SAFETY INSTRUCTIONS FOR CONTRACTOR'S EMPLOYEES

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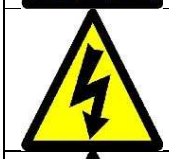
READOUT OF SAFETY FLAGS ON CONSTRUCTION SITES

In the area of the Machine Shop there are the following signs, some of which indicate an obligation, some a prohibition and others warn of dangers.

SIGNS	INTERPRETATION
	Mandatory use of protective goggles
	Mandatory use of work clothes
	Mandatory use of work footwear
	Mandatory use of protective gloves
	Mandatory use of shoulder protectors
	Mandatory use of safety helmet
	Mandatory use of visor
	Mandatory use of a welding mask
	No smoking

	The use of the pallet truck for transport is prohibited
	Load handling vehicles
	Risk of electric shock
	Overall risk
	Risk of stumbling
	Risk of falling

SAFETY RULES FOR WELDERS

1) Keep the welding machines in good condition
2) Pay particular attention to pliers and cables, especially with regard to their insulation
3) The welder should always wear gloves and special shoes with rubber bands
4) Each weld has its own return body. Good tightening
5) Do not use for return body , piping or metal parts of buildings , but correctly place the return pliers on the fitting we weld
6) When stopping work, do not leave the electrode tweezers on a metal surface (to avoid possible electric shock or fire)
7) Ground the object to be welded
8) Check the insulation of tools
9) Check for moisture on the tool (corrosion, water, etc.)

SAFETY RULES FOR WELDING - PLASMA CUTTING

Oxygen, acetylene and argon cylinders should not be stored in areas such as near flammable materials, especially oil and oils. Only in the specially constructed area outside the machine shop. Rubbers that show leaks, holes or other damage must be repaired or replaced. Pressure regulators are used only for combustible gases and the corresponding pressures. When regulators need to be repaired, this shall be done by specially trained technicians. The valves shall be closed before moving and after the end of operation. The cylinders must be located away from the welders area.

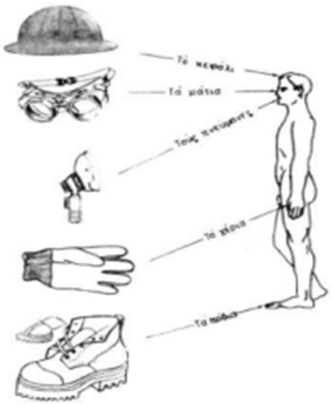
Use of Personal Protective Equipment (PPE)

The following personal protective equipment has been provided to you to eliminate or minimise the risk of injury while you are in the workplace. You are required to wear this PPE and keep it in working order.

PERSONAL PROTECTIVE EQUIPMENT	SPECIFICATIONS OF PERSONAL PROTECTIVE EQUIPMENT
HEARING AIDS - EARPLUGS	EN 352-2 disposable earplugs with 32 db attenuation and sense of high frequencies
Goggles	EN 166 1FT
Work clothes	EN 340 , EN 13034 TYPE 6
Work shoes	EN 345-1 S3 with synthetic toe protection, anti-slip, and excellent sole feel
Gloves	Depending on the task
High definition vest	
Mask	General purpose class A

1. Self-Protection equipment used in similar work sites as this PaperMill.

- Protective clothing
- Head protection (helmet)
- Foot protection (safety shoes)
- Hand protection (gloves)
- Ear protection
- Respiration protection
- Height protection
- Weather protection
- Welder protection



➢ HEAD PROTECTION

In cases where the worker is exposed to head injury during working time, safety jockey hat should be used manufactured according to EN-812:2012 standard which offers protection against shock hitting on construction elements. This protective equipment is not appropriate for falling object protection. In such cases of falling objects or fall from heights, a safety helmet according to standard EN397 should be used.

This type of head protection is used against.

- Falling from heights
- Falling objects or exploded particles.
- Crashing into objects, machinery, or construction elements
- Electricity

➢ BODY PROTECTION

During your working procedure there is a danger of destroying working clothes or spill them with dangerous sustances. Therefore strong protective clothing should be used depending on the type of work performing

- Clothing against bad weather conditions like working outdoors under rain or cold weather
- Flame protecting clothing for welders
- Protective clothing against possible explosive working environment
- Protective welder's apron
- Overall clothing against chemical or mechanical dangers
- Belts

➢ RESPIRATORY PROTECTION

Respiratory equipment is distinct into two categories.

- Respiratory masks for clearing breathable air of direct environment from toxic or corrosive gasses.
- Respiratory masks for clearing breathable air of direct environment from harmful masks

➢ HAND AND ARM PROTECTION

Workers should be using hand and arm protection when performing jobs involving the below conditions

- Toxic, irritating, or corrosive substances
- Electricity shock
- Hot objects, tools, or machinery
- Sharp edges
- Machinery or tools which can injure hands by crashing or friction or vibrations

➢ FOOT PROTECTION

Foot injuries occured mainly because of the below reasons

- Falling objects, crashing of foot or on foot
- Hot, toxic, irritating or corrosive substances
- Nails or other sharp objects, or surfaces
- Tools with sharp edges
- Slippery surfaces

Depending on the job nature , different types of foot protection is used as follows

- Safety shoes
- Water proof boots with tip protection
- Boots with enforcement against cold

➢ HEIGHT PROTECTION

When works are taking place at levels of high altitude difference from the ground and there are no technical means of protection from falling the following shoyld be used

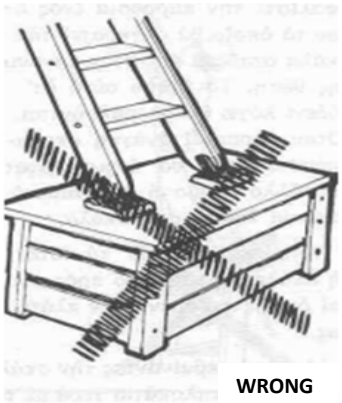
- 5 point support belts with ropes and lifeline,

2. Working at height. Ladders – Scaffolding

- Never use a defective ladder.
- Examine the ladder carefully before using it, especially when it has been stored for a long time.
- Make sure someone is at the bottom of the ladder, or securely fasten the top of the ladder.
- Make sure that the ladder protrudes more than 1 m from the level you want to reach.

- The correct slope of a ladder is 1:4 i.e. 1m distance from the base of the ladder to the wall for every 4m of ladder length.
- Use the right length ladder for each job. Never tie two short ladders together to make a longer one.
- Use wooden portable ladders for electrical work; never metal ones and protect ladders from moisture.

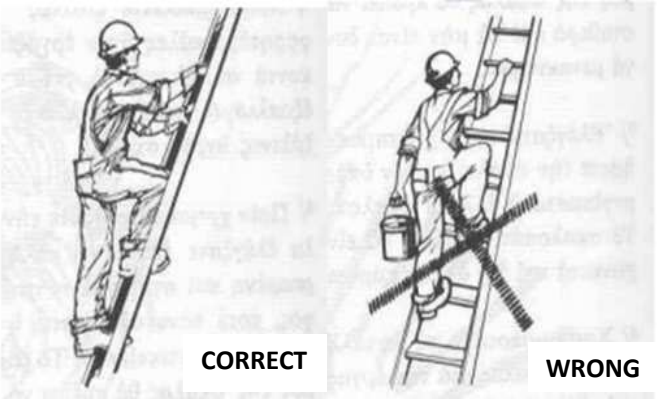
- Watch out for wet, oily or ice-covered steps.
- On uneven ground firmly fastened the legs of the ladder.
- Check your shoes for oil, grease etc. before you go up.
- Fix the ladder firmly to the ground and do not move it when there is a person on it.
- Make sure the ladder is placed on a stable flat base.
- For great heights, make sure there is a person downstairs to hold the ladder steady and in a normal position.



