

# SAFETY AND HEALTH RECOGNITION PROGRAMME 2011



## Learning from experience

Organisations gain the most benefit from being members of the World Steel Association by networking, sharing and participating in the development of good practices.

Great benefit can be derived from organisations communicating their health and safety experiences. When an organisation shares details of a serious incident it is reactive, but by allowing others to act on this information, recurrence of the incident becomes 100% preventable. When an organisation shares details of achievements and best practices, others can benefit. This makes the whole industry a safer place to work.

Sharing practices is an active way of communicating with the wider membership. It allows audits to be carried out to identify similar risk or hazardous situations. In this way, other steel plants can reduce the risk of injury or exposure to the risk altogether.

The safety and health principles endorsed by the leaders of worldsteel member companies are a key element of all of our safety and health programmes. The implementation of these will only be effective with their sustained effort and commitment.

The worldsteel safety and health excellence recognition programme shows us many examples of how direct leadership prevent injuries. The discipline required in setting – and applying – the standard is critical. Leaders have to be active in sharing incident and hazard reports at every opportunity, especially when visiting a site.

The recognition programme was launched in 2008 with the aim of identifying the efforts made by worldsteel member companies to make the industry safer. Five companies were recognised at the worldsteel annual conference. In 2009 three companies and in 2010 four companies received this prestigious recognition.

Each one of the 22 submissions for 2011 is of great merit. Once more, the selection process was difficult for the experts on the judging panel. Each safety and health practice submitted for consideration has been successfully introduced into the workplace and had a clear impact on the company's safety statistics. It is also transferable within the industry and some across industries. These are the eligibility requirements for the programme.

This year, the judging panel decided to recognise four companies: Tata Steel Europe, Gerdau, Metinvest and NatSteel.

In this brochure you can read about their successful efforts to improve safety and health. You will also find video interviews on our YouTube channel: [www.youtube.com/worldsteelorg](http://www.youtube.com/worldsteelorg). Sharing these experiences widely will alert steelmakers to potential hazards, and it may save lives.

**Edwin Basson**  
Director General  
worldsteel

## Improved communication

This year, there has again been excellent support from the Safety and Health Committee (SHCO) members and their managers to improve the communication of incidents within their organisations and across the industry.

By communicating information about fatalities, serious incidents and significant hazards, others learn and can prevent similar occurrences in their own workplaces. Knowing about it is only the first step. To have a meaningful effect, company leaders must act on the information by auditing their own sites for similar hazards, take the necessary actions and be held accountable for removal of the identified risks.

The goal of an injury-free, illness-free and healthy workplace is the highest priority for our industry. This is especially important in difficult times when it is tempting to reduce efforts in this area to create a temporary cost reduction. This saving is very quickly lost from increased injuries, damage or loss of time.

Participation in worldsteel's safety and health work saw significant change again this year with many new members attending the SHCO meeting. The commitment and enthusiasm from this team is encouraging. Many members have engaged with renewed vigour in the committee's work and in the task forces.

The communication commitment is an initiative that will increase sharing and learning from each others' experiences. The information is to be exchanged on an anonymous or non-site specific basis, and this has a tremendous preventative impact.

The companies recognised in the safety and health excellence programme have seen the results of their innovative and important work: a drastic reduction in injuries and incidents. Some plants have demonstrated that it is possible to achieve many years of zero lost-time injuries.

The first worldsteel safety and health principle is that "all injuries and work-related illness can and must be prevented". There are six principles in all. worldsteel has published a free guidance booklet to help companies to apply the principles. You can download or order the 'worldsteel Safety and Health Principles guidance book' from the Bookshop at [worldsteel.org](http://worldsteel.org). It is available in 10 languages.

The work to implement the principles can never stop nor be delayed. Our efforts in sharing information, experiences and good practices across the industry can have a drastic impact by reducing injuries.

