

Health & Safety Handbook

(Version SSC -August 2021)



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Letter from

Jean-Marc Butin



The management Committee of West SSC believes that prevention of the risks we face in our activities is our first priority. All members of the organization must take safety in consideration and make maximum effort to develop and promote safety behaviours, create a healthy working environment and ensure safer equipment, products and production lines for everyone working in our plants.

We put our efforts to ensure that all risks are well identified, addressed and properly managed.

All managers, all front line leaders promote a safe attitude, talk to our teams and lead by example.

Our commitment will be to show anytime a real visible leadership and this can be achieved through a strong management presence, regular training and coaching, and sharing and promoting good practices and actions.

We recognize and reward our teams for their positive actions and success stories, but more importantly, we ensure that we have regular two way conversations and discussions with our teams.

Behavior is key and we do not tolerate breaches of safety rules. The most important safety rules are explained in detail and accepted by everyone entering the company - employee or third party & subcontractors.

This Handbook is as a tool for everyone, including external actors acting on our premises with the objective to get involved and understand the tools, the standards and the correct ways of doing things.

I sincerely believe that as a West SSC team, we can succeed in being the safest organization possible. I am counting on everyone's full support and commitment to this journey.

Jean Marc Butin
CEO – BD West SSC
ArcelorMittal Downstream Solutions



Health & Safety Policy

Short description:

Health & Safety is the Company's top priority. It requires the commitment of all our employees both at the workplace as well as when off-duty.

Scope:

The success of Health & Safety policy requires the involvement and commitment of everyone working for and with us all the time.

Everyone safe & healthy everyday

1. Purpose

ArcelorMittal's core philosophy is to produce Safe, Sustainable, Steel. Health & Safety is the Company's top priority. In fact we are striving for it to be part of our existing values. In order to be the world's safest steel company, ArcelorMittal works to ensure a systematic application of its fatality prevention standards across the Group, to adopt a proactive approach to preventative work, focusing on advance indicators of safety issues, based on a proper Health & Safety management system (ISO 45001 based).

The final initiative is to drive down fatality and injury rates for own personnel and contractors, without any distinction, on our Journey to Zero, started in 2008. A similar approach has been launched for health and wellness.

2. Principles

Our commitment to the Health & Safety of all employees both on and off the job is a clear component of our brand promise to 'transform tomorrow'. We believe in the following principles to guide our actions:

1. All injuries and work related illnesses can and must be prevented.
2. Management is accountable for the Health & Safety performance.
3. Communication, involvement and training of all employees are essential in Health & Safety excellence.
4. Everyone continuously has a role to play in preventing injuries and illnesses.
5. Excellence in Health & Safety supports excellent business results.
6. Health & Safety must be integrated into all business management processes.
7. Product Stewardship aiming at eliminating Health and Environmental impact for customers.

We will work vigorously towards a goal of zero accidents and injuries. To achieve this - through our Safety Management Systems including the continuous improvement principal - we will:

1. Identify, evaluate and eliminate Health & Safety risks to ensure that hazards are managed.
2. Establish an effective process for preventing all injuries and work related illnesses.
3. Build a supportive culture that requires visible Leadership with clear accountability.
4. Provide everyone with effective training so that we are all able to work safely.
5. Investigate all incidents in order to prevent a recurrence.
6. Establish a culture where work will be stopped if it is unsafe.
7. Establish measurable objectives to monitor progress through regular audits and reporting.
8. Comply fully with all legal and other applicable requirements and meet or exceed these expectations wherever we operate in the world.
9. Update and test emergency procedures.

The success of this policy requires the involvement and commitment of everyone working for and with us.

Health and Safety Responsibilities



Management responsibilities

All leaders should create an atmosphere that clearly demonstrates to employees that safety is a vital part of their personal and professional activities.

Leaders are responsible for implementing systems and programs that convey the safety philosophy to employees.

- ❖ Assume the responsibility for the safety and health program and ensure that the program remains successful and effective in practice.
- ❖ Report all fatalities and multiple hospitalizations within 8 hours to the nearest Department of Labor and Industries office.
- ❖ Make certain that a wide Safety Committee is formed and is carrying out its responsibilities as described in this program.
- ❖ Ensure that sufficient employee time, supervisor support, and funds are budgeted for safety equipment, training, and to carry out the safety program.
- ❖ Evaluate supervisors each year to make sure they are carrying out their responsibilities as described in this program.
- ❖ Make sure that incidents are fully investigated and corrective action is taken to prevent the hazardous conditions or behaviors from happening again.
- ❖ Ensure that a record of injuries and illnesses is maintained and posted as described in this program.
- ❖ Set a good example by following established safety rules and attending required training.
- ❖ Make subcontractors aware of the importance of complying with the Downstream Solutions contractor site safety program.
- ❖ Safety performance is included in each employee's performance evaluation, including each department director's performance appraisal process each year.
- ❖ Acknowledge and reward safe practices.

Health and Safety Responsibilities



Supervisor responsibilities

- ❖ Ensure that each employee you supervise has received an initial orientation of the Accident Prevention Program before beginning work.
- ❖ Make certain that each employee you supervise is competent or receives training on safe operation of equipment or tasks before starting work on that equipment or project.
- ❖ Take care that each employee receives required personal protective equipment (PPE) before starting work on a project requiring PPE.
- ❖ Do a daily walk-around safety-check of the work area. Promptly correct any hazards you find.
- ❖ Observe the employees working. Promptly correct any unsafe behavior. Provide training and take corrective action as necessary. Document employee evaluations.
- ❖ Set a good example for employees by following safety rules and attending required training.
- ❖ Investigate all incidents in your area and report your findings to management.
- ❖ Talk to management about changes to work practices or equipment that will improve employee safety.
- ❖ Enforce all safety rules.

Health and Safety Responsibilities



Employee responsibilities

The health and safety of each employee is a major responsibility. All employees share this obligation.

Employees should treat safety as one of their most important job responsibilities, watching for potential hazards, and thinking about what could go wrong before it goes wrong.

Employee's safety responsibilities include:

- ❖ Observe and comply with all safety signs, rules, and regulations described in this program.
- ❖ Report all on-the-job injuries promptly.
- ❖ Identify, correct, or report potential or unsafe conditions.
- ❖ Report all near-miss incidents to your supervisor promptly.
- ❖ Incorporate safe practices into all activities.
- ❖ Attend and participate in safety meetings in their own department.
- ❖ Always use personal protective equipment (PPE) in good working condition where it is required.
- ❖ Do not remove or defeat any safety device or safeguard provided for employee protection.
- ❖ Operate equipment safely. Do not operate equipment you are not trained for or qualified to operate.
- ❖ Report all equipment damage or failure to your supervisor immediately.
- ❖ Feel free to talk to management about problems that affect your safety or working conditions.
- ❖ Make suggestions to your supervisor, safety committee representative, or management about changes you believe will improve employee safety.

General Safety Rules



The following are general safety rules and regulations that have been established to help make your work environment a safe and efficient place to work. For a specific list of additional rules and regulations, refer to your departmental safety manual.

- ❖ Alcohol and drugs are strictly forbidden on our sites.
- ❖ Never stand under a lifted load, in the danger cone or between a lifted load and a fixed point.
- ❖ Follow the safe instructions of packaging, loading and cargo securing.
- ❖ Using mobile phone is a standalone job, don't walk, drive or operate a machine when phoning or texting.
- ❖ Follow all safety rules when working at height, HIRA, clear instructions, PPE harness etc.
- ❖ Follow all circulation rules, give rail priority, stay alert all the time.
- ❖ Follow all LOTO procedures, never enter a machine if it is not secured well.
- ❖ Don't touch the steel with unprotected hands. Best use a tool, minimum wear gloves.
- ❖ In case of unexpected tasks: STOP, THINK, ACT safely, make a HIRA before taking action.
- ❖ Help subcontractors by training and safety checks.
- ❖ Never enter a pit without HIRA and permit.
- ❖ Follow all rules regarding forklift driving and crane driving.
- ❖ Follow all rules for stocking products.
- ❖ Report all safety problems (unsafe acts, unsafe situations, serious occurrences).

Violation of the above listed safety guidelines may lead to corrective action and/or disciplinary action.

General Safety Rules



Disciplinary Policy

Employees are expected to use good judgment when doing their work and to follow established safety rules.

We have established a disciplinary policy to provide appropriate consequences for failure to follow safety rules.

The purpose of these guidelines is to improve the health and safety culture and behaviour at ArcelorMittal Downstream Solutions, ensure respect for and compliance with all health and safety laws, rules and regulations including ArcelorMittal's Safety Golden Rules, by recognizing safe practices and behaviour and providing for consequence measures for safety breaches, unsafe acts and behaviours.

This policy is designed not so much to punish as to bring unacceptable behavior to the employee's attention in a way that the employee will be motivated to make corrections.

Reward Policy

Based on the achievement of annual safety targets set by the business unit for the year, rewards and celebrations are implemented. This policy aims to recognize and reward performing employees throughout the organisation.

For further information and details on this policy, please contact your Human Recourse Manager.

Manager, promote safe behaviour !

1. Spend more time on the shop floor
2. Give feedback more often to the workers
3. Use more time to monitor performance
4. Spend less time setting antecedents
5. Spend more time communicating on non-work related issues
6. Give either positive or neutral feedback, while poorer performers give more negative feedback
7. Give incentives to work safely more often
8. Use a more participative management style in discussions

Three Key ingredients for Excellence in Safety

1. Culture of anticipation:
How risks are understood by people and systematically addressed
2. Culture of openness and collaboration
How people work together and support each other
3. Operational discipline
How following the rules is transformed into organisational pride

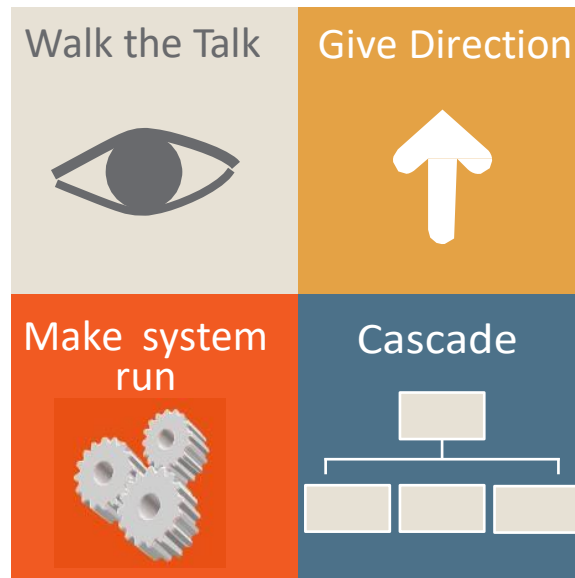
Your Role as Leaders in Safety

It starts with YOU!

- Communicating your value for safety
- Leadership in safety is about influencing the hearts and minds of employees
- People change cultures



Key aspects of Felt Leadership



The glue that holds everything together



Demonstrating Visible Felt Leadership

Behaviour of a leader



Perception of employees

360 ° H&S behaviour assessment for managers and supervisors (self-assessment)	Self-assessment					
	Never	Sometimes	Usually	Always	not applicable	Self Asset
Exemplarity: respect, obey, implement, self-discipline	0					
I respect the golden rules of safety	0					0
I respect all the other safety rules inside and outside of the site	0					0
I put in place the safety tools of the group (Fatality prevention standards, Shop floor audits, Safety talks,...)	0					0
Engagement: explain, recognise, understand, reformulate, adapt, cascade	0					
I demonstrate that safety is really my first priority in all my daily activities	0					0
I know the health and safety standards, the golden rules of safety. I know where to find them.	0					0
I am able to explain in an understandable way the Safety standards, the Golden rules.	0					0
Management: explain, communicate, encourage, check, pilot, prioritise, sanction	0					
I ensure the respect the Golden rules at all times.	0					0
I react and provide feedback on all the unsafe acts I see.	0					0
I use an adequate sanctioning process when I see a violation.	0					0
I maintain my installations in a standard condition (Housekeeping, 5S, access,...) and I notify/ take charge of all non-compliances.	0					0
I set safety objectives and I set up safety action plans for my collaborators.	0					0
I reward safety efforts and safe behaviour.	0					0
I explain the safety rules and I give information to my team on safety (REXs,...).	0					0
I lead my safety actions with key indicators, I follow up on my safety action plan and I check its efficiency.	0					0
I check that my collaborators skills and knowledge are up-to-date.	0					0
I assess my collaborators on their engagement in safety.	0					0
I cascade the safety messages, objectives. I represent the management.	0					0
I encourage improvement actions, problem solving.	0					0
I evaluate my collaborators training needs .	0					0
Reactivity/ Pro-activity: demonstrate, educate, react, anticipate, check, take the initiative	0					
I correct unsafe acts / situations immediately.	0					0
I take the initiative when faced with unexpected situations («Stop, think and act safely», light HIRAs, ...).	0					0
I encourage my collaborators to check their own skills/ knowledge level and to inform me of upcoming deadlines.	0					0
					0	0
	Score Self assessment =>					0,00

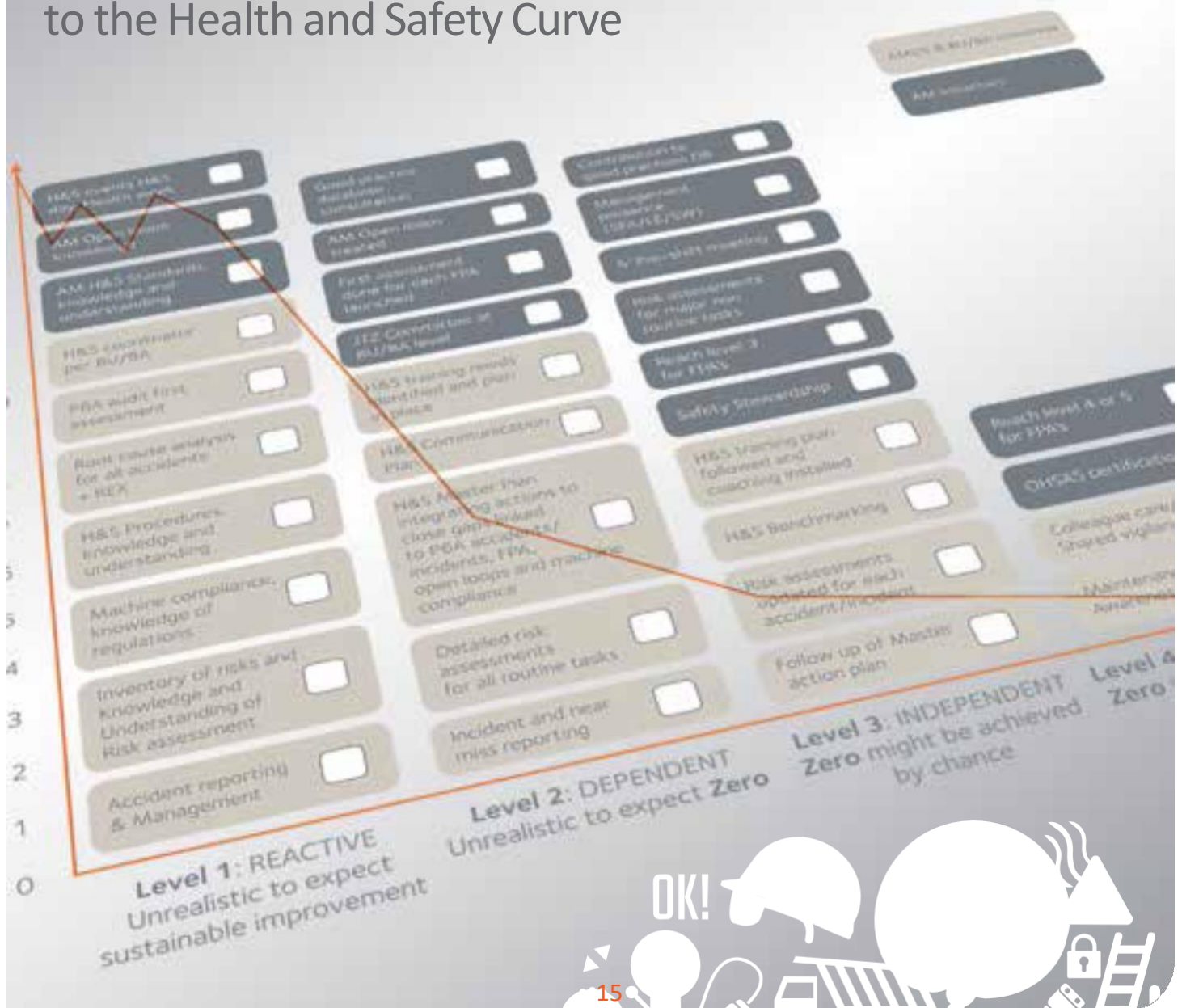


ArcelorMittal

The Journey to

Zero

Your essential guide
to the Health and Safety Curve



Safety is a core value, safety is good for business

Experience has shown that safety can be a strategic business value that creates a strong link between a reduction in workplace injuries and improved business performance.

ArcelorMittal launched its «Journey to Zero» initiative in 2009 with the strong belief that «all injuries and work related illnesses can and must be prevented, our objective is ZERO accidents». Reaching ZERO accidents requires much effort and hard work and although our safety results are steadily improving, the journey is still ongoing.

For Downstream Solutions, our strength in terms of business is the diversity of our activities and sites, but this also means a multitude of cultures and ways of working.

Where HSE is concerned this means that we have some really strong sites showing excellent safety results and some weaker sites where real improvement still needs to happen.

So the question is – how does your site measure up in terms of H&S?

In order to help us in Downstream Solutions to have a vision of where we stand and to help us to improve, we launched the Downstream Solutions Health & Safety Curve. The Curve is based upon the DuPont Bradley Curve that strives to create a working culture in which our teams are interdependent. Meaning that Shared Vigilance is embedded into a strong HSE environment.

The Curve graphically illustrates the changes that occur when a company moves from reactive to dependent and finally to interdependent within an

Level 1

Reactive «Your natural Instinct»
Tending to be responsive or to react to a stimulus and to your natural instinct

Level 2

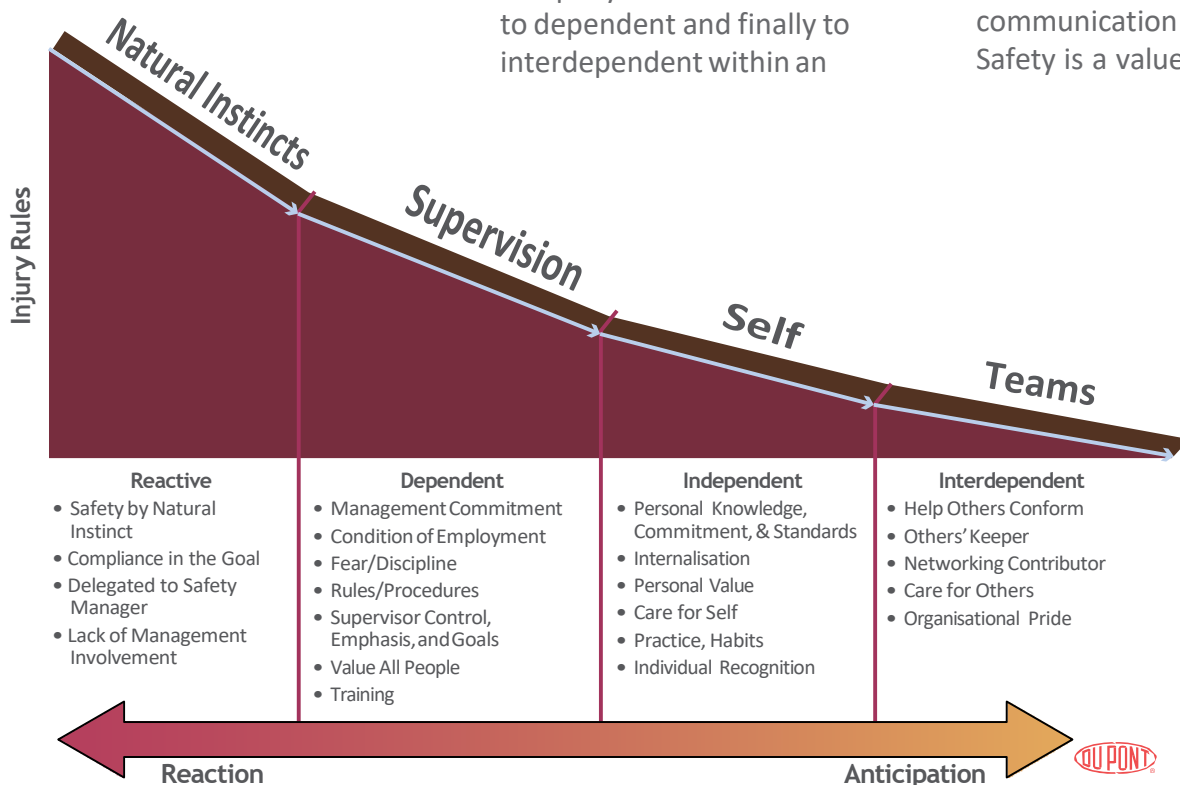
Dependent «Your Management»
Relying on someone or something else for aid, support, etc. Safety is pushed by the management through a Top-Down communication

Level 3

Independent «Yourself»
Thinking or acting for oneself, not influenced or controlled by others, by the thought or action of others. Not relying on another or others for aid or support. Safety is linked to self-discipline

Level 4

Interdependent «Your team and Colleagues»
Being reliant on and responsible for each other. Shared vigilance is in place and communication is Bottom-up. Safety is a value.



