



ArcelorMittal

Fatality Prevention Standards Safety – from priority to value

F
P
S

Isolation



F
P
S

Confined Spaces



F
P
S

Working at Height



F
P
S

Rail Safety



F
P
S

Shop floor Audits
Layered Evaluations



F
P
S

Vehicles and Driving



F
P
S

HIRA



Cranes and Lifting

F
P
S



Contractors

F
P
S



Alert and Emergency Preparedness

F
P
S



Safety Metrics

F
P
S



Incident Investigation

F
P
S



Working in Gas Hazard Areas

F
P
S



AM
001

Isolation

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1. The Standard concerns disconnecting and securing the sources of energy before you start to perform work of varying character, such as housekeeping, servicing, repair and all other types of work, in such a way as to protect employees, environment and assets.
2. The Standard is applicable to all types of hazardous energy and substances:
 - **Hazardous energy:**
 - electrical,
 - pneumatic,
 - hydraulic,
 - heat (steam, hot water),
 - potential energy,
 - accumulated energy (e.g. battery),
 - radiation.
 - **Hazardous substance:**
 - gas,
 - fumes,
 - liquids,
 - dust.
3. Energy lockout is performed by an **AUTHORIZED PERSON, competent for a given area.** The task of such a person is to check if the machine has been correctly secured before any work is started following the rule that: **ANY ENERGY THAT PUTS ONE AT RISK MUST BE LOCKED OUT.**



4. Isolation is performed in line with the specific scheme:

Scheme to be followed:

- All employees concerned in a given area are informed that lock-out or tag-out procedure has been initiated.
- Device is switched off.
- Device is locked out and tagged out in points designed for this purpose.
- Lockout correctness checked.
- Device restart after work has been completed.



- No person other than the lockout owner is authorized to attach or remove the lock.



AM Confined 002 Spaces

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1. Confined space – is a space where movement of a man is limited or physically restricted, is not intended or designed primarily as a place of work. It may have limited or restricted entry and exit (e.g. manhole) and it may involve the following hazards:

- an atmosphere which contains potentially harmful contaminants (gases, vapors),
- not a safe level of oxygen,
- entrapment or engulfment.

Confined spaces include, but are not limited to:

- storage tanks, containers used in technological process, boilers, pressure vessels, tank-like compartments that have only a manhole for entry, ceiling and floor spaces.
- open-topped spaces such as pits, grease traps or excavations more than 1,5 meters deep.
- pipes, pumps, sewers, shafts, ducts, drains, tunnels, cellars, spaces under equipments/installations, basements and similar structures.



2. Marking

Signs must be erected at or near by the entries of all confined spaces.

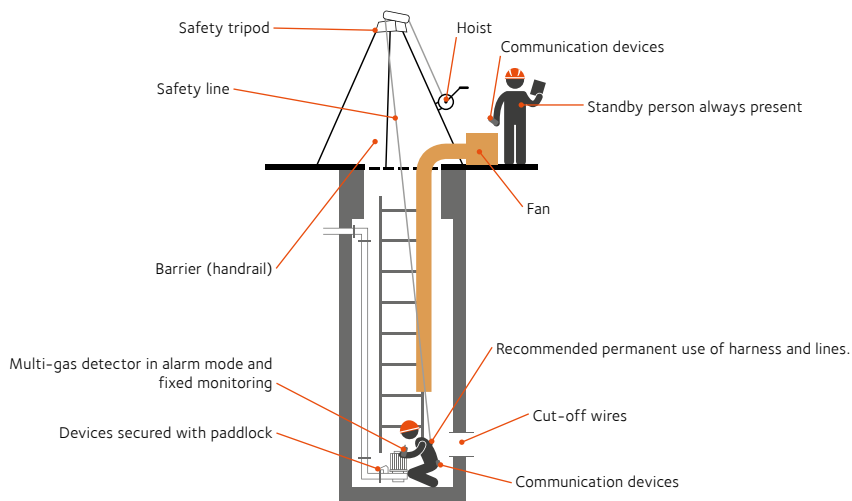


3. Principles of work in confined spaces

Work in confined spaces is one of particularly hazardous works which take place on the premises of the Company and is subject to all legal requirements related to this kind of work.