### **Henk Reimink**

General Manager  
Safety, Technology and Environment

The development of NatSteel's safety culture was based on its Safety Training and Observation Programme (STOP). STOP is an observation methodology, designed to prevent incidents and injuries by promoting safe behaviour and workplace conditions.

The STOP principle is founded on the belief that the reduction of unsafe acts and conditions will result in fewer accidents and incidents.

NatSteel used a six-step process that is designed to identify and challenge unsafe behaviours, whilst reinforcing the positive elements observed.



### Six-step process

1. Observe, decide how to make contact, stop the unsafe act safely
2. Comment on safe behaviour
3. Discuss
4. Get agreement to work safely
5. Discuss other safety issues
6. Thank the employee

#### Step 1: Observation

A team of two safety observers watches workers carrying out their tasks. After an initial remote observation, the STOP observer decides how best to make contact with the worker. If the observer witnesses an unsafe act, then contact must be made as soon as it is safe to do so, and the unsafe act must be immediately stopped.

#### Step 2: Comment on safe behaviour

The STOP observer notes and praises positive conduct. This reinforces safe behaviour. The two parties can then discuss the importance of working safely.

#### Step 3: Discuss

If unsafe acts or conditions have been observed, the two parties discuss the observation. The STOP observer must understand the reason for the unsafe act or condition. The observer explains the potential consequences and shares their concerns. Both parties then discuss alternatives which eliminate any unsafe task elements.

#### Step 4: Get agreement

The STOP observer ensures that the worker understands the risks and consequences of unsafe acts. The worker agrees to work safely.

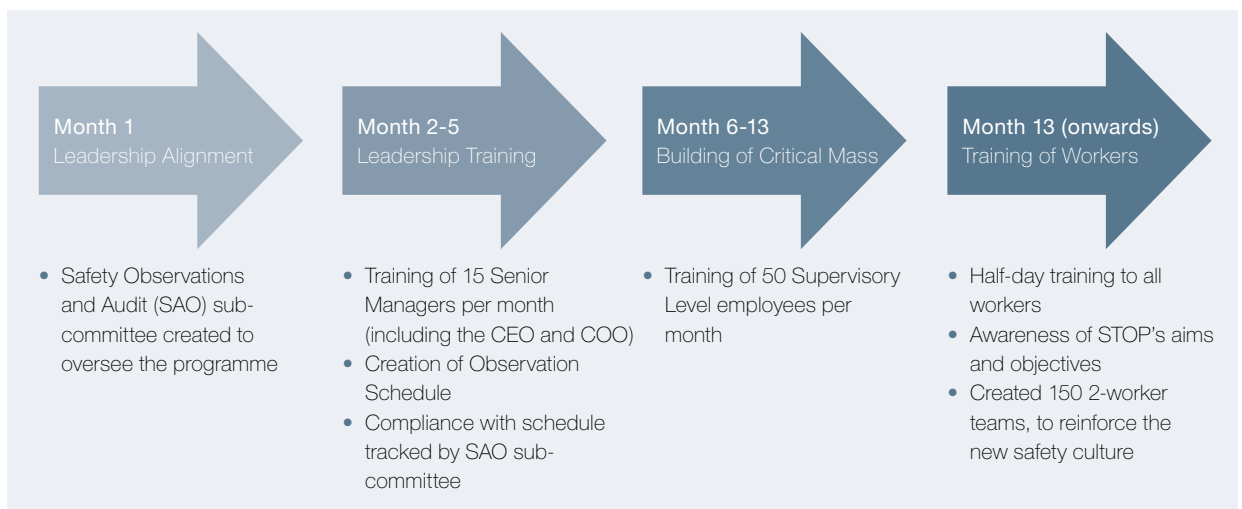
#### Step 5: Discuss any other safety issues

The STOP observer asks the worker if they have any other safety concerns, and acts upon any other issues raised.

#### Step 6: Thank the employee

The STOP observer thanks the worker for the commitment that they have shown to working safely, and for their willingness to share and learn.