*The DuPont Company developed over the last 10 years the DuPont Operational Excellence model that helps other companies to improve their competitiveness in global business including Health and Safety

So, where is your site on the curve?

Within ArcelorMittal and Downstream Solutions there are many tools at your disposal to help you manage Health and Safety at work. These tools are designed to not only implement the ArcelorMittal H&S Policy but to help us to comply with regulations and to continually improve and monitor improvements. Tools should be deployed at key stages in the development of the H&S Culture to ensure it is sustainable. These stages are defined on the H&S Curve: Reactive, Dependent, Independent + Interdependent.

Get going

A questionnaire has been designed per level on the "H&S Curve", answer the questions and position your site on the Curve. You will then be able to define your priorities, areas for improvement and define your necessary action plans.

Keep going!

These questionnaires should be reviewed on a monthly basis so that you can track your H&S actions, improvement and progression onto the next level on the H&S Curve.

Progressing along the curve

Is your Safety culture already pro-active ?
Then you will be able to answer a lot of the questions with «Yes»



ArcelorMittal Downstream Solutions H&S Curve

Level reached

Questions level 1

Accident reporting and management

1. Do you register, report and manage all accidents (LTI, RW and Accidents without time loss) according to the AMDS Reporting Procedure?

Inventory of risks and knowledge and understanding risk assessment

2. Did you make an inventory of risks present in your site, linked to the tasks and working stations (as legally required)?

3. Did you make the risk assessment for all these risks including the mitigation, according to the AMDS Risk Assessment Procedure?

Knowledge and understanding of machine compliance regulations

4. Do you have a recent overview and reasonable understanding of the regulations regarding machine compliance for the machines in your site?

Knowledge and understanding of H&S procedures AMDS

5. Do you know all H&S procedures of AMDS and your perimeter and do you understand these procedures?

Root Cause Analysis (RCA) for all accidents + REX

6. Do you perform and report systematically a root cause analysis (AM Standard) for your LTI and RW accidents and send out the REX (according to the AMDS Reporting standard)?

P6A audit first assessment

7. Did you perform a first AMDS Audit review (P6A)?

H&S Coordinator per BU/BA

8. Is there a safety coordinator for your BU/BA and do you know this person?

Knowledge and understanding of AM H&S Standards

9. Do you know and understand all the AM H&S standards?

Knowledge and understanding of AM Open Loops

10. Do you know and understand the AM Open loops

H&S events, H&S day, Health week

11. Do you organise H&S events in your site to promote and support the Journey to Zero?

12. Do you participate actively at the yearly AM H&S Day?

13. Do you participate actively at the yearly Health Week?

Y/N

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Level 1

H&S events H&S day, Health week

AM Open loops knowledge

AM H&S Standards, knowledge and understanding

H&S coordinator per BU/BA

P6A audit first assessment

Root cause analysis for all accidents + REX

H&S procedures, knowledge and understanding

Machine compliance, knowledge of regulations

Inventory of risks and Knowledge and Understanding of Risk assessment

Accident reporting & Management

Level 2

Good practice database consultation

AM Open loops treated

First assessment done for each FPA launched

JTZ Committee at BU/BA level

H&S training needs identified and plan in place

H&S Communication Plan

H&S Master Plan integrating actions to close gaps linked to P6A accidents/incidents, FPA, open loops and machine compliance

Detailed risk assessments for all routine

Incident and near miss

Level 3

Contribution to good practices

Management presence (SFA/LE/SW)

5' Pre-shift meeting

Risk assessments for major non routine tasks

Reach level 3 for FPAs

H&S training plan followed and coaching installed

H&S Benchmarking

Colleague care/ Shared vigilance

Risk assessments updated for each accident/incident

Follow up of Master action plan

AMDS & BU/BA initiatives

AM

Level 1: REACTIVE
Unrealistic to expect sustainable improvement

Level 2: DEPENDENT
Unrealistic to expect Zero

Level 3: INDEPENDENT
Zero might be achieved by chance

Level 4: INTERDEPENDENT
Zero is achieved by choice

Downstream Solutions P6A

internal H&S audit - information

The 6 Axis Profile (P6A) is an audit, internally developed to monitor and assess the Health and Safety system in AMDS sites with their specific size and activities.

It is built on the basis of a questionnaire with for each question a possible score ranking from 0 to 4. As MAZE referential, it allows through questions to evaluate the safety management and the technical compliance in a site, giving a safety state.

The audit P6A is reviewed yearly by the AMDS JTZ Committee and questions are updated, to keep up with the changing circumstances.

The P6A Audit is divided into 6 parts:

- OH&S Policy and Planning
- Implementation and operation
- Safety operational control
- Health operational control
- Prevention of emergency situation and capacity to react
- Checking and management review

In these parts, we ask questions about: PPE, training, management presence, fire, first aid, machine compliance...

The P6A is used as the internal audit tool for all ISO certified sites and each BA is in charge to define P6A audit planning (recommended at least twice a year) and to report the P6A ratings to the AMDS HSE Team.

Standards and procedures

ArcelorMittal standards: Safety

ST 001	Isolation
ST 002	Confined Space
ST 003	Working at heights
ST 004	Rail Safety
ST 005	Shop Floor Audit
ST 006	Vehicles and Driving
ST 007	Cranes and Lifting
ST 008	Contractor management
ST 009	Alert
ST 010	Safety metrics
ST 011	Incident Investigation
ST 012	Working in gas hazard areas
ST 013	Emergency preparedness
ST 014	HIRA
ST 015	Golden Rules
ST 016	Emergency management Guidelines for Local Sites
ST 017	Emergency management Guidelines for Corporate Team
ST 018	
ST 019	Cargo Securing
ST 020	
ST 301 V2.1	Cell Phones

ArcelorMittal standards: Health

ST 001	Health metrics
ST 002	Hazardous substances exposure control
ST 003	Medical surveillance
ST 004	Hearing conservation
ST 005	Legionella
ST 006	Travelers standard
ST 007	Asbestos management
ST 008	Respiratory protection
ST 009	Global Ergonomics
ST 011	Radiation Protection
ST 012	Medical Emergency Responses
ST 013	Prevention and Treatment of venomous Animal bites

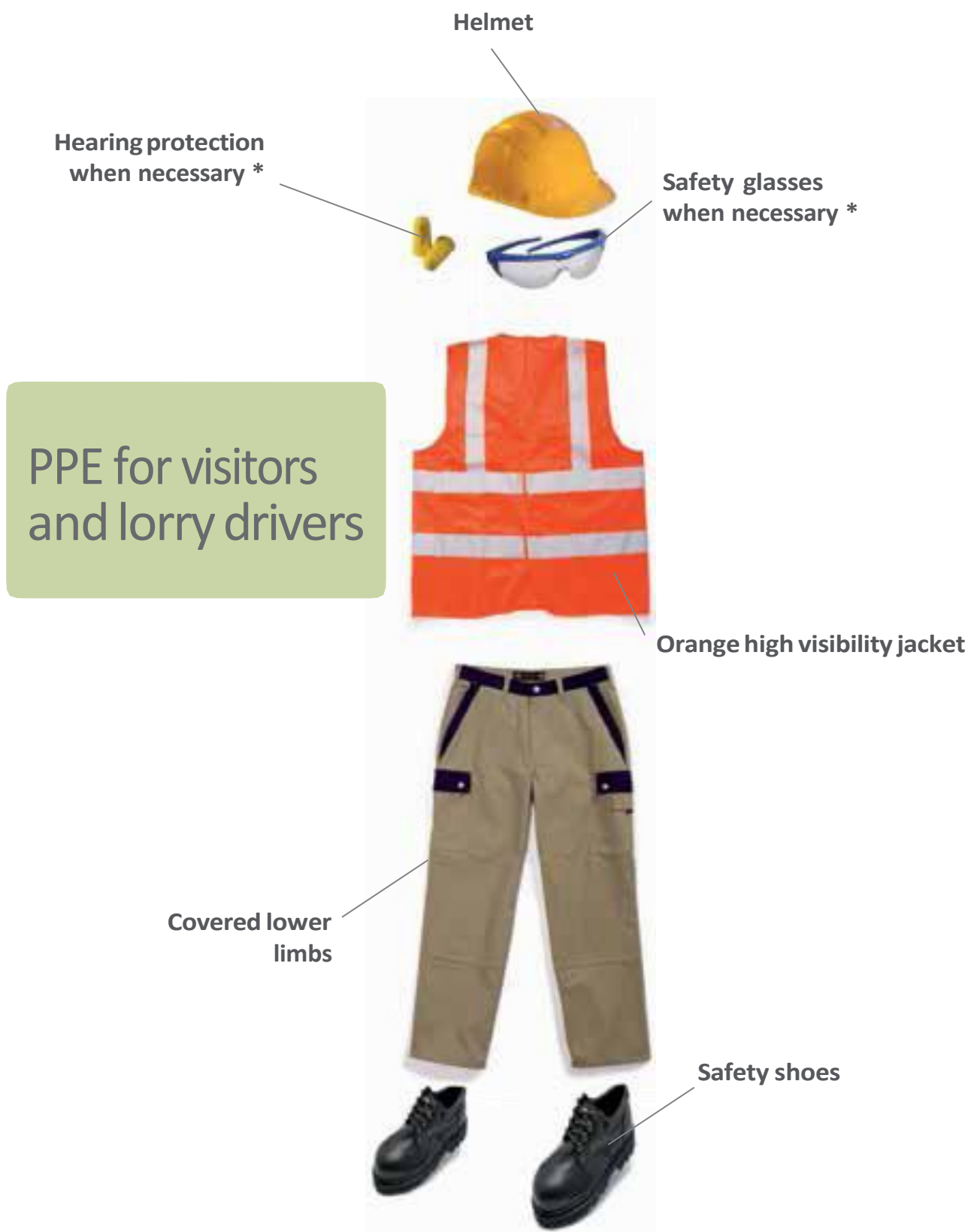
Downstream Solutions procedures

AMDS BP HSE P 01	Safety Reporting
AMDS BP HSE P 02	Forklift procedure
AMDS BP HSE P 03	Risks Assessment
AMDS BP HSE P 04	Coil storage procedure
AMDS BP HSE P 06	Lifting equipment
AMDS BP HSE P 08	Reverse parking
AMDS BP HSE P 10	(Un) Loading and storage of slit coils

Personal Protective Equipment (PPE)

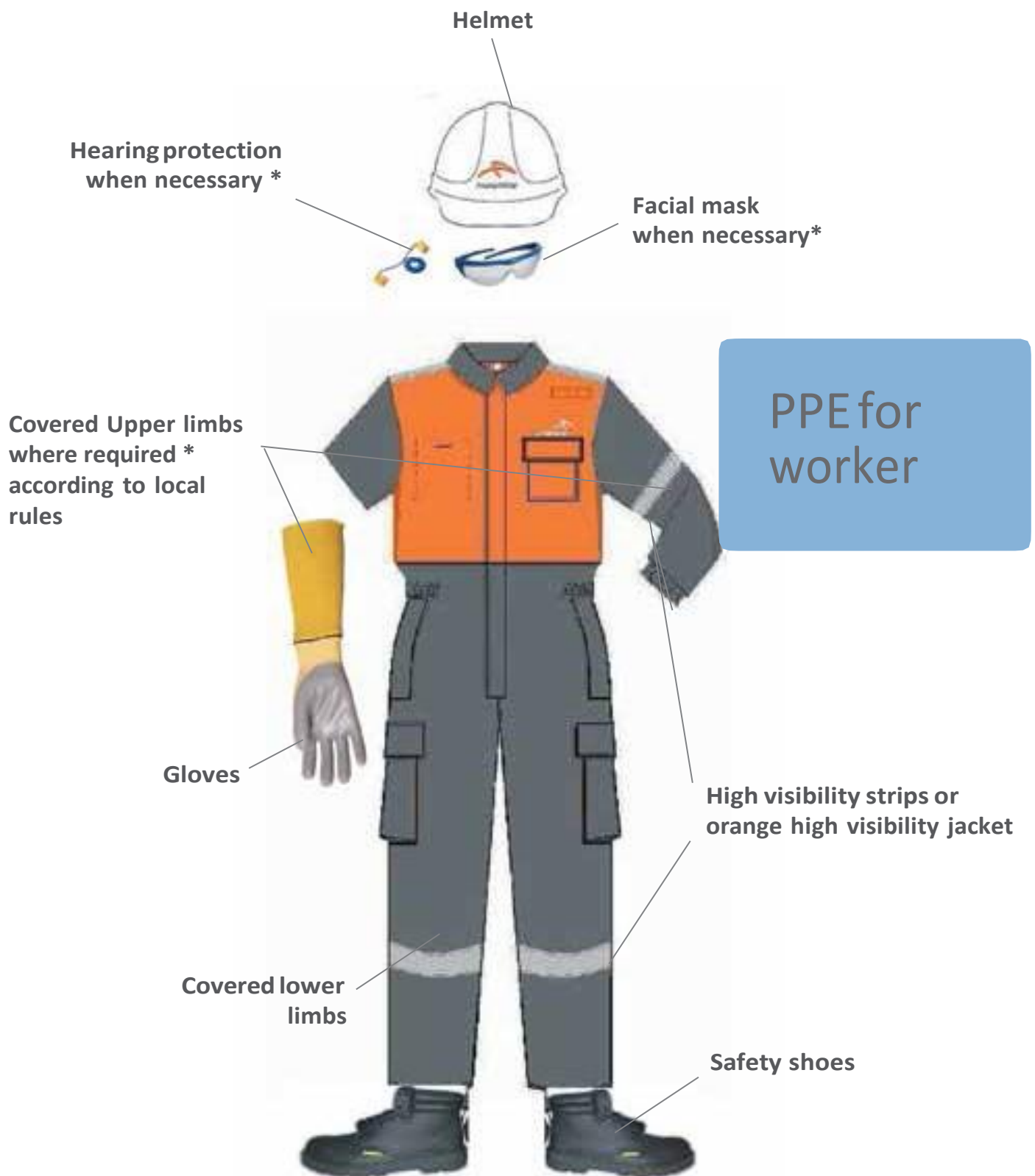
for workers, visitors
and lorry drivers





Mandatory PPE

PPE (Personal Protective Equipment) to be worn by visitors and lorry drivers while entering in the workshop.

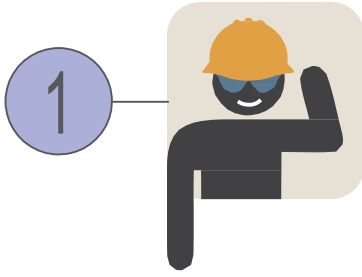


Mandatory PPE

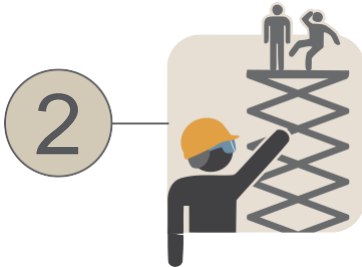
PPE (Personal Protective Equipment) to be worn by operators when entering inside the workshop.
(*) See the required equipment stated on the Job Sheet.

Golden Rules

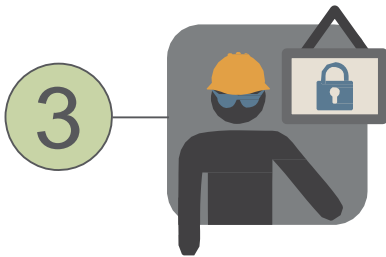




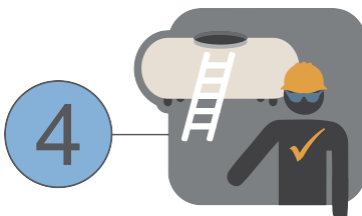
I will come to work
in a "fit and able" condition



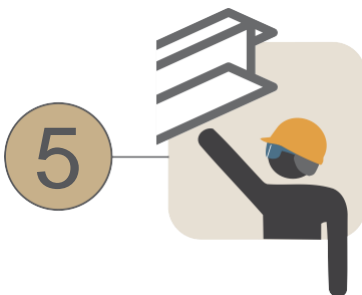
I will use fall protection or prevention
whenever and wherever required according
to our standards



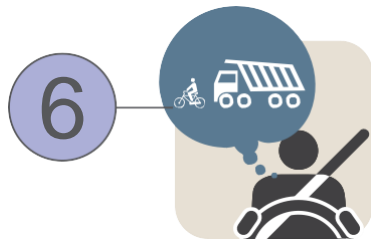
I will follow the lockout/isolation procedure
when working on equipment



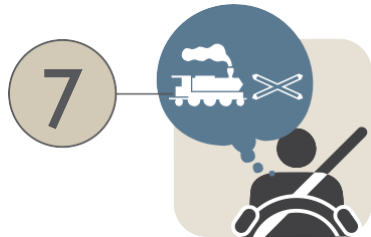
I will follow the confined space entry
procedure before entering as well
as during the full duration of the task



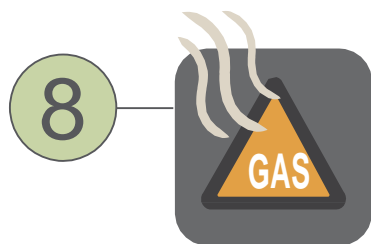
I will respect all the rules of load
handling at all times and never stand
under a suspended load



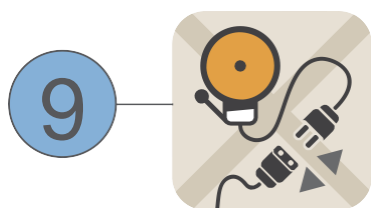
I will respect all the traffic rules



I will respect rail priority and stay out of close clearance areas without proper precautions being taken



I will respect the rules for entering and/or working in hazardous gas areas



I will not disable safety devices



I will respect all the H&S basic rules, standards and signals and I will wear the required PPE

1



I will come to work
in a "fit and able" condition

I will come to work with all the skills required by my job. That means:

- To be medically fit for my job.
- Having a clear mind and not being under the influence of alcohol or drugs.

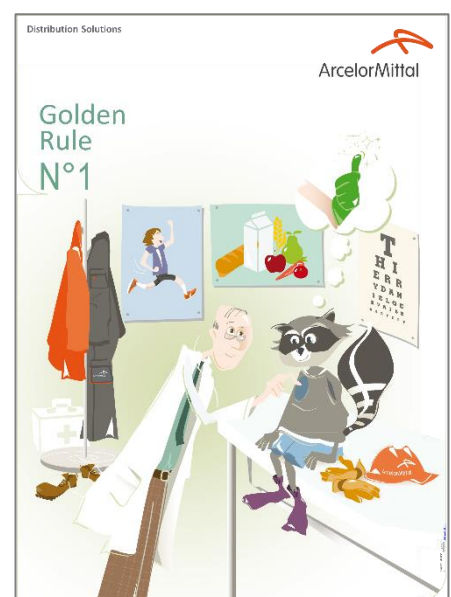
Infectious diseases: I will follow the rules and do my best not to get infected. If I am infected, I will stay out of the company and visit my doctor.

If I am doing restricted work, I will respect the restrictions given by physicians.

If I observe a not fit and able condition from a colleague, I will immediately get in touch with him/her and explain to them in a courteous manner the correct way of working.

If I see a colleague a little euphoric and acting not in a safe way:

- Quietly, I ask him/her to stop the work.
- After that, I advise him/her to go to the infirmary.
- If he/she disagrees, I call his/her supervisor.

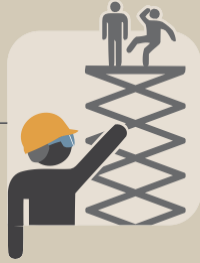


Shared Vigilance can save lives

Employee Authorisation to STOP Work

As an ArcelorMittal employee, you have the authority, without fear of reprimand or retaliation, to immediately stop any work activity that presents a danger to you, your co-workers or contractors. You have the right to get involved by questioning and correcting any situation that is identified as not in compliance with our Health and Safety Standards. If you do not feel the issue is addressed adequately, you have the right to raise the issue higher.