Before starting work in confined spaces you need to:

- Perform identification of hazards and risk assessment.
- Identify and ensure technical and organizational means ensuring safety in the work place and effective safeguarding and evacuation if necessary.
- Equip employees in respiratory protection equipment and gas detectors.
- Check the ability to use respiratory protection equipment and gas detectors.
- Equip employees in fall protection equipment – safety lines and harness and identify anchorage points.
- Create additional operational instructions for fire hazardous works (cutting, welding) and works with the use of chemicals (cleaning).

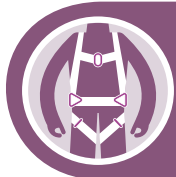


REMEMBER

You cannot use respiratory protection equipment or gas detectors which are used or lack calibration.

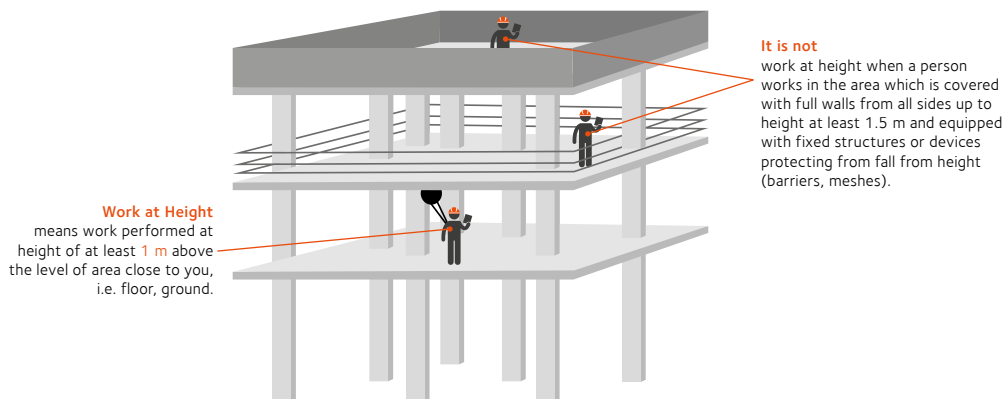
4. You can start works in confined spaces after you:

- have up-to-date, **approved permit for works** in confined space/ gas hazardous area or in case of confined space which doesn't require written permit, after reporting the need to enter to the person responsible for facility/device and signing in the report book the confirmation that you will enter the confined space,
- **cutting off** the supply of all energy media,
- **ventilating** the confined space,
- discussing the **scope and methods of work**, making yourself familiar with HIRA,
- checking the contents of **gases and vapors** in the atmosphere inside the confined space and acquiring the measurement result compliant with safe working conditions,
- obtaining **admission** from a person responsible for facility/device.



AM Praca 003 na wysokości

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Use only the equipment which is certified and checked before use.

When the falling distance is below 4 meters **use** fall arresters.



+



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When the falling distance is greater than 4 meters use line fitted with a shock absorber.



CAUTION!
WORKERS
ABOVE

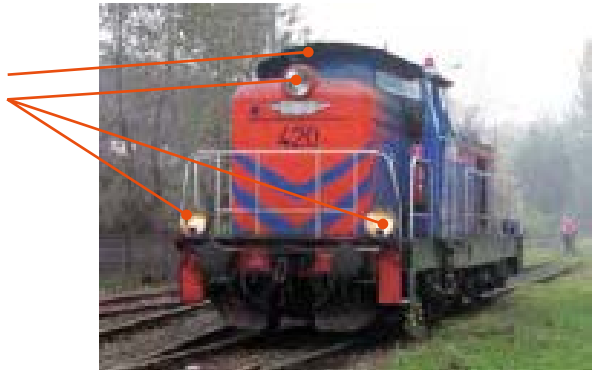
CAUTION!
WORKS AT HEIGHT.
NO ENTRY

- Carry out detailed hazard identification and risk assessment.
- For each work an emergency procedure should be developed.
- Each fall from ladder may be fatal, hence manlift, scaffolding, movable platform, caged ladders should be used for work instead of the ladder.