WRONG

- Always go up and down facing the ladder.

- Hold the stairs firmly with both hands while walking up and down the stairs. Never hold objects with one hand and the other.



- Do not carry a load by climbing a ladder. Use a lifting device.
- Do not lean to the side when on a ladder. It is safer to move the ladder (on the ladder do not bend, do not stretch and do not try to reach points beyond the distance of your arm).

The following hoists could be used for work at height where access is available.

Working at height with cables:

- Disconnect,
- We ensure the interruption of supply,
- We check if there is power,
- We ground and short-circuit the facility we're working in
- Cover and isolate adjacent wires that may be live and touched.

SCAFFOLDING

Fixed scaffolds that are metal or wooden structures are used in:

- external work >4 m in height
- interior work >3,5 m in height
- buildings over 3 storeys or with a height >10 m, external wooden scaffolding (only metal scaffolding) is prohibited.

Mobile scaffolding (towers) are used in:

- work at a height of up to 5m outside and 12m inside.

Start of operations – Inspection

Before starting work on fixed scaffolds, a certificate of suitability must be issued in duplicate by the supervising engineer and the project constructor. Type examination certificate for metal scaffolding. The parts/components of the certified metal scaffolding must be marked with the following:

- the name or mark of the manufacturer or of the person putting the scaffolding into circulation
- the type or serial number of the scaffolding and the
- year of construction.

Quality control of the data should be carried out. Removal of worn, damaged, oxidized and other deteriorated elements that are dangerous to the scaffolding's strength, as well as those that are more than 15 years old from the date of manufacture. For buildings with a façade of more than 16 m, the supervising engineer must calculate how the scaffolding is to be connected to the building.

A study must also be prepared by the supervising engineer for:

- the installation of a hoist on the scaffolding
- the construction of all types of fixed scaffolding other than those with a floor width of 0.60 m supporting workers and directly used materials.

Assembly and disassembly of scaffolding

- The assembly and disassembly of the wooden scaffolding is carried out by qualified technical personnel.
- The assembly and disassembly of the metal scaffolding shall be carried out in accordance with the manufacturer's specifications.
- Partial dismantling of parts of the scaffolding before the work is completed is prohibited.

- The assembly and disassembly of scaffolding should not be carried out during peak hours, the surrounding area should be isolated and the distance from any overhead electrical conductors should be taken into account in the working method and safety measures.
- When certain parts of a scaffold are not ready for use, in particular during the assembly and dismantling or conversion phase, these parts must be marked with general danger warning signs in accordance with Decree No 105/95 and must be suitably delimited by material elements which prevent access to the danger zone.

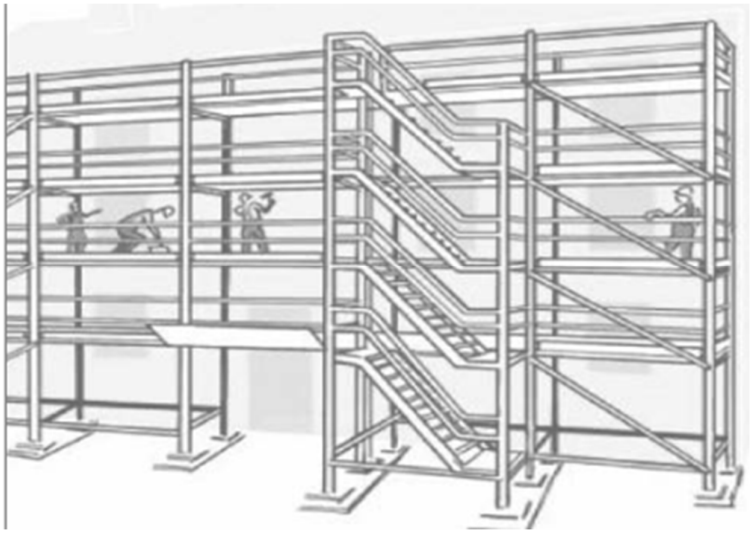
Scaffolding support

- It is forbidden to support the metal scaffolding on external walls or precarious points of the building.
- Tower-type scaffolding shall be used only on stable, level and smooth floors and shall be secured against overturning or shifting.
- The distance between the internal uprights from the building, on metal scaffolding, should be up to 15 cm. The distance between the working surface and the floor of the scaffold shall not exceed 30 cm.
- When the distance between the internal uprights and the building is greater than 15 cm or the gap between the working surface and the scaffolding floor is greater than 30 cm, protection against falling is also required on the inner side of the working floor.

Construction materials

- The uprights and handrails must be made of sound wood and be in good condition. The ends of the stays shall be protected laterally with metal tape.

Protection against overturning scaffolding fall



Source: How to choose the most suitable work equipment for temporary work at height

- Scaffolding shall have a handrail one metre above the working floor with an intermediate bar.
- Work floors should not be overloaded.
- The working floors must have an internal and external skirting board (skirting board) of 15 cm. They must also protrude from their support point to a length at least 4 times their thickness.
- The use of portable ladders or other makeshift devices on the floors is prohibited.
- It is forbidden for more than 2 people to work on one floor, between 2 consecutive uprights.

- There must be a special ladder for ascending and descending the scaffolding and this should never be done by climbing.
- Suspended scaffolds shall be fitted on their 3 outer sides with a parapet and screens.

Width of working floor

- The minimum overall width of the working floor must be 60 cm.
- In the case of floors where materials other than those directly used will be deposited, a working floor width of 0.80 m is required.
- For floors supporting another working floor at a higher level, a width of 1.10 m is required.
- Similarly, for stone cladding or masonry work, a working floor width of 1.30 m is required.
- Finally, when the working floor is also used to support another floor, but also for the above operations, a width of 1.50 m is required.

Uprights

- The uprights on fixed scaffolds shall be well supported on skids and extend for at least 1 m above the last working floor.
- The uprights should lean slightly towards the building.

Basic principles of working on fixed and mobile scaffolding

It is very important for the safety of the worker at work to know some basic principles concerning scaffolding. Thus, the following should be observed as far as possible:

- Construction and dismantling of scaffolding shall be done in accordance with the manufacturer's instructions and specifications and under the supervision of the engineer and using the required PPE. Partial disassembly of the scaffolding prior to completion of the work is prohibited.
- Fixed scaffolding is safe when secured by horizontal movements.
- Scaffolding should be supported on solid, stable floors (not inappropriate skids, stones, etc.). On mobile scaffolds special brakes are used for their stability.
- Scaffolding materials must be durable and well-maintained.

- Pedestrians are not allowed to pass under the scaffolding. Where passage is necessary, a protected passage from below shall be provided, with a clearance height of more than 2.20 m,

covering of links, painting of the tubular elements in a visible colour, night lighting, full roof of the access passage and safety and directional signage.

Equipment used in construction works (mixers, hoists, hoists, power generators, air bridges, etc.) must be placed in such positions that they do not affect the stability of the scaffolding.

The installation of a hoist on a scaffold should:

- To be done only with the permission of a supervising engineer, who checks the scaffolding.
- Be accompanied by firmly attached uprights (uprights firmly attached to fixed points at least in the part where the lifting machinery is located).
- If the lifting is done freely, without rails, a fence shall be constructed over the entire height of the scaffold to prevent the load from striking the parts of the scaffold.

In addition, the following should apply:

- On each working floor there should be a handrail at a height of 1m, a parallel board or metal bar between the floor and the handrail (spacer bars) and 15cm wide parapets on the sides of the floor.
- The floor should be a single metal mesh or, if it is mesh, it should leave no gaps between them.To access the scaffolding, workers should use permanent or portable ladders and not climb on it.

Fixed wooden and metal scaffolding

Wooden fixed scaffolding should:

- be made of sound, long grain wood, free from bark and free from cracks or splits
- be well maintained, not painted or stained
- stored separately from other building materials
- are assembled by qualified craftsmen in accordance with the legislation in force.

