

RISK CONSULTING FOR THE FOOD AND BEVERAGE INDUSTRY



INTRODUCTION

Food and beverage (F&B) companies operate in a dynamic industry, with leading manufacturers competing against each other and against niche firms globally. As the economy continues to improve in developing countries, a wave of change is roiling the food and beverage industry, redefining how companies grow, operate, and manage risk. The rapid advancement in technology is driving much of the transformation, providing opportunities to explore new ways of doing business. However, technology exposes companies to new risks and challenges. The F&B service market is worth Rs. 2,04,438 crore and is expected to reach Rs. 3,80,000 crore by 2017 in India, according to industry sources.

MAJOR RISKS

Major property risks in the F&B industry, includes fire, explosion, contamination and spoilage, supply chain, and equipment breakdown.

Fire: Fire is one of the biggest risks that food production facilities face today. The need for an effective manufacturing process, together with energy saving initiatives to control the heat and cold loss in processing and storage, in the F&B industry has led to the use of construction materials, such as combustible composite panels in the premises. The quality of fire protection, housekeeping and management, maintenance, and protection against criminal activity are key factors that can help minimize the risk of fire.

Contamination: Product contamination and spoilage are common in this industry. The challenge is to find the source of contamination. A few of the widely occurring contamination source, includes pathogens and physical contamination. However, there are other non-obvious contaminants, including smoke, water, and spoilage, due to power outages.

Power outages and other issues beyond the company's control can result in costly spoilage or contamination of food, which can damage the business and lower revenue.

Liquid damage from non-process water lines, including fire protection, cooling or chilled water lines, often are an over looked contaminant.

In the past, such damages caused large losses in the F&B industry. Similarly, smoke damage even due to controlled fire in one area can affect food quality in the entire premise. An effective equipment maintenance program together with the proper selection of building materials can minimize this risk.

Explosion: After a fire, explosions can occur. Such explosions can expand with combustible dust. Examples of explosive dust in the F&B industry include flour, custard powder, instant coffee, sugar, dried milk, potato powder, and soup powder.

Common processes that generate explosive dusts in the food industry include flour and provender milling, sugar grinding, spray drying of milk and instant coffee, and conveyance/storage of whole grains and finely divided materials. Other activities may also be at risk

of fire and explosion because of the use of finely sprayed oils, mixing with potable flammable solvents (i.e. ethanol), or sterilization techniques, such as high temperature drying or spraying with hydrogen peroxide solutions. Controlling ignition source and providing explosion protection for process and equipment help mitigate risks.

Equipment breakdown: Many F&B companies rely on plant and machinery as a key part of their operational infrastructure. Whether it is the reliance on refrigeration units to store food; reliable power supply; or critical production equipment that can lead to stoppage of production the breakdown of either could have a detrimental effect on the business.

Supply chain risk: The food industry depends on its suppliers. Yet supply delivery can be interrupted by many factors, including adverse weather, infrastructure issues, price increases, or damage to a supplier location. The loss of one supplier can lead to a decline in income, and can affect the quality, consistency, and service of a food service provider. The supply chain study helps companies understand the causes of supply chain risk.

WHAT ARE AUDITS?

In these audits, MRC experts analyze the different factors that may cause fire and explosion. The scope depends on the specific client requirement. It covers discussion with the top management to understand the safety philosophy and support to the operations personnel in implementing the policies as well as hazard identification policies, verification of the standards adopted, and the procedures for property loss prevention in the premises.

Sometimes, the performance of the systems is tested through functional tests on fire pumps; performance of hydrant system, fire alarm systems, smoke extraction systems; and closure of fire doors together with the effectiveness of the emergency response teams by participating in mock fire drills. Management programs, such as the work permit system, smoking controls, housekeeping practices, management of change procedure, and maintenance of electrical systems are also evaluated.

The evaluation is based on international industrial quality standards, such as NFPA and FM Global, together with local codes, including national building codes.

INDUSTRY FOCUS

MRC experts work with clients and provide an independent inspection platform of the existing status of the fire and life safety arrangements in the existing premises. The team prepares a report to highlight the gaps and the recommendations to bridge the gaps. The reports rank the level of priority such issues should have to address the non-compliance in the industry specific categories.

With a range of risk management spectrum, the MRC experts offer clients a broader understanding of their risk profiles. These services give added insight to help protect the business and revenue.

- Natural hazards risk assessment, including wind, flood, and earthquake exposure.
- Flammable liquids and gases: Storage and handling evaluation.
- Review of constructional features, which include sandwich panel construction.
- Review of deep fat fryers from fire and explosion safety perspective.
- Review of dust explosion hazards.
- Review of mechanical refrigeration system using ammonia.
- Review of ignition source control measures.
- Review of safety interlocks on fuel fired boilers and pumped flammable liquid transfer.
- Review of installed fire protection systems to local/international standard.
- Annual pump tests as per NFPA 25.
- Training on loss prevention program and preparation of loss prevention manual.
- Property risk engineering: Loss control visits.
- Code compliance visits.
- Fire and life safety audits.
- Logistic risk management, including cargo loss minimization, journey risk management as well as vehicle and driver safety programs.

SUCCESS STORIES

MRC experts from India conduct loss prevention audits for some of the major confectionery and sugar manufacturing companies. They helped the management to understand the risk levels, and prepared reports for informed decisions on risk issues.