NatSteel considers STOP to be a continuous process. At the beginning, an implementation roadmap was developed (see below).



Training took a top-down approach, starting with the CEO and then through the management structure to include all levels of employees.

An observation schedule was given to all STOP observers, showing when and where they were required to undertake observations. Each observation was done in teams of two. Different levels of employee were required to undertake observations at different frequencies.

Data collected from the observations is collated and categorised. This allows tracking and development of trends so that areas of focus for improvement can be identified.

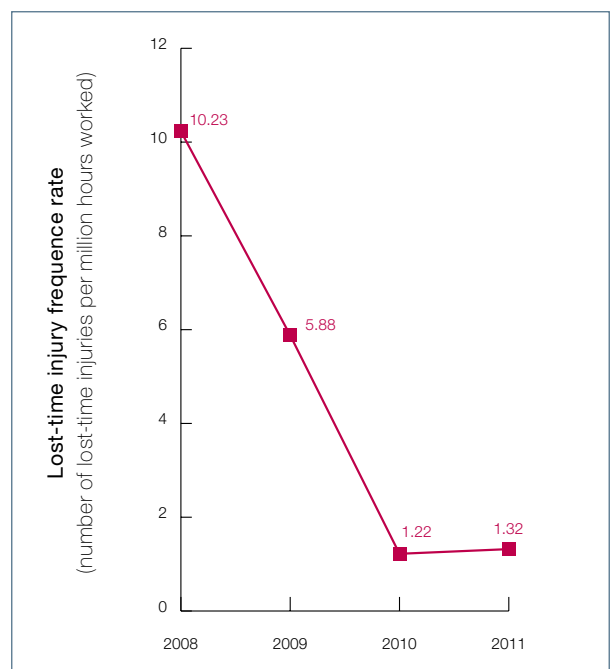
Examples of two main improvement tools used by NatSteel are 5S Housekeeping and 30-Day Improvement.

**5S Housekeeping (Sort, Set in Order, Shine, Standardise and Sustain)**

Aim to have a clean, neat and tidy workplace, removing any potential workplace hazards before they cause incident or injury.

**30-Day Improvement**

Create a visible improvement over an intensive 30 days. This also becomes a demonstration to other production units.



# TATA STEEL EUROPE – STRIP PRODUCTS UK

## Establishing trust through leadership and engagement

In 2008, Tata Steel Europe's Strip Products UK, an integrated steel business at Port Talbot and Llanwern, recognised that its health and safety performance was below benchmark level. Analysis revealed that the leadership was not always felt or engaging, and the people who worked on the sites did not always fully appreciate the risks and control measures associated with their jobs.

Strip Products UK embarked on an initiative based on establishing trust through leadership and engagement, whilst also recognising that engagement and leadership alone would not address some of the issues. A range of tools and techniques were employed to build upon these foundations. The initiative is on-going, and includes the following initiatives:

- a) Dedicated safety teams were created in all operational areas. Its members were rotated to allow all employees time to address safety issues that were of direct importance to them. The creation of the safety teams significantly increased employee engagement and empowerment.
- b) Every employee attended two engagement days a year off site. These days were focussed on group work to establish a change in culture and expectations. One engagement day was focussed entirely on health and safety. The other day incorporated safety engagement into the wider business context.