For metal fixed scaffolding, the safety provisions for wooden fixed scaffolding apply and in addition:

It is forbidden to support metal scaffolding on exterior walls by the use of drilling sticks. The connection of the scaffolding to the building must be made with elements of the same material.

Mobile metal or wooden scaffolding

Movable metal or wooden scaffolding (eaves or towers) must:

- meet the safety requirements of the legislation in force
- are used only on stable, durable, level and smooth floors
- be secured against overturning or accidental movement
- have a scale firmly attached for ascending or descending from the working floor
- be fitted with wheels which are securely held on the uprights

- have a metal handrail at a height of 1 m from the work floor and a spacer bar
- be assembled and disassembled in accordance with the manufacturer's instructions
- move only when no person is on the platforms
- are always located at a sufficient distance from electrical conductors or other installations which may present a risk of electric shock.

Also

- ✓ the ground over which the scaffold is moved is free from obstacles or irregularities.

3. Electrode welding and Welding Work

The hazards in welding operations can come from dangerous radiation that affects vision, gases (oxygen and acetylene that can cause fire, burns or even explosions in welding, electricity that can cause electric shocks and particulate matter produced in welding.

With the right working method, all accidents can be avoided.

GENERAL RULES OF SAFETY

- ✓ Weldings are performed only by licensed welders
- ✓ No welding or cutting of completely closed containers or containers containing fuel, chemicals, etc.
- ✓ Fire safety measures
  - Removal of combustible materials prior to work
  - Curtains
  - Fire extinguishers
  - Supports made of non-combustible materials.

USE OF PERSONAL PROTECTION EQUIPMENT

- ✓ Suitable overalls and never wear clothing made of synthetic material or soiled by flammable substances (e.g. lubricants).
- ✓ Gloves, apron, sleeves & cuffs made of special non-combustible leather.
- ✓ Eye protectors.

- The welders, glasses with filter depending on the supply of gases.
- Welders, head mask or hand protectors with the appropriate filter depending on the intensity of the current.

✓ Headgear to prevent the hair from catching fire.

- ✓ Fixing vessel to the wall with a chain
- ✓ Storage of unused stored ω in cool, ventilated places

- ✓ Careful transport of vessels in trolleys
- ✓ The vessels must always be grounded.
- ✓ Regular visual inspection of all parts and vessels for damage, oxidation, and dents
- ✓ First use of old vessels beyond five years (stamped indication e.g., 03 96) and immediate return of empty vessels for inspection
- ✓ Every 5 years a hydraulic test is carried out under the responsibility of the manufacturer.
- ✓ The cylinders must be supplied by suppliers who can perform the above tests in an approved laboratory.
- ✓ The test date should appear stamped on the bottle.
- ✓ NO knocked or rusty vessels (immediate replacement)
- ✓ NO oil or grease on the bottle closures or stored near the vessels.
- ✓ NO bottle gripping with oily hands
- ✓ Use of cylinders with suitable manoeuvre protection system for oxygen and acetylene
- ✓ In case of ignition of the cylinder, cool it with cold water from a protected position.
- ✓ Use two non-return valves per cylinder at a distance of 1m from the cylinder and 1m from the lamp.
- ✓ Replace worn tyres at least once a year.
- ✓ Replacement of manometers, pressure gauges, pressure relief valves every year.
- ✓ NO improvised fittings
- ✓ Connection of clamps to cover the entire length of the manoeuvring beam.
- ✓ Make sure your mask or special goggles with side protection have the right absorbent lenses.
- ✓ Wear a suitable work uniform, a leather apron, long leather gloves and clean the protective goggles from the bits and pieces that are left behind.
- ✓ When welding, use protective curtains where. possible to protect nearby workers from the electric arc.
- ✓ Make sure the cables and connectors are in good condition and are securely seated & in the correct position.
- ✓ Make sure the welding machine, workbench or workpiece is properly grounded.
- ✓ Check that the electrode tip is fully insulated and always place it on a grounded surface when not in use.
- ✓ When the ground is wet, stand on a floor made of insulating material.
- ✓ Make sure there is good ventilation in the welding area.

- ✓ Avoid welding near flammable materials.
- ✓ Never weld in closed containers or tanks that have contained flammable materials unless they have been steam or boiled or filled with an inert gas and then tested and certified as safe to work on.
- ✓ Ensure that welding cables that run on the floor are away from passageways & traffic corridors. Fix the cables in high places where possible.
- ✓ When performing electric welding on exterior railings or metal structures, wear a safety belt and a protective helmet.
- ✓ Be careful not to approach P.P.S. pipes with long metal objects.

4. General rules for maintenance work using tools

Keep your tools clean.

Do not use tools with oil or grease or with greasy hands, as they may slip from your hands and injure you or colleagues.

Check their good condition before using them. If they are not in good condition, do not use them.

Percussion tools (hamme`rs, sledgehammers, sledgehammers) that have widened their heads due to much use, replace them.

Do not tamper with tools. Do not apply excessive force or pressure to a tool. If you need something like this, you're probably not using the right tool.

Use the right tool for each job and do not misuse tools E.g. Do not hit a hammer with another hammer because you will dislodge the head. Never use a screwdriver instead of a chisel. Do not use improvised tools unless approved.

Do not throw tools because you may hit a colleague. Always estimate the direction a cutting tool will take if it slips out of your hand and adjust your position accordingly.

If you are using a chipper, make sure that the metal fragments are not thrown in the direction of your colleagues who are present. If this is impossible, place an object (eg sheet metal) between the material and your colleagues to protect them.

Use a toolbox to carry the tools. Do not put sharp tools in your pockets. You may be injured in a sudden or abrupt movement. If you bring a screwdriver with you, make sure its tip is facing down.

Do not scatter tools while working. At the end of your work, clean them and arrange them in the toolbox. Be careful not to forget a tool inside a machine (eg inside a reducer). If necessary, measure them.

When climbing stairs, do not lift tools with your hands or arms. Use the special tool belt or hoist the toolbox with a rope.

GUIDELINES FOR SAFE WORK WHEN USING HAND TOOLS

If you work at high points (scaffolding or ladders), do not leave tools in places where they could fall and injure your colleague. Special care is needed if you are working on sloping ceilings.

GUIDELINES FOR SAFE WORK WHEN USING PORTABLE POWER TOOLS

Working with wheels

- When interrupting any work you are doing with a wheel, always make sure that the disc is stopped and placed without knocking before installing it.
- Check the wheel disc regularly for cracks.
- It is forbidden to remove the wheel guard.
- Avoid lateral stress on the grinding wheels. Do not remove their protective covers.
- These wheels are made for frontal loads and for this reason the removal of the side covers and the machining of e.g. cutting tools on their side surface should be prohibited. If there is a need for a larger working surface, care should be taken to install another wheel with a larger frontal surface, if it fits the particular device, or even to procure a larger device that will also carry larger wheels.

Work in general with power tools

- Know the operation of the power tool. Use each tool for the job it was designed for.
- Before using any portable electrical machine check that it is properly grounded unless it is double insulated and does not require grounding. In this case it has the special sign.
- Before using an electric machine, make sure that the housing is not damaged. If it is damaged, do not use it.
- Make sure all cables, sockets and connectors are in good condition and connected correctly.

