

**SAFETY AND HEALTH**

Excellence Recognition Award 2009

In setting its zero injury goal, Essar Steel acknowledged that it also needed to change the culture of the organisation to one that reflected a “positive safety culture”. In the past, accidents seemed almost to be a way of life. The new approach required a drastic change with a significant cultural transformation towards “safety – a way of life”.

Four key factors were identified to reach the new goal:

1. **visible senior management commitment**
2. **building a safety competency**
3. **a rewards and penalty structure**
4. **a technical infrastructure to support the actions.**

Taking the lead from a quote by a senior executive who said, “We don’t want to produce steel at the cost of anybody’s life or ill health”, the company set about implementing the four elements of the plan.

Developing and enhancing the competency level of the Health and Safety Executive was the first step in the process. Supported by a senior executive, certified health and safety programmes were developed with a comprehensive toolbox of safety tools and techniques. A system of employee job rotation was introduced to maximise the effectiveness of the programme.

As the Safety Leaders began to introduce the new strategy, a system of recognition and rewards was introduced throughout the entire management team, from the Chief Executive Officer to the individual plant managers. The company also introduced a system that recorded safety violations with ‘consequence actions for safety non-compliance’.

During 2008, more than 120 plant safety engineers went through job rotations. At the same time, as a direct result of the entire programme some 1,000 near misses were recorded by employees and contract workers as they improved the incident reporting process. This information is shared with all employees through a specially developed Health and Safety Executive Portal.

In parallel with the safety programme, the company also focused its attention on occupational health and

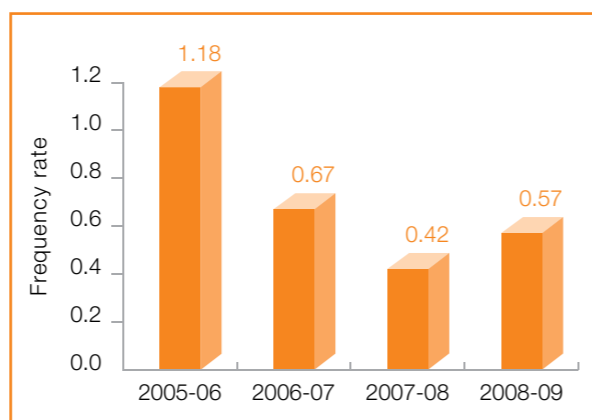
industrial hygiene initiatives. All employees undergo a mandatory medical check-up and are issued with a certificate of health. For those employees who are exposed to noise and dust hazards, audiometry and spirometry (hearing and breathing) tests are carried out every six months.

The results of the entire programme have revealed some significant improvements in safety metrics. By the end of 2009, Essar Steel will have gone three years without a fatal accident and the company has also seen an improvement in the LTIFR from 1.18 in 2005/6 to 0.57 to date for 2009.

Essar Steel acknowledges that a safety culture cannot be changed overnight and that is a long journey towards excellence when building a positive safety culture. The company has now set itself the goal of moving from “safety as a priority” to “safety as a core value”.



**Lost Time Injury Frequency Rate**



**How to achieve unconscious competence**

The promotion of excellence in safety and health practices, endorsed at the highest level, is one of the fundamental goals of all worldsteel member companies. The set of principles outlined in the worldsteel policy statement are the basis for creating a safe and healthy workplace environment for everyone who works in the industry.

In 2008, worldsteel launched its Safety and Health Excellence Recognition Award at its annual conference in October in Washington DC. Five companies received recognition for their outstanding work in the area of safety and health promotion.

In 2009, the Safety and Health Committee (SHCO) of worldsteel again called on its members to submit details of individual programmes they have developed for consideration for this prestigious award, and once again members have responded. Even in these times of economic hardship, member companies continue to place safety and health issues at the forefront of their operations.

The submissions cover a broad spectrum of programmes from company-wide health promotion projects to specific safety guidelines and personal protection equipment (PPE) for sheet handling. In developing these programmes, safety and health executives have looked to educational psychology and learning theory to help them understand the most effective ways of “communicating the safety message.” According to the experts, human beings go through several stages of learning when we are faced with something new to understand. The final stage in this process is often referred to as unconscious competence, when the learned skill becomes so practiced that it enters the unconscious part of the brain and it becomes “second nature.”

This is the goal of all safety and health programmes, to be able to have every steel industry employee so practiced in the area of safety and health issues that every action, thought or process is preceded by the automatic thought: “Is this safe?”.

Many programmes aimed at making sure we all arrive home safely today and every day try to instil this element of learning.

**Message from the Chairman of the Health and Safety Committee**

I am delighted to be able provide a foreword for this prestigious award. As the steel industry starts on the road to economic recovery, I am encouraged by the continued commitment from worldsteel member companies to their goal of an injury-free, illness-free and healthy workplace.

The diversity of the safety and health programmes and the submissions from a broad range of companies and operations demonstrate the high priority placed upon safety and health performance. In a year where our performance has dipped a little in terms of the overall lost-time injury frequency rate (LTIFR), it is vitally important that the industry continues to demonstrate its commitment to health and safety issues. As we state in the preamble to our safety and health principles, “Nothing is more important than the safety and health of people who work in the iron and steel industry”.

