

December 2013

BlueScope Steel Australia

***Everybody's business:
Load restraint safety
in the steel industry***

No. of Staff:
8,000

Distribution Centres:
100

CASE STUDY

NRSP
NATIONAL ROAD SAFETY

**PARTNERSHIP
PROGRAM**

Organisation: BlueScope Steel Australia
No. of Staff: 8,000
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Case Study:

Above and Beyond: Making safety in the steel industry everybody's business

Key Outcomes:

- Involving those affected by safety policies in drawing up and implementing the policies increases engagement and, in turn, compliance
- People make mistakes; robust and effective safety management systems can reduce human error
- Understanding how safety guidelines are interpreted or read by personnel, and tailoring how they are communicated to the target audience, such as using plain language and diagrams rather than words, can make them more effective
- Effective load restraint drives significant benefits for the company, the industry and the community. These can include increased safety and minimising downtime and workers compensation, contributing to cost savings for the business
- Sharing effective company initiatives with other peer organisations can help improve standards and practices across whole industries.

Synopsis:

BlueScope Steel has gone well beyond meeting its legislative requirements and taken a leading role in improving safety across its industry. By taking responsibility for ensuring that large loads are securely restrained, BlueScope Steel has improved the safety of its drivers, the steel supply chain and the community.

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Company Overview

BlueScope Steel's global business has been built on the strength of its worldwide partnerships, networks and brands, with the company employing more than 16,000 people in 17 countries.

BlueScope Australia supplies a large percentage of all flat steel products within Australia, employing 8,000 people across 50 facilities in the region and operating 100 distribution centres. Its steelworks at Port Kembla in New South Wales is Australia's largest steel production facility, with an annual production capacity of 2.6 million tonnes of crude steel. BlueScope was created when the former BHP Steel was split into BlueScope and OneSteel.

BlueScope has a strong commitment to safety. A comprehensive company-wide Occupational Health and Safety Management System ensures the health and safety of employees, customers, contractors, visitors and the public. Safety management systems also significantly inform and influence company decision making.

BlueScope's focus on 'zero harm' is an important driver for continuous improvement and safety contributions are recognised within the company through safety awards. The company also encourages the development of specific initiatives to foster safety 'on the ground'. For example, BlueScope Distribution has worked with transport company Metropolitan Express to develop the first Fall Prevention Safety System trailer.

While BlueScope has a comprehensive company-wide approach to safety, this case study will focus on its successful and industry-leading efforts to address one of the most significant safety risks facing the steel industry, and others moving large loads: proper load restraints to ensure large products remain secure during transport.

Above and Beyond

BlueScope places high importance on being a safety conscious company and a good corporate citizen supporting the communities in which it operates. The company understands the inherent risk potential in its products causing injury, due simply to their size and nature, and the need to have systems in place to control that risk.

Two events in the mid-1990s prompted BlueScope to review its load restraint practices: new legislation introduced tougher performance standards and two drivers using 'trucking dogs' were injured.

The company's attitude towards safety and its corporate social responsibility, combined with those two events, drove BlueScope's commitment to developing load restraint guidelines for each of its products.

The company also realised that its specialist knowledge as the manufacturer put it in a stronger position to produce effective guidelines. Developing the guidelines itself, rather than relying on transport companies also meant BlueScope had more control over a consistent standard of restraint for its product regardless of where it was despatched.

The company has now drawn up 130 steel load restraint guidelines. Rather than settling for ensuring its own operations ticked the required boxes, as a major supplier of steel, BlueScope saw that it had a responsibility to go further.

BlueScope has drawn up similar guidelines for other companies, both inside and outside the steel industry, and has taken a leading role in helping to improve industry load restraint standards. BlueScope load restraint guidelines are considered the steel industry standard in Australia, and the company continues to take a leading role in steel industry safety through the Steel Transport Safety Network. The network was jointly established by BlueScope, and it is also the administrator of the Australian Steel Industry Logistics Safety Code of Practice.

