worldsteel
ASSOCIATION

SAFETY AND HEALTH RECOGNITION PROGRAMME 2012

WORLDSTEEL SAFETY AND HEALTH PRINCIPLES

Our commitment: The industry is committed to the goal of an injury-free, illness-free and healthy workplace.

1. All injuries and work-related illness can and must be prevented.
2. Managers are responsible and accountable for safety and health performance.
3. Employee engagement and training is essential.
4. Working safely is a condition of employment.
5. Excellence in safety and health drives excellent business results.
6. Safety and health must be integrated in all business management processes.

worldsteel represents approximately 170 steel producers (including 17 of the world's 20 largest steel companies), national and regional steel industry associations, and steel research institutes. worldsteel members represent around 85% of world steel production. worldsteel acts as the focal point for the steel industry, providing global leadership on all major strategic issues affecting the industry, particularly focusing on economic, environmental and social sustainability.

Safety and Health Recognition Programme 2012

ISBN 978-2-930069-70-8

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Sharing and Learning

Each year, I look forward to the safety recognition submissions and reading through the many successfully implemented systems and mitigation techniques. This year, worldsteel has received 38 submissions, which is a significant increase on the 23 submissions of 2011, and all of which provide valuable learning opportunities.

As in previous years, the quality and effectiveness of the measures have improved again. Listening to the recognised companies presenting their submissions at the Safety and Health Committee meetings shows the level of pride and confidence gained from this success, and the recognition of peers is one of the best ways to encourage people.

Each of the 38 submissions is of great value to all worldsteel members, and I encourage you to download them from our extranet and use them to challenge your staff on all your sites to implement the appropriate improvements.

The four companies recognised this year have shown continuous strong commitment to leadership in safety by setting themselves high safety standards using the six safety and health principles as a cornerstone.

One of the key initiatives created by the Safety and Health Committee is the anonymous communication of serious safety incidents across the industry. Anonymity allows sharing of the knowledge gained from the incident, the hazard that exists or the potential hazard of a Near Miss.

Such sharing represents a fantastic learning opportunity and can mean the prevention of a potential re-occurrence. To make an impact, managers must act on the information received by auditing their own plant or site for similar hazards and their company's leaders must hold managers accountable for taking action to mitigate the identified hazards.

The goal of an injury-free, illness-free and healthy work environment is the highest priority for our industry. This is even more important in difficult economic times, when it may be tempting to reduce safety efforts and resources.

Once again, this year's safety metrics survey highlights excellent results, with many companies approaching world-class standards. This provides a fantastic opportunity to learn from those who have reached high safety levels and allows for accelerated improvement – studies show that changes can make a dramatic effect over a relatively short period of time, for example one to two years, with injury rates halving year-on-year.

The six safety and health principles developed by worldsteel members remain a very powerful method of effecting change and are available from the worldsteel bookshop in the **worldsteel safety and health principles guidance book**.

Safety and health sharing and learning never stops, both within the organisation and worldsteel membership. There are always new hazards being discovered or ideas developed to reduce risks or damage potential – most of the best ideas are simple, and are surprisingly easy to implement.

The four recognised companies can be very proud of the changes that they have made within their business. They have found confidence in their success and will continue their leadership by sharing and learning in the future.

Henk Reimink
Director
Safety, Technology and Environment

CHINA STEEL CORPORATION (CSC)

Safety Promotion Project

China Steel Corporation's Safety Promotion Project was launched in 2008, in response to a fatality that occurred within the company. The Safety Promotion Project has the clear aims of preventing any future fatalities, and allowing the company to progress towards their goal of zero accidents.

The Safety Promotion Project focused on four key areas:

Safety Improvement Proposals

There were two principal ways in which employees could propose safety improvements.

Creative Development Activities (CDA) teams allowed all front-line employees to engage in improvement activities. Front-line employees were expected to be involved in creative development activities, across a range of subjects. In 2011, more than 50% of all creative development activity was focused on safety – and the best projects were recognised by the presentation of safety contribution awards.

The 'To Chairman' mailbox was a web-based tool that allowed all employees to highlight safety concerns to the Chairman of the company. The system allowed the Chairman to engage with the workforce, and demonstrates the great importance that the company places on safety. The aim was for all safety concerns to be addressed with 24 hours.