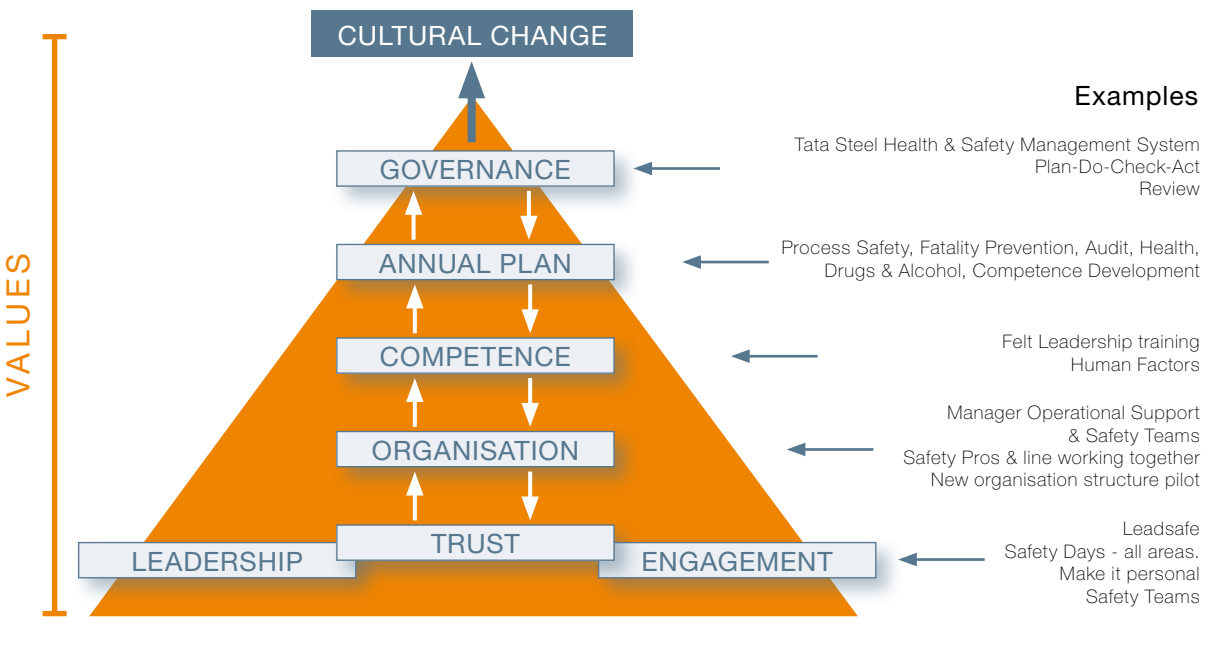
- c) All leaders – from first line supervisors to directors – received felt leadership training. The felt leadership approach requires all leaders to demonstrate their commitment and care. Over the past three years, 1,000 people have attended felt leadership courses, which are also run across all Tata Steel Europe plants.

- d) Every department was asked to identify its top five health risks, and opportunities to reduce exposure to these risks. Health issues are not seen as only the concern of the Occupational Health department, whose priority is prevention. For example, experts and trained counsellors have been involved in delivering drugs and alcohol (D&A) awareness training to over 5,000 people across the organisation, including contractors, and assisting in the D&A management systems.