**Jeffery R. Dierdorf**  
General Manager, Safety and Industrial Hygiene  
United States Steel Corporation

As far as Gerdau is concerned, the safety and health of its employees are of greater value and integrity than any other company aims, objectives or priorities. No production targets, no economic situation and no risk is worth taking above the security, safety and health of employees.

To ensure compliance with its primary objectives, the company has developed a safety management system (SMS) which has three key principles:

1. Safe physical conditions
2. Health and safety management system
3. Behaviour and commitment policy.

To encourage participation in and commitment to the SMS there are two separate components in the structure. One is related to employee behaviour and the other is leadership commitment. Each element compliments the other in a combined focus on safety.

One obligation of the leadership team is for all individual leaders, which includes the Plant Manager, Department Superintendents and Production Supervisors, to actively participate in a safety hour. The main objective of this practice is to bring the leadership team closer to the operational areas and the shop floor employees, to promote and identify individual safety and health issues and to implement solutions that will ensure an accident-free environment.

The safety hour demonstrates each leader's personal commitment. It involves them spending an hour each day on the shop floor exclusively discussing safety issues. On a pre-arranged schedule, with clearly defined activities outlined in the SMS, the tour must include all aspects of the physical conditions, the management practices as well as behaviour and commitment.

During the safety hour, the safety operational tasks are executed according to a plan which includes safety inspections, assessments, critical task analysis and task observation with a focus upon each of the three key principles. Leaders take the opportunity to acknowledge employees and processes that deserve individual recognition. All leaders involved in the safety hour wear

special green jackets which are easily recognisable and clearly demonstrate to all employees the leadership time dedicated to improving safety.

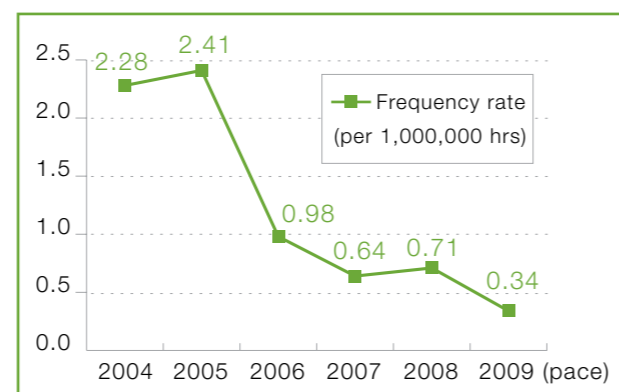
The safety hour is practised at all Gerdau sites around the world. Every day, more than 1,230 leaders dedicate one hour of their time to safety and health issues. In actual terms, more than 300,000 hours are dedicated specifically to safety issues each year.

Relating this commitment to the impact on metrics, in terms of LTIFR, the company has recorded a significant improvement since the introduction of the SMS. There has been a 30% improvement over the last three years.

Enio Viterbo, Gerdau's Health and Safety Director, has stated that the company's commitment to safety is practiced through personal dedication and emotional engagement, ensuring that everyone truly "walks the talk" as far as safety is concerned.



**Lost Time Injury Frequency Rate**



Prior to embarking upon a major new expansion project, Tata Steel reviewed the parameters surrounding the employment of a large contract workforce with a particular focus upon safety and health issues. The challenges included changing the attitudes of a low literacy work force, women wearing loose-fitting clothing, religious beliefs that influenced attitudes towards safety, an "it's OK" attitude and a significant resistance to change.

The company developed a comprehensive code book of dos and don'ts during construction. However, after some initial success, the company decided to go further down the road of safety and health issues, to transform the "basic DNA" of the contract workforce.

Working closely with Dupont, who believe that "safety is a journey rather than a destination", Tata Steel developed a three-phase plan to address some of the major issues. The first element was on-the-job training with the entire workforce, all of whom were required to wear standard personal protection equipment (PPE).

The second step was to adopt the Dupont Six Step Contract Management Process which was subsequently modified to suit the learning processes. A three-tier safety structure was set up. It was composed of the main construction safety committee, the divisional implementation committee and the area implementation committee. Each committee was responsible for driving and supporting contractor safety with:

1. skill training
2. safety audits
3. making each contractor responsible for their own safety
4. health checks for all employees
5. the development of safety standards
6. a specific focus on working at heights with standardised scaffolding, double lanyards, full body harnesses, high visibility jackets, dress codes for women and no 'head loading'
7. a centralised database to record and track all observations, issues and remedial action
8. equipment 'fitness for purpose' certification
9. a crane code of practice.

The final step in the process was sustainability. All the processes, actions and plans needed to be sustained over the entire life of the project. A system of rewards and recognitions was introduced to encourage participation and to reward effort. A penalty system was also introduced to emphasise the importance of adopting and adhering to safe working practices.

To support the process, Tata Steel set up a Safety Excellence Centre and Safety Park to provide training and to give practical demonstrations of the standards and codes of conduct. The target of achieving operational excellence was monitored through a PDCA (Plan, Do, Check, Act) approach followed up with an SDCA (Standardise, Do, Check, Act) approach.

The initiatives yielded a high degree of success. The largest blast furnace in Asia was built and commissioned without any injuries. Tata Steel recorded 35 million accident-free hours during the entire construction project.

**Lost Time Injury Frequency Rate of Construction Safety**