Physical Safety Training

Physical Safety Training was introduced in recognition that more traditional, classroom training did not create the desired level of energy and improvement regarding safety performance. Physical safety training simulated real-life scenarios, and trained employees on the correct way of responding. Physical training courses were developed for the five most common hazards within the workplace, and 100% of employees completed this training. The company is on track to achieve 100% of contractors having completed the training by the end of 2012.

Examples of physical safety training

Safety Care

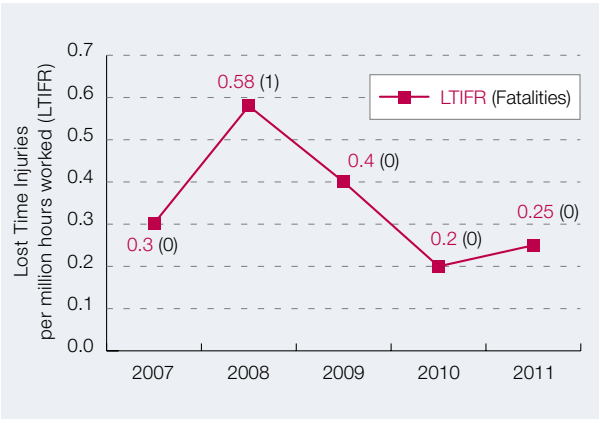
Safety Care was China Steel Corporation's own approach to addressing the attitude and behaviour of its employees. Safety Care encouraged workers to care for each other's safety, and be self-motivated with regards to their own and their colleagues' safety. Workers were encouraged to understand and correct the reasons for their colleagues' unsafe actions.

Health Promotion Activity

CSC provided annual health examinations for all employees. Based on the examination, employees that were considered to be at risk from certain non-occupational health conditions (such as high blood pressure or cholesterol) were offered advice and assistance in achieving a healthier lifestyle. The assistance included supplying nutritionist-designed meal boxes, exercise guidance and medical lecture courses. Via monitoring of the at-risk population, significant reductions in average Body Mass Index, cholesterol and blood pressure were achieved, along with an accompanying increase in muscle endurance, flexibility and cardiopulmonary function.

Confined space training: Confined spaces were identified as one of the top five hazards that employees were exposed to

CSC Lost Time Injury Frequency Rate (LTIFR) and Fatality trend, 2007 - 2011



Safety Multipliers

Within Gerdau, there is a clear aim that the company's workforce will have an interdependent approach to safety. The company is striving to create an environment in which all employees, irrespective of their role, will proactively ensure both their own safety and the safety of those around them. The company wishes to go beyond safety being solely a leadership function by encouraging all employees to understand that safety is everyone's responsibility.

To drive improvements in safety culture, Gerdau recognised the need for safety support to be integrated into daily activities. One of the tools used to achieve this was the introduction of Safety Multipliers.

A Safety Multiplier is a production worker who has voluntarily agreed to undertake an additional role, providing safety support for his or her fellow team members. By training team members in this role, it is an effective way of integrating safety into every team, while also increasing employee engagement.