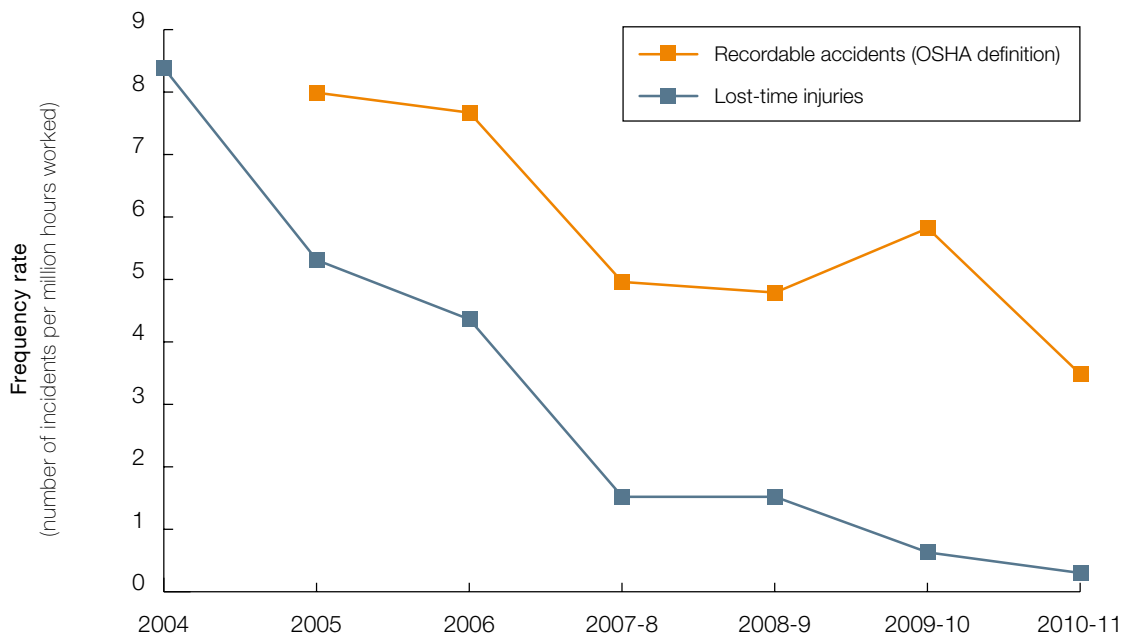
- e) Through a renewed focus on the health and well-being of the workforce, absence levels have been reduced from over 4% to below 3%.

Often, employee engagement is attempted with rules and requirements that are linked to negative outcomes. To address this, the organisation launched a set of values and invited all employees to sign up to these values. Inspiration comes from the positive view offered by the concept of values, which describe how the organisation wishes to work.

Schematic showing the approach taken by Tata Steel Europe – Strip Products UK



Tata Steel Europe - Strip Products UK



Metinvest launched its Safety Culture Change project in 2008, with the introduction of a number of new corporate safety standards. These standards included the introduction of safety audits, root cause analysis in incident investigation, risk assessment and contractor safety initiatives.

Metinvest recognised that training was essential, as it would not be possible to change the culture of the organisation without first providing its employees with the relevant skills. However, the company considered that there were insufficient external trainers available within Ukraine to provide the required training to several thousand employees. Metinvest embarked on a programme of internal training, using recently retired senior managers as trainers.

Each trainer was someone respected by the local community, who had substantial management experience in steel industry operations and good communication skills. The company developed a train-the-trainer course to provide the newly-appointed trainers with the relevant skills and expertise in the new corporate standards.

The company upgraded several of its training centres, investing significant resources to ensure a professional environment. The training methodology was developed to ensure that:

1. The courses were interactive, allowing for continuous dialogue between the participants and the trainer
2. The courses were built around the participants' personal experiences
3. The courses used discovery learning: group work and discussions that allow the participants to look for their own answers and draw their own conclusions.

Practical training was given in behavioural safety auditing. During these plant-based training sessions, participants observed around 12,000 unsafe acts and conditions, and were able to correct around 50% of these immediately.