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Developing Guidelines

Common Misconceptions

The starting point in BlueScope developing load restraint guidelines for each of its products was to determine if existing practices were safe and complied with the law. Where they did comply, existing procedures would be documented and shared.

What BlueScope found in many cases was that load restraint practices were determined by what it termed 'Grandfather's rules' – where practices were simply passed on by drivers without any basis in science or understanding of the safety benefit. While such practices were often effective to a point, they did not meet the upgraded legislation. Another misconception was that drivers believed how they restrained loads was 'the way everybody did it'. In reality, there was more inconsistency in load restraint than standard procedures.

Where guidelines were required, the company's logistics engineers calculated, based on required G forces and the specific product, what was required. Often, those calculations were tested on closed private roads to ensure that the suggested load restraint worked. That testing involved real company drivers and trucks, with an engineer in the passenger seat to measure the forces at work. The test would also be video recorded for later use in training.

The team quickly discovered that between 40-60kmh was the critical speed to test load restraint – if systems worked at that speed then they would work at higher speeds. This practical testing showed that the driver most at risk from poorly restrained loads is the urban delivery driver, not those on long haul routes.

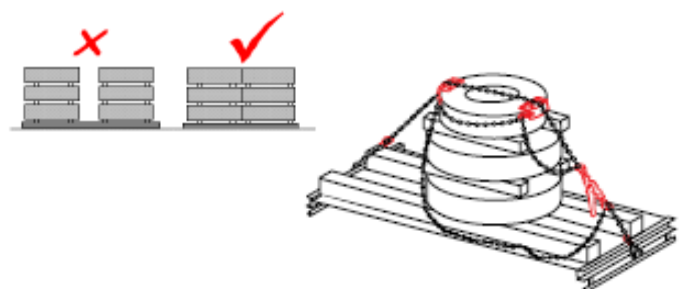
Written for Truck Drivers

Before guidelines are implemented, transport companies are asked for feedback to ensure the guidelines are easily understood and that it covers the intended range of products.

Indeed, communicating the guidelines to its target audience – truck drivers – was a key challenge and focus of BlueScope's efforts. The company realised that to effectively get the message across to its then 8000 drivers, the guidelines would need to be produced using language they understood. Following consultation with an adult education expert, guidelines used as many diagrams and as few words as possible. Three-dimensional diagrams were created, as most people have difficulty translating two-dimensional elevations into what they look like in the real world, and use of photographs was also avoided. Diagrams could be made specific and the object to be focused on could be highlighted in colour, for example. Often in photos the object to focus on could be small or was competing for attention.

Diagrams also allowed common mistakes to be shown and highlighted with a cross, with the correct procedure emphasised with a tick. This allowed a visual message to be quickly and easily understood by truck drivers.

Guidelines were produced in a loose leaf format, and stored in a ring folder kept in the truck, to allow easy revisions or updates as needed. Load restraint guidelines were also produced with a bright green top to make them instantly recognisable.



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Explaining the 'Why'

Similar principles were employed in training drivers once the standard procedure for restraining products had been determined. For example, the use of video for long periods in training was avoided. The education expert consulted outlined that people expect a Hollywood standard production, making it hard to keep their attention with anything less, however short bursts of video can be effective. In this case, BlueScope deliberately used emotive news footage of a load restraint 'disaster' to create emotional buy-in from drivers. In this way, the load restraint guideline training demonstrated the importance of properly securing loads – and potential consequences on real people of not doing so. It explained the rationale behind the load restraint regulations and outlined how factors like speed and friction influenced the damage a load can cause.

Once the reason for proper load restraint was demonstrated to drivers, the second part of the training focused on introducing the guideline and reinforcing its role in addressing the issues outlined.

With large numbers of drivers, in an industry with significant turnover, BlueScope created 'Train the Trainer' packs for each guideline. This allowed BlueScope to train each transport company and they, in turn, use the training pack to train their drivers.

To reinforce the training provided, BlueScope produces and circulates real-world case studies of actual incidents through the business and to contracted transport companies. For example, BlueScope has used the case studies to outline instances where a properly restrained load remained secure in a major crash, such as a truck driving off the road. Conversely, a poorly restrained load has caused significant damage in a minor braking incident.