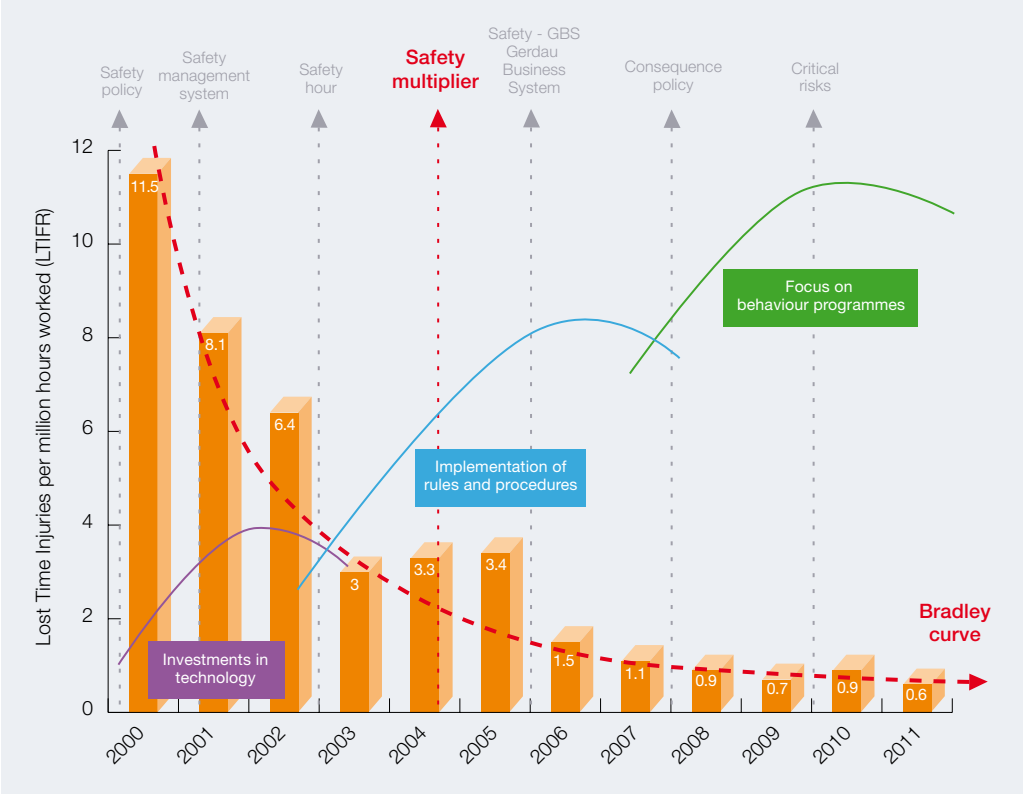
The role of the Safety Multiplier is undertaken for a one-year period, and the aim is that at some point every team member will have undertaken the role of Safety Multiplier. Every work-cell, of every shift-team, has a Safety Multiplier integrated into the team. The Safety Multiplier spends approximately half an hour per shift in assisting his or her colleagues to take control of their own safety, and also assisting the work-cell's leader in effectively managing and leading the safety activities on the shift. For the rest of the work shift, the Safety Multiplier undertakes their regular production tasks.

Gerdau recognise that it is essential that Safety Multipliers are given the tools and skills required to undertake the role. Each volunteer is trained in risk perception and behaviour observation, incident investigation, failure analysis, the Gerdau Health & Safety Management System and tools and techniques for engaging with the production teams. It is also essential that the volunteer has the appropriate management support and this is achieved by formal objective setting and performance evaluation.

Since the introduction of Safety Multipliers, the total number of unsafe acts and conditions identified and corrected has significantly increased. On average, every Gerdau employee identifies 20 such conditions per year. This is a clear example of the strong safety commitment of every employee, supported by the Safety Multiplier.

A Safety Multiplier assisting his colleague in understanding the risks associated with his task

Evolution of the safety culture within Gerdau



The graph above shows Gerdau's Lost Time Injury Frequency Rate over the past 12 years. The introduction of each new safety improvement tool can be seen to result in a corresponding improvement in performance. Three key areas of focus are identified for the company, with management focus changing as safety culture improvements progress.

Expectations of care placed on all members of Gerdau's workforce (manager, employees and contractors)

NATSTEEL

Risk Assessment to identify High Risk Activities

Natsteel implemented a risk-assessment methodology designed to assist the company in identifying hazardous activities. From the risk-assessment process, it was possible for Natsteel to implement corresponding control measures, to mitigate against hazards. Through the implementation of the risk-assessment process, Natsteel was able to focus its resource on high-risk activities with the potential of causing fatalities or serious injuries.

In order to ensure that sufficient experience was available, the risk-assessment process was undertaken in teams comprising engineers, supervisors, contractors and line workers.
Upon completion of the assessment, the teams recommended appropriate and practical mitigation against the hazards. It was then the responsibility of each Head of Department to provide the appropriate resources to reduce the risks to acceptable levels.