2



I will use fall protection or prevention whenever and wherever required according to our standards

I will use Fall prevention or protection for elevated work above 1.8 meters (6 feet). However, for any task where the risk assessment highlights a danger of falling, proper actions have to be taken, even if the distance one can fall is less than 1,8 m. This includes working around excavations.

I must ensure that:

- Risks have been assessed and suitable safety controls and safe methods of work are established.
- Special equipment suitable for the task, such as e.g. scaffolding, mobile access platforms or fall arrest equipment, have been put in place and these have been verified by a competent person with regards to design, installation and condition.
- I am competent to perform the work.

If I observe a colleague not respecting these rules, I will immediately get in touch with him/her and explain to them in a courteous manner the correct way of working.

I work in compliance
with ArcelorMittal Safety Standard ST 003 Working at Heights

Fall prevention

Wherever practical, a safe working area must be provided by means of work platforms or scaffolds. In all other cases, Fall Protection must be used. This includes situations in which work is being carried out from an elevated work platform or man-lift/ cherry picker.



Ladders

A person may climb or descend a ladder without Fall Protection provided that they are able to use both hands and legs to do so; face the ladder observe the 3 points of contact rule and use one step at a time. Straight ladders shall be tied off and may require support at the base.

Restricted access

Where overhead work is being conducted, there must be demarcation to restrict access around the work area to protect others below from falling objects.

Working on a Roof

Design Specifications

Nobody is allowed to walk or work on a roof without an authorisation.

- For walking on a roof (visits, inspections, etc.), you have to be trained and the follow has to be defined, secured and protected on the basis of a HIRA
- For working on a roof, you have to follow the procedure defined by a HIRA.

Each access to a roof has to be closed with a tag describing the interdiction.

The way of walking/working on a roof has to be secured;

- Firstly, by using collective protection to avoid the collapse of the roof (complete floors resting on beams) and avoid falling due to the hazards coming from the elevated position (guardrails, toe-boards, hand rails, man hole cover).
- If it is not possible, you can use safety nets under the roof (Collapsing) or on the extremity of the roof (Falling from elevated position).
- If it is not possible, you can use beam lifts or a basket suspended by a crane. In these two cases, you have to wear proper fall protective equipment and in the second case (Basket), you have to define a lift plan.
- If it is not possible, you have to be secured by proper fall protective equipment (and approved full body harness, shock absorbing lanyard (where the potential to fall is greater than 4 meters) or short restraining lanyards (where the potential to fall is less than 4 meters), self-locking snap hooks (or carabineer type rings) and secure anchorage points). A second way is to use an approved full body harness and an anti- fall system.
- All work on roofs must be permanently supervised by a qualified person.



Safety Work Instructions

A HIRA has to be done in all the cases.

The work procedure has to be perfectly respected (Never go out the defined and secured work place). People must be trained on how and where to step on and on what they should not do,...etc.

Safety Checks

There is a system for ensuring that Fall Protection equipment and material is tested and certified for use, inspected by the user before use, and destroyed after a fall or a negative inspection.

3



I will follow the lockout/isolation procedure when working on equipment

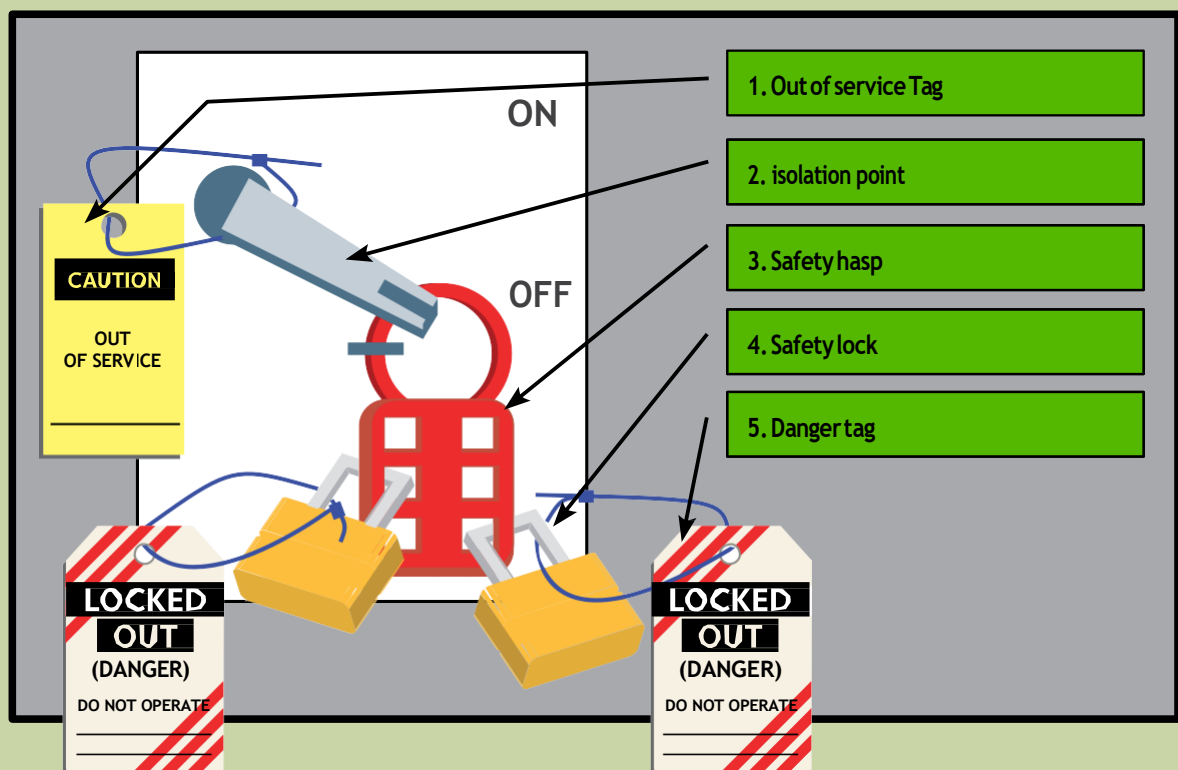
I will only work on equipment when I will have received the permit including the respect of isolation procedure

The isolation procedure will be established following the rule 'one person, one lock, one key' described in the ArcelorMittal Safety ST 001 Isolation. If I observe a colleague not respecting these rules, I will immediately get in touch with him/her and explain to them in a courteous manner the correct way of working.

I work in compliance
with ArcelorMittal Safety Standard ST 001 Isolation

The use of the emergency stops or shutting off the control power of machines or equipment does not constitute positive isolation and lockout of such machines or equipment is not allowed.

- **Disconnecting** all the energy sources of the equipment.
- **Locking** the equipment out before work is being performed on it.
- Tagging the equipment out after the lockout is performed - **even in the event that it cannot be locked out with a LOCK.**
- **Verifying** that the equipment and machinery cannot move via electricity, pneumatics, hydraulics, water, steam, or by any other pressurised systems or energy.
- **Note: Verification** is often a step in the lockout process that is overlooked or simply ignored. All lockouts must be verified – no exceptions – ever!
- **Control the zero power : "Cannot move via pneumatics, hydraulics, or by any other means"** - tells us that other means of locking out equipment and machinery may have to occur, such as bleeding, blanking, blocking, chaining, etc.



4



I will follow the confined space entry procedure before entering as well as during the full duration of the task

I will only enter a confined space when I will have received the entry permit.

The confined space entry procedure will be established following the ArcelorMittal Safety ST 002 Confined Space.

If I observe a colleague not respecting these rules, I will immediately get in touch with him/her and explain to them in a courteous manner the correct way of working.

I work in compliance
with ArcelorMittal Safety Standard ST 002 Confined Spaces

The "ArcelorMittal Safety Standard ST 002 Confined Spaces"

describes minimum requirements for working in a confined space taking into account;

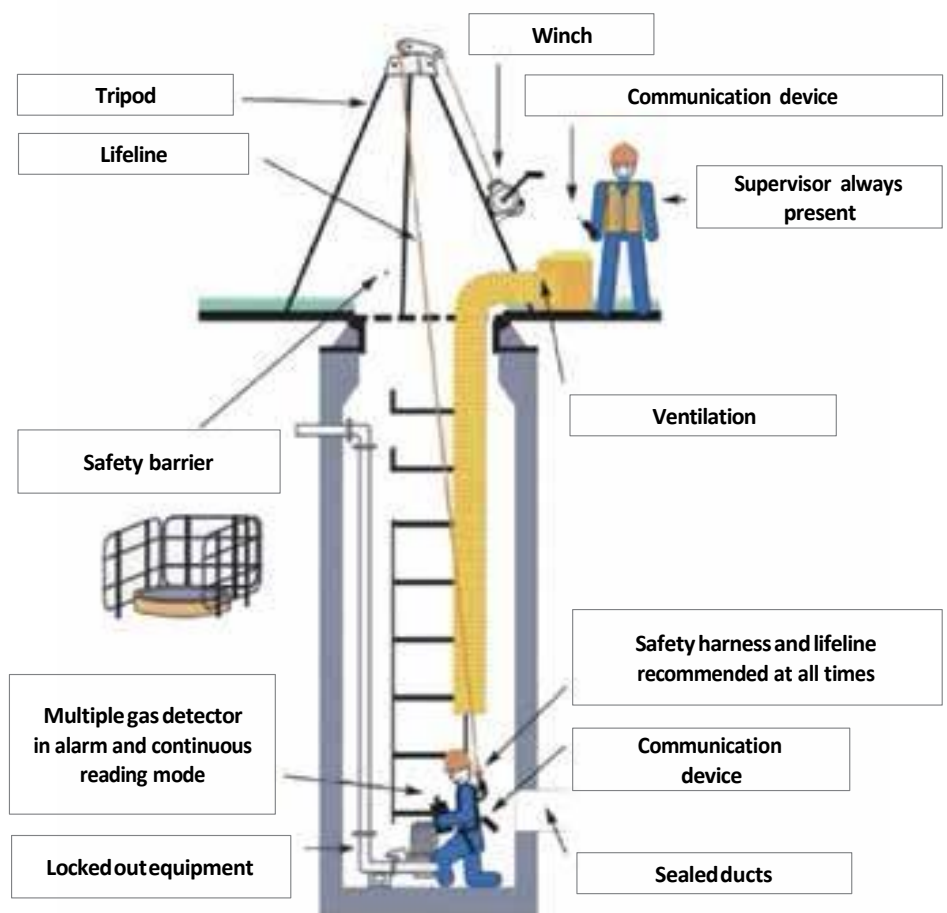
- Having an atmosphere which contains **or may contain** potentially harmful levels of contaminant (dust, fume, mist, vapour, gas, or other substance in liquid or solid form) the presence of which may be harmful to health and safety.
- Not having a safe level of oxygen, in particular due to presence of CO, CO₂, Ar, N₂ (e.g. following nitrogen purge).
- Risk of combustion or explosion due to O₂, CO, chemical organic products. (e.g. grease/oil + O₂).
- Cause entrapment or engulfment due to movement of devices, movement of earths, demolitions or new constructions, working with pipes, cutting rocks in mines...
- Extra risk due to vehicles working in these kind of spaces (e.g. in slag / tapping pits, casting...).

Identification, inventory, signage

Confined spaces must be identified and inventoried; signs must be erected at or near by all the entries of all confined spaces.

Permit system

Entry to a confined space must only be allowed after a complete Risk Assessment and after proper isolation conditions and mitigation actions have been put in place and a written approval, in the form of a permit, has been issued by a competent person (i.e. the one responsible to coordinate the tasks to be done in this confined space and has participated in the Risk Assessment) who is authorised to issue such permits.



5



I will respect all the rules of load handling at all times and never stand under a suspended load

I will only conduct lifting operations under the following circumstances:

- The risks have been assessed and suitable safety controls were established either:
 - under a lifting plan, taking into account the lift method, the equipment, responsibilities and communications (typically for higher risk or more complex lifts involving specialised equipment),

or

- under an approved Work Method, Work Procedure or Instruction (typically for routine lifts of low or insignificant risk)
- I and other people involved in the lifting operation (e.g. riggers of the load) are competent and authorized for the lifting equipment and lift method to be used.
- The lifting equipment is for purpose in terms of its design, load capacity, condition and test status.

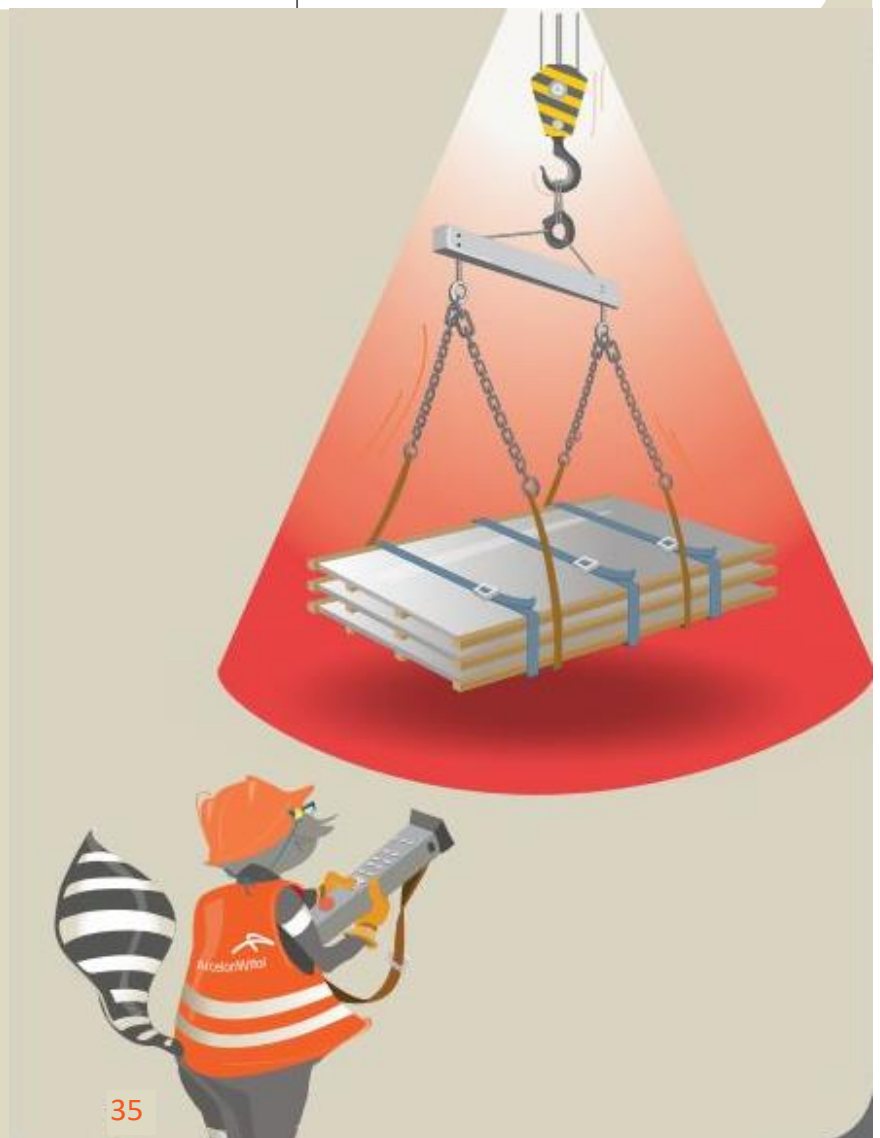
If I observe a colleague not respecting these rules, I will immediately get in touch with him/her and explain to them in a courteous manner the correct way of working.

**I work in compliance
with ArcelorMittal Safety Standard ST 007 Cranes & Lifting**

Category of Lift	Examples: (but not limited to)	Planning Required
High Risk/Abnormal Lifts	<ul style="list-style-type: none"> - Liquid steel - All multiple crane lifts; - Lifts over operating areas that may endanger personnel - Lifts over power lines; - Lifts involving personnel cages; - Lifts over or exceeding maximum rated loads 	<ul style="list-style-type: none"> - Risk Assessment - Develop a Lift Plan that addresses associated hazards - Incl. crane drivers and rigging crews in the lift plan development. A record of this involvement must be kept - See below for details on what should be included in the lift plan
Standard Lifts with SOP's	<ul style="list-style-type: none"> - Standard required lifts throughout the plant 	<ul style="list-style-type: none"> - Risk Assessment - Develop a Standard Operating Procedure (SOP)
Low Risk Lifts	<ul style="list-style-type: none"> - Regular maintenance lifts 	<ul style="list-style-type: none"> - On the Job Risk Assessment - Follow safe operating practices

Danger Zone

During the handling of the load no one should be in the danger zone, under and around the load. This zone, highlighted by the cone on the above picture depends on how the lifting is done and the height of load.





Wire rope sling defects

Reject actions:

- Remove from service.
- Cut into two pieces.
- Discard wire rope in scrap bin.

Operation clean-up and removal of defective lifting tackle

Chain defects

Reject actions:

- Remove from service.
- If the chain has been exposed to acid or alkali it must be withdrawn from service and referred to the supplier.
- If a chain sling is found to be in need of repair such as replacement of hooks, couplings, master links, grab hook, etc. It should be returned to the supplier immediately. After it has been repaired, the chain sling will be tested, inspected and returned to the plant.
- Stretched chain links are grounds for immediate removal from service. Cut the chain into pieces and discard in scrap bin.



Shackle, eye bolt and hook defects

Reject actions:

- Remove from service.
- Cut into pieces.
- Discard shackle, eye bolt or hooks in scrap bin.



Webbing sling defects

Reject actions:

- Remove from service.
- Cut into pieces.
- Discard sling in general waste bin.
- Do not use white webbing slings.



6



I will respect all the traffic rules

I will only drive a vehicle used for work purposes if

- The vehicle has been subject to a risk assessment and a maintenance plan.
- I have carried out an appropriate pre-operation safety check based on this risk assessment.
- I have a valid site license or permit.

If I observe a colleague not respecting these rules, I will immediately get in touch with him/her and explain to them in a courteous manner the correct way of working.

**I work in compliance
with ArcelorMittal Safety Standard ST 006 Vehicles and Driving**

- Always carry out risk assessment for the activities related and propose suitable control measures.
- Always observe all traffic rules and risk signalling.
- Always check the state / conservation of equipment and safety items before using the vehicles.
- Keep the vehicle in good working condition and equipped with all safety items.
- Drive vehicles only if you hold a valid driver's licence, specific for each of the vehicles.

Traffic Rules

- Drivers and passengers must wear seatbelts while the vehicle is moving (in all places at all times).
- Speed limits and traffic rules must be developed, regularly reviewed and rigorously implemented.
- Signage should be used in high-risk areas (e.g. level crossings, etc.).
- Rules must be established based on the risk assessment to ensure that:

- No car parks in dangerous or controlled areas (e.g. railways, near cranes and fire hydrants, etc.).
- Risk areas are identified and highlighted.
- Only specific vehicles are used to haul specific equipment.
- Smoking is not permitted in any company vehicle.
- Cell phone use is regulated: see Safety AM ST 301.
- Vehicles will be operated with lights on at all times.
- Vehicles operated on the site will be equipped with automatic reverse siren, except for cars.

- Vehicles operated on the site are equipped with taillights.
- At intersections of roads and pedestrian crossing, the loaded industrial vehicle has the right of way.
- For trucks no reversing without a banksman
- The reverse parking for cars is mandatory



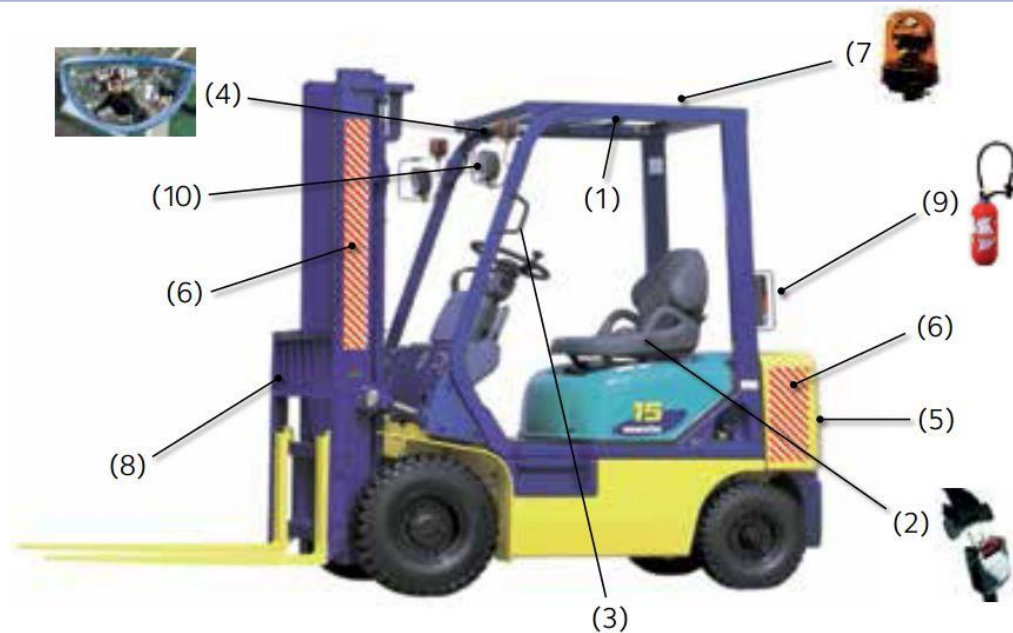
Inside



Outside



Forklift trucks must be compliant to Standard ArcelorMittal Safety A2 and the local legal requirements when more demanding.



