

Safety

Vesuvius is fundamentally committed to protecting our employees by reducing and eliminating workplace hazards

As set out in our KPIs on page 17, we place the highest priority on the safety of our employees and use the Lost Time Injury Frequency rate as a key indicator of our performance.

We adopt an integrated and comprehensive approach to managing workplace risks, covering people and property, in our approach to effective health and safety management. Our aim is to identify, eliminate, reduce or control all workplace risks.

Safety Leadership

Safety is the first item on the agenda at all our executive and management meetings.

The Group is committed to continual safety improvement with a Group Health and Safety Policy stating an objective of:

- Zero accidents
- No repeat injuries
- No harm to people

These objectives are pursued through a range of policies, standards and procedures. Our first major change programme, 'Safety Breakthrough' was launched in 2008. This global initiative was

designed to reduce the number of accidents in the business to the lowest level within the industry sector, with the ultimate goal to reach zero accidents throughout Vesuvius.

The current phase of the Safety Breakthrough initiative - Turbo S - builds on the foundation of Safety Breakthrough and includes a broad range of actions based on recording, analysis and the subsequent development of new or improved safety procedures.

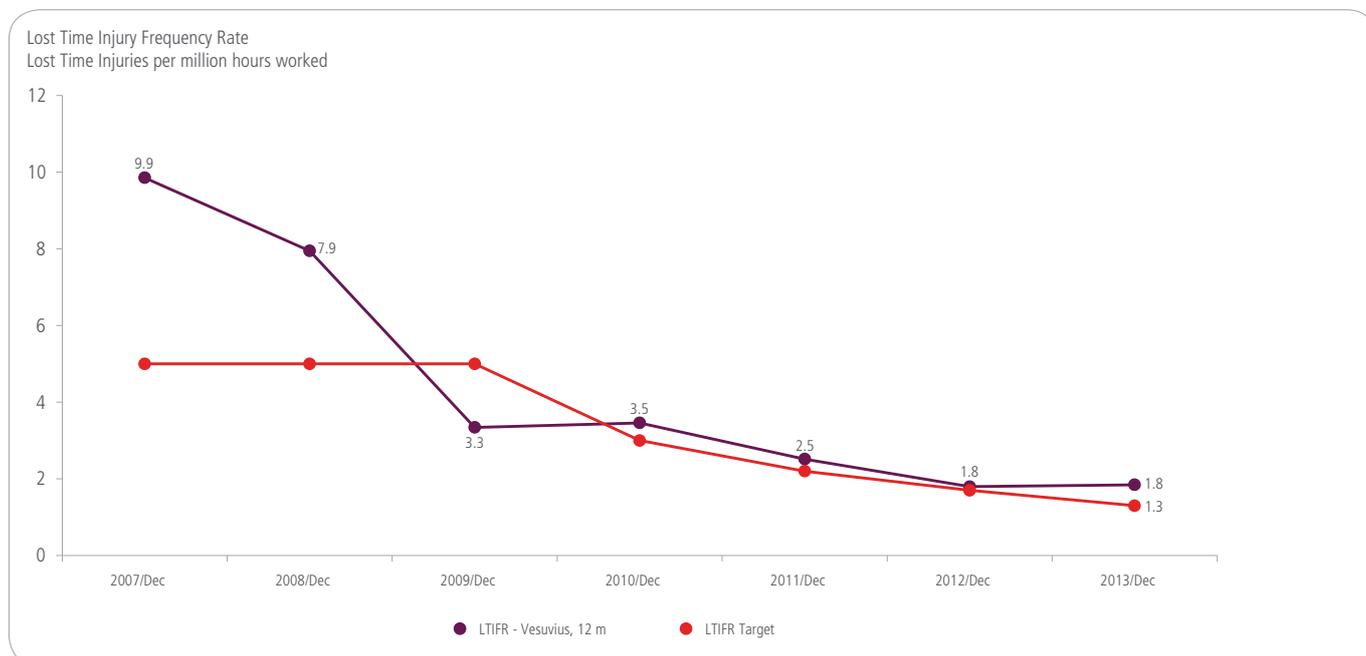
As part of this initiative:

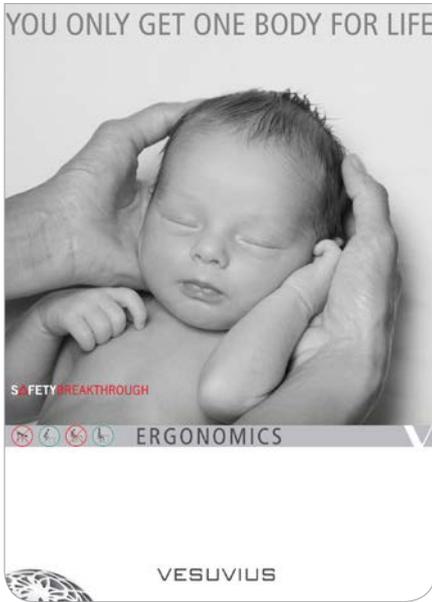
- Senior executives regularly lead safety tours at all locations
- Employees participate in routine safety audits
- We invest significantly in safety training, recently covering Ergonomics and a complete review of Lock, Tag and Try implementation
- All employees are expected to routinely raise safety improvement opportunities
- Safety standards are continually updated, translated and deployed globally throughout Vesuvius

- All severe injuries are analysed locally, with a formal presentation to and review by the Group Executive Committee.

Our current strategies show good progress over the past six years in reducing the number of lost time injuries and Lost Time Injury Frequency Rate ("LTIFR"), as shown below. This chart highlights the improvement achieved to date – although we recognise the need for continued focus on this area. In 2013 we set ourselves a Group LTIFR target of 1.3. We did not achieve this during the year, recording the same LTIFR of 1.8 attained in 2012. For 2014 we will focus on continual improvement to meet the Group's target of 1.2.

Very regrettably, and despite our efforts, in 2013 Vesuvius suffered a work-related loss of life. A full investigation with senior HSE Management followed the accident and a Group-wide review of relevant procedures was undertaken. These standards were updated, operators were retrained and we communicated globally on the lessons learned from this tragic event.





Accident and Incident Reporting and Analysis

A significant investment in time and resources has been made over recent years to develop robust, comprehensive and timely reporting of accident and incident information. Our standard provides the foundation for targeted safety interventions and activities to reduce the number, severity and frequency of lost time injuries and incidents. As part of management reporting, the Vesuvius Board receives a monthly update on all lost time injuries and severe accidents.

Vesuvius has developed a reporting process that uses more stringent definitions for LTI and 'severe accidents' than OSHA (USA). This ensures that we capture and investigate all fires, explosions and any major spill or other chemical release and means we report on all potential fire and explosion scenarios, no matter how small the actual outcome. 2010 was used as the base year for global reporting in order to establish key improvement initiatives and meaningful relative targets. This process has been successful with much more effective reporting levels.

Accident information is openly available and summarised in the HSE database, including the mandatory completion of a full investigation report for more significant incidents to identify the true root cause – in line with the 'No Repeats' objective. The quality of accident investigation has improved thanks to the common establishment of a 'Vesuvius 8D' process for practical problem-solving.

Fire incident reporting is an important part of the accident and incident reporting process. Efforts to improve the reporting of all fires, and, in particular, minor and contained process fires, have been successful.

Taking Safety Breakthrough to the Next Level – Turbo S

Vesuvius launched Safety Breakthrough with the aim of reducing the number of accidents (including fires), lost time injuries and increasing safety awareness through greater employee engagement. This major initiative aimed to raise health and safety performance to best-in-class levels throughout the Vesuvius business. Turbo S integrates good management practices in the workplace with a strong emphasis on the need to standardise tasks so that everybody works to the same high standards in safety performance.

Turbo S has been designed to deploy best practice and increasing management and employee involvement. This is supported by dedicated training for all employees including senior managers. The initiative continues to work towards the ultimate objective of zero workplace incidents.

Turbo S features:

- The implementation and sharing of best practices through Vesuvius standards and other tools
- A commitment to become a true Learning Organisation, avoiding repeat accidents and sharing lessons learned
- Total employee involvement, with the need for safety improvement being driven at the most senior levels of our business.

Safety Audits

A key part of the Turbo S programme is to ensure that safety audits become an established and sustainable part of the Group's ongoing safety efforts.

The audit programme involves employees at all levels – from Group executives and safety specialists through to local site management, employees and contractors. A database is maintained of all Executive, Corporate and Fire Safety audits to enable all auditors to have a full site history available prior to undertaking the next, upcoming audit. The successful programme to include employees in safety audits as auditors started in 2012 has continued with nearly 50% of employees and contractors involved in conducting audits. The target employee participation for 2013 was 50% with 55% participation achieved. A target of 75% has been set for 2014.

Safety Improvements and Lessons Learned

A feature of Turbo S is to become a true learning organisation, avoiding repeat accidents and we share lessons learned using the 'Red Stripe' distribution process to avoid repeat accidents by highlighting and sharing a serious issue.

Promoting employee engagement in improving safety conditions is an important objective. This objective is also pursued using the Safety Improvement Opportunity with Permanent corrective Action ("SIOPA") initiative. This requires site employees to identify safety problems / improvement opportunities, which then require a formal response including the implementation of improvement action. The Group has annual targets for employee SIOPAs which are continually reviewed.