CHECK THE WIRING

BEFORE USING THE TOOL

- Use the machine only at the correct operating voltage in accordance with the manufacturer's instructions on the manufacturer's plate. Keep your workplace clean and tidy.
- Make sure the power cable is long enough to reach your workstation without stretching.
- When you leave your workplace, even temporarily, do not leave tools on the floor. Put them back in place to avoid injury a passing colleague and the tools themselves are not damaged.
- Do not carry tools while holding them only by the cord.
- Do not hold or carry tools with your finger on the switch. Do not use twisted wires instead of plugs to connect a tool to the socket. Unplug the tool when not in use or when replacing parts (drill, wheel, etc.)
- Do not use power tools in wet or damp areas. If it is absolutely necessary to work in such areas, be sure to tread on dry floorboards.
- Be careful with cables, do not touch hot spots, flammable liquids, sharp edges, do not create knots.
- Do not use long lengths of cable and do not connect several tools on the same line with a multiplexer without the approval of the qualified electrician.
- Do not lay tool cords that you are using in areas where vehicles or other wheeled vehicles pass through. If necessary, cover them for greater safety.
- Do not disassemble or repair power tools unless you are an expert. If, when using a tool, its motor emits sparks or smoke, stop using it and hand it over to a competent electrician to have it checked.

5. Emergency Plan

Emergency Plan for visitors of MEL M.A.E.

Visitor instructions

To deal with catastrophic emergencies such as fire, earthquake, flood, gas leakage, chemical spills and terrorist attacks, consider the following:

In case the alarm is sounded 20 times, everyone present on the factory premises should evacuate the area following the instructions posted at various key points (see the map on the back page).

A. In case of fire

- **STAY calm.**
- **SET** the alarm immediately.
- **NOTIFY** the guard at the main gate on telephone number 143.

B. In case of evacuation

- **STAY calm.**
- **DON'T** RUN
- **STOP** your work
- **TURN OFF** the machine you are working on.
- FOLLOW the green signs to the emergency exits of the buildings.

Gathering areas in case of emergency

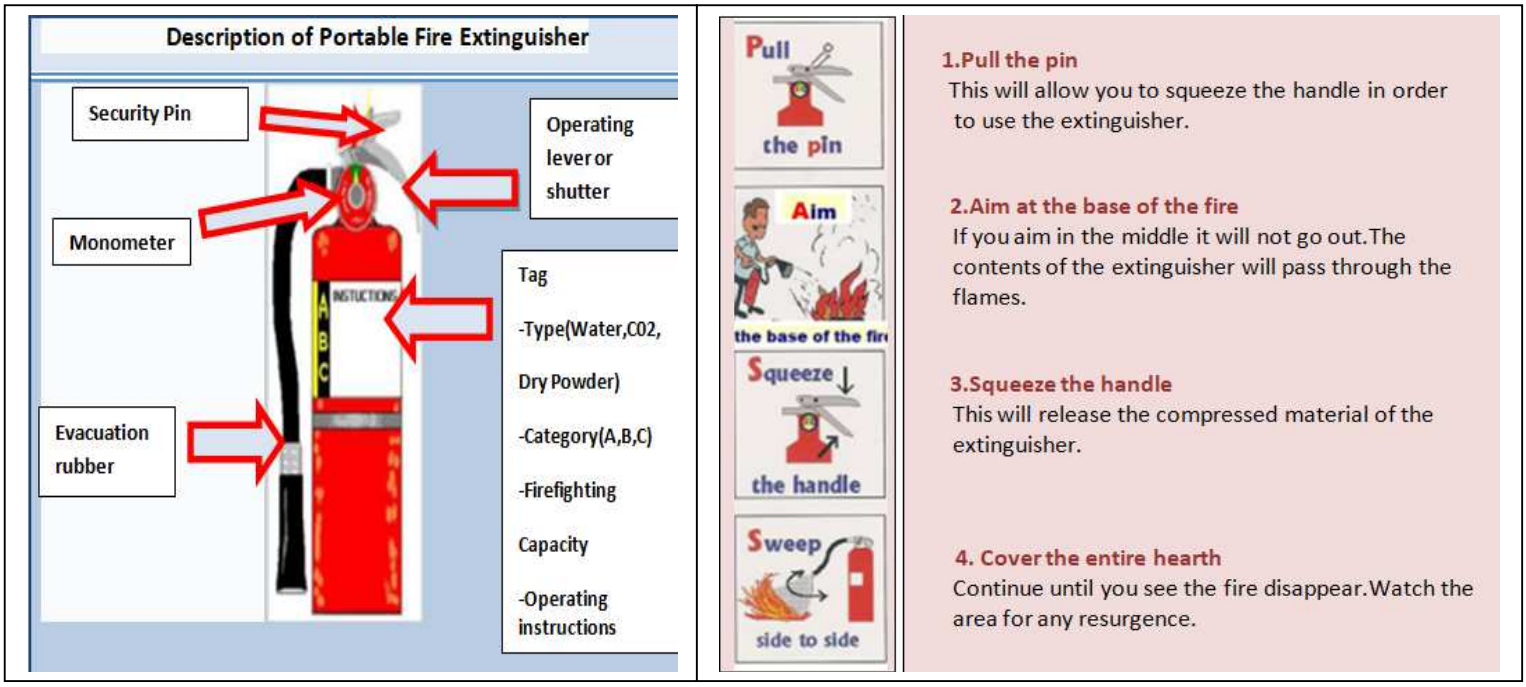
Assembly point

Emergency Exit

6. Firefighting- Firefighting means

Fires, depending on the material that burns, are divided into four categories: A, B, C, D.

- ✓ **A: Solid fuel materials.** Usually of organic composition (wood, paper, straw, tires, some plastics, etc.).
- ✓ **B: Liquid fuel materials** or solids that liquefy during combustion (ether, alcohol, petrol, oils, fats, grease, wax, etc.).
- ✓ **C: Gaseous fuel materials** (e.g. methane, propane, hydrogen, acetylene, etc.).
- ✓ **D: Metals** (e.g. sodium, potassium, magnesium, titanium, etc.).
- ✓ **E: Electrical fires**. In the literature a fifth category is mentioned E, which is essentially one of the above cases but with the significant presence of electricity.



We remember the English word P A S S as an acronym.

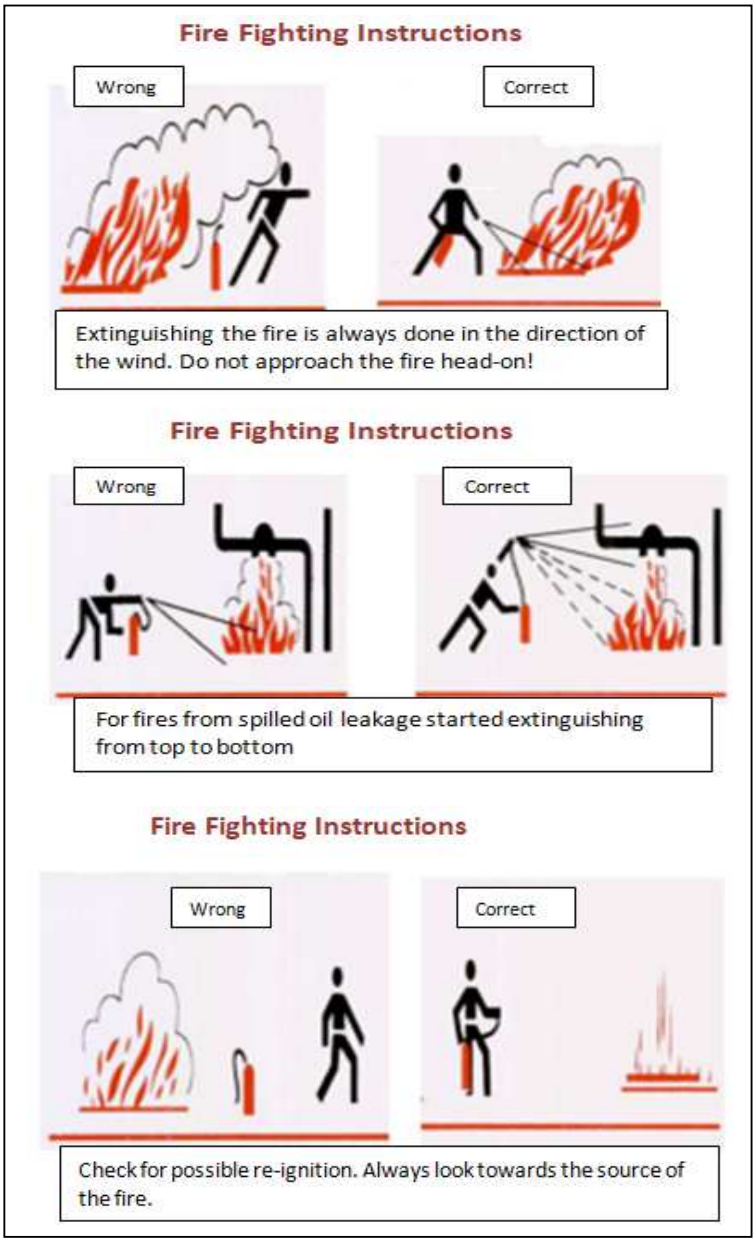
In the event of a fire and the use of fire extinguishers we act as follows:

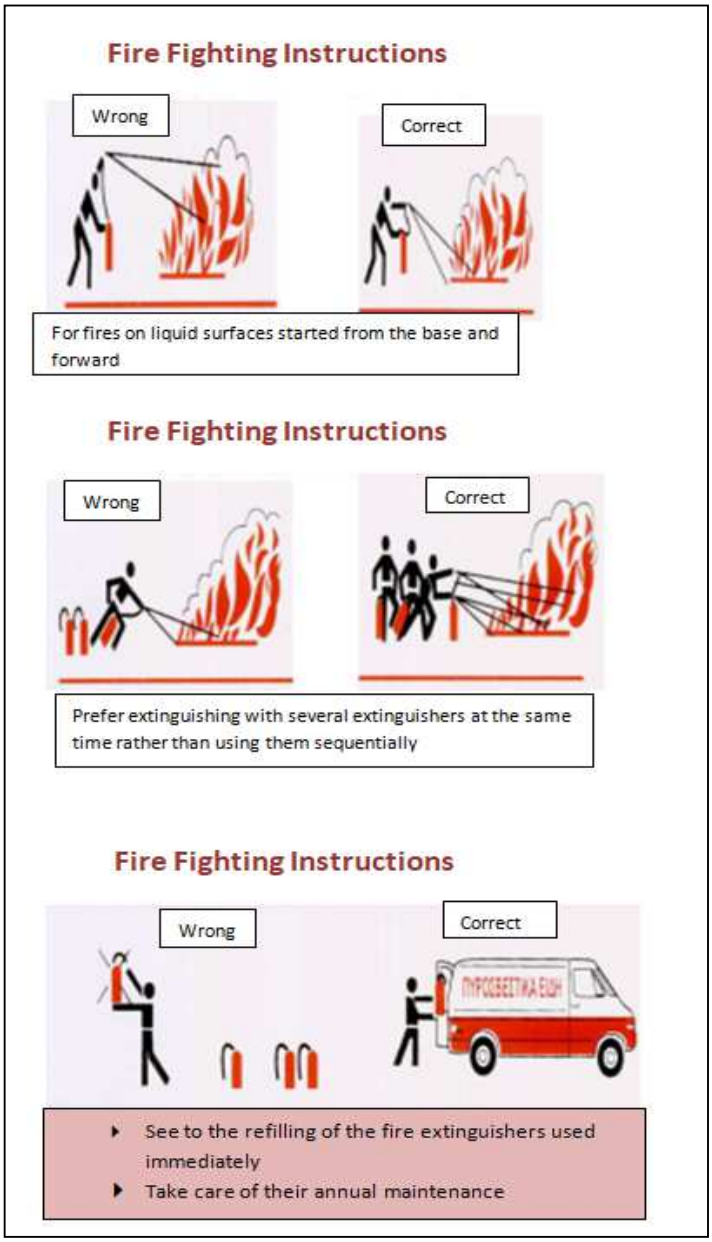
- first pull the safety pin and press the handle of the extinguisher (some extinguishers have a safety pin which needs to be removed before they can be put into operation)
- **direct the extinguishing liquid to the base of the fire and not to the flames**
- **sweep from edge to edge, directing the extinguishing material to the base of the fire, move the extinguisher right and left in such a way that the entire surface of the fire is swept and until the fire is completely extinguished**
- we try to have the wind on our side and not against us
- we make sure that we can escape, so that if we realize that we cannot do anything, we can easily escape.

Most fire extinguishers work according to the above instructions, but some do not. For them, the specific instructions for use indicated by the manufacturer should be followed.

When used correctly, a portable fire extinguisher can save lives and property by being able to put out a small fire or bring a larger fire under control until the fire brigade arrives. Portable fire extinguishers, of course, are not designed for fighting large or rapidly developing fires. However, even in small fires they are very useful and effective, if used in the right way.

<u>Special care is required when handling CO_2 carbon dioxide extinguishers, because the contents of these extinguishers can cause burns on contact with bare skin.</u>





7. SPECIAL SAFETY RULES AT THE INSTALLATIONS OF THE MEL

- Contractors' foremen are responsible to:
  - ✓ Check that all staff are equipped with appropriate PPE.
  - ✓ Ensure that PPE is used by staff,
  - ✓ Ensure that PPE is adequately maintained and
  - ✓ They check if working conditions change and require additional or different PPE. If the foremen are in doubt about anything they should seek assistance from the Contractor's Supervising Engineer or TA.
  - ✓ Where multiple protection is needed, PPE that adapts or fits without creating a problem (another risk, reduced protection) is selected.
  - ✓ The PPE chosen must not create other risks for the user or others.
  - ✓ Head and foot PPE must always be used on a construction site at or accessing workplaces.
  - ✓ PPE requires good and diligent cleaning.
  - ✓ PPE requires constant inspection for wear and tear and immediate replacement in case of wear or damage.
  - ✓ PPE must be of good quality and bear the CE mark.
  - ✓ PPE must be used correctly, in accordance with the manufacturers' instructions.
  - ✓ PPE must be used at all times by workers where provided.
  - ✓ It is necessary to train and inform workers on the usefulness and use of PPE.
  - ✓ It is the duty of all workers to use PPE.

7.2. Boiler room

There are 4 boilers in the boiler room of MEL. Two of them operate with fuel oil and the other 2 with biomass or pellets. The maintenance working conditions in boilers are subject to the following rules

1. **All welders who may be employed should be licensed for pressure welding**
2. **The work starts only if permission to start the work is given by the heater or the head of the department**
3. **In all cases it should be ensured that the fuel flow to the boiler is stopped and that there is no steam pressure in the boiler or air pressure in the pressure vessels.**

7.3 PPE

It is necessary to use the following Personal Protective Equipment in all areas of the factory

1) **A. Work uniform**
2) **B. Safety footwear with tread and toe protection**
3) **High definition vest**
4) **Safety helmet in all areas**

In addition, the following should always be used during the work

1) **Work gloves**
2) **Eye protection goggles or visor**

***Special PPE is required depending on the work assigned**

7.4 . General rules

In any case, approval must be obtained from the supervisor of the MRL before starting any work

1) **Passage through the area of the Raw paper materials is forbidden except in the case where there is work in this area**
2) **Traffic on outdoor roads with vehicles is limited to a maximum speed of 20 km / h and in indoor areas not to exceed 5 km / h**
3) **It is forbidden to be on the premises of the Finished Product and Packaging Warehouses without permission from the head of this department.**
4) **Smoking is generally prohibited in all areas except in specially designated smoking areas with a special sign.**
5) **It is forbidden to enter electrical cabinet rooms unless permission has been given by an authorised personel**
6) **Leaving the area is only possible after informing the relevant supervisor of the MEL.**
7) **Pedestrian movements in areas where vehicles are moving are only possible from the marked corridors**
8) **The use of fluorescent vests is mandatory in all synergies in all areas of the plant.**
9) **No unnecessary movement to places other than the workplace is permitted**
10) **No eating in areas other than the designated rest areas (canopies) and the restaurant**
11) **All rubbish to be disposed of in special rubbish bins**

12) **Stairs. The factory's available stairs are located at specific points indicated by signs. They shall be used only after approval of the supervising supervisor and shall be returned to the same storage location.**

13. Hot work instruction

Where the work involves hot work, i.e., use of a wheel, all types of metal welding, cutting with an acetylene oxygen device, a hot work instruction must be issued to the workshop supervisor.