(1) Fall-on protection : protection for driver from material falling from overhead

(2) Seat belt : all forklifts must be fitted with a seat belt which must be used by the driver at all times. It is a good practice to have it retractable and linked to the ignition

(2.1) Alarm for safety belts.

(3) Step and grab handles to enable the operator to get onto the forklift; steps have to be fitted with non-slip material and be maintained in a good condition

(4) Wide angle rear vision mirror; it is a good practice to have camera on top of forklift to safely access high stored material

(5) Improved visibility paint to make the forklifts more visible. To be able to monitor the driving and working behavior of the forklift driver, the backside of the

forklift should always be kept painted in perfect state. Any damage must be explained by the driver immediately after occurring.

(6) Reflective tape to be attached to mast and counterweight

(7) Flashing lights : can be flashing, blinking or rotating

(8) Load back rest : prevents the loads from falling into the driving space; the grid must be adapted according to the size of the loads to carry

(9) When the work area is not equipped, the forklift should be foreseen with firefighting equipment

(10) Front and rear lights: in case of low lighting, at night or in badly lit spaces; if they are fitted on the forklift, they have to be permanently switched on when the forklift is in operation

And furthermore (not indicated in the picture above)

(a) Operator's protection including weather guard if the forklift is used outside (e.g. wind shield, cockpit, ...)

(b) Locking system (ignition key or other system) to prevent use by unauthorized persons.

(c) Reverse motion alarm / Reverse driving sensor (when reversing and in order to avoid collisions, a sensor must be installed that detects obstacles).

(d) Parking brake alarm.

(e) Adequate tire for the activity (for example, chamber tires should not be used for high elevations).

(f) Load support (depending on the load, accessories such as spurs for coils can be used).

(g) Proximity detectors (sensors or other solutions that detect people in the vicinity of the forklift truck and prevent collisions with persons).

7



I will respect rail priority and stay out of close clearance areas without proper precautions being taken

I will come to a complete stop prior to crossing any rail track.

I won't walk on the tracks.

I will not access to close clearance areas unless the track is isolated.

I will access close clearance areas only by following a documented procedure developed from a risk assessment.

If I observe a colleague not respecting these rules, I will immediately get in touch with him/her and explain to them in a courteous manner the correct way of working.

I work in compliance
with ArcelorMittal Safety Standard ST 004 Rail Safety



Everyone required to work on or within 3 metres (10 feet) of a railway track must be protected from rail movements by track isolation using derail or switch locks.

Prior to begin work where railroad track isolation is necessary, the supervisor or designee, must notify those responsible for rail operations to alert them of the work to be performed.



All people involved in the operation of rolling stock must be trained and competent. No other person is allowed to ride on wagons or locomotives.

The risk assessment must also identify any close clearances around the track. These must be identified and signed.



Railroad Crossings should be marked with Warning Signs. Drivers are required to stop the vehicle and look around before arriving at the railway crossing.

Procedures for getting on and off trains must include the use of engineered sill step handles and ladders/steps placed so to prevent injury to legs, feet and hands.

Coupling and Uncoupling

Railway vehicles can only be coupled and uncoupled when at standstill; stepping in front of or between moving railway vehicles for their coupling and uncoupling is forbidden and will be regarded as gross violation of work discipline and safety regulations. When coupling and uncoupling railway vehicles, the space between the vehicles can be accessed and left only on the side where the caution signals are given.

8



I will respect the rules for entering and/or working in hazardous gas areas

I will only enter and/or work in Hazardous Gas Areas under the following circumstances:

- A risk assessment has been done to develop the most appropriate safe work procedure and the actions are put in place.
- There is a process where a written permit is used to plan and control the work involved in isolating, purging and making the area safe for maintenance and other activities.
- Appropriate gas monitoring must be done before, during and after work has been completed.

If I observe a colleague not respecting these rules, I will immediately get in touch with him/her and explain to them in a courteous manner the correct way of working.





The standard «**ArcelorMittal Safety ST 012 Working in Gas Hazard Areas**» describes minimum requirements for working in a potentially hazardous gaseous environment («Gas Hazard Areas»)

- to prevent the formation of explosive mixtures or zones of explosive atmospheres
 - a build up of asphyxiate or toxic gas (incl. gases taking the place of O₂)
 - to manage the oxygen levels to prevent either extremely rapid combustion or suffocation (harmful atmospheres)
-
- Each site must have a documented and up to date risk assessment for each area and task associated with working in potentially hazardous gaseous environments.
 - Each site must have an up to date layout plan in which all Gas Hazard Areas are highlighted and in the operative pulpit a system of alarms particularly for levels of CO.
 - Safe work and purge procedures shall refer to the risk assessment and specify appropriate controls for all work. These should include at least items such as the required hot work, PPE, purging and permitting, monitoring, isolation, consideration for using a safety standby person; the emergency response should be included in the risk reduction strategy.
This is to be completed with any relevant specific local condition.
 - All such areas highlighted by the risk assessment shall have appropriate warning signs posted and a permit system for controlled access to authorized employees and contractors must exist.
 - There must be a process where a written permit (one time task) or a written procedure (repetitive or continuous jobs) is used to plan and control the work.
 - Appropriate gas monitoring must be done before, during and after work has been completed.

9



I will not disable safety devices

I will not disable safety devices.

If the need occurs to disable a safety device, a complete risk assessment will be carried out.

If I observe a colleague not respecting these rules, I will immediately get in touch with him/her and explain to them in a courteous manner the correct way of working.

Risk assessments will be carried out together with a supervisor and safety expert.

In case of violations to disable safety devices without permission, disciplinary actions will be taken.

10



I will respect all the H&S basic rules, standards and signals and I will wear the required PPE

My life, and the life of my colleagues are too important and I would jeopardise those lives by not following these basic rules. Respecting rules of Safety is a precondition for employment.

In terms of safety, I will make a commitment - even in the long term - that I will always help my colleague whenever possible.



10 commandments to protect your hands

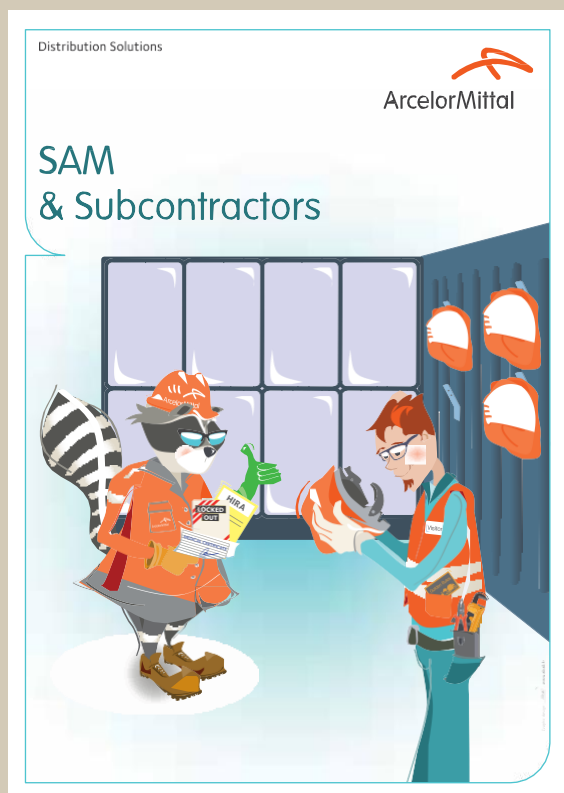
- 1 Only perform manual works on equipment if you know very well the activity to be executed, performing the risks assessment and establishing preventive protection measures.
- 2 Prior to performing any activity involving manual contact, think: «wouldn't it be better to use a tool?» If the answer is positive, do not perform it and search for engineering solutions together with your coordinator.
- 3 Never replace the work tools by the hands.
- 4 During the operation, never put your hands on wire rods, bars or on moving machines.
- 5 Always use correctly the adequate tool for each activity. Each tool has been designed for a specific function and has a designed useful life. Do not prolong this time.
- 6 Never replace one of the tools homologated for the activities by improvised tools. Always inspect them and, if the need for special tool is required immediately request it to your coordinator.
- 7 Only perform manual works like maintenances, tools and programme changes after performing the lock-out and/or disconnection of the equipment. Make the zero energy test. Disconnected equipment is different from unenergised equipment.
- 8 Be cautious when handling heated, chemically aggressive or cutting objects, and steel scraps with sharp edges. Give special attention to objects with cutting edges. They may be locked when it is necessary to pull them out.
- 9 Always use the adequate glove defined in the work standards for manual activities. At the first wearing sign, immediately replace this Individual Protection Equipment.
- 10 Inform the supervision about the risk situations observed in your work area. You are the most capable individual to assess the risks concerning manual work activities.

ArcelorMittal Safety Standard ST 008

Contractor Management



For all Contractors there must be an ArcelorMittal site 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 including emergency procedures.
- The Contractor must confirm in writing to the ArcelorMittal site management that all tools and equipment to be used are in a safe condition and this must be checked by the site representative.





To be done by the ArcelorMittal site

1. Identify and explain the risks coming from its activities contractors can be exposed to, the location of facilities, traffic plan...
2. Give the information to the concerned contractors/ sub-contractors
3. Explain the adapted control measures (including the rules for emergency response)
4. Communicate the safety rules to each concerned contractor and require compliance.
Each contractor involved in the works should have been trained to this information during induction before being authorised to enter on site.

To be done by the contractors (and their subcontractors the same)

1. Identify and explain the risks coming from the tasks to be performed in the ArcelorMittal site its employees can be exposed to
2. Give the information to the ArcelorMittal site + to its employees and other contractors/ sub-contractors' employees involved in the works
3. Explain the adapted control measures
4. Communicate the safety rules + the SOP to the ArcelorMittal site + to its employees involved in the works

To be done by the ArcelorMittal site

All this information must be reviewed during the pre-job conference. All the contractors/ subcontractors involved in the works must attend the pre-job conference. If one or several contractors have to work in the same time in the same or close location, the ArcelorMittal site and all the contractors/ sub-contractors together have to:

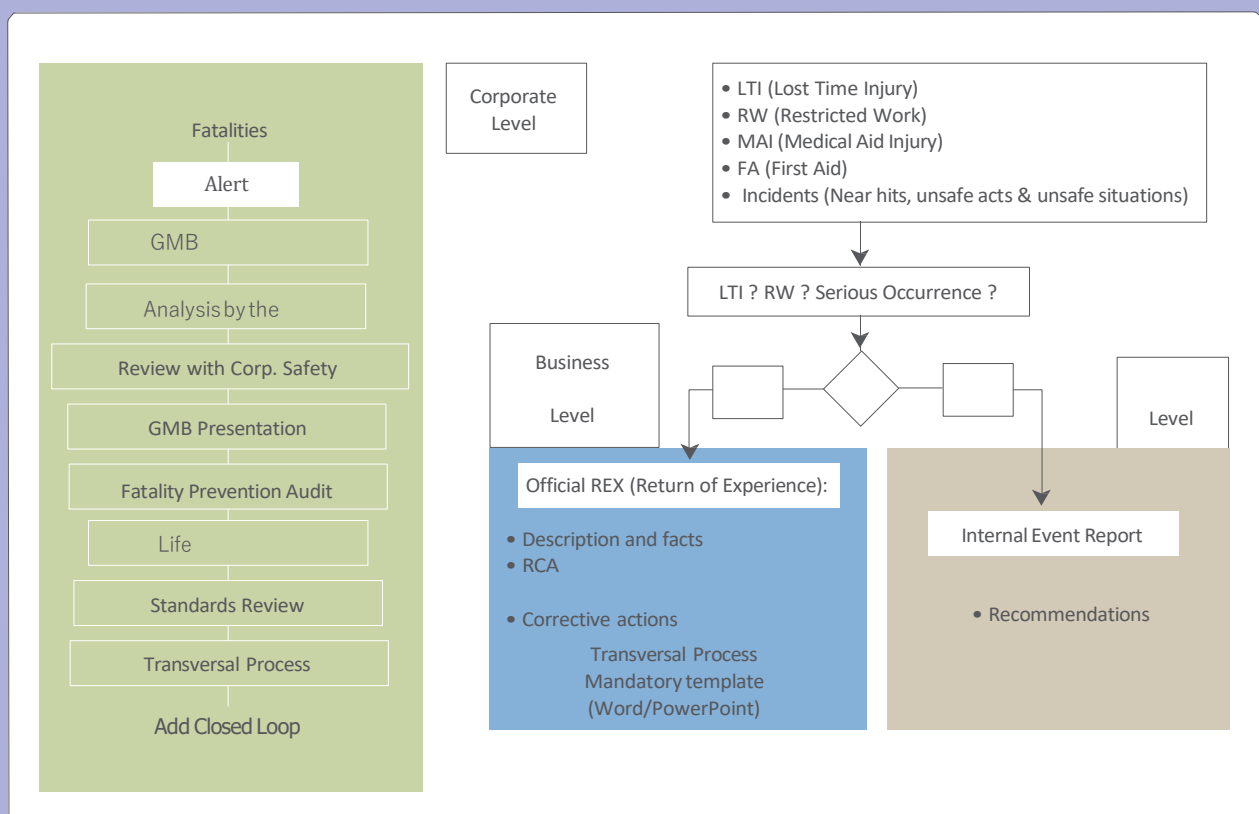
1. Exchange on their works to identify the risks coming from possible interferences between their activities
2. Define the adapted control measures, the responsables and the deadlines
The works must be then conducted in compliance with the safety rules defined during the described process and audited by the ArcelorMittal site (see audit form).
3. Define possible consequences due to violations against agreed safety rules.

Notification chart according to AMDS BP HSE P 01

AMDS_BP_HSE_P_01 Safety Reporting

- Accident or incident notification has to be done with the document «Work accident & incident report» (AMDS_ HSE_F 01) using English language for communication to the addressees.
- The regional H&S coordinator is responsible for sending out to the regional organisation. Where appropriate they will also be responsible for ensuring that information is distributed in the regional language.
- Fatality: Reporting of a fatality is applicable for all ArcelorMittal employees and all other people present in an ArcelorMittal plant (service providers, customers, visitors...) In the event of a fatality, the Head of HSE of Downstream Solutions will organise the communication of the information to the addressees according to the defined procedure by the Corporate ArcelorMittal (see the procedure ArcelorMittal Safety 009 Alert)

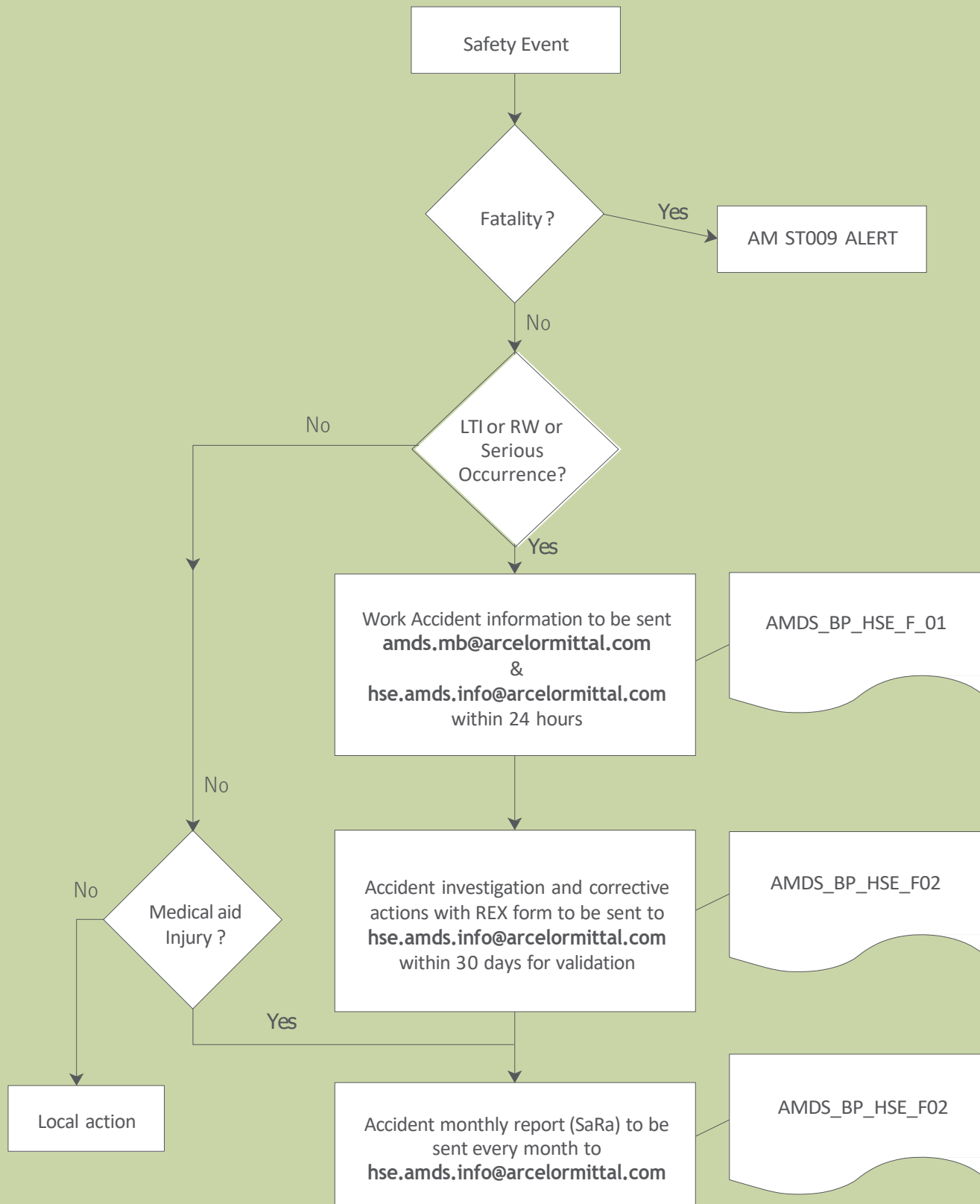
Investigations – Who takes action (ArcelorMittal Safety 009)



Serious occurrence is an accident or incident with the potential to be fatal or life changing for the victim

ArcelorMittal Safety Standard ST 009

Alert for significant incidences



Serious occurrence is an accident or incident with the potential to be fatal or life changing for the victim

ArcelorMittal Safety Standard ST 010

Safety metric

Performance Indicators for Injuries

Lost Time Injury Frequency rate (LTI Fr):

$$\text{LTI Fr} = \frac{\text{Fatalities + Lost Time Injuries (LTI)}}{\text{Worked hours}} \times 10^6$$

Severity rate of incidents (LTI Sr):

$$\text{LTI Sr} = \frac{\text{Number of days lost for LTI}}{\text{Worked hours}} \times 10^3$$

Lost Time Injury + Restricted Work Frequency rate (Fr'):

$$\text{Fr}' = \frac{\text{Fatalities + Lost Time Injuries (LTI) + Restricted Work (RW)}}{\text{Worked hours}} \times 10^6$$

Severity rate of Lost Time Incidents and Restricted Work (Sr'):

$$\text{Sr}' = \frac{\text{Number of days lost for LTI and Restricted Work Cases}}{\text{Worked hours}} \times 10^3$$

Recordable Injury Rate (RIR):

$$\text{RIR} = \frac{\text{Fatalities + LTI + RW + Medical_Aid}}{\text{Worked hours}} \times 10^7$$

Total Injury Rate (TIR):

$$\text{TIR} = \frac{\text{First_Aid + Medical_Aid + Restricted_Work + LTI + Fatality}}{\text{Worked hours}} \times 10^6$$

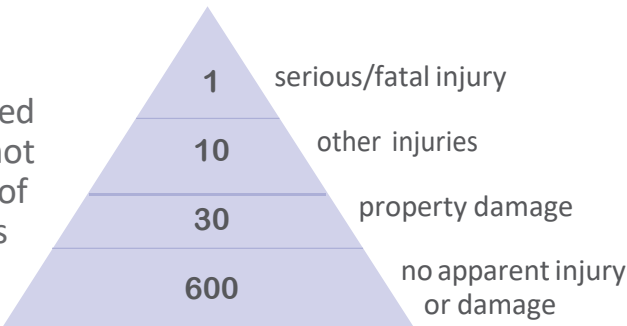
Calculation of frequency / severity rates - various cases