AM 004 Rail Safety



- Work in railway operations involves high risk of accident.
- Before you start work, inform the switch tower operator or Kolprem company about work to be performed.
- Rail vehicles always have the right of way.
- Each person that is to perform work in **the distance equal to or below 3 meters** from the railway track must be protected from movement of rail vehicles by **cutting out track** using derailer or switch lock.
- A locomotive must be equipped with head lights and sound signaling, e.g. siren. Loco movement must be preceded by sounding the siren and switching the headlights on.



- Use only the approved railway crossings which should be marked and illuminated. Stop the vehicle in front of each railway crossing, irrespective of whether you can see a train approaching or not.
- Cross the tracks only in designated and marked places.
- Do not leave railcars without rail car stops installed.
- It is prohibited for a loco to enter the loading point when red light is on.

V-50 km/h		Lh-10 m
V-100 km/h		Lh-40 m
V-60 km/h		Lh-400-500 m
V-60-80 km/h		Lh-700 m

Braking distance: where V stands for speed of vehicle, Lh= braking distance.



AM Shop floor Audits/ 005 Layered Evaluations

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1. This Standard is designed to increase the employees engagement in the compliance with safety rules. It is based on discussions between managers and employees.

2. The objectives of the audits are:

- observations of activities performed by the employee,
- consolidation of the existing norms,
- establishing safe working methods,
- discussion on the newly introduced and existing safety rules,
- correcting the unsafe behaviors.



3. Shop floor audits should be performer by:

- shift leaders and foremen – **internal audits**, which are an element of everyday work. During these audits, based on previous observations, the superior talks directly to the employee about safe working methods;
- directors, line managers, specialists – **external audits** performed in line with previously prepared schedule, during which hazards occurring in specific job positions, safe working methods and suggestions for improvement are discussed with employees.

4. A summary of material observations and discussions during the process must be documented. This summary must include:

- A list of the observed and discussed commendable actions.
- Safety actions to be followed up as a result of the activities.
- A list of responsible persons and timing.
- The at-risk issues categorized and ranked according to the potential for injury.



5. Process to be followed:

- Activity must be conducted in an open, positive and personal manner.
- The focus of the process must be on work activity and behavior.
- Discussions should be two-way, including open questions.
- Feedback should be given to the employee and in case of observing unsafe practices it is necessary to explain what the unsafe act consisted in.
- The trend in observations and action plans must be followed up to ensure systematic issues are eliminated.



AM Vehicles 006 and Driving

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- Only authorized persons with appropriate qualifications and licenses are allowed to drive a vehicle.
- All vehicles used for work must be equipped with fixed seats and seat belts for the driver and all passengers unless the risk assessment determines otherwise.
- Remember about the speed limit (Kraków, Dąbrowa Górnicza, Zdzieszowice - 40 km/h; Sosnowiec, Świętochłowice, Chorzów - 20 km/h).
- Park only in designated areas. Parked vehicle should have the engine turned off, the keys removed from the ignition, and the handbrake applied.
- Do not use the phone while driving, and if you need to, use the speakerphone.
- Remember about the passing lights.



Switch on the lights. Switch on your thinking.

- Fasten the seatbelts – live.
- Stop before every railway crossing and the STOP sign.
- Smoking when driving is forbidden.

Best practices

1. During loading and/or unloading operations use wheel locking device.
2. Follow the golden rules and driver's obligations posted in the loading/unloading stations.





AM 007 Cranes and lifting

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All lifting devices should be equipped with name plates identifying the crane, displayed in a visible place so that it is possible to check them if needed.

In case of high risk or non-standard lifting operations:

- identify risks,
- analyze risks,
- establish the crane category,
- develop lifting plan,
- put controls in place.