The form of the instruction is given on the next page and contains all the necessary measurements to be taken before, during and after the work.

- It is necessary to supplement the instructions for the performance of hot work in all cases where it takes place outside the engine room.
- Before starting the work, the Engineer-in-Charge completes the form, hands it to the Manager of the Company performing the work and signs it.
- In any hot work, the Contractor (or the Responsible Engineer), if any, is responsible to observe all fire safety measures listed.
- The Safety Technician must visit the site to check that the Protection Measures are observed as recorded in this Directive.

Hot Work Instruction

Date: ……
Responsible Contractor (or internal part):
……
Working Point (Department, floor, space): ……

TYPE OF THERMAL WORK
☐ open flame cutting/oxygen ☐ wheel ☐ electrowelding ☐ shrinking / hot gluing.
☐ roof work
……

Names of persons performing the work

S/N	NAME	SPECIALITY

Starting work: …… Scheduled expiry:
…….. Final termination:……
Maximum power duration: 24 hours

Emergency phone number: 143	Nearest phone:

Measures taken before the start of work.

Object	Power
Work area	Definition of dangerous area, separation with tape (r=10m, securing of floor openings)
	Safety instructions from supervisor
	Removal of any flammable materials (liquids, gases, solids)
	Covering them with fire-resistant materials
	Washing / cleaning of pipes, containers, devices / Covering openings
	Inspection for safety of work equipment
Area of firefighting measures	☐ Fire extinguishers: CO2 ☐ Dry land ☐ Foam ☐ Fire hydrant/hose ready for use in the work area
Factory fire detection/alarm system	If the fire alarm is deactivated, inform the fire service and fire protection team and determine an alternative alarm mode
Alert team	Instructions for fire control
Others	

Measures during work

Object	Power
Alert team	Continuous supervision of the hazardous area (also during breaks)
Interruption	The person carrying out the work must put the work equipment in a safe condition (power cut, gas switches off, etc.)

Measures to be followed after work has been carried out

Object	Power
Work area	Remove all equipment from the work area
	Remove all covers with care
Factory fire detection/alarm system	Reconnection of fire detection/alarm system
	Notification of fire protection team / fire brigade
Team/person on alert	Inspection after 30 minutes after completion of work, and then every 30 minutes up to 4 hours (fire extinguishers remain available near the site)
Completion (after the end of alert)	Removal of dividers Removal of additional firefighting equipment, reporting any incidents

From the Health and Safety Department

Persons involved

Responsible Engineer MEL	**Contractor/Equipment Manager**	**Safety Technician**
SIGNATURE AND NAME	SIGNATURE AND NAME	SIGNATURE AND NAME

8. IDENTIFIED RISKS

8.1 Hazards in construction Project

1. There should be a corresponding power supply board.

Installation of site electricity supply	Electric shock	Workplace distribution board 

2. There should be fencing at a distance around the perimeter of the pit.

General project excavation	Overwhelming	Slopes/Zone free of loads 

3. Dangerous points during construction work.

Staircases	Falling from a height	Stair handrails

Floor openings	Falling from a height	Covers 

Excavation access	Falling from a height	Walkways with handrails 

Roof	Cleaning roof gutters	Falling from a height	PPE against falls from a height (provision is required at the design stage)  Aerial work platform (basket carrier) 

Excavation collapse and falls of materials and persons from a height	• Control of excavation fronts and cutting of unsafe (dangerous) volumes. • Marking unsafe (hazardous) jobs. • Supporting slopes, manhole walls, adjacent buildings, pillars, etc. • Appropriate slope design and controlled water pumping for stability reasons. • For excavations in boggy or soft soils, a working method should be used which does not require workers to enter the excavation. • Fencing at least 110 cm high, near the edges of the excavation. • Deposit of materials and parking of machinery at a safe distance from the lip of the excavation. • Safe means of access, e.g. safe staircases, portable stairs (with rests and handrails, where required) and bridges-passes with sturdy floors and handrails. • Ladders should be installed in the wells. • Use of minimum necessary PPE.*
Worker involvement with machinery	• Good visibility of the operator. • Adequate space for maneuvers of machinery. • Use of vehicles equipped with audible and visual signals.

BRIEF DESCRIPTION OF THE ACTIVITY

Construction of the formwork (or metal formwork) and its support with scaffolding (towers), as well as its removal after the end of concreting. Placement of the iron reinforcement and then the completion of the formwork. Execution of concreting works including the construction of unreinforced concrete.

Formwork collapse	• Checking and using materials that are in good condition and replacing those that are worn out. • Completeness of assembly of the formwork support scaffolding in accordance with the configuration drawings and/or the manufacturer's instructions. • During the construction of the formwork or metal formwork, the case of earthquake and wind must be taken into account. • Trimming and securing of the formwork of the columns according to the configuration drawings and/or the manufacturer's instructions. • Prohibit movement under the formwork during concreting and concrete maintenance. • Use of minimum necessary PPE and safety belts.
Fall of persons from a height	• Safe workplaces, solid and well-fixed portable stairs, ramps, bridges-passes with sturdy floors and railings (handrails). • Marking unsafe (hazardous) jobs. • Checking and using materials that are in good condition and replacing those that are worn out. • Work floors should not be overloaded and there should be no gaps in the moulded floors. • Parallel construction of a scaffolding facade that facilitates and ensures the movement of personnel and materials around the formwork. • Protection from falling on edges of slabs, floors, shuttering, openings, with appropriate handrails or other suitable barriers. • Use of safety nets. • Use of minimum necessary PPE and safety belts.

Falls of materials and objects from height.	• Construction of a protective apron and / or collector shells. • The materials must be deposited in an orderly manner, ensuring the stability of their piles and facilitating their transport. • Work floors should not be overloaded and there should be no gaps in the moulded floors. • Use of scaffolding and work platforms equipped with appropriate screens, safety nets or other suitable barriers. • Installation of suitable handrails fitted with screens (parapets) or other suitable barriers to protect against falling at the edges of slabs, floors, formwork, openings and work platforms. • Use of safety nets. • Control and correct use of appropriate wire ropes. • Use of minimum necessary PPE.
Scaffolding collapse (facade and work)	• Checking and using materials that are in good condition and replacing those that are worn out. • Completeness of assembly of scaffolding in accordance with the configuration drawings and/or manufacturer's instructions. • When erecting the scaffolding, the case of earthquake and wind must be taken into account. • Ensure the stability of the scaffolding by using secure connections to the permanent structure or by other means, in accordance with the relevant design and/or the manufacturer's instructions. • Secure anchoring of the scaffolding on clean and stable ground with the use of suitable pedestals (metal bases of adjustable height). • Use of minimum necessary PPE and safety belts.
Worker involvement with machinery	• Good operator visibility. • Sufficient space for manoeuvring machinery. • Use of vehicles equipped with audible and visual signals. • Coordination of the movement of machinery and personnel by a supervisor or signaller and special attention to the movement of the crane and the concrete pump. • Configuration of employee access corridors. • Use of minimum necessary PPE. • Placement of small cranes for lifting materials in positions of sufficient strength. • Fixed connection of the passengers to the permanent structure. • Use of appropriate machinery/vehicles (fitted with the necessary bumpers and safety devices).