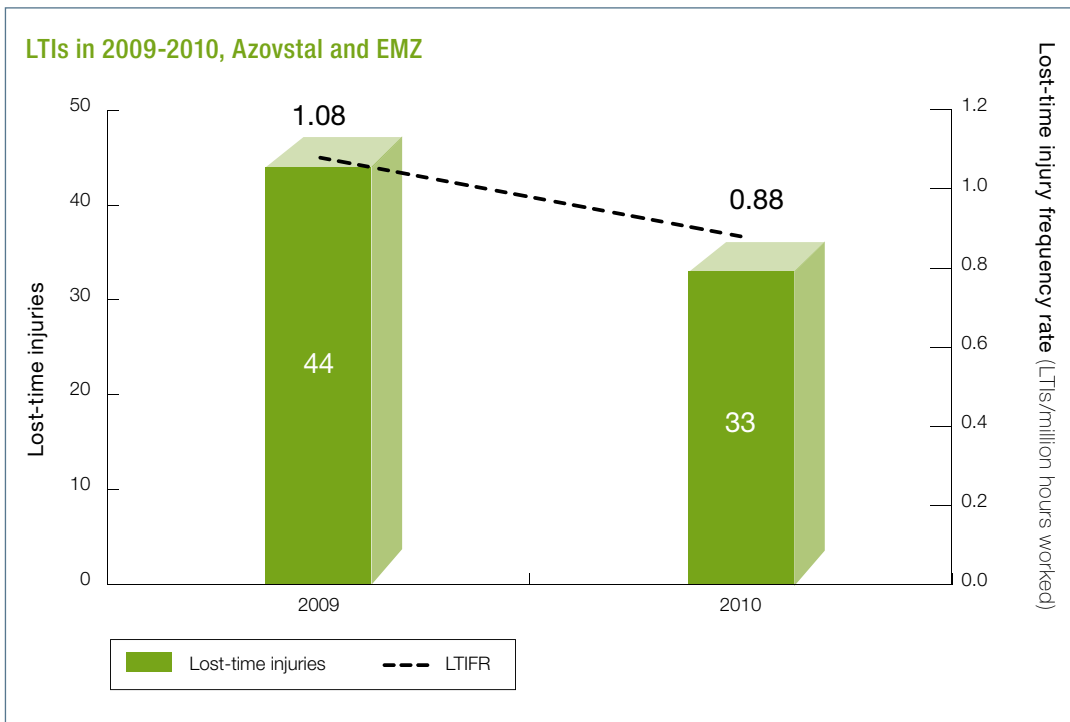
The use of internal trainers was found to significantly increase the engagement of Metinvest's employees, as the trainers were already well respected within the company. The roll-out of the training was the first time in Metinvest's history that common safety training has been delivered to such a large proportion of the company's leadership and supervisory employees.

In 2009-2010, 53 internal trainers delivered training to over 8,000 employees.

In 2010, a third-party company was employed by Metinvest to conduct research into employee involvement and opinion on a range of topics. Health and safety information received the most positive employee feedback of any business areas, with a high level of satisfaction expressed by employees and management alike.

The company's commitment to safety leadership and audit training has resulted in a significant decrease in safety incidents, with the two main production plants seeing a 19% reduction in lost-time injuries (LTIs) in just one year.





*Practical behavioural safety audit: internal trainer Nikolay Ponomarenko (retired in April 2009, former deputy head of the mechanical repair shop) demonstrates to a seminar participant how to conduct a safety conversation with an employee. Khartsyzsk pipe plant, September 2009.*



*Root cause analysis seminar: internal trainer Alexander Kolesnik (retired in December 2009, former head of the railroad transport workshop) facilitates an exercise on building a time scale of an incident. Azovstal steel plant, February 2010.*

Gerdau's Molten Steel Path project was developed in response to several major accidents across the company's steelmaking operations. The project began in 2007, with the aim of preventing all fatalities and major accidents associated specifically with the melting, refining, casting and transport of molten steel.

A thorough inventory of all risks was compiled. It was accompanied by the actions required to eliminate, reduce or control the risk. The project also included a compilation of knowledge from other Gerdau sites, sharing best practice with, and benchmarking against, other world-class mills and local reviews of historic accidents.

The process was conducted within the framework of Gerdau's Critical Risk Prevention Model (see diagram below).

