Structural Safety: the Life and Death Question of Your Supply Chain

This document will provide you with an in-depth analysis of the state of structural safety around the globe compiled from AI's own insights and findings.
Structural Safety – Not Just a Bangladesh Problem

The 2013 Rana Plaza collapse in Bangladesh rightfully holds the record as the deadliest accidental structural failure in modern history. This disaster, which killed over 1,100 people and injured a further 2,500, has forever changed the face of global supply chains, and brought to light the appalling lack of structural safety in low-cost sourcing locations.

In the wake of the disaster, major brands suffered massive reputational damage, owners of the factory have been brought in on murder charges, and two international safety initiatives were established: the Bangladesh Accord on Fire and Building Safety and the Alliance for Bangladesh Worker Safety.

However, despite the staggering scale and the unprecedented international response to the Rana Plaza catastrophe, structural safety neither starts nor ends with Bangladesh. The years that followed brought such high-profile incidents as the Tianjin blast in China, the Lahore collapse in Pakistan, and the Valenzuela fire in the Philippines.

AI data from Q2 2016 shows that most manufacturing powerhouses in Asia and Southeast Asia suffer from persistent structural problems. The share of factories ranked “at immediate risk” or “in need of improvement” ranges from 38% to 75%. Even in Bangladesh, despite the progress made by the Accord and Alliance, over half of RMG factories need action to ensure structural safety.

Leading Causes of Structural Failures

Every year, industrial fires and collapses still claim hundreds of lives, cause infrastructural damage, and destroy millions of dollars in equipment and merchandise – even though the majority of these disasters are preventable.
Risk factors that contribute to collapses and fires include:

- **Unauthorized construction and modification** are among the primary risk factors, including those that have resulted in the Rana Plaza collapse. Extra floors added without proper permits and design, mezzanines and rooftop water tanks, conversion of premises for industrial use – all these factors compromise load conditions and pose great risks to worker safety.

- **Environmental factors** can exacerbate structural issues and lead to collapse if not addressed in time, especially in areas with monsoon, heavy rainfall, or seismic activity.

- **Factory size and age** affect structural safety. Statistics show that smaller (under 20,000 m²) and older (over 15 years) factories are at a 20% higher chance to be at risk.

- **Violation of fire safety regulations**, including lack of firefighting equipment and clearly identified fire exits, as well as improper handling and storage of flammable products.

- **Negligence and lack of awareness** remain major human factors in structural safety.

No two factories are the same. Depending on their location, history, and industrial specialization, different facilities face different safety challenges. Nevertheless, whatever the situation, the only way to ensure structural and fire safety is to identify issues through regular structural audits, take timely corrective action to mitigate risks, and carry out regular follow-up to prevent recurring problems.

### Structural Audits and Supplier Relations

As today’s global supply chains increase in complexity, a standalone structural audit is not enough for lasting improvement. Any brand, retailer, or manufacturer wishing to ensure structural safety must look to appropriately complex solutions that involve multiple stakeholders and safety efforts staged in time.

The **initial structural and fire safety audit** is an important first step that helps get a realistic picture of the building and identify any existing issues. The traditional outcome of a structural audit is a **Corrective Action Plan (CAP)** that addresses all shortcomings discovered during the audit and proposes a list of corrective measures with a timeline for implementation.

The next step is crucial, because far too many structural safety initiatives take the pressure off the factory after the fact-finding stage, leaving actual improvement to be carried out with delays or not at all. A prime example of that was the 2015 sweater factory fire in Gazipur, Bangladesh, which only avoided becoming a deadly incident because fire broke out after hours. As of the time of the incident, the factory has already been inspected by engineers of Bangladesh Accord, but the management failed to take corrective action in time.
With this in mind, the importance of **timely CAP implementation** cannot be overstated. This is the stage at which the supplier’s cooperation is paramount. This is why more and more brands are working to form **long-term relations with suppliers**, creating economic incentives to improve. In the paradigm where the supplier is a brand’s long-term partner, the CAP is no longer a collection of external, arbitrary demands – but a roadmap to improve both parties’ business.

Even in the best-case scenario, where the supplier is glad to cooperate with the brand, and the CAP has been implemented in time and in full, ensuring structural safety is an ongoing effort. **Follow-up audits** should be conducted at least once a year, to help set important safety milestones and monitor improvement. That is the minimum standard for structural safety follow-up. Brands at the forefront of remediation progress are more proactive, and employ **in-house structural civil engineers** that conduct much more frequent check-ups. These often discover potential risks (especially fire and electrical) that might have gone unnoticed until the next audit, by which time the risk would have aggravated. Employee communication is equally valuable for timely discovery and prevention of structural risks.

In addition to that, factory workers themselves are a valuable source of information about any newly-discovered hazards. Even with basic **safety training**, the supplier’s employees become more aware of safety issues, and are more likely to bring them to the management’s attention, especially when they have a communication channel to do that.
How AI Can Help

- Comprehensive audits covering structural, fire, and electrical safety
- Audit reports with clear grading and Corrective Action Plans you can act upon
- KPI reporting and status follow-up on audited suppliers
- Experienced structural auditors and licensed civil engineers
- Supplier workshops to educate and engage suppliers in structural safety
- Factory Improvement Services for continuous improvement and CAP management

Do you have questions about structural safety? We would be glad to help you. Contact us today at sales@asiainspection.com.

About AsiaInspection

AsiaInspection (AI) is a global quality control and compliance programs provider that partners with brands, retailers and importers to secure, manage and optimize their supply chain. With unique web-based and mobile quality control management, AI offers Product Inspection, Supplier Audit Programs and Laboratory Testing services in 77 countries for more than 5,000 clients worldwide.