8.2 Risks in Construction Project

BRIEF DESCRIPTION OF THE ACTIVITY Ironwork for the construction and maintenance of metal buildings and their individual components.	

Fall of persons from a height	• Safe workplaces, solid and well-fixed portable stairs, ramps, bridges-passes with sturdy floors and railings (handrails). • Do not use tripods or portable ladders near floor edges. • Installation of suitable handrails fitted with screens (parapets) or other suitable barriers to protect against falling at the edges of slabs, floors, openings and work platforms. • Marking unsafe (hazardous) jobs. • Checking and using materials that are in good condition and replacing those that are worn out. • Work floors should not be overloaded and there should be no gaps in the moulded floors. • Parallel construction of a scaffolding facade that facilitates and ensures the work and movement of personnel and materials. • Use of safety nets. • Use of minimum necessary PPE and safety belts.
Falls of materials and objects from height.	• Construction of protective covering and/or collecting devices. • The materials must be deposited in an orderly manner, ensuring the stability of their piles and facilitating their transport. • Work floors should not be overloaded and there should be no gaps in the moulded floors. • Installation of suitable handrails fitted with screens (parapets) or other suitable barriers to protect against falling at the edges of slabs, floors, openings and work platforms. • Use of safety nets. • Control and correct use of appropriate wire ropes. • In general, as far as possible, the parts of the structure should be constructed in the ground and then placed in their final position at height.

	• Use of minimum necessary PPE.
Worker involvement with machinery	• Good operator visibility. • Sufficient space for manoeuvring machinery. • Use of vehicles equipped with audible and visual signals. • Coordination of the movement of machinery and personnel by a supervisor or signaller and special attention to the movement of the crane and the concrete pump. • Configuration of employee access corridors. • Use of minimum necessary PPE. • Placement of small cranes for lifting materials in positions of sufficient strength. • Fixed connection of the passengers to the permanent structure. • Use of appropriate machinery/vehicles (fitted with the necessary bumpers and safety devices).
Collision during the movement of machinery	• Use of machinery equipped with audio and visual signals. • Coordination of machinery movement by a supervisor or marker. • Configuration of employee access corridors. • Appropriate signage of works at the exit of the construction site and regulation of traffic according to the Road Traffic Code, definition and observance of site traffic rules.
Chemical burns from concrete	• Use of minimum necessary PPE, goggles, gloves and appropriate clothing.

8.3. Hazards in installation work

BRIEF DESCRIPTION OF ACTIVITY

Installations of heating, air conditioning, ventilation systems, drainage and hydraulic systems. Installation of piping, control circuits, radiators, air conditioning units, ventilation ducts and sanitary ware and other systems in construction. Installation of elevator.	

Falling of materials and persons from a height or falling into the elevator shaft	• Safe workplaces, solid and well-fixed portable ladders and bridging-passages and scaffolding with durable clean floors (not overloaded) and railings (handrails). Do not place tripods (trestles) on balconies. • Safe and solid workplaces in the elevator shaft. Blocking access or covering the shaft opening with solid constructions. During the installation of the elevator system, the doors of the floors must be secured. • Marking and fencing of openings in slabs for the passage of ducts or ladders. • Placement of small cranes or winches/palagons to lift materials in positions of sufficient strength. • Prohibited the use of worn booms/wire ropes on cranes. • Edge fall protection by use of safety nets and safety belts adequately lashed or lashed to the building. • Protection from falling on the edges of slabs, floors, in formwork, in openings, with suitable railings or other suitable obstacles. • The mobile scaffolds must meet the stability specifications according to the manufacturer's instructions and/or the relevant study. They must be equipped with suitable railings and brakes on all wheels. The functionality of the brakes must be checked before each use. • Use of minimum required PPE* and tool belt.

Fire	• Elaboration and implementation of an Emergency Plan. • Control and use of fire extinguishers or other fire extinguishing means. • Implementation of a written work permit system, where required. • Use of non-return valves and flame arresters. • Checking welding nozzles (handles with picks), flame valve, gas cylinders, pressure pipes, cables and welding generator and use electrodes only of those they have. • The oxygen in the vessels should not come into contact with lubricants (the shutters are not lubricated) and iron filings. • Welders should wear protective leather aprons and their clothing should not be soiled with oils and petroleum. • Check for residual sparks up to half an hour after welding or cutting work. • Isolation of the workplace. • During the testing of the installations, no workers should be present near dangerous points (elevator motors, elevator doors, heating boilers). • Tools and mechanical equipment must be certified and regularly maintained. • Use of minimum necessary PPE*.

Electric shock	• Ensuring safe movement of networks by the competent Authority • In cases where it is impossible to safely move the network outside the construction site or to deactivate the power lines: – marking of live conductors – placing appropriate barriers or taking other measures in cooperation with the supervisor and the competent Authority • Ensuring a sufficient distance of machines, equipment, tools, from electric cables. • Use of suitable portable electric tools of double insulation type with appropriate marking (two concentric squares). • Installation and daily control of the operation of the automatic circuit breaker (RCD) before starting work. • Use of power outlets, sockets, electrical panels of waterproof type. • Adequacy and completeness of the electrical network of the construction site (insulation and strength wiring, grounding, etc.).

8.4. Hazards of Working on Electrical Panels

EXPECTED HAZARDS :Electrical maintenance workers

The effect of electric current on human physiology and its consequences The passage of high-intensity electric current through the human body causes muscle contractions. In the case of the muscles of the hands, the hand is unable to detach from the point of electrical contact. When the current acts on the area of the thoracic cavity, it results in an interruption of breathing. The effect on the heart can have devastating effects, e.g. irregular heartbeat, cessation of blood circulation, etc. For the passage of electric current in the human body there are generally the following (4) cases. The severity of an electric shock in humans depends on:

Low resistance = high current flow = high risk = fatal accident.

High resistance = low current flow = low risk = electric shock.

Current intensities of up to 10 mA are considered harmless to humans, causing only a slight numbness. Current intensities between 10 -20 mA cause muscle contractions, such that it is impossible to detach the hand from the point of electrical contact. Current intensities of more than 20 mA lead to muscular contractions of the respiratory system, resulting in apnoea and an increase in pressure. Voltages above 60 mA with a contact duration of more than 0.3 sec, present the phenomenon of ventricular fibrillation and require immediate first aid to the electrocautery victim.

GENERAL SAFETY MEASURES WHEN CARRYING OUT WORK WITH ELECTRICAL TOOLS AND ELECTRICAL WORK

We must never forget that the commonly used voltages are deadly and that dangerous conditions are often created by the careless treatment and solution of the various problems that can occur in the

electrical appliances, machinery or installations. Extension cords, for example, are one of the biggest causes of accidents. Often their insulation or plugs are broken or damaged, making them dangerous for fire or electric shock. Equally dangerous are unstable appliances or machinery of all types and sizes.

For your safety you should not forget the following

- ✓ Any interference by a worker in the electromechanical installations is FORBIDDEN. The only person who may intervene is the licensed electrician in charge and only for those installations permitted by their license.
  DO NOT operate electrical appliances, machines or switches with wet hands.
- ✓ The central electrical panel from which the appliances and equipment are powered shall be equipped with an anti-electrical escape switch.
- ✓ Any damaged or worn electrical appliance cable, any broken switch or socket, any lost cover of an internal electrical installation junction box shall be restored immediately
- ✓ To disconnect the power from any appliance, you must pull the plug from the socket and NOT the cord, otherwise you may cause damage to the connection to the appliance, very dangerous for your physical integrity.
- ✓ The cables and sockets of electrical appliances or machines must be in perfect condition.
- ✓ Never overload an outlet or circuit. The preceding applies and even more so when an extension cord is used. Make sure that the extension cord you use is appropriate for the device you are using it for.
- ✓ The insulation of the electrical cables of machines, tools, devices etc. must be in perfect condition. Wear and tear strips the cables, resulting in fires and/or electric shock. To protect the insulation it is necessary to :
  - Do not touch the cables with materials that can damage or compress them, such as sharp corners, doorways, glass, iron, etc.
  - Do not allow cables to be stepped on by heavy objects.