Auditing

When load restraint guidelines are introduced, transport companies are also given a code of practice that outlines both parties' obligations and an audit sheet to monitor compliance. BlueScope is required to perform audits on all its despatch points, with the level of auditing matched to the level of risk attached to a product. That knowledge has been accumulated and calculated over time.

When the first guidelines were introduced, BlueScope was completing about 500 audits a month across Australia; within a decade that figure had grown to 3000 audits a month.

The focus of the audits was not to punish non-compliance, it was to educate truck drivers and transport companies in effective load restraint. Good auditing is a learning experience – it is an opportunity to show the driver where they have gone wrong, compare their practice with the guidelines, and to learn the correct procedure.

The auditing results are also examined, because 'you can't improve what you don't measure'. Information from the audit is entered into BlueScope's national database and reported on monthly to track compliance rates and highlight opportunities to improve. This may demonstrate that a particular product is causing concern, or that a specific distribution site or transport company needs further support or mentoring to meet the compliance target.

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This approach reflects the sustained education approach BlueScope has taken in implementing each of its guidelines, which is designed to build collective industry knowledge over time.

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Results

BlueScope's increased focus on load restraints drove significant improvements in compliance, with 95% compliance reached by 2004. This has become BlueScope's load restraint compliance target, and that target is consistently met, with some areas of the business tracking at 99 or 100 per cent compliance.

These achievements have driven significant benefits for BlueScope Steel, its employees and others in the supply chain, the steel and logistics industries, and the community.

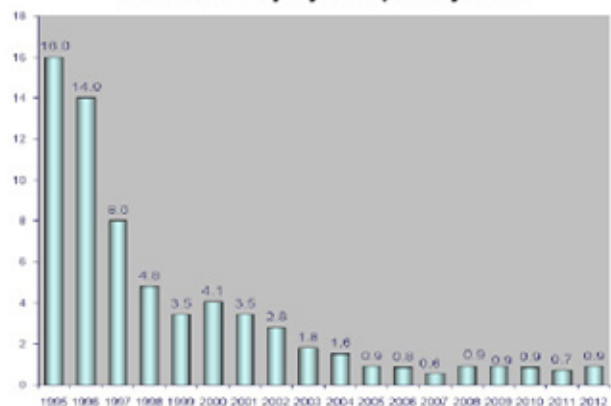
The most important benefit is that secure load restraint in the steel industry has reduced death or injury on our roads. Major incidents involving steel coils – the largest BlueScope product both in size and volume – coming off trucks had been eradicated in the company's own trucks by 2003. Other incidents involving smaller 'downstream' products have also been significantly reduced among transport companies. These are phenomenal results considering that at its peak 12 million tonnes of BlueScope product was being moved by road each year. Any failures are the result of human error and mistakes in application of the load restraint, rather than the guideline not being robust.

Legal compliance with the myriad legislation and regulations that govern steel and logistics is a key internal benefit of BlueScope's safety management systems.

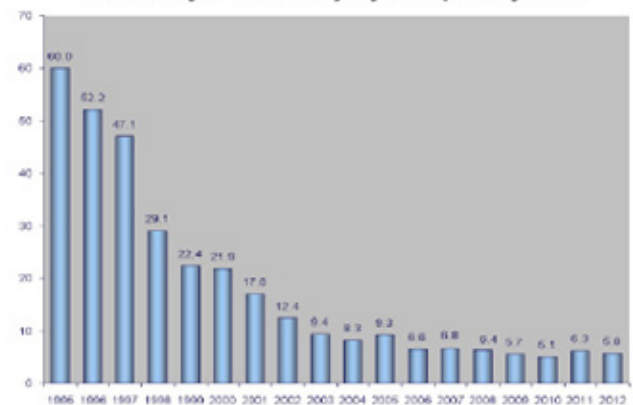
These outcomes translate to bottom line benefits for the business. For example, an effective load restraint management system, combined with a strong safety focus across the business, has resulted in low workers compensation rates. Similarly, lost time injury rates are below one incident for every million hours worked and, like the medically treated injury frequency rate, have improved significantly since the mid-1990s.