When performing the risk assessment, seven steps were undertaken:

1. Identify the hazards – specific work-related activities related to the process were broken down into sub-tasks and hazard types
2. Determine the Exposure (E) to the hazards – the expected exposure levels were quantified, with numerical values awarded for exposures ranging from rarely to continuous
3. Evaluate the Severity (S) of the hazard – the potential severity was quantified, with numerical values awarded for severity ranging from minor to disaster
4. Determine the Probability (P) of the incident happening – using a numerical scale with values attributed to a range from once in a lifetime to once in a week
5. Calculate the Resultant Risk Score (R) – where the resultant risk score was the product of Exposure, Severity and Probability

   $R = E \times S \times P$
6. Analysis of activities with Fatality Consequences – from step three, activities with potentially fatal consequences were grouped together (for example, working at height, electrical safety etc.)
7. Analysis of activities based on the resultant Risk Score
   - Activities were ranked based on the outcome of step five
   - Additional control measures had to be implemented for the 10% of activities with the highest risk scores.

The risk-assessment process is ongoing and must be conducted or reviewed whenever there is a change in personnel, process and equipment, or after an incident. Periodic reviews will also identify changes to the top 10% of risks, as mitigating factors are successfully employed.

Natsteel developed an implementation road map, taking 12 months to train all relevant personnel (see next page).

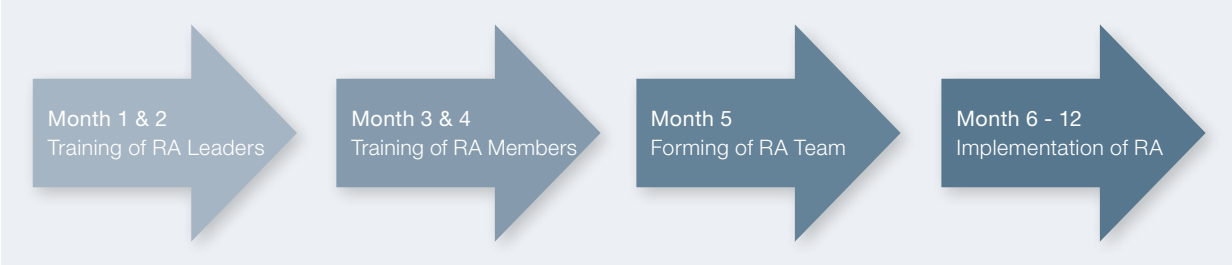
Based on the analysis completed during step six of the process, task forces were formed to re-examine certain key areas. For example, on the basis of the risk-assessment process, Natsteel formed a Working at Height task force.

The Working at Height task force:

- Reviewed all working at height activities, to identify any potential falls from height
- Reviewed the effectiveness and adequacy of the current risk assessments, standard operating procedures, safe working procedures, communications and personal protective equipment
- Implemented remedial measures against any identified non-compliances.

Within a three-month period, all working at height activities had been audited.

Implementation road map



A tool-box talk by the company's Chief Operating Officer (COO)

An example of the branding and publicity for the working at height task force

TATA STEEL LIMITED

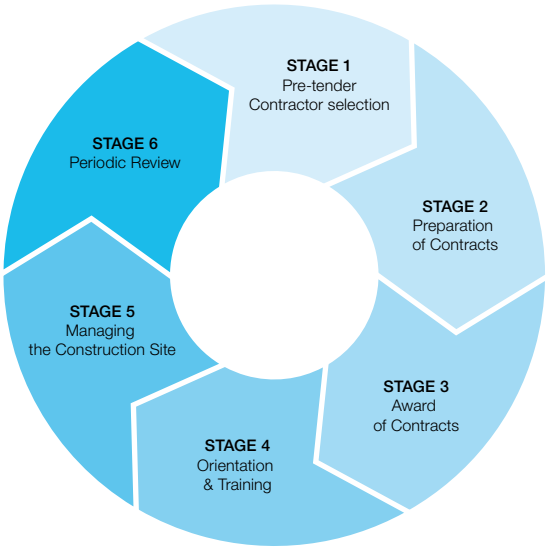
Cultural Transformation of Contract Workers

Tata Steel Limited is currently undertaking a major expansion project, increasing its Jamshedpur site capacity from 7 to 10 million tonnes per annum. This expansion project is the third major expansion in the past 10 years, and analysis of the previous two expansions was critical in designing Tata Steel's Contractor Safety Management System.