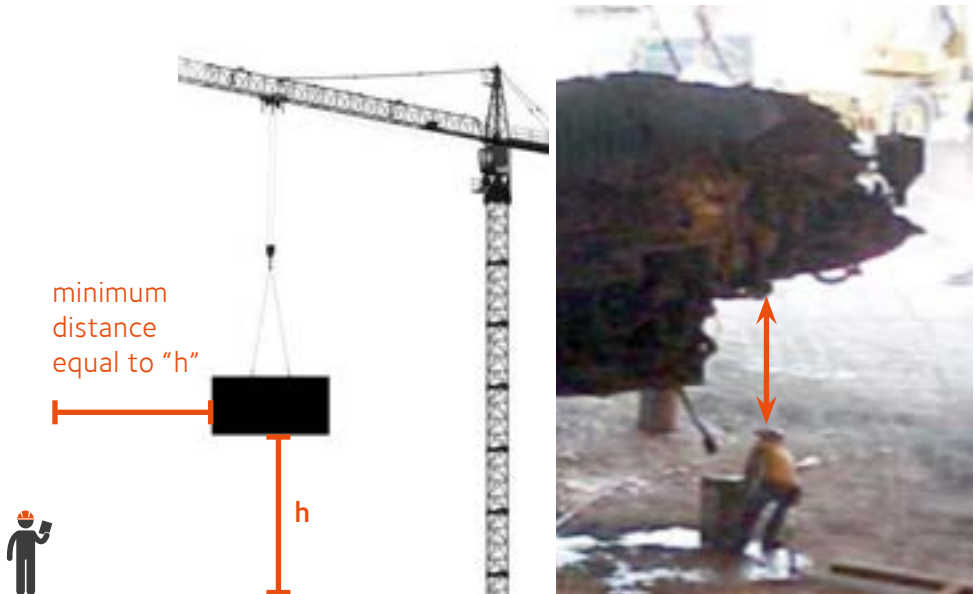


Before you start work, check:

- **condition of grappling element,**
- **conditions of ropes and if they are properly attached,**
- emergency "STOP" and zero-voltage interlock,
- light and sound alarm signals,
- all limit switches,
- drive mechanisms and their brakes.

Hazard zone





Crane operators must hold the license, be trained and skilled in systems, loads, transmission of signals to the control room, control, maintenance and testing of cranes, hoists, cages for staff, lifting or turning devices.

Crane operator should, prior to any movement of the load and during the process of lifting:

- Make sure that the load is not blocked or fixed to the ground.
- Pay attention to the condition of lifting slings fixing the load.
- Avoid any sudden movements with the load, lift carefully to prevent jerks at the beginning of lifting operation.
- Never allow anybody to stay on the load or in the moving crane.
- **Continuously observe the load being handled.**



AM
008 Contractors

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1. This Standard refers to all contractors, their subcontractors, suppliers, visitors and it is applicable in all ArcelorMittal Poland units and facilities.

2. Rules that must be applied with reference to all Contractors

- For all Contractors there must be an ArcelorMittal Poland representative whose job includes determining whether or not the Contractor is complying with the Contractor's contractual obligation to have and to follow an effective Contractor health and safety management system in relation to the work under that contract.
- Before work begins on any contract all Contractor personnel must be given appropriate orientation and health and safety induction training and pass the final test with a positive result.
- The Contractor must confirm in writing that all their employees have been familiarized with the Contractors' Safety Manual, procedures, standards, rules and H&S regulations.

3. Rules that apply to all Contractors

- Contractors must follow all H&S rules as if they were employees of ArcelorMittal Poland, e.g. training, personal protective equipment, accidents reporting, etc.
- They must always have a valid „passport” on them, which is a document that identifies their competence and ability to work.



AM 009 AM 013 Alert and Emergency Preparedness

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1. The scope of procedure

Alarm procedure involves:

- all ArcelorMittal employees,
- all people present on the premises of ArcelorMittal Plants (service providers, clients, guests...).

2. Alarming

You need to follow alarming procedure and notify proper persons and organizational units.