- Injury occurs
- Person not at work but in the plant (first aid)
- Person at work and not in the plant
- Person not at work in normal job but in restricted (adapted to his remaining capacity)
- Person at work in the plant
- Person in non-working shift or in vacation
- Person goes to the doctor at home

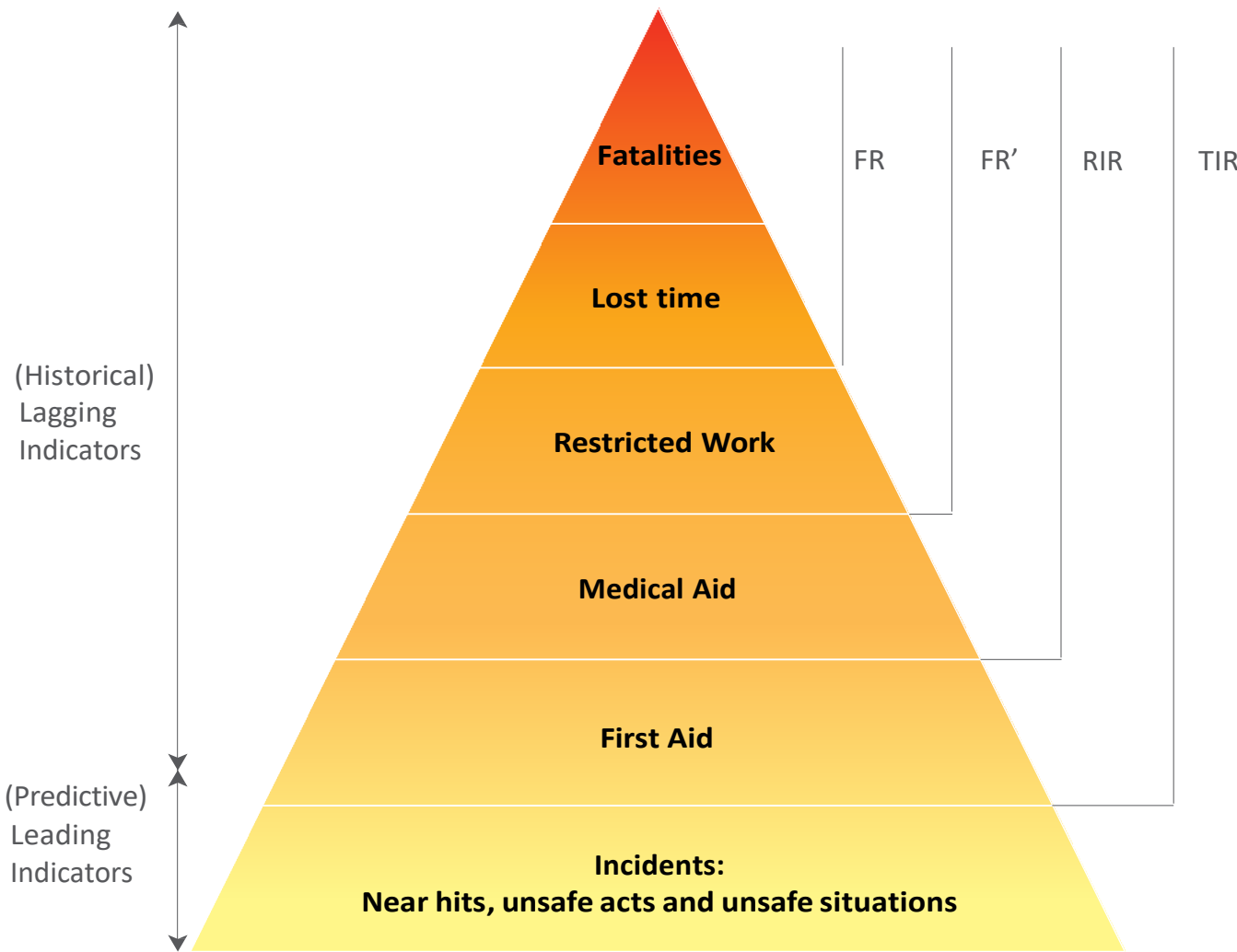
	8 hours	8 hours	8 hours	8 hours	8 hours	8 hours	8 hours	LTI Fr	RW Fr'	LTI Sr	RW Sr'
								events per million hours	events per million hours	events per 1000 hours	events per 1000 hours
								events	events	days	days
1	 							0	0	0	0
2	 							0	0	0	0
3	 							0	0	0	0
4	 							1	0	2	0
5	 							0	0	0	0
6	 							0	0	0	0
7	 							0	1	0	2
8	 							1	0	3	0
9	 							0	1	0	3
10	 							1	0	2	1
11	 							1	0	1	2
12	 							1	0	2	1
13	 	X	X					0	1	0	2
14	 	X	X					1	0	2	0
15	 							1	0	5	0
16	 							0	1	0	5

Bird's Pyramid

Bird's (1980) pyramid is now accepted as the standard example because it not only shows more clearly the number of «hidden» accidents, but also indicates the huge loss potential of property damage incidents.



In order to develop effective improvement, managers may put in place a process to know and analyse the elements of the base of the Bird's pyramid.



ArcelorMittal Safety Standard ST011

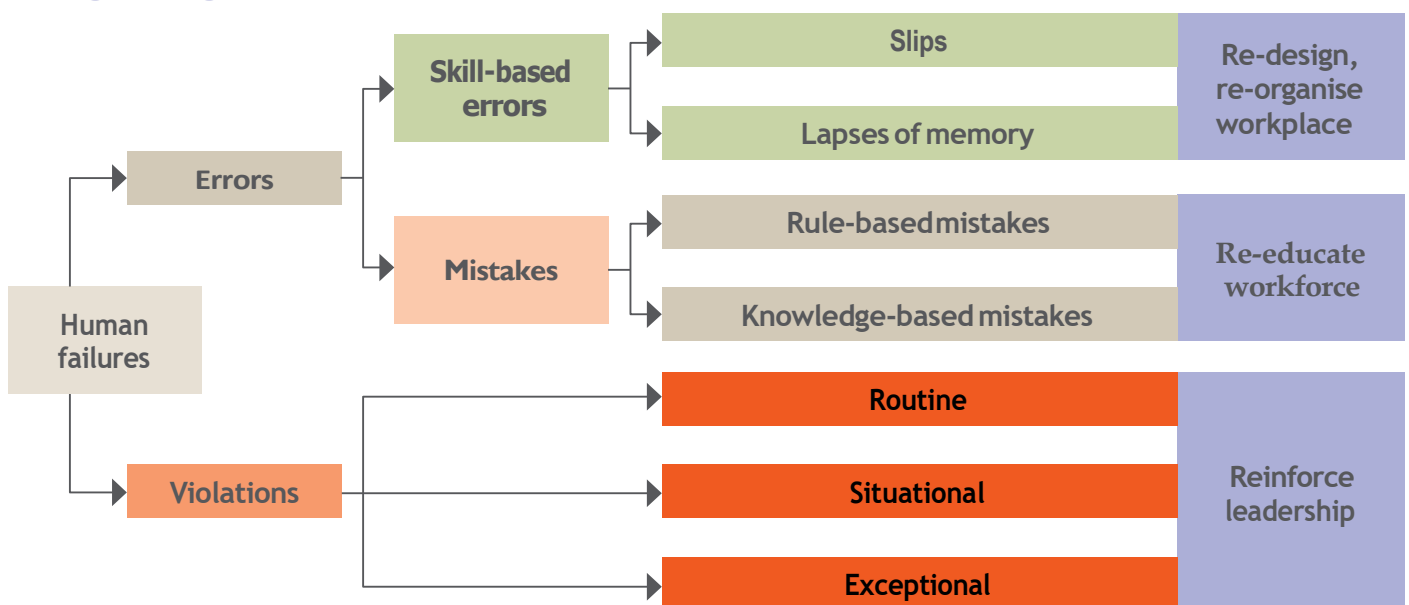
Safety metric

The organisation shall establish, implement, and maintain an incident investigation process to investigate all work-related incidents and prevent their recurrence.

The organisation shall use the root cause analysis and critical decision analysis methods, or equivalent analyses, as part of the incident investigation activity to determine causal factors. As a minimum, these analyses must be formally documented for investigations involving:

- Work related incidents which have resulted in one or more fatalities or where one or more people suffered life threatening injuries in an ArcelorMittal plant (includes employees, contractors, customers, visitors etc.).
- Significant incidents that could have caused a fatality in an ArcelorMittal plant (includes employee, contractors, customers, visitors etc.)
- Incidents that result in a lost time injury or restricted work. If the investigation comes to the conclusion that human factor has contributed to the incident happening, it is necessary to investigate why this occurred. In order to do this in a systematic way the approach as described below has to be followed strictly.

Categorising unsafe behaviour and reaction



Slips:

- The plan of action may be perfectly adequate, but the actions do not go as planned there is unintended failure during execution of the task.

Mistakes:

- The actions may go according to plan, but the plan is not adequate to achieve its intended outcome.

Violations:

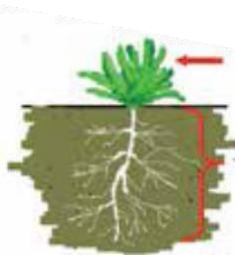
- Whereas slips and mistakes are unintentional, in most cases violations are deliberate.

People generally intend the non-compliant acts, but not the bad consequences that occasionally ensue.

Root Cause Analysis (RCA)

- Root cause analysis is an approach for identifying the underlying causes of why an incident or accident occurred so that the most effective solutions can be identified and implemented.
- Within an organisation, incident/accident investigation and root cause analysis are all fundamentally connected by three basic questions: What's the problem? Why did it happen? and What will be done to prevent it?

Root Cause Analysis Basics



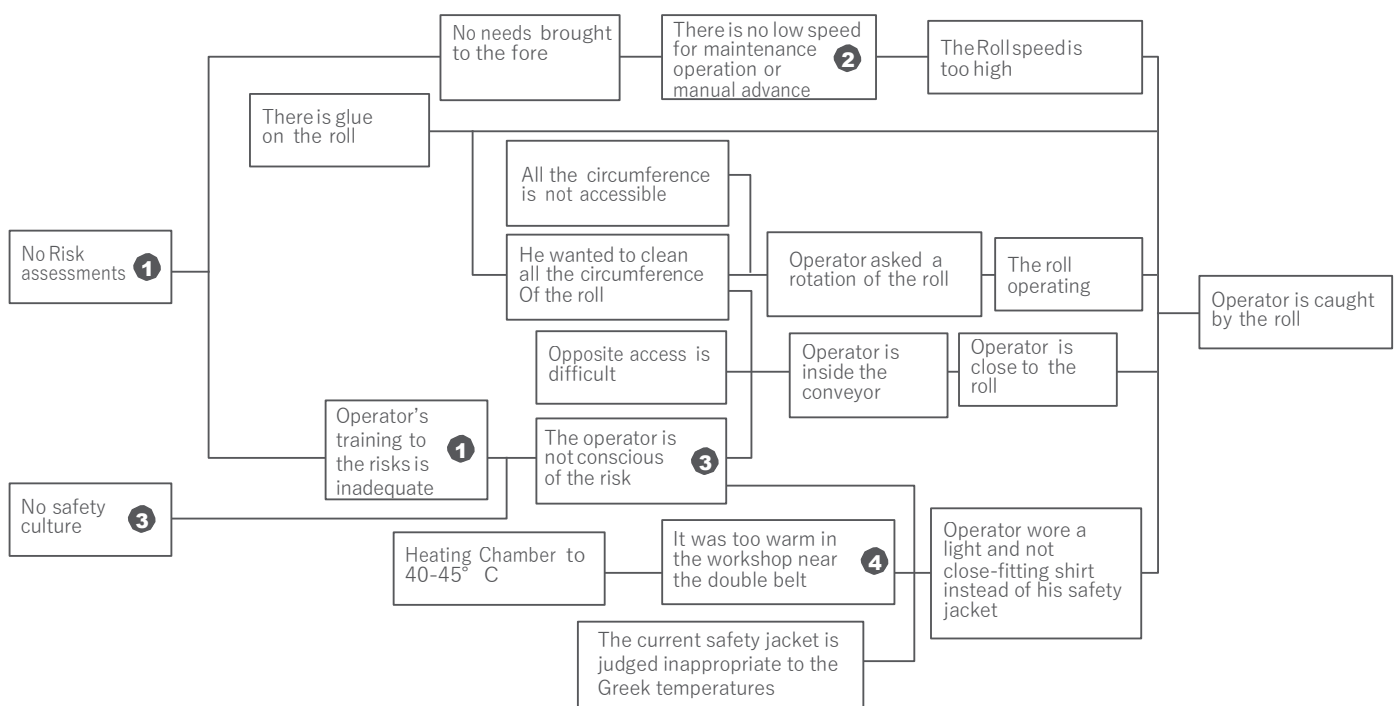
Symptom of the problem. «The Weed» (incident, accident...) Above the surface (obvious)

The **Underlying Causes** «The Root» Below the surface (not obvious)

The word root, in root cause analysis, refers to the underlying causes, not the one cause.

RCA methodology for Work accident

- 1 Gather facts & evidences
- 2 Built of root causes tree
- 3 Determine corrective & preventive measures



At each stage of the «root causes tree», the question «Is it sufficient? Is it necessary?» must be asked in order not to miss any facts and to avoid false conclusions.

ArcelorMittal Safety Standard ST 013

Emergency Preparedness

For any site, after a Hazard Identification and Risk Assessment to detect the possible emergency cases existing on the site, an emergency plan has to be prepared in order to give clear response for each case. This may include health and safety matters as well as environment related issues.

The main targets of this standard are to define what has to be done when and by whom.

Minimum list of emergency scenario to be developed :

Fire

Explosion

Pollution (water, ground, ...)

Transport of dangerous products (hydrogen, fuel, acids, ...)

Gases contamination

Radioactive material contamination

Earthquake

Flooding

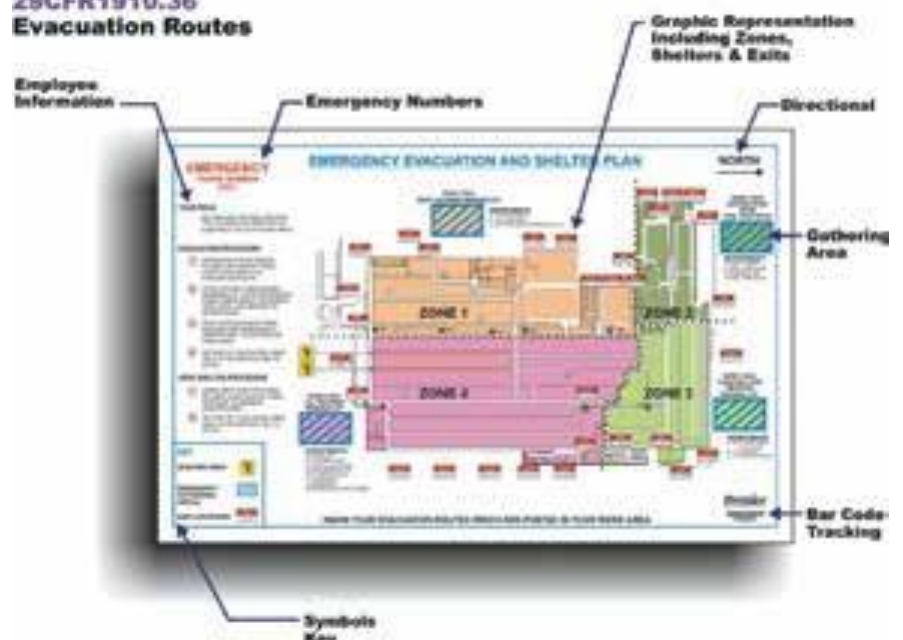
Hurricane in regions where these natural catastrophes are to be expected

Tornado

Other, as detected by the site



29CFR1910.36 Evacuation Routes



Medical Emergency Preparedness

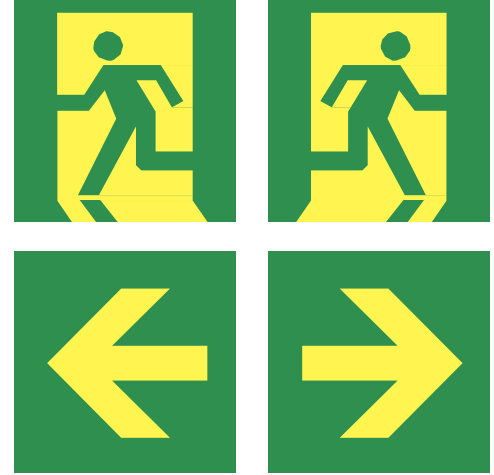
1 Gather information :

1. About your first aid kits and your first aid trained personnel
2. Identify medical capabilities of the hospitals / clinics next to your facilities (depending on the medical condition)
3. Identify transportation mean available for the medical evacuation of ill/injured employee / visitor / contractor

2 Build and deploy action plan to design the process

- Buy the required number of first aid boxes
- Organise first aid training for your employees
- Draft your MERP (Medical Emergency Response Plan)

3 Organise drills to ensure effectiveness of the process



+	
First aid	
IN THE EVENT OF ACCIDENT/ ILLNESS	
1. Call a first aider	
Your area first aider is	
<input type="text"/>	
2. Your nearest first aid box	
is located at	
<input type="text"/>	
3. For sick bay use contact	
Your sick bay is located at	
<input type="text"/>	
TO CALL AN AMBULANCE	
Dial <input type="text"/>	

ArcelorMittal Safety Standard ST 014 HIRA

Hazard Identification and Risks Assessment

There are two types of HIRA:

- Main HIRA which includes the whole process of Hazard Identification and Risk Assessment and starts with a project and is continually updated thanks to the different events which occur (incidents, accidents, new installations, new organisation...)
- Specific HIRA can be on the job HIRA and/or additional Risks Analysis needed for specific new tasks when these ones may not yet be taken into account in the Main HIRA (for example, contractors tasks, interfering risks, specific risks linked to the different standards, especially when a work permit is needed).

These different risks will be then integrated as soon as possible in the main HIRA process.

Hazard

Source, situation, or act with the potential for harm in terms of human injury or ill health, or a combination of these.

Risk

Combination of the likelihood of an occurrence of a hazardous event or exposure(s) and the severity of injury or ill health that can be caused by the exposure to the event or exposure(s).

Risk = Probability x Frequency x Severity

Frequency

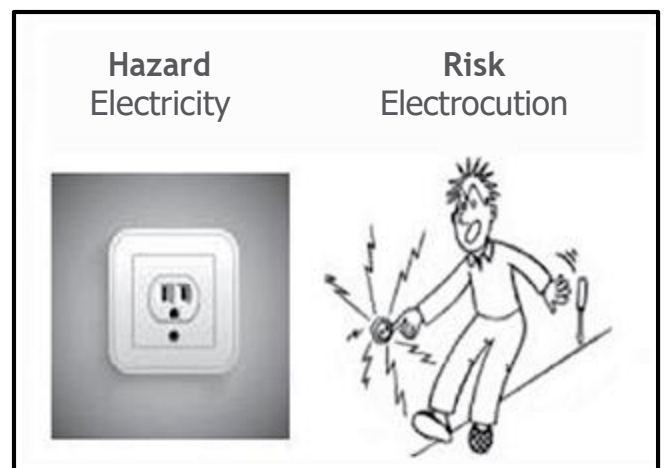
Number of times that the undesirable event can occur or number of times an employee faces the hazard.

Probability

The possibility that the undesirable event can occur, taking into account the means in place to manage this risk and the historical safety accidents.