Minimising the frequency and severity of load restraint incidents also reduces downtime. Taking a wider perspective, the potential damage to BlueScope's reputation should a stray steel coil inflict injury or death has been minimised. BlueScope is also considered an industry leader and the benchmark for transport of steel products. That creates strong links to industry groups and the government sector, where its standing allows BlueScope to influence policy and practice that affects its business as well as the wider industry, such as the introduction of height systems and 'no dogs' policies, and where its experience and knowledge can be put to further use.

Lost Time Injury Frequency Rate



Medically Treated Injury Frequency Rate



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Foundations for Success

BlueScope's significant commitment to and success in improving load restraint practices is built on a strong company-wide safety management focus and a genuine belief that it can achieve its 'zero harm' goal. While that guiding principle applies beyond load restraints to all safety areas, it has been a key factor in successfully developing and implementing load restraint guidelines by reflecting the importance company leaders place on safety.

That commitment is reinforced by the sustained passion for safety displayed over many years by BlueScope personnel responsible for load restraint.

Another key foundation of BlueScope's load restraint safety success is taking a pragmatic approach in setting and enforcing realistic compliance targets, which accepts that people are human and will make mistakes, treating any load restraint failure as an opportunity for improvement and education. This also encourages accurate reporting of failures, which then highlights areas to be prevented in the future.

Involving drivers and transport companies in developing and testing new guidelines also increases acceptance and compliance, as well as ensuring guidelines are practical in real-world situations. Writing guidelines in 'truckie-friendly' language and promoting the use of diagrams instead of words, has also increased compliance by maximising understanding of standard procedures.

While contracts with transport companies do allow for penalties to be applied for consistent failure to comply with safety practices – and BlueScope has dismissed contractors on that basis – the company prefers to deal with breaches through the personal relationships between contract managers and the transport company, taking into account the company's safety record. Mechanisms are also built in to the contract system to reward contractors for high and consistent safety standards across a range of performance indicators.

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Setting the Standard

BlueScope has set the industry benchmark for load restraint systems. As well as ensuring its fleet of contractors adheres to safe loading practices, BlueScope has shared its load restraint systems with other steel companies, and worked in consultation with transport companies, such as Toll and Linfox, to design guidelines for safely securing specific products. The Australian steel industry is considered a world leader in load restraint practices, due in no small part to BlueScope's efforts.

BlueScope's commitment to transport safety continues through its support of the Australian Steel Industry Logistics Safety Code, which has more than 30 signatories. The voluntary industry-specific code of practice outlines areas where companies have legal requirements, such as load restraint, chain of responsibility, fatigue management and speed. It also allows companies to measure both their legal compliance and performance against industry best practices.

BlueScope has also leveraged its strong and respected industry position to encourage other companies to sign up to the code, especially companies that are awarded transport contracts with BlueScope.

The company also plays a leading role in administration of the steel industry code through the Steel Transport Safety Network. The network, which consists of representatives of BlueScope, OneSteel, Toll, K&S Freighters and other code signatories, is an industry body responsible for developing, administering and updating the industry code of practice.

The scope of the industry-specific code is expected to grow with the Australian Steel Institute now partnering with the Transport Safety Network with the express purpose of growing the number of signatories and promoting the learnings from the network across the steel industry to drive a consistent approach to logistics, safety and legislative compliance.

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The steel industry code is also aligned with the National Logistics Safety Code (NLSC), which is administered by the Australian Logistics Council, the peak national body for the Australian freight transport and logistics supply chain.

Steel industry code signatories are required to abide by the NLSC, which also outlines the auditing requirements that apply to member companies who have signed up to the steel industry code.

Through this wider focus on influencing industry practice, a journey that began with a specific internal focus on the safe restraint of BlueScope products has grown into a key driver of safety improvements, both in load restraint and other safety practices, across the steel industry and the wider Australian logistics supply chain.