The Contractor Safety Management System (CSMS) was designed to bring about a cultural transformation within the 48,000 contractor workers employed on the construction site. Through this transformation of culture and attitude, Tata Steel was able to achieve the expansion with a greatly reduced Lost Time Injury Frequency Rate (LTIFR), and zero fatalities.

Tata Steel focussed on 6 key areas in which to achieve effective cultural change within its contractor workforce and branded the implementation process the 'Tata Steel Six Step Contract Management Process'.

Tata Steel Six Step Contract Safety Management Process*



*Based on DuPont Sustainable Solutions -Six Steps of Effective Contractor Management

Stage 1

Prior to any company being able to bid for a contract, the company had to fulfil the company registration process. In order to be considered as a potential construction partner, each company had to provide details of how they would comply with the Tata Steel Health and Safety Management System, and its lagging and leading safety metrics for the previous 3 years. Prior to commencement of the bidding process, Tata Steel safety professionals would visit the contract companies' other places of work, to validate the information supplied.

Stage 2

When preparing the contracts, Tata Steel undertook specific Job Hazard Analysis (JHA), to identify all job specific safety requirements. In addition to the job-specific safety elements, Tata Steel also formalised the general expectations placed on any contract company. These expectations were referred to as 'The rules of the game', and included the following points:

- Expected safety standards
- Competency levels for all key personnel
- Expected behaviours of all workers and supervisors.

Stage 3

The process of awarding contracts was completed in two stages:

1. Pre-award discussion with contractor partners – a pre-award meeting was arranged with all bidders, to discuss the scope of the work and the applicable safety standards
2. Post-award discussion with the contractor partner – once the contract has been awarded to the winning bidder, the contractor partner was expected to provide detailed safety management material, including risk assessments, safe working procedures and lists of skilled workers.

Stage 4

1. Prior to commencement of work, all contractors had to pass through the Safety Excellence Centre. The centre provided theoretical training, allocated PPE and performed pre-work medical checks on 100% of the contract workers
2. Skill development programme – it was recognised that a lack of job-specific skills had contributed to incidents during previous construction projects. A skill development centre was established to train workers in specific trades
3. On the job training – daily training and briefing against the task's Standard Operating Procedure (SOP) were completed.

Orientation and training programmes

Stage 5

During the construction management phase, Tata Steel monitored, measured and reinforced safety performance. Tata Steel adopted a number of innovative contractor management tools, including:

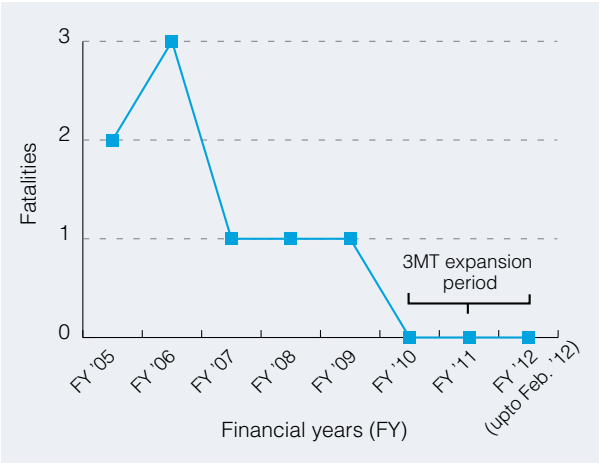
- Provision of shuttle bus transport for 40,000 workers, from the entry gate to the construction site – removing thousands of additional vehicles from the site's roads
- Working with tribal women to remove the dangers of loose clothing associated with their traditional dress
- Ensuring demarcated temporary pathways through all construction zones, significantly reducing man-machine interface
- Introducing a site-safety audit systems and severity index, to monitor and quantify the significance of safety deviations and identify contract companies that failed to comply with Tata Steel standards. This is done in four tiers – contractors, supervisors, line managers and safety professionals
- Fatality Risk Control Programme (FRCP) – trained safety professionals to find hidden potentially fatal scenarios that are normally not visible to line managers.

Stage 6

The review process aimed to satisfy two key criteria:

1. Eliminate poor safety performers and reward and recognise excellence in safety
2. Enable success to be shared throughout the whole of Tata Steel Limited – including for future selection of contractors.

Tata Steel's Contractor Fatalities related to Construction Activities



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