Severity

Severity is the possible consequences for people



Downstream Solutions - HSE-BP-P-03

Risk Assessment Procedure

RISK	CLASS	ACTIONS TO BE TAKEN
400 < R	IV	Treat immediately in order to be out of this level
200 < R < 400	III	Action should be a high priority and degraded mode required
70 < R < 200	II	Action should be a priority and degraded mode required
20 < R < 70	I	Attention required
R < 20	0	Information Required

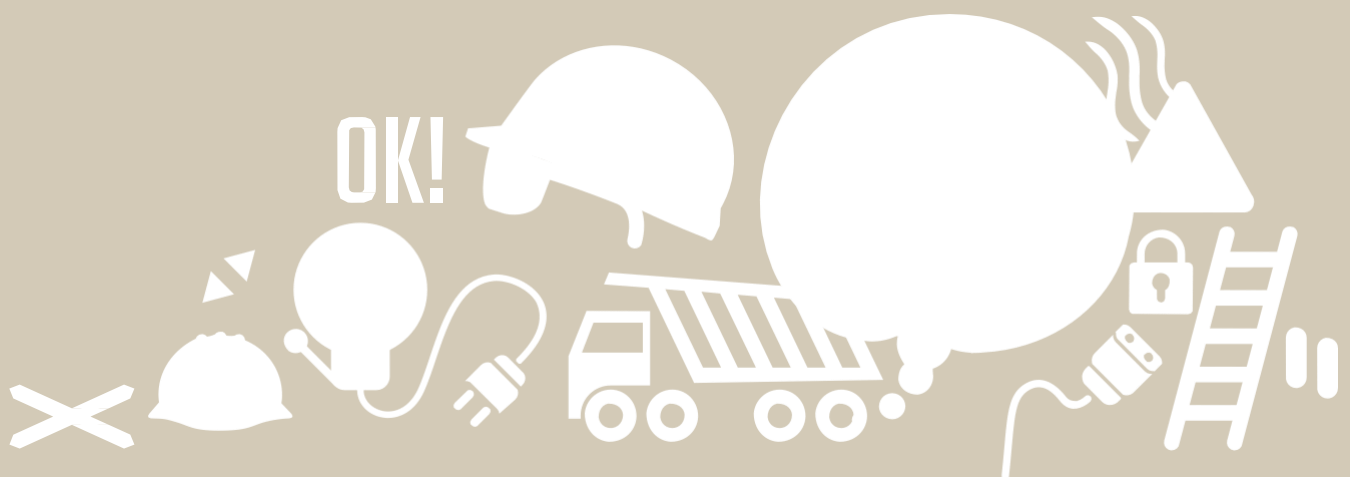
F	FREQUENCY	S	Severity
10	Almost continuously (once or a few times in an hour)	100	Disaster (with lot of deaths)
6	Regular (once or a few times in a day)	40	Major (with number of deaths)
3	Occasional (once or a few times in a week)	15	Fatal accident
2	Unusual (once or a few times in a month)	7	Serious (Permanent partial disability)
1	Rarely (a few times in a year)	3	Injury, Work delay
0,5	Hardly ever (once a year or less)	1	Internal first aid

P	PROBABILITY The possibility that the undesirable event can occur, taking into account the means in place to manage this risk and the historical safety accidents	Technical safety Device, Collective safety device	PPE	Procedures, Instructions	Training	HISTORICAL SAFETY ACCIDENT
10	To be expected, almost certain	0	0			An accident occurred in the site within the last 12 months
6	Very / quite possible	0	1 among these			
3	Possible	0	2 among these			A REX exists
1	Possible but unusual	0	All			
0,5	Improbable but possible	1				
0,2	Improbable	1				

Procedures Downstream Solutions

AMDS BP HSE P 10
(Un) Loading and storage of slit coils

AMDS BP HSE P 04
Coil storage procedures





1. Statistics:

1.1. Adult Driver Cell Phone, Texting, and Car Accident Information

- Talking on a cell phone causes nearly 25% of car accidents.
- One-fifth of experienced adult drivers in the United States
- send text messages while driving.

Source: Edgar Snyder & Associates 2012; Cell Phone & Texting Accident Statistics Pennsylvania, US

1.2. 2012 Texting Pedestrian Study

Researchers from the University of Washington monitored 20 of busiest intersections and observed the following:

- Pedestrians who text are four times less likely to look before
- crossing the street, crossing crosswalk or to obey traffic signals.
- They also found that texting pedestrians take an average of two seconds longer to cross the street.

Source: University of Washington study, which monitored 2- of Seattle's busiest intersections

2. ArcelorMittal Safety ST 301

In the standard AM Safety ST 301 you can find the rules describing the use of cellular phones and earphones on company premises and whilst driving vehicles during business trips [www.mycelormittal.com/Health and Safety/ Standards](http://www.mycelormittal.com/Health%20and%20Safety/Standards)

3. More useful tips for a safe use of mobile phones:

- Avoiding distraction;
- Do not walk and phone
- Do not drive and phone
- Do not send or read text messages when driving or walking. Text messaging requires more visual, manual and cognitive attention
- from the driver and is by far the worst and riskiest distraction
- Only use or consult your cell phone when you are not moving and in a safe position e.g. a parking space.
- Do not use your mobile phone in a noisy environment Seattle's busiest intersections and observed the following:
- Try to plan your calls before pulling into traffic
- Put your phone on the back seat before you start driving, so you are not tempted to read or answer emails while driving
- Pull over and stop your car in a safe place if on a long call with your hands-free kit. Never stop on the emergency lane on the highway. two seconds longer to cross the street.
- Do not have a long conversation with a person who you know is driving and using a hands-free kit
- If hand-free systems are legally authorised:
 - o Most cars now have Bluetooth devices installed. If renting a car, take five minutes before you first drive it to programme the connection between your mobile phone and the car radio
 - o For cars with voice recognition, programme your usual contacts so it is easy to phone them
 - o Some cars are equipped with an automatic message that alerts you if the person you are trying to call is driving. Switch on that use of cellular phones and earphones on company premises and whilst mode.

4. Use of mobile phones:

- 1 Never walk and talk
Never walk and text



- 2 Do not drive or ride while using a mobile phone. If legally authorised, a hands-free kit can be used in cars



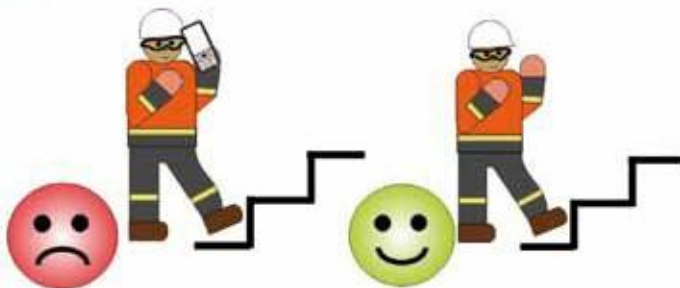
- 3 Never use your mobile phone while operating moving equipment and vehicles



- 4 Never operate a plant workstation while using a mobile phone



- 5 Do not walk stairs up or down using a mobile phone



6



- 7 Perform a risk assessment before using a mobile phone: are you in a hazardous environment?



- 8 Can stay as is



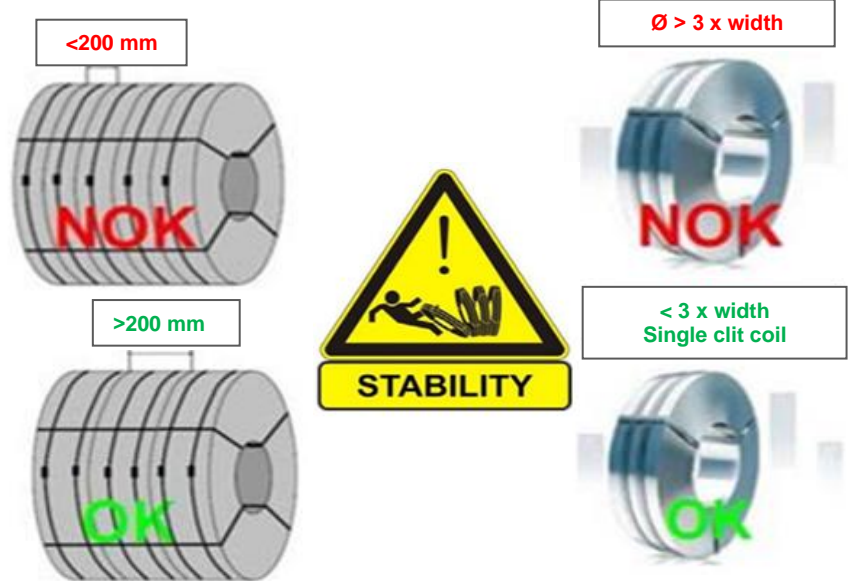
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Downstream Solutions BP HSE P 10

(Un) Loading and storage of slit coils

- All red marked dimensions of slit coils and bundles defined in this table or bundles with single narrow slit coils (diameter > 3 x width) are in danger to tip over.
- For these products please refer to the specific loading and storage conditions in the procedure.
- A «stability» warning (yellow/black) should mandatorily be fixed on all slit coils defined in the red zone area in the stability graph, be it with a sticker or with a tag.
- Slit coils and bundles with a width below 150 mm are extremely dangerous when manipulating and need extra measures for safety. (see black area in the table below)



- To decrease the risks when loading or unloading, the work procedure AMDS BP HSE P 10 chapter 3 must be followed strictly.



- Narrow slit coils (red area of the graph figure 1) have to be stored in racks, cages or between appropriate horizontal supports.



- The slit coils have to be laid flat (horizontally) and formed into a stack when racks are not available. The height of the stack should not exceed 2.5 times the wider diameter and the maximum height is 2.5 meters.



Downstream Solutions BP HSE P 04

Coil storage procedure

Coil storage areas

Coils have to be stored by width, on two levels maximum and using KLP® RollStop or KLP® Rollblocks or any equivalent system. These equipments are adjusted according to the coil dimensions (external diameter). The other dimensions such as the span between the two rails are defined according to the coil width prior to the installation. KLP® RollStop system: The RollStop system is used for the storage of coils ranging from 680 to 2,500 mm in diameter. KLP® Rollblocks: This equipment can be used for the storage of coils with diameters ranging from 500 to 2,500 mm.

Any system equivalent to KLP® RollStop or KLP® Rollblocks can be put in place but has to be evaluated. The evaluation should be formalised in the Risk Assessment Document validated by a Safety specialist appointed by the JTZ Committee.



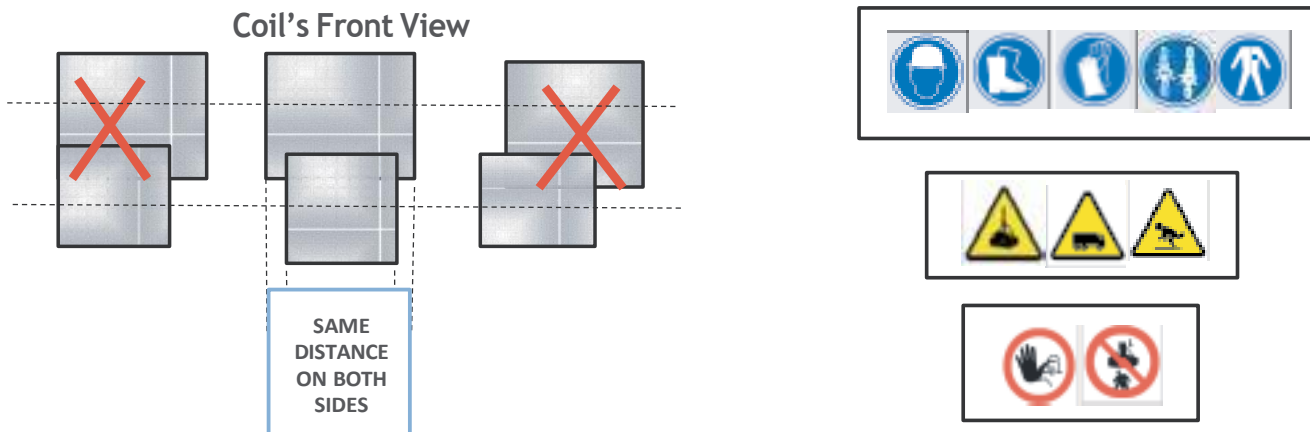
Coil storage rules

Each coil must be secured by four chocks.

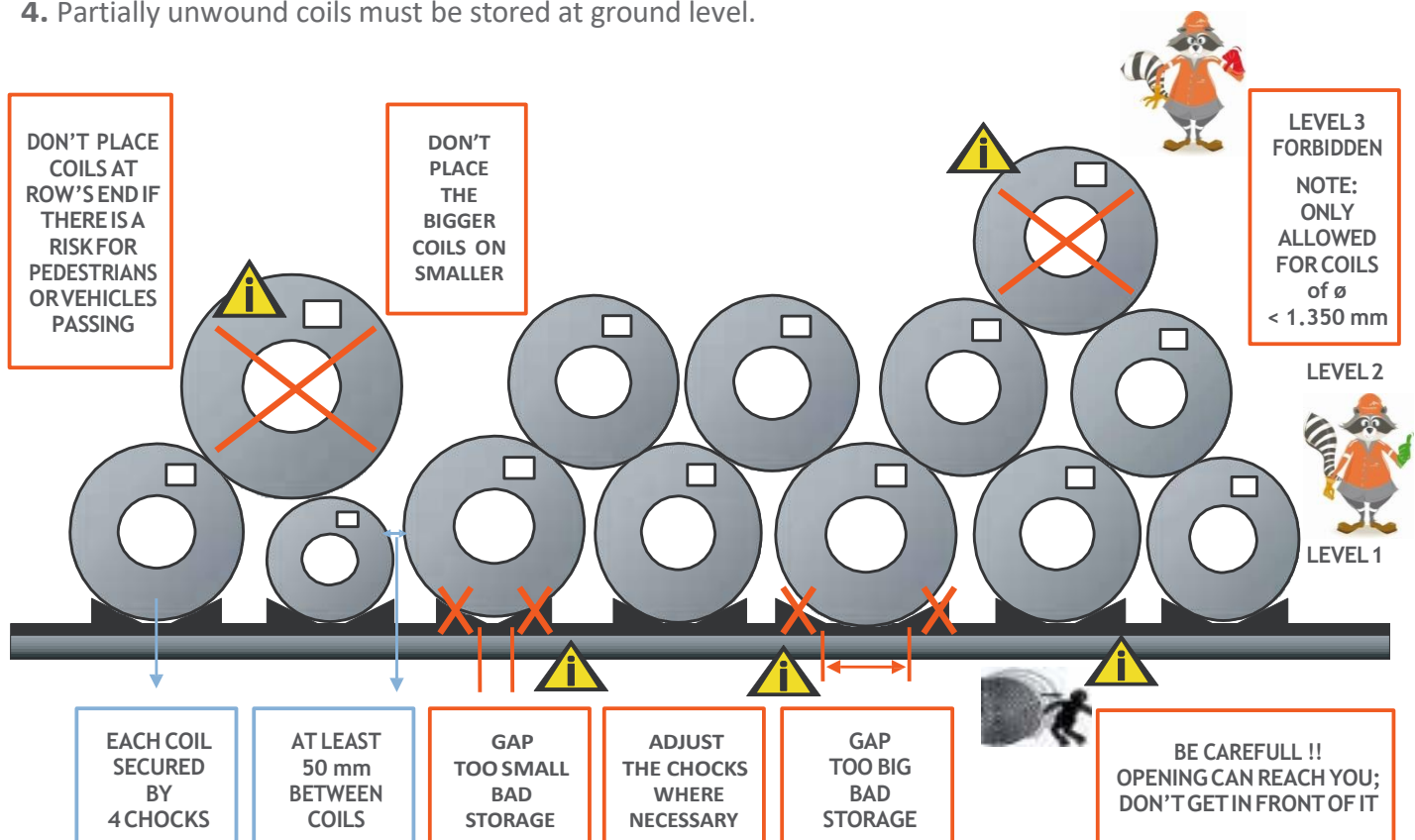
- Coils have to be stored on two levels maximum. Exceptionally a third level is permitted only for coils with a diameter of < 1350 mm
- At row ends, in case of frequent pedestrian or vehicle traffic or location there or a working station or critical installation, no second level coil should be stored on top of the first two coils. A risk assessment has to be performed there to prove that this measure is enough to reduce the risk to an acceptable level. If not, other additional measures should be taken to manage the risk, like putting stable coil stoppers or chaining the bottom two coils together.
- It is not allowed that the sides of the coils touch each other (minimum space = 50mm)
- Partially unwound coils must be stored at ground level.
- No large coil on top of small ones
- The structure of the stock must be composed according to criteria of width diameter and weight in order to ensure stability. Coils should be correctly aligned and stacked so that the centre point of each coil is directly above an imaginary line joining the centre of the row of coils and running down the middle of the row

Stocking Coils

Ø 500 to 2.500 mm



1. Only authorised persons are allowed into the stock yard.
2. High visibility clothes or Jacket should to be worn into the stock yard.
3. When a person is entering in the stock yard overhead cranes driver must be warned in order to stop all handling above the area.
4. Partially unwound coils must be stored at ground level.



Downstream Solutions Major Risks

Guidelines - Summary
June 2012

Major Risks: Taskforces

Hazard identification and Risk assessment (HIRA) is the foundation of our H&S management system, and is legally required in most countries for standard jobs and tasks. If all hazards have been identified, all risks carefully assessed and mitigated, accidents are unlikely to happen. Corrective measures taken to mitigate existing risks will be prioritised based on their risk rating, assuring that we will work first to prevent

events that could lead to the most severe injuries. Looking into the accidents we have had over the last years, we have defined, with the help of the H & S coordinators, a list of risks ranked according to their importance. For the 13 major ones we have set up a dedicated Task Force involving also our CTOs. Each task force has defined now a set of simple guidelines for each of these risks, assuring that when appropriately applied, new accidents will be prevented. After investigation of the 2012 accidents we found that 90% would have been prevented if the guidelines had been followed.

These Guidelines define the minimum safety requirements for each of the defined risks on all ArcelorMittal Downstream Solutions site premises, so mandatory for each ArcelorMittal Downstream Solutions site and their service providers, unless a HIRA can be shown that risks are efficiently tackled by other applied means. For each of the Major Risks a ppt-presentation has been set up to explain these basic rules showing mandatory practices (blue arrow) or good practices (green thumbs). In some cases we also show bad practices found (red thumb).



Journey to Zero
Our goal: Zero accidents



Downstream Solutions Major Risks:



- 1 (Un)loading trucks and wagons (at our sites/at customers)



- 2 Working at heights



- 3 Traffic risks and circulation plans



- 4 Manipulation and storage of long products



- 5 Working and walking on trucks/trailers wagons unprotected



- 6 Manual handling
a. Linked to hands
b. Linked to ergonomics



- 7 Loto linked to intervention on machine



- 8 Maintenance work and non-routine activities



- 9 Working with subcontractors



- 10 Working in pits



- 11 Manipulation and storage of flat products



- 12 Storage rack guidelines



- 13 Forklift safety rules

Major Risks TF 1

(Un)loading trucks & wagons (in our sites/at customers)

Major Risks TF 5

Working and walking on truck/trailers/wagons unprotected



1. No transport organised by ArcelorMittal without a contract including a transport protocol.
2. No (Un)loading if the carrier does not comply with Safety Protocol at the entrance of the site.
3. Preparation of truck/trailer not allowed unless under full control of ArcelorMittal site.
4. **All vehicles have to be carefully blocked** during the (un)loading operations.
5. **Nobody should be on the trailer**, unless defined as necessary, having studied all the known means to prevent it and after having assessed and treated the risk. However nobody may stay on the vehicle platform during lifting or moving of materials.
6. **Never touch the material** unless defined as necessary, having studied all the known means & tools to prevent it and after having assessed and treated the risk.
7. The position, activity and behaviour of the driver should be under control at all times.
8. It is recommended to check all trucks formally after securing and lashing and before leaving the site. It is a good practice to document it and to make pictures.



Major Risks TF 2

Working at heights (cranes, roofs – system Downstream Solutions)



1. All working at heights on roofs and cranes should be performed with the use of safe man lifts, **with operator attached, or walkways with railings at both sides.**
2. If rule no. 1 not possible, then walkways need to be equipped with compliant anchorage points and lifelines.
3. Only roofs with stability, approved by an external expert, can be accessed without, in other cases all measures to work safe have to be put in place (nets, attaching points, PPE, Trainings, audits, ...)
4. **All employees who have to work at heights have to be fully, properly trained and tested for working at heights and it is a good practice to use work permits.**
5. All accesses to roofs and cranes must be secured and locked.
6. Access to working places at heights is forbidden if not explicitly permitted by the site manager or operational manager (as described in local procedure) after a proper risk assessment.
7. Fall protection equipment needs to be used properly (wearing and attaching) and needs to be checked once a year by a certified external expert and before every use by the user.
8. **All roofs and cranes need to be identified on a site plan and an individual working procedure needs to be defined for each in case of works to be performed there.**
9. A Rescue Procedure needs to be available referring to either an internal or an external rescue team.



Major Risk TF 3

Traffic risks and Circulation Plan



1. It is mandatory to **set up and install a safe circulation plan** in the site (inside and outside) and publish it at the site entry.
2. Define a speed limit inside the gates of your site and check regularly where possible.
3. Use as much as possible **public road signs and markings**.
4. Assess during management presences that the circulation plan is still up to date, the traffic rules are fully respected and signs and markings are clear and clean.
5. Assure that all industrial vehicles (including forklifts) are driving inside the site gates with the headlights on at all times.
6. Assure that all industrial vehicles have a sound signal working when driving backwards.
7. **Install clearly defined walkways for pedestrians and make as much as possible physical separation with vehicle traffic.**
Recommendation to keep minimum 3m distance from the vehicle.
8. Arrange as much as possible one way traffic lanes.
9. Avoid situations where vehicles have to drive backwards. If any reversing is required, ensure this is done with the aid of a trained banks man.
10. When parked, all vehicles must be blocked: brakes on and engine off.
11. Reverse parking is mandatory for cars.

