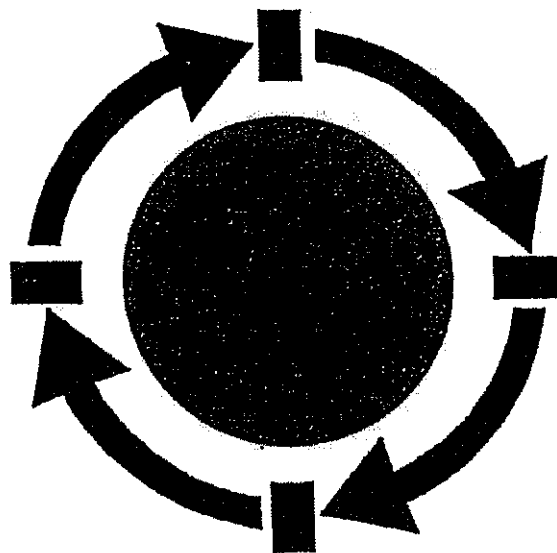
For set-up or maintenance reasons the Mesh Welder is in hand function. The different machine functions have to be done manually by push buttons.
Mind the following:

Do not play with any buttons on the control panel while somebody is working on or in the Mesh Welder !!

In case of set-up or mechanical work on or in the Mesh Welder, the welder has to be in "Hold" ! Whenever possible switch it off.

A "Hold" button is installed on several panels of the Mesh Welders (red locking press button). When pressed, a red light (with the same symbol) in or next to this button indicates that the plant is in "Hold" condition, which means that the machine functions are blocked.

"HOLD" symbol



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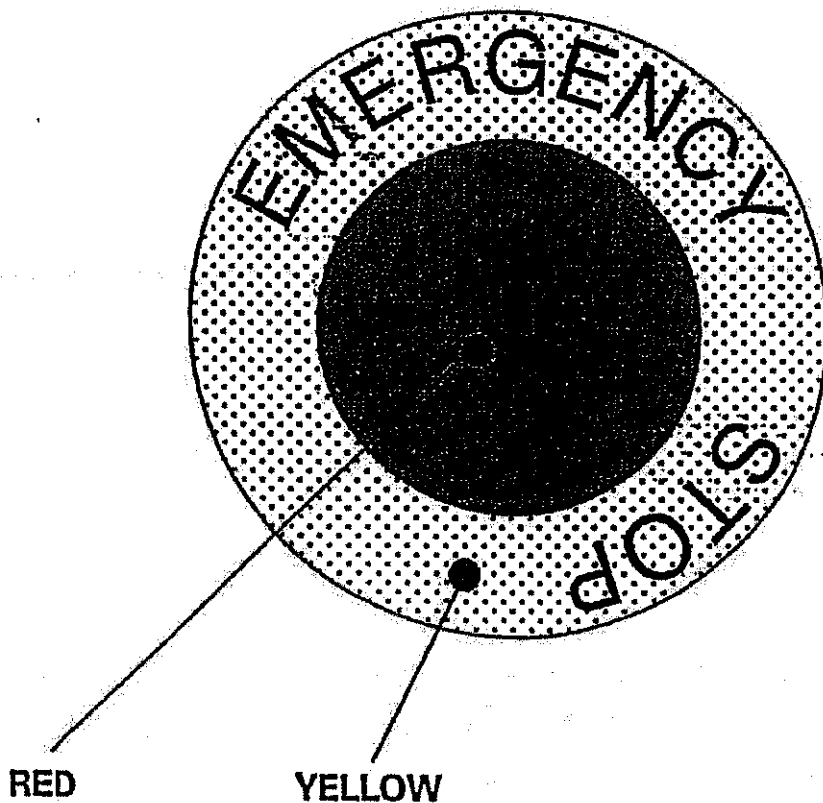
3.2 Initializing mode

In this mode the Mesh Welder automatically sets all machine parts in position for the automatic run. A lot of movements happen on which the Operator has no influence until the machine is ready or not ready for automatic mode.

Do not stand in or too close to the Mesh Welder during the initializing mode !

In case of danger press EMERGENCY STOP !

The Emergency Stop button drops the main power of the whole plant !



All persons involved with Mesh Welders MG 330 and MG 201 must be carefully instructed on the location of these buttons !

SAFETY

3.3 Automatic mode

In this mode the Mesh Welder is automatically producing meshes.
There is no manual influence on the machine functions, except "HOLD" and EMERGENCY STOP.

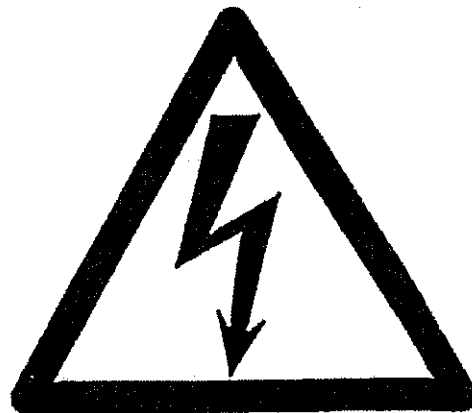
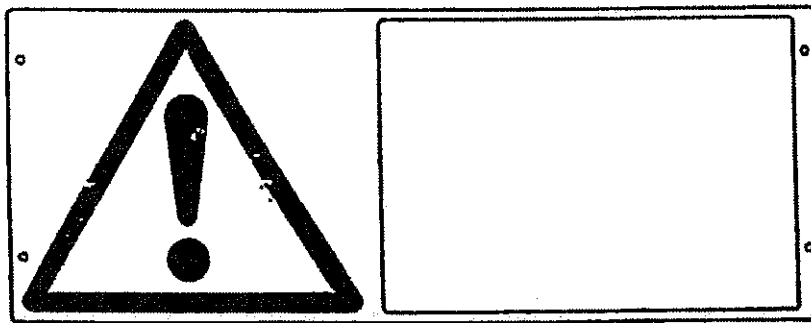
Do not stand close or in the Mesh Welder during the automatic mode !