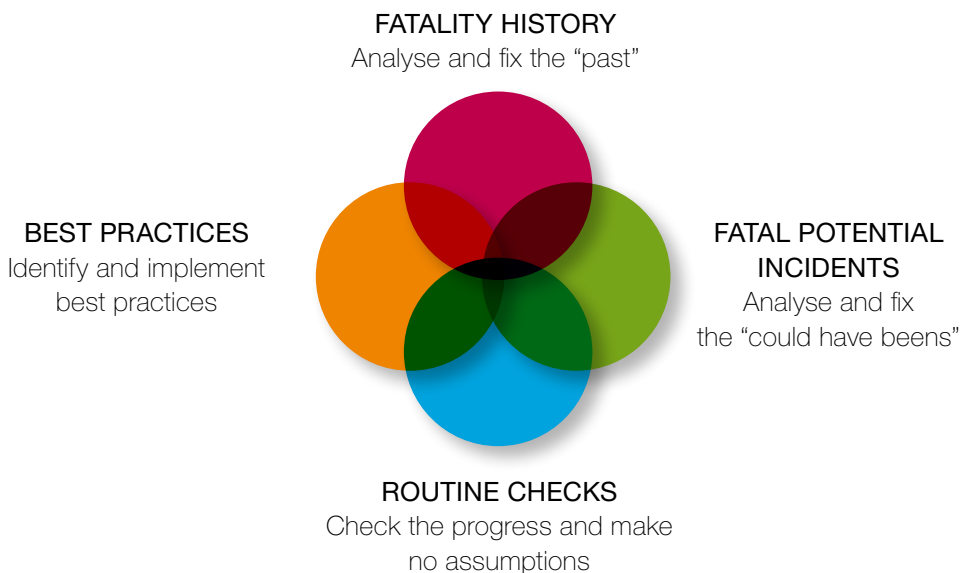
Six areas were identified for study:

1. Water leak in a furnace
2. Handling of molten slag
3. Heat tapping and ladle transport
4. Ladle preparation
5. Ladle arc furnaces
6. Continuous casting.

Within the plants, all failures were investigated. The results of investigations were coordinated and shared between the leaders of all steelmaking operations. Within the project, knowledge has been developed into two distinct areas: engineering standards and operational procedures.

The knowledge gained has resulted in improvements in process control, increased capital expenditure, a comprehensive review of operational procedures, and a major reduction in employee exposure to hazardous situations.

### Critical Risk Prevention Model

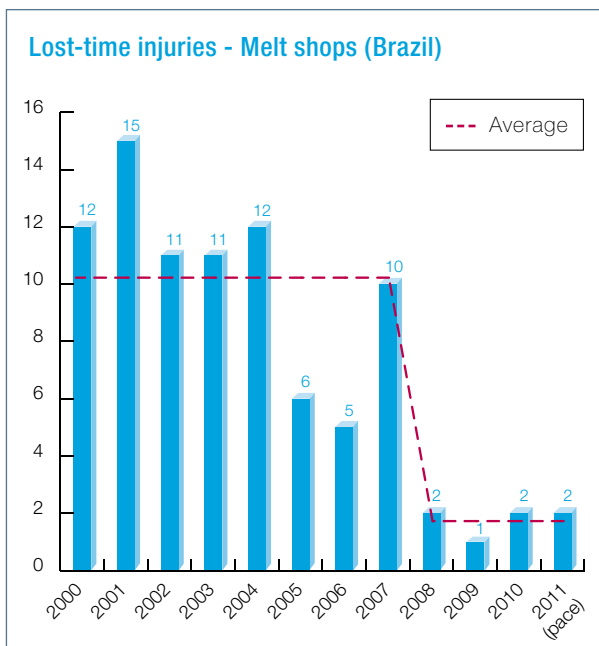


### Examples of improvements implemented by the project



*Breast cleanliness: removal of the operator from the risk area. Gerdau Steel Mill – Charqueadas, Rio Grande do Sul, Brazil*

Since the introduction of the project, there has been a reduction in the number of lost-time injuries from an average of 10 a year, to an average of less than two a year.



There have been zero fatalities related to this critical risk since 2008.

There has been a significant increase in the number of recorded near misses (especially due to the presence of water in the electric arc furnace (EAF). This can be attributed to the enforcement of operational discipline, which means insisting on the immediate suspension of operations if a set of pre-determined conditions is experienced.



As a result of this more effective process control, Gerdau has had no explosions due to the presence of water in the EAF in the last two years.

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