Requirements: Standard AM 013

Effective notification of rescue units is a basic activity in the organization of rescue actions. Alarming is an obligation of each ArcelorMittal Poland employee.

- Each person who observed any event which may indicate that a fire, failure or any other threat occurred is obliged to notify immediately.

Remember

When you call fire and rescue unit you have to clearly indicate the name and number of the contact point of the plant and department, type of threat, your name and telephone number.

EMERGENCY CENTER

If you witness a breakdown, a fire or an accident CALL

Dąbrowa Górnicza, Kraków

55-55 or 784-30-55-55

Zdzieszowice

FIRE

1222, 2222 or 77 445 1222, 77 445 2222

ACCIDENT

2550, 2324 or 77 445 2550, 77 445 2324

Sosnowiec, Świętochłowice, Chorzów

FIRE

112 or 998

ACCIDENT

112 or 999

Alarming scheme

Alarming

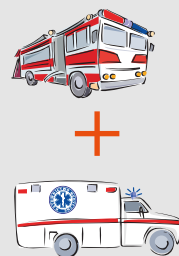


ALARM CHARTS

Located on work places, information boards with number of the contact point for particular location. Employee reporting an event gives the number of the contact point, which is the closest to his location and information resulting from the principles of alarming. "Liaison" is sent to the contact point whose job is to guide ambulance service or fire brigade to the place of the incident.

Dispatching

Centrum Alarmowe



CONTACT POINT

Boards with number of contact points are placed outside the facilities in the area of main entrances and access roads.



The principles of response and proceedings in case of breakdown are specified by:

- emergency instructions,
- fire safety instructions,
- gas safety instructions,
- internal rescue and operation plan,
- procedure PO/S2/B.001 on the asset risk management in ArcelorMittal Poland in Dąbrowa Górnicza and in Kraków.

Note: point 4 and 5 refer only to Dąbrowa Górnicza and Kraków.

Each person who observed any event which may indicate that a fire, failure or any other threat occurred is obliged to immediately report it.

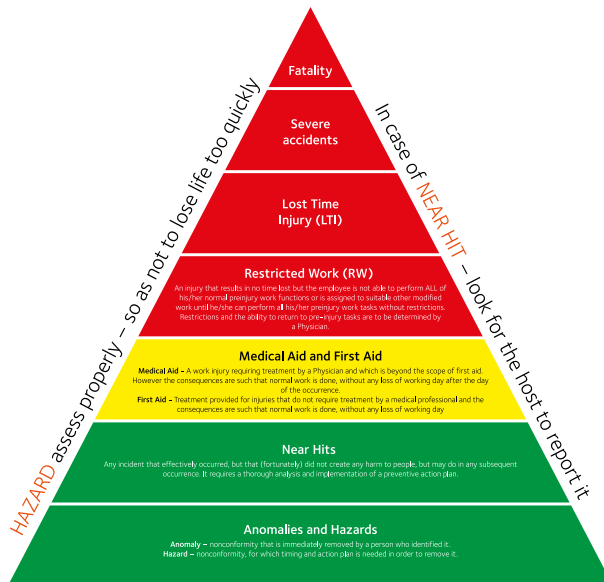
REMEMBER

After the arrival of fire brigade units provide them with necessary information and follow the instruction of the commandant of the units.



AM 010 Safety Metrics

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ANOMALY I know well – because I remove it by myself

The incidents are categorized as:

- Fatality.
- Severe accident.
- Lost Time Injury.
- Restricted Work case (Adapted Work case).
- Medical Aid.
- First Aid Injury.
- Near Hits.
- Anomalies and hazards (Unsafe Acts and Unsafe Situations).

Unsafe acts/anomalies

An employee is driving a vehicle without the required qualifications.



Such work is subject to high risk and poses a threat to the driver and the people working in the vicinity.



Hazards

A hole in a platform due to material consumption.



Dangerous situation, sooner or later, someone may not notice the threat and fall into the hole risking a leg injury or even a fall from the platform.



Near hits

An employee's leg falls into a manhole with a damaged cover but he does not sustain any injury.



This time nothing happened but another person may fall down, hurt oneself with a sharp edge or even break a leg.





AM Incident
011 Investigation

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1. The Standard describes general rules of investigating, analyzing and reporting of incidents which happened in on the premises of the company and identification of their root causes with the goal to implement actions preventing against the recurrence of the incident. determine causal factors, and develop preventive and corrective actions.

Incident include i.a: accidents.

2. Accident at work is a sudden event caused by an external factor related to work which may result in an injury or death.

The root cause analysis covers also near hits.

3. Incident investigation process involves the following four interrelated activities:

- Collecting incydent data. This may include information on personnel, tasks, equipment and environmental conditions.
- Describing incident sequence. The incident sequence is described or re-created by arranging the relevant incident events and circumstances into a time-based sequence.

- Determining causal factors.
Within the incident sequence of events and circumstances are unsafe conditions and actions (or decisions) that are considered to be causal factors and ultimately led to the unplanned event.
 - Developing Preventive and Corrective Actions.
- 4. The organization shall establish, implement, and maintain an incident investigation process to investigate all work-related incidents and prevent their recurrence.**
- 5. It is also required to formally document the findings of the investigations of the following cases:**
- Accidents related to work which resulted in death of one or more people or which resulted in a life-threatening injury due to an accident on the premises of ArcelorMittal.
 - Severe accidents, which might have resulted in death on the premises of ArcelorMittal.
 - Accidents resulting in a lost time injury.





AM Working in Gas 012 Hazard Areas

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UWAGA ! 

**I STREFA
ZAGROŻENIA GAZOWEGO**

W miejscach tych:

- wymagana jest obecność minimum dwóch pracowników, przy czym jeden z nich musi być ratownikiem gazowym (Stag Ratownika i Ratownictwa Gazowego) lub członkiem Ochotniczych Drużyn Ratownictwa Gazowego
- należy obowiązkowo stosować odpowiednie sprzęty ochrony dróg oddechowych
- należy posiadać indywidualny detektor (CO i O₂)





UWAGA ! 

**II STREFA
ZAGROŻENIA GAZOWEGO**

W miejscach tych:

- wolno przebywać nie mniej jak dwóm pracownikom
- należy posiadać sprzęt ochrony dróg oddechowych i stosować w razie potrzeby
- przed wejściem należy dokonać pomiarów stężeń gazowe
- należy posiadać indywidualny detektor (CO i O₂)





UWAGA ! 

**III STREFA
ZAGROŻENIA GAZOWEGO**

W miejscach tych:

- może przebywać jeden pracownik, z którym należy pozostawać w stałym kontakcie telefonicznym lub osobistym
- należy posiadać indywidualny detektor (CO i O₂)





1. Definition of gas hazardous area

It is a place where the following gases may occur: **carbon oxide, methane, hydrogen, hydrogen sulphide, nitrogen, oxygen and others**, which are dangerous because of:

- formation of explosive mixtures,
- poisonous effect for humans,
- oxygen content below 19,5 % – possibility of suffocation,
- oxygen content above 22,5 % – possibility of airways irritation and circulatory problems.

2. Proper equipment

Make sure that when you enter a gas hazardous area you are equipped in a multi-gas or at least single-gas detector and an absorber or air apparatus if necessary.



3. Control of gas concentration

Measurements with a detector must be made **before, during and after the completion of work.**

Concentration of carbon oxide – CO

- 20ppm – you may remain in the area up to 8 hours.
- 100ppm – you may remain up to 15 minutes.

Concentration of oxygen – O₂

- 19,5 % – the lowest admissible concentration.
- 22,5% – the highest admissible concentration.

Concentration of hydrogen sulphide – H₂S

- 5ppm – admissible concentration.
- 10ppm – hazardous high concentration.

Remember to remain cautious – the reaction time of a detector is 10 – 20 seconds. Sometimes it is enough to get injured.



If your detector or someone else's detector alarms about hazardous conditions, immediately leave the hazardous area together with other employees.