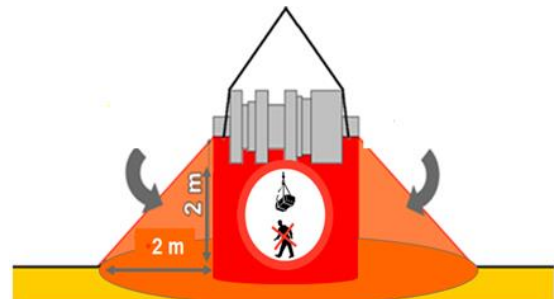


Major Risks TF 4

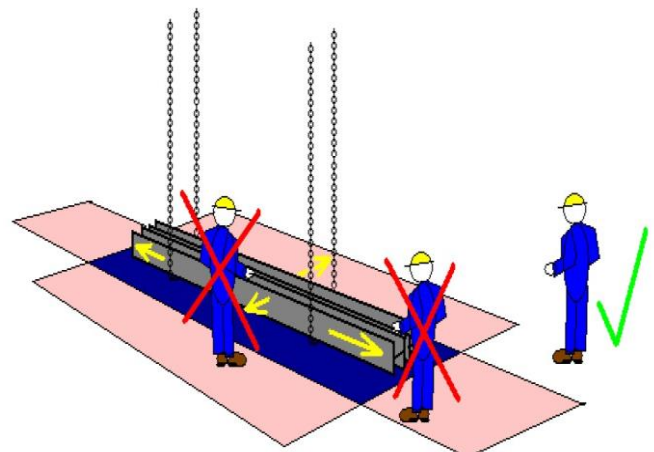
Manipulation & Storage of long products



1. **Always keep sufficient distance between persons and lifted or moving load**, depending on how lifting is done and the height of the load.
2. Never walk, drive or stay under a hanging load or loading equipment.
3. During lifting and moving, **never touch the product and the slings**. If still needed, use an adapted tool to guide the material allowing to respect the safety distances.
4. Never use the banding wire or straps to lift the material.
5. Use only the proper lifting equipment and lifting accessories which are checked, compliant and allowed for the task.
6. Use adapted and compliant storage systems with racks to protect tipping over.
7. Respect the storage rules: maximum heights, maximum weight and wedging rules.
8. **Never lift or move a load if you are not able to see the load and the crane.**
9. Only walk carefully and move the crane at the same time, if the walkway is even and free of obstacles.
10. Make sure the **slings are put around the materials at a sufficiently safe distance from the long product ends** (at least a fore arm's length – appr. 50 cms).
11. **Never stand between a lifted load and a fixed point or obstacle.**



ALWAYS keep to the safety cone rules and the dead man's cross. The distance to keep away from the load is minimum the height of the lifted load.



Major Risk TF 6 part 1

Manual Handling, linked to hands



1. Before performing manual handling on equipment, **THINK!** Always perform a risk analysis before starting any work.
2. **Never leave your hands under a load, close to a pinch point or in between a fixed and mobile part.**
3. **Never deactivate safety devices** (laser, protection grid,...)
4. Use gloves which are adapted to your hands and the activities you perform, with its related risks.
5. Before each work, check the status of your gloves and request to have them changed on time.
6. **Use a “no touch” tool** like a stick with hooks at the end.
It is always better because you don't need to touch the material with your hands and at the same time you are able to stay at safe distance.
7. Wash your hands regularly.

Examples of “no touch” tools





Major Risk TF 6 part 2

Manual Handling, linked to ergonomics



1. Never manually lift a load, if not trained how to do so.
2. If not necessary, do not carry the load by yourself.
3. **Check the weight of the load before lifting it.** Make sure when lifting a load manually that it is not too heavy for your back. **THINK!**
4. Think before acting! Check how you can hold the load in the most safe and efficient way.
5. **Plan the activity: Roads are free, no stairs to take, ... Know where to go to!**
6. Keep the load as close as possible to the body.
7. Always use the appropriate lifting technique:
 - bend slightly the back, hips and knees
 - put the load down first, slide it into position to lift
 - keep your head up while lifting

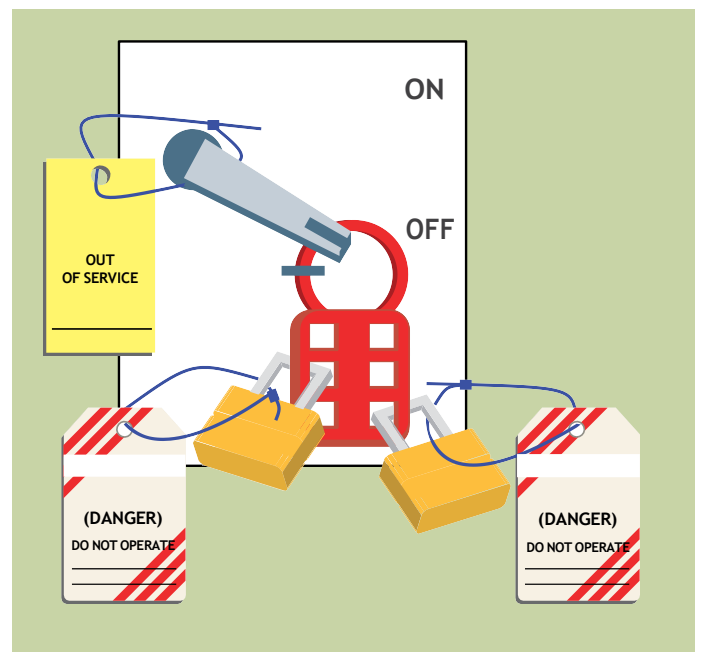


Major Risks TF 7

LoTo linked to intervention on machines



1. **Inform supervision** of the intention to Stop & assure proper lock out/tag out (LoTo) after validation by authorised manager.
2. Shut-down the machinery and equipment.
3. Identify all energy sources and other hazards.
4. Identify all isolation points.
5. Isolate all energy sources.
6. **De-energise all stored energies.**
Lock out all isolation points.
7. Tag machinery controls, energy sources and other hazards.
8. **Verify** absence of energy.
9. **Test by 'trying'** to reactivate the machine without exposing the tester or others to risk.



Major Risks TF 8

Maintenance works and non-routine activities



1. Perform a **risk assessment for each maintenance action or activity.**
(Stop - think - before acting).
2. Identify and assure signalisation for high and specific risk areas.
3. Assure **personal authorisation linked to the specific job requirements.**
4. Follow the lockout/isolation procedure when working on machines and equipment with moving parts.
5. **Make sure that all energy sources have been cut off.**
6. Do not perform any intervention on machines or equipment in operation.



Major Risks TF 9

Working with subcontractors



1. Choose contractors with good proven safety records.
2. Organise a pre-job conference with all bid-contractors, presenting the area risks, the risks linked to having several contractors on the same job, explaining the rules to be followed, resulting in a **prevention plan**.
3. When chosen, define the working area and verify that all rules are understood and applied by all.
4. Prevention plan should be part of the intervention plan, **including financial penalisation in case of non-respect**.
5. Assure regular audits to check the respect of the working rules in the concerned area.
6. Evaluate the H&S performance of all subcontractors.
7. Register the performance of the subcontractors for future reference.
8. If necessary, take actions after violation against agreed safety rules.

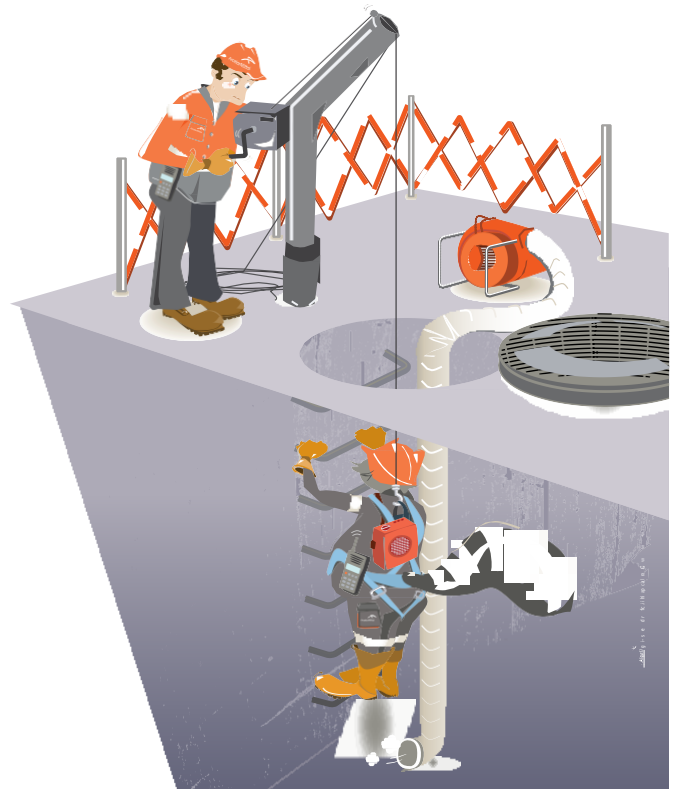


Major Risks TF 10

Working in pits



1. **It is forbidden to enter any pit,** unless there is no other safer solution.
2. Each pit should be protected against people falling in.
3. Before any intervention in a pit, **air quality monitoring and the necessary ventilation should be assured previously to any operation.**
4. In case chemical products are used, continuous ventilation and air quality monitoring is mandatory.
5. Nobody should be in a pit during the mechanical handling of a load in this pit.
6. **Standby person, fully equipped with rescue material, is required for any operation in pit.**
7. Descent and ascent should be assured in a safe way, ensuring that it will also be accessible to any unconscious victims.



Major Risks TF 11

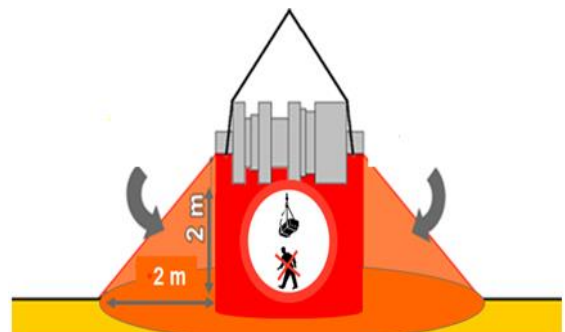
Manipulation and storage of flat products



1. **Always keep sufficient distance between persons and lifted or moving load**, depending on how lifting is done and the height of the load.
2. Never walk, drive or stay under a hanging load or loading equipment.
3. During lifting and moving, never touch the product and the slings. If still needed, use an adapted tool to guide the material allowing to respect the safety distances.
4. Use only the proper lifting equipment and lifting accessories which are checked, compliant and allowed for the task.
5. Respect the storage rules: maximum heights, maximum weight and wedging rules.
6. **Never lift or move a load if you are not able to see the load and the crane.**
7. Only walk carefully and move the crane at the same time, if the walkway is even and free of obstacles.
8. Make sure to **hook the materials at a sufficiently safe distance of the package ends** (Put the sling against the transversal wood block).
9. Never walk on the product. The packages should always been accessible by walkways.



10. Make sure to lift and to place the product in a stable way.
11. Several sheets should be banded previous to mechanical handling in order to prevent any slide.
12. **Never stand between a lifted load and a fixed point or obstacle.**



ALWAYS keep to the safety cone rules and the dead man's cross. The distance to keep away from the load is minimum the height of the lifted load.

Major Risks TF 12

Storage Rack guidelines

- 1. The Rack storage construction and installation must be validated by the manufacturer or be installed according to the requirements and guidelines given by the manufacturer.**

It must be fixed at the floor, taking the quality of the floor (tarmac, concrete, ...) into account. No modification should be done without the validation of the manufacturer. The validation should be documented.



- 2. The condition of the storage racks (structure, posts, shelves) must be checked at least once a year, in a documented way.**
- 3. It is recommended to put a cover on each shelf** in order to prevent, during the loading, the fall of the pallet or to hit the rear support rail.



- 4. The weight limit must be clearly displayed on each shelf** and on each column, well visible from the floor by the operator.



- 5. The operator must know the weight of the pallet to be stored.**
- 6. Assure that the heaviest weights are stored as low as possible** and consider also the access frequency before storing high on the rack.
- 7. The rack's posts must be protected on ground level, against the potential damages caused by forklift.**



- 8. The storage area must be prohibited for pedestrians when a forklift is operating.**

- 9. The content of the storage must be visible from the floor,** avoiding the use of a ladder in order to know what is up on the shelf.



- 10. When a pallet must be stored in an elevated position** with no visibility for the forklift driver, a camera must be used to observe.



- 11. When close to a pedestrian lane or if racks are positioned back to back, the back side of each storage rack must be protected** against fall of material.



Major Risks TF 13

Forklift safety rules



1. Forklift trucks must be compliant with Standard ArcelorMittal Safety ST 006 –A2 V5 and the local legal requirements when more demanding.
2. Do not operate a forklift unless you have been trained, are authorised and fit and able to do so.
3. Make sure a daily pre-use vehicle check is done.
4. Pedestrians must always be at 3m from an operating forklift or at least the height of the mast.
5. It is forbidden to lift and drive at the same time, nor to use a mobile phone.
6. When travelling with a load, it must be tilted back, and the forks shall not be raised.
7. Forklift trucks must not be used to elevate persons and do not allow passengers to ride on.
8. Drivers must respect the 3 points principle when Getting on / Getting off.
9. Always use the safety belt, even in case of a closed cabin.
10. Always operate within the Safe Working Load (SWL) boundaries.
11. Be extremely cautious when driving on grades or ramps.
12. Avoid having the forward sight blocked, or consider to drive backwards.
13. Drive always with adapted speed as you approach and make a turn.
14. When a forklift is to be left unattended, park it, set the parking brake, lower the forks, and neutralise the controls.
15. Refuelling a forklift or recharging the battery should be done in adequate areas and according to a Safe Operating Procedure.

Guidelines

For cargo securing in Steel Distribution
and Steel Service Centres

Table of content:

1. Legal basis
2. Technical basis
3. Technical equipment of trucks
4. Technical equipment of loading aids
5. Preparation, packaging of the material
6. Loading plan
7. Fixing of the load
8. Loading control



ANNEXE - examples of calculation

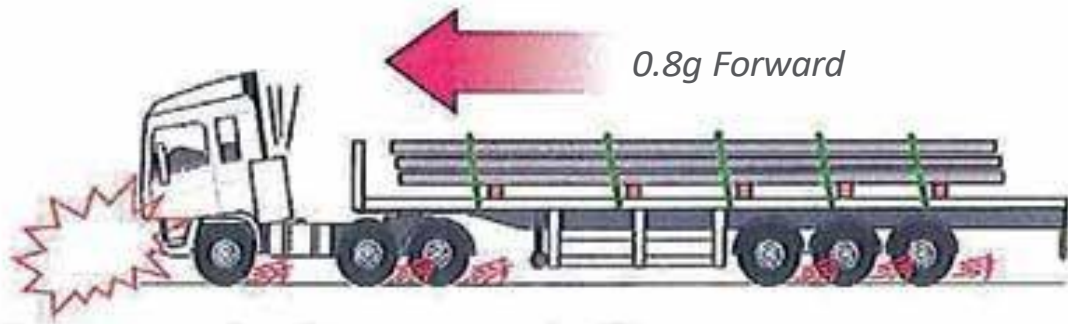
Find this document on:

Distribution Solutions Intranet / HSE

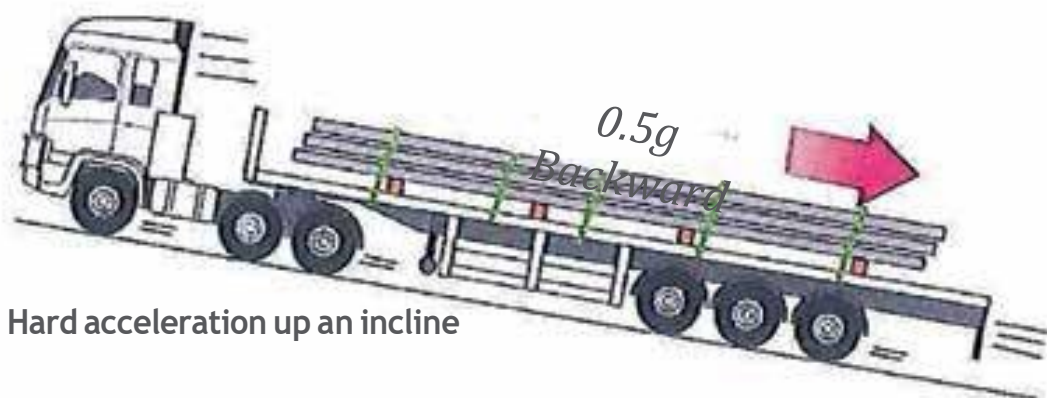


Guidelines for Cargo Securing

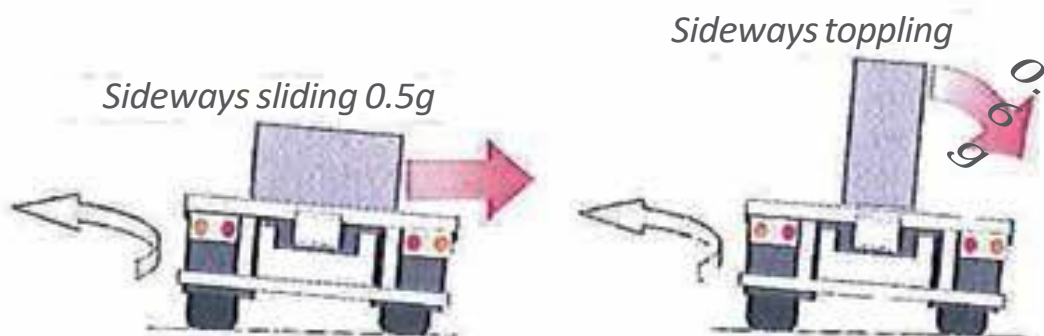
European Standard EN 12195 Load restraining on road Vehicles - Safety requires loads to be secured to the following forces for road transport:



Emergency braking to standstill



Hard acceleration up an incline



Sudden evasive manoeuvre

European Standard EN 12195

Load restraining on road Vehicles - Safety states how to calculate restraint forces for road transport

There are two types of HIRA:

Downstream Solutions Cargo securing

Restraint calculations:

Restraint forces should be calculated by balancing the following equation:

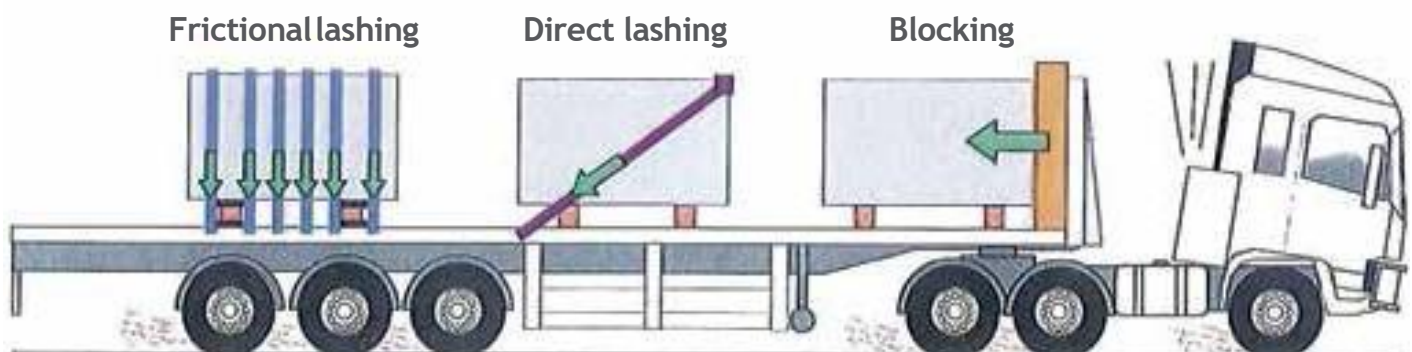
$$\text{Generating forces} = \text{Restraining forces}$$

Example : Forward direction for road transport

Generation forces = Braking force of $0.8 \times \text{load weight}$

Braking force of $0.8 \times \text{load weight}$ = Friction of the product

- + Clamping force from frictional lashings
- + Restraint from direct lashing
- + Blocking forces



Options for restraint in the forward direction

What you need is help

Downstream Solutions HSE Intranet

On our Downstream Solutions HSE Intranet pages the H&S Curve is being developed and designed in such a way that by clicking on one of the boxes you will be able to find all the necessary information related to the topic that you choose.

For each topic, procedures, guidelines and other documents will be available as well as videos, good practices and links to other pages for more technical information, not forgetting the contact details for a Downstream Solutions expert at hand.