- Do not rub the cables on the opening of windows, doors and do not touch hot surfaces such as radiators, etc.
- Do not pull the sockets from the cables of the appliances because then they are worn out, resulting in the destruction of both their insulation and their connection to the sockets.

✓ Do not touch switches, sockets and electrical appliances in general with wet hands, because in these cases the resistance of your hands is significantly reduced. This reduction often reaches a ratio of up to 1 : 100, i.e. 10,000 units of electrical resistance can be reduced to 1000, at which level the risk of electric shock is high.

✓ **Use of certified (CE), insulated tools and equipment**, regular inspection for their good condition, repair/replacement of worn tools, sockets, cables, plugs, etc.

✓ **In cases of repair and maintenance work**, the power supply must be switched off. The following precautions should therefore be taken:

- To lower the general switch
- Preventively remove the general fuse or fuses when three-phase current is involved and have them kept by the responsible electrician.
- Determine whether the phase has actually been interrupted by the circuit breaker and the fuse, e.g. it is possible that instead of the phase passing through the circuit breaker and the fuse, the neutral passes through.
- There should be a warning sign with the indication <<ATTENTION: WORK ON THE LINE>>.
- For greater security, use the panel lock system.

✓ The following must be observed when using portable electrical appliances, mobile projectors and machines that operate with 220/380 Volt electricity:

- Power cables should be routed away from the normal movement of personnel, vehicles and materials so as not to create hazards.
- The routes and locations of the power supply cables should in any case be adequately marked. At points where dangerous conditions are likely to arise, the movement of vehicles, machinery, etc. should be prevented.

- When installing power cables on floors, the floors should be free of sharp objects -materials, oils-oil, thinners and others, which may cause damage to the cables.

- In places where vehicles-machinery are usually moved, the passing power cables should be additionally secured by placing special protective coating floors.

All installation and power cables should include a grounding conductor, even in cases where the tools used do not require grounding.

- ✓ Portable cable extensions should be in excellent condition and have rubber plugs.
- ✓ Apply all required protective devices based on the manufacturer's user manuals (e.g. covers where there are moving parts).

SAFETY MEASURES FOR CARRYING OUT WORK CLOSE TO SUBMERGED CIRCUITS

When works are performed near live elements that do not have direct contact protection, the following must be checked first:

- ✓ If there is a voltage shortage and ensure that it is maintained throughout its duration.
- ✓ Cover or enclose live components taking into account the magnitude of the voltage of the electrical current, the place of work, the type of work and the work equipment used
- ✓ Safety clearances must be observed when it is not possible to cover or enclose live elements.
- ✓ The protection through the cover and fencing is fulfilled if :
- ✓ For voltage up to 1000 V the live electrical elements are insulated or covered
- ✓ Safety devices (partitions) for voltages up to 1000 V must be placed at such a distance that direct contact is prevented (safety distances).

USE OF APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT WHEN PERFORMING WORK UNDER THE INFLUENCE

Special tools with insulating grips (DIN 48699) and suitable personal protective equipment (helmet, insulating covers, insulating gloves, anti-static footwear, insulating pedestals, insulating partitions) must be used to carry out the work under voltage.

IMMEDIATE ACTIONS IN CASE OF ELECTRIC SHOCK

In case of an electric shock, your intervention should be immediate and without delay.

Your first action will be to stop any proposed electrical contact due to the victim's muscle spasm. This interruption, if there is no nearby switch, should be made with the aid of an insulating body, e.g. dry wood, rope, leather belt, etc. At the same time you should step on a dry, non-conductive floor (covered with dry newspapers, fabrics, wood), so as to ensure the necessary insulation from the earth.

Your second action should be, if the victim is not breathing, the immediate and continuous application of CPR. Any unnecessary transfer is prohibited

At the same time, a doctor and/or 166 should be notified.

8.5 Use of cranes and lifting equipment

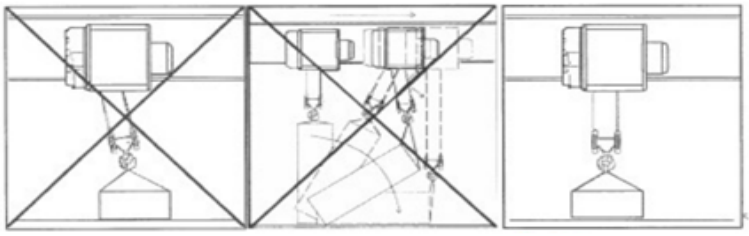
- If the overhead travelling cranes is equipped with immobilizers (a brake that locks the overhead travelling cranes to the track), make sure to deactivate it.
- Make sure that all control buttons are in the <<zero>> position before turning on the overhead travelling cranes
- Activate overhead travelling cranes by turning the red emegency switch on the controller
- Make sure that all safety limit switches are working
  Make sure that the brakes in all directions are working properly

- GENERAL
- The wire ropes must have known sufficient capacity, be of the correct length and be free of deformation.

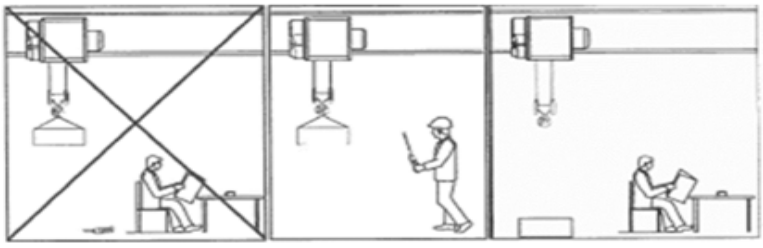
- The load shall not be allowed to be dragged or pulled on the ground so as to create lateral traction
- The starting and stopping of the overhead travelling cranes must be done at the lowest speed in order to avoid a large swing of the load
- Do not lift people on the hook or on the load
- Do not attempt to lift a load that is tied to the ground or is greater than the rated lifting capacity of the overhead travelling cranes

- Make sure that the gantry crane is vertically above the load when lifting it.

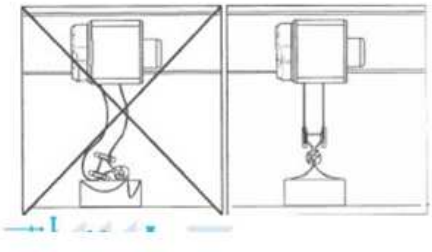
- Before moving the load, check that it is secured by lifting it a few centimetres off the ground.

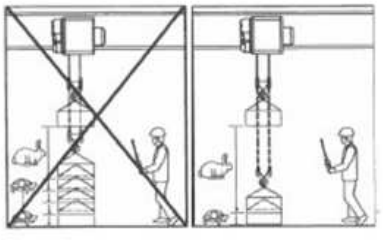


- It is forbidden to leave his seat or the control until he has safely deposited the transported load.



- Lift the load as much as necessary to avoid hitting possible obstacles, but not more than necessary.
- Avoid lifting the hook up to the activation point of the top limit switch.





- Raise the hook as high as possible, but not to the upper limit switch.
- All control buttons should be in the zero position.
- Turn off the general power switch.
- Engage the mechanical brakes if available.
- Notify the shift supervisor or the next operator of any problems encountered during operation overhead travelling cranes

- Stay focused on the load, the boom and your handler.
- If you are assisting with the lifting, use a rope to handle the load.
- Never tie the rope to your body or hands.
- Be careful not to lift or move the load, lest it catch another material in its path.
- Do not stand stand under suspended loads or even empty crane booms at any circumstances .