AM
000

HIRA Hazard Identification and Risk Assessment

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Preparing HIRA for the job



1

Identify one job.



2

Identify activities
this job consists of in
chronological order.



3

Identify all hazards related to activities.



4

Think what can go wrong, what you will do in such case and what risk will come from the job you perform and what risks will come from the surrounding environment.

5

Are there some works that do not require special permits?
Are you equipped with appropriate PPE that will protect you from identified risks?

AM ST014 Hazard Identification and Risk Assessment (HIRA)

Formal HIRA related to routine jobs done on the premises of the company by employees on different positions. Such HIRA is developed using the method anticipating assessment/risk rating and is included in the risk map for a specific area. It must take into account all activities performed by persons entering a specific area. When it comes to work stations or a job requiring use of materials (in particular hazardous substances); their impact or preferably their own HIRA (based on the safety data sheet) should be part of this type of HIRA. Criteria used for risk assessment/rating depend on the method selected. Risk Assessment may be formalized by ascribing level to each risk. The alternative is to use colors or letters, but in any case these must indicate the level of risk assessed.



For assessment of non-standard work which are not routine works and formal HIRA has not been run for them, other method should be used prior to starting work. Such a HIRA for activity (preliminary risk assessment, HIRA Light) is used to identify hazards and assess risks related to activities in question and determine the relevant controls. If such activities will be repeated in the future they should come under the formal HIRA assessment.

What do you do if working conditions have changed?

- Stop work in a safe way.
- Secure the place of work performance.
- Inform your supervisor that work has been stopped.
- Analyze how the situation has changed and impact of changes on work.
- Run HIRA light taking into account the hazards related to changes that have occurred.
- Assess hazards and choose the right preventive measures.
- Start work if the updated HIRA allows it.



First aid in emergency situations

- Keep calm.
- Secure the accident site (in case of road accident – put out a warning triangle on the road).
- Take care of your own safety.
- Remove (if needed) the injured from the hazard zone.
- Call emergency number.

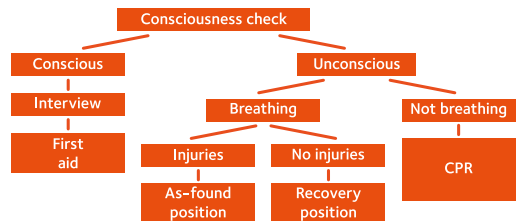
Provide exact information

- WHERE: describe the place of accident (describe possible landmarks).
- WHAT HAPPENED: describe the type of incident, say how many people were injured.
- TYPE OF INJURIES: describe the health condition (consciousness, cardiac arrest, potential poisoning).
- WHO : give your personal details.
- ADDITIONALLY: try to give very precise information to questions asked by the person taking your call.

Check consciousness and vital functions

- Shake the injured holding them by both shoulders and ask “Can you hear me?”.
- Shout for help.
- Open the airway of the injured by tilting their head tilt and jaw thrust.
- Check breath for around 10s trying to hear it, feel it on your cheek and observe the patient’s chest movement. You should detect at least 2 breaths.

CPR:



Repeat the operations cyclically. Resuscitation can be stopped only in three cases:

- ambulance arrival,
- patient starts breathing again,
- first-aider gets exhausted – but first make sure that there is somebody who will take over resuscitation.

Act reasonably!

If you do not act immediately, the patient’s health may deteriorate or they may die!

CONTENTS:

AM 001 – Isolation	2
AM 002 – Confined Spaces	4
AM 003 – Working at Height	7
AM 004 – Rail Safety	9
AM 005 – Shop Floor Audits / Layered Evaluations	11
AM 006 – Vehicles and Driving	13
AM 007 – Cranes and Lifting	15
AM 008 – Contractors	17
AM 009 and AM 013 – Alert and Emergency Preparedness	18
AM 010 – Safety Metrics	21
AM 011 – Incident Investigation	23
AM 012 – Working in Gas Hazard Areas	25
AM 014 – Hazard Identification and Risk Assessment (HIRA)	27
FIRST AID	31

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