The area motor drives and wire feeding systems can be danger to life !

In case of danger press EMERGENCY STOP !!

3.4 General warning

Yellow warning plates are fixed to all dangerous machine parts. Please take them serious !



SAFETY

Do not remove protection hoods from the machines !

Ask for maintenance in case of mechanical or electrical damages !

Mind warning signs and do not remove them !

Keep warning signs clean !

Get informed about the location of:

- EMERGENCY STOPS**
- First aid boxes**
- Fire extinguisher**

WEAR SAFETY GLASSES !

WEAR HEAD PROTECTION !

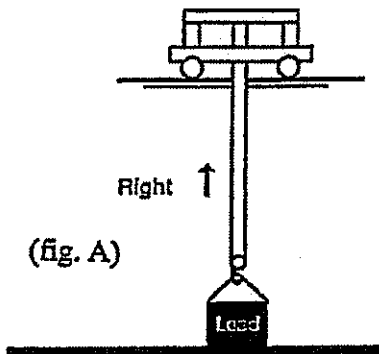
WEAR SAFETY SHOES !

DO NOT STAND BENEATH THE LOAD OF A CRANE !

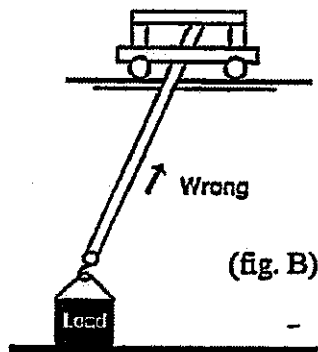
WEAR GLOVES WHEN HANDLING WIRES !

LOADING AND UNLOADING STRAIGHT AND CUT.

1. Use a 2 leg cinch cable and securely hook it onto the crane.
2. The crane should be centered over straight and cut material before starting. (fig. A)
This will help avoid the hoist from swinging the clamp as the lift is started. Loads should not be swung by the crane at any time.



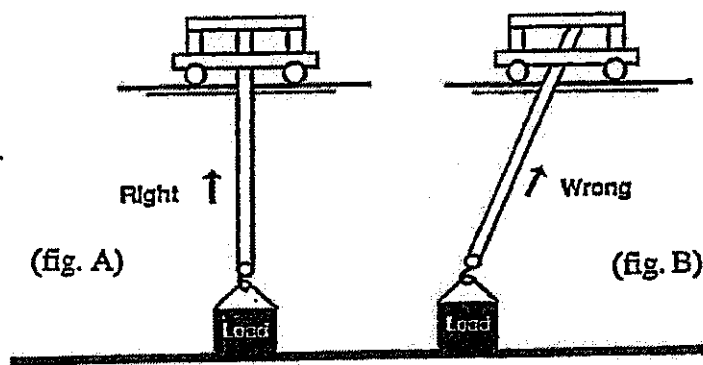
2. All slack must be removed from the sling before the material is lifted.
3. All hoisting ropes should be kept vertical being careful not to use side pulls. (fig. B)



4. Center cinch cable over the straight and cut material and wrap cable around both ends of material and securely fasten.
5. Slowly raise the bundle and wire tie and properly tag.
6. After tying and tagging, clear the immediate area while the bundle is being raised, lowered or moved.
7. Do not stand under raised material.
8. Keep loads as close to the ground as possible when moving.
9. When unloading make sure cane is centered over the material.
10. Slowly lower crane until the material is properly placed at new location.
11. Use 2 cranes and cinch cables for all straight and cut material over 30'.

LOADING AND UNLOADING SPOOLS FROM CRANE.

1. Always use the spool clamp when loading and unloading spools.
2. The crane should be centered over spool clamp before starting. (fig. A)
This will help avoid the hoist from swinging the clamp as the lift is started. Loads should not be swung by the crane at any time.
3. Make sure spool clamp is securely hooked.
4. All slack must be removed from the sling before the clamp is lifted.
5. All hoisting ropes should be kept vertical being careful not to use side pulls. (fig. B)



- Center Crane Over Load Before Lifting

6. Center spool clamp over spool and slowly lower into position.
7. Slowly raise the spool clamp so that it can securely lock onto the spool.
8. After hooking, clear the immediate area while spool is being raised, lowered or moved.
9. Do not stand under raised material.
10. Keep loads as close to the ground as possible when moving.
11. When unloading make sure crane is centered over spool.
12. Slowly lower crane until spool clamp releases spool and locks into place.
13. Raise crane and clamp and store on top of spool that is not being used.



WHAT TO DO IF SOMEONE CATCHES ON FIRE

If you should catch on fire:

- **STOP** – where you are
- **DROP** – to the floor
- **ROLL** – around on the floor

This will smother the flames, Possibly saving your life. Just Rememer to **STOP, DROP, AND ROLL.**



- If a co-worker catches On fire, smother the Flames by grabbing a Blanket or rug and Wrapping them up In it. That could save Them from serious Burns or even death.