Please follow the Intranet link:

*myarcelormittal : Health & Safety >
ArcelorMittal Europe > Downstream Solutions*

Please follow the SharePoint link:

<https://arcelormittal.sharepoint.com/sites/docman-amdshse/default.aspx>



What it all means

Technical terms and acronyms are useful to describe specific tools in one word but they may be difficult to understand for non specialists

FPA

Fatality Prevention Audits are based on the Fatality Prevention Standards, they are a self-evaluation tool for compliance to the standard but are also used after a fatality to audit a site.

FPS and Downstream Solutions H&S Procedure

The Fatality Prevention Standards are written by ArcelorMittal Corporate H&S team, they are born out of fatal & serious accidents that have happened within the Group. Downstream Solutions H&S procedures are documents which provide detailed instructions linked to FPS. The standards and the procedures MUST be implemented within each business unit, however local law must always take precedence over these standards when more demanding.

GPDB

The Good Practice Database is a website on myarcelormittal.com that collects and sorts as many good practices as possible and makes them available to all.

JTZ

The Journey To Zero is an initiative launched by ArcelorMittal Corporate H&S, its objective is to define actions to

Management Presences

Shop floor audits (SFA) and layered evaluations (LE) are face-to-face discussions between people working on the shop floor and intermediate supervisors/leaders or managers. Their purpose is to increase the commitment towards safer ways of working.

Lesson Learned Survey

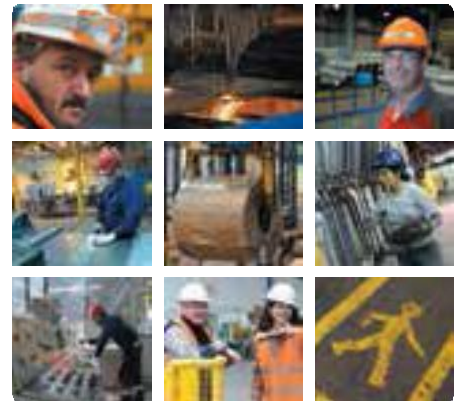
(former Closed /Open Loop) is a dedicated online tool, similar to FPA online, for giving feedback on fatalities or other important events, including the need for sites to reply and given the possibility to get an overview of the answers / actions by the sites.

ISO

It means Occupational Health and Safety Assessment Series. ISO 45001 is an international occupational health and safety management system specification.

P6A audit

The Profile 6 Axis audit is the internal H&S audit. This audit periodically inspects the operations, maintenance and effectiveness of the H&S management system installed and identifies opportunities for improvement. The 6 axis are in line with the chapters of ISO 45001



RCA

Root Cause Analysis is an approach for identifying the underlying causes of why an incident or accident occurred so that the most effective solutions can be identified and implemented.

REX

The Return of Experience is a report of an incident or accident that has occurred on ArcelorMittal sites and its facts, causes, conclusion and actions are shared with all sites.

HIRA

An overall process of estimating the magnitude of a risk and decision making about acceptability of a risk.

SO/PSIF

A serious occurrence (also called PSIF = Potential Serious Injury and Fatality) is every accident or incident, which has the potential to be life changing (e.g. amputation, heavy burns, ...) or fatal.

Downstream Solutions

Take Care Training – Volume 1

The “Take care” initiative has been put in place in Downstream Solutions in 2016 to further improve our safety results. The process of reflection started after having noted that our safety results were improving, but not fast enough. It was thus decided not only in Downstream Solutions, but at the level of ArcelorMittal Europe management team, to further support employees with initiatives to work on our safety action plan.

In the first quarter of 2017, all BD’s started cascading these trainings in their sites.

The “take care” programme targets all the AMDS people working in the shop floor in our plants. “Take care” programme will be also available for some of our subcontractors.

The assigned BD health and safety responsables were trained as master trainers, who will be in charge of deploying the sessions in their own perimeters.

Mixing classroom presence and shop floor practical exercises, “Take care” training programme is made of three phases, providing each participant with

a total of 10 days of training spread on 5 years.
Goal is to achieve minimum 80% of the people trained end of 2019 to be able to reach 100% in 2020.

Phase 1: “It starts with ME” – a five days training, working on: inspiring change, recognizing shop floor hazards, lowering risk tolerance, speaking up, high impact engagement, preventing fatalities, renewing commitment.

Phase 2: Consolidation on the shop floor; five days training, to be done within the two years after completion of phase 1. In this phase, shop floor activities will be included as much as possible to keep up momentum and engage shop floor employees and their supervisors or N+1 on safety.

Phase 3: Sustain in improvement; ten days, to be done within the eight years after completion of phase 2.

Some aspects will run through all modules as “red threads” e.g. fatality prevention (“Journey to Zero”), golden rules, hazard recognition, taking ownership, speaking up, and “focus on the shop floor”, etc.,

The “Take Care” Modules:

Module 1: Creating the vision

Module 2: Our “Journey to Zero” – Giving direction

Module 3: How we prevent fatalities at AMDS

Module 4: Improve Risk Perception

Module 5: Walking the Talk “It’s not about what you say but what you do and how you make people feel.”

Module 6: Communicating with Impact

Module 7: Delivering Effective Training

Module 8: Profile Six Axis (P6A) Audit

Module 9: Risk Assessment Tools

Module 10: Incident Investigation & Root Cause Analysis



Downstream Solutions

Take Care Training – Volume 2

After the first take care wave which took place between 2017 and 2019, we understood the necessity to implement a more practical and interactive follow up. This is why this program has been developed by Ludwig Felser and Rainer Billmaier of BD West Steel Service Center West. Beside strongly safety focused topics we have added some leadership and communication themes.

The Take Care mission is that each employee invests 16 hours per year to the theme of safety. This means four modules of four hours each per year. This target must be reached end 2023.

Each module is first discussed by the Management Committee, then presented to the managers, who in turn cascade it to their teams.

Experience so far has shown that there are no "dry" topics, but only differently motivated participants and trainers. The topic of safety should interest everyone. We have learned from "should": The new modules are more interactive and offer more scope for individual design. The modules for managers are designed to impart teaching knowledge and thus make training easier.

But the fact remains: I only learn if the topic is obviously relevant to me.

What do we get from a new round of Take Care:

- More safety!
That means less stress
- More security!
That means fewer accidents
- Better education!
That means more fun in training
- Current topics!
That means suitable for everyday use

The sequence of the 10 modules can be chosen depending on the situation and individual needs.

The "Take Care" Modules:

Module 11: FPS Fatal Prevention Standard

FPS are the most important rules to prevent fatalities. For the highest risks in the group mandatory rules were given to guarantee safety. The compliance with the rules is checked by FPA.



Downstream Solutions

Take Care Training – Volume 2

Module 12: Major Risks

Major Risks describe the main risks in AMDS and distinguish them from the risks in the plants. They are tailored to the work at our plants.

The defined rules help to prevent accidents and they give advice on what to look out for in the branches.

Only if everyone participates, including every single person (ME), will we be successful.

Module 13: SO Serious Occurrence

A SO is an incident where someone could suffer a life-changing injury. We treat it like an LTI. Measures should be taken before the accident to prevent it. And not just after the accident has happened. This is something every employee must work on.

Module 14: Trust

The participants should understand what trust means for the individual and reflect on the importance of trust within colleagues and teams.

Module 15: Being a good example

Every participant should recognize their role models and question their own behaviour.

Module 16: Feedback

To know the rules and benefits of feedback and to be able to give and accept feedback

Module 17: Dynamic Leadership

This module is for executives only. Here it is a matter of defining, recognizing and ultimately fulfilling one's own goals, responsibilities and role.

Module 18: Communication

This module should open the view for the possibilities of communication and make clear to the participants the importance of a clear and contradiction free conversation.

Module 19: Working with mistakes

Understanding what mistakes do.
Develop ideas to learn from mistakes.

Module 20: My daily self-check

Employees should recognise the connection between personality and security, show courage to make changes and learn to reflect on themselves.



Downstream Solutions

Serious Occurrences

What is a Serious Occurrence?

The definition in the standard ST010 v10.01 (paragraph 3.12), available on GPPM is : “It is an event, act or situation for which consequences or potential consequences are life threatening or lead/may lead to permanent disability or loss of function”.

It may be:

- **An accident or incident which happened (near hit), with the potential to result in a fatality or a severe life changing injury.**
Examples:
 - Someone got crushed between a fixed point and a mobile equipment or load
 - Someone fell from > 1.8 m
 - Something heavy fell in an area where people are used to work
 - ...
- **A latent condition, a fatality or life changing injury just waiting to happen, being any dangerous situation that could result in a fatality or a severe injury.**
Examples:
 - Someone entering an area or putting part of his body inside a machine, without isolation or, if isolation not possible, without strong controls deeply thought in a specific LMRA.
 - Someone working at height without collective protection, or without being attached, or being attached but with a loose harness, or on a loose lifeline or too low...
 - Someone not respecting the walkway in an area where trucks or forklifts or machinery are moving around.
 - A poor LMRA which did not identify or controlled properly a fatal risk .

Why reporting and treating Serious occurrences (SO)?

- **To increase risk awareness:**
 - By talking to people about serious occurrences which happened in their own working environment and which they can see/feel/understand/visualize : use SOs as topics of safety talks during shift meetings, SFA, ...
 - By encouraging people to identify & correct latent conditions, having the potential to result in fatalities or severe life changing injuries.
- **To increase the consistency of our action plans:**
 - By using SOs as input for our Risks databases, making it a living document that really helps us to prioritize which risks to treat first and where to focus our actions
- **To focus on the right risks and optimise the use of our resources:**
 - By tackling the Serious Occurrences, according to their criticality, we concentrate our energy, intelligence, time and resources on what really matters to eradicate fatalities and severe injuries.
- **To move towards more advanced statistically meaningful KPI's**
 - As we are reducing LTIs and RWs, their numbers start to be less and less correlated to fatalities & severe injuries. We need a KPI which is statistically significant: the number of serious occurrences.
 - It is also an opportunity to move towards more leading indicators as the number of Serious Occurrences can give us view on how many fatalities we escape.

Downstream Solutions

Serious Occurrences

Reactive and Proactive Serious occurrences

Since the beginning of 2018 we specify the type of SO (Reactive or Proactive) knowing that the large majority in AMDS perimeter are related to proactive Serious Occurrences.

→ Focusing on SO/PSIF is a major axis of our strategy to become fatality-free.

- **A Reactive SO/PSIF turned into LTI's or RW's.** They have to be understood and managed locally (at plant level) as “potentially the last flashlight before a fatality” **(1 fatality for 11/12 reactive SO/PSIF in the group over 2016/2017 and for 21 reactive SO/PSIF in the group in 2018).** More globally (at segment level, group level), the number of reactive SOs/PSIFs is a “semi-lagging” KPI indicating the current level of exposure to fatal accidents (even if the ratio fatalities/reactive PSIFs, calculated over a long period, varies from one segment to another). SOs/PSIFs, whatever their nature reactive or proactive, should also be analyzed to detect patterns and trends about golden rules, human factors, ... and to trigger some adapted actions. Please investigate deeply to find out what is wrong in the organization/processes and to fix the deep/real root causes.
- FAT = Fatalities, LTI = Lost Time Injuries, RWI = Restricted Work Injuries.
- Number of SOs/PSIFs related to these categories is an indicator of the level of riskiness.

The lower this number, the best it is.

- **Proactive SOs/PSIFs:** are all the other SOs/PSIFs. To be understood as gifts to the organization of free opportunities to learn and improve by fixing bugs before they lead to human dramas.

FA = First Aid, NH = Near Hits, UA = Unsafe Acts, US = Unsafe Situations.

Number of SOs/PSIFs related to these categories is an indicator of pro-activity and willingness to share experience to improve. The higher the number, the best it is.

Our goal is to eradicate fatalities, each Serious Occurrence is a potential fatality from which we can learn, with opportunity to react.

Superman Syndrome or overconfidence leading to underestimation of the risk

Superman's specialty is fighting crime to save the world and he does this by using his unnatural super powers. He is always available to tackle any situation.

It is known that the most experienced employees carry **traits** of **superman**. When an incident or unsafe situation occurs they immediately tackle it, without consulting or thinking. They take actions only superman could have, which is known to be the **superman syndrome**.

By trying to save the day, fatalities and serious occurrences are increasing!

We are changing the mindset!

I am strong

I am experienced

I am invincible

I never get injured

I do not need any help



**Even Superman
can be defeated!**

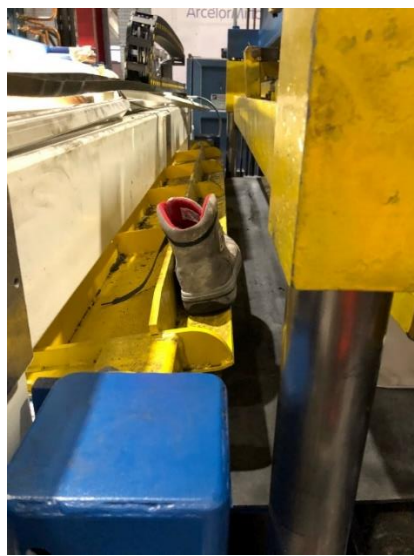


Superman Syndrome or overconfidence leading to underestimation of the risk

Examples of the superman syndrome



Climbing into a machine and restarting it.
"Nothing may happen to me"



Moving into a high risk area



Mixing ArcelorMittal with a Circus



Downstream SolutionsJTZ

Steering committee

Steering and driving Health and Safety in AMDS

- Chaired by AMDS CEO
- Prepared and managed by Head of HSE
- With AMDS Head of HR
- Quarterly live meetings on site

Principles

- Working transparent and close with MC
- Coordinating with all HSE coordinators
- Assure operational calibration of H&S actions launched

Members:

- Operational H&S champions (one per BD)
- H&S Coordinators (one per BD)

AMDSJTZ

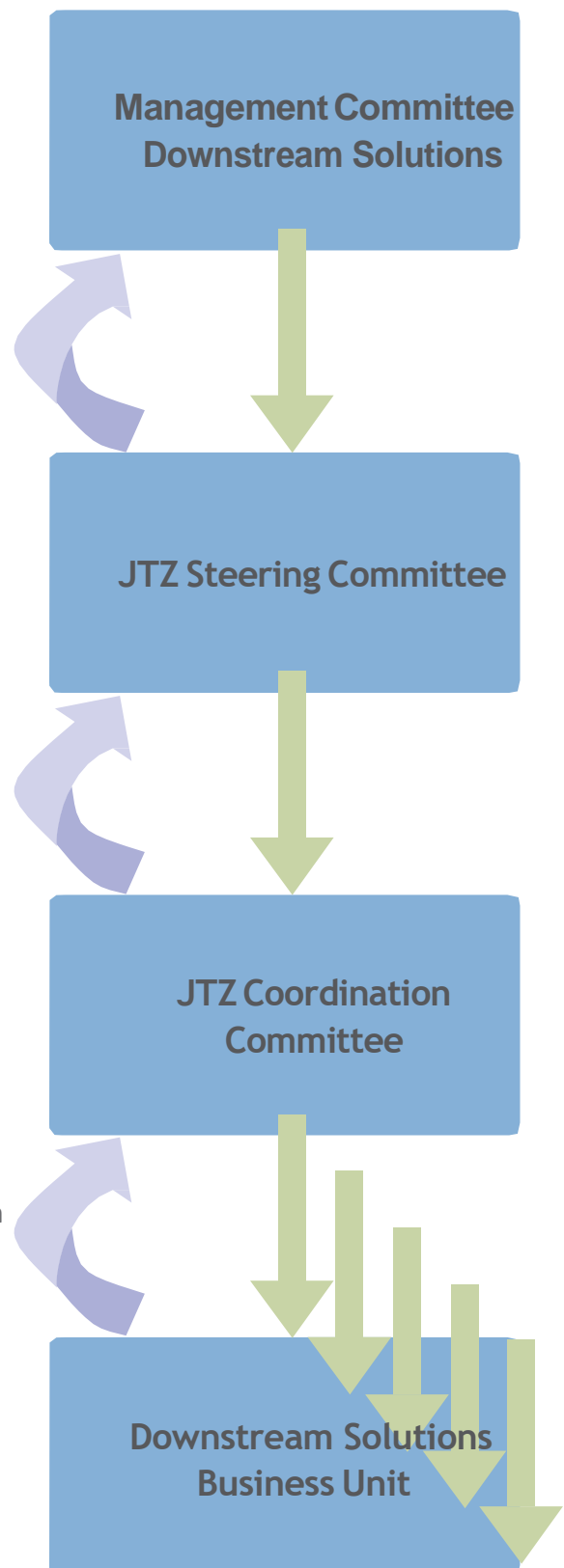
Coordination committee

Coordinating Health and Safety in AMDS

- Applying and transferring to the BUs the decisions taken by the JTZ Steering Committee
- Monthly conference call

Members:

- H&S Corporate team
- H&S Coordinators of the BUs



Safety walk - Checklist - Downstream Solutions

Name :

Date :

GENERAL PRINCIPLES	Y	N	X
Warehouse is clean and tidy?			
Helmet and safety shoes are always worn? *			
Foreman/manager shows the right example?			
PPE are adapted to the working conditions?			
Chemical fluids stand on a reservoir?			
Remarks :			

CIRCULATION PLAN	Y	N	X
Walkways are clearly defined ?			
Walkways are clean and unobstructed ?			
Traffic rules are being followed ?			
Signs are adequate and visible ?			
All crossroads between pedestrians and moving vehicles are clearly marked ? *			
The circulation plan is safe ?			
Remarks :			

TRUCKS	Y	N	X
Stairways are always used and blocked if in use?			
Nobody is inside the trailer until the material is completely loaded?			
Truck drivers all wear safety shoes and helmets?			
The piling of material is conform?			
Truck wheels are blocked during loading and unloading operations? *			
Material is loaded against the truck bearing or another fix point?			
Remarks :			

LIFTING	Y	N	X
The lifting equipment is racked?			
Single use nylon straps are cut and thrown away?			
Rod wires are not used for lifting the material? *			
The access to attach the lifting equipment is safe?			
Remarks :			

WORKING IN HEIGHTS	Y	N	X
The cherry picker is used where possible?			
Fall protection is properly worn? *			
Floor and wall openings are protected?			
The work area is marked out?			
Remarks :			

FORKLIFTS	Y	N	X
Safety belts are worn? *			
Speed limits are respected?			
The forklifts are equipped with a reversing signal and a flashing light?			
Is key removed from forklift when it is not use and parked?			
Remarks :			

RAILWAY	Y	N	X
Wagons are properly blocked?			
Coupling and de-coupling of the wagons only if the wagons are not in movement?			
Access to and from the wagons / locomotive is done in a safe way?			
No person between the buffers until the buffers are in contact? *			
The acoustic signal is used before the train moves?			
No passing the rails when a train is in movement?			
Remarks :			

* Cardinal rule

Signature:



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Downstream Solution

LE / SFA Record - Safe Behaviour

Auditor(s)..... Date

Start time End time..... Duration

The Audit

Name..... Job Title

Location.....

Job/task being observed

Observations

✓ indicates safe

X highlights that improvement is required and a need to work

SWP

✓

X

Is the job being carried out

☐

Would you do the job/task that way?

Is it the safest way of carrying out the

☐

Is there a safer way? Are there any uncontrolled

PPE

✓

X

Items

or N/A

being used

PPE condition

Hard Hat

☐
☐
☐

Ear protection

☐
☐
☐

Eye protection

☐
☐
☐

Work Wear

☐
☐
☐

(J&T) Hi-Vis

☐
☐
☐

Gloves

☐
☐
☐

Limbs

☐
☐
☐

covered

☐
☐
☐

Safety Boots

☐
☐
☐

Comments

Job/task ergonomics

✓

X

Is manual handling minimised?

☐

Does the person have a good posture?

☐

Are Computer Workstations set up appropriately?

☐

Is adequate protection available against the elements?

☐

Noise level acceptable? (Can you hear yourself talk?)

☐

Comments

Safeworking environment

Is the person aware and observant of moving material/mobile equipment?

Is the person working away from steps and ledges?

Is the person aware of the hazards they are exposed to?

Have all slip, trip or fall hazards been removed/controlled? Is a good level of housekeeping being maintained?

✓

X

☐

What are they close to?

☐

Risk of fall from height been minimised?

☐

What could cause them harm?

☐

Timber, banding, tools, etc... put away?

☐

Cleanliness of general work area ok?

Tools & Equipment

Are the tools & equipment appropriate for the job/task?

Are the tools & equipment being used correctly/safely?

Is the person in the right position for using them?

Has the person ensured that the appropriate guards are active?

✓

X

☐

Are they in a good state of repair/not adapted?

☐

How would you use them?

☐

Are they out of the line of fire?

☐

Guards, gates and their PPE

Comments

Actions required and agreed on:

Signed: Auditor..... Ops Man

Auditee Date filed

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Notes:

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transforming tomorrow

Downstream Solutions
Health, Safety & Environment
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L-1160 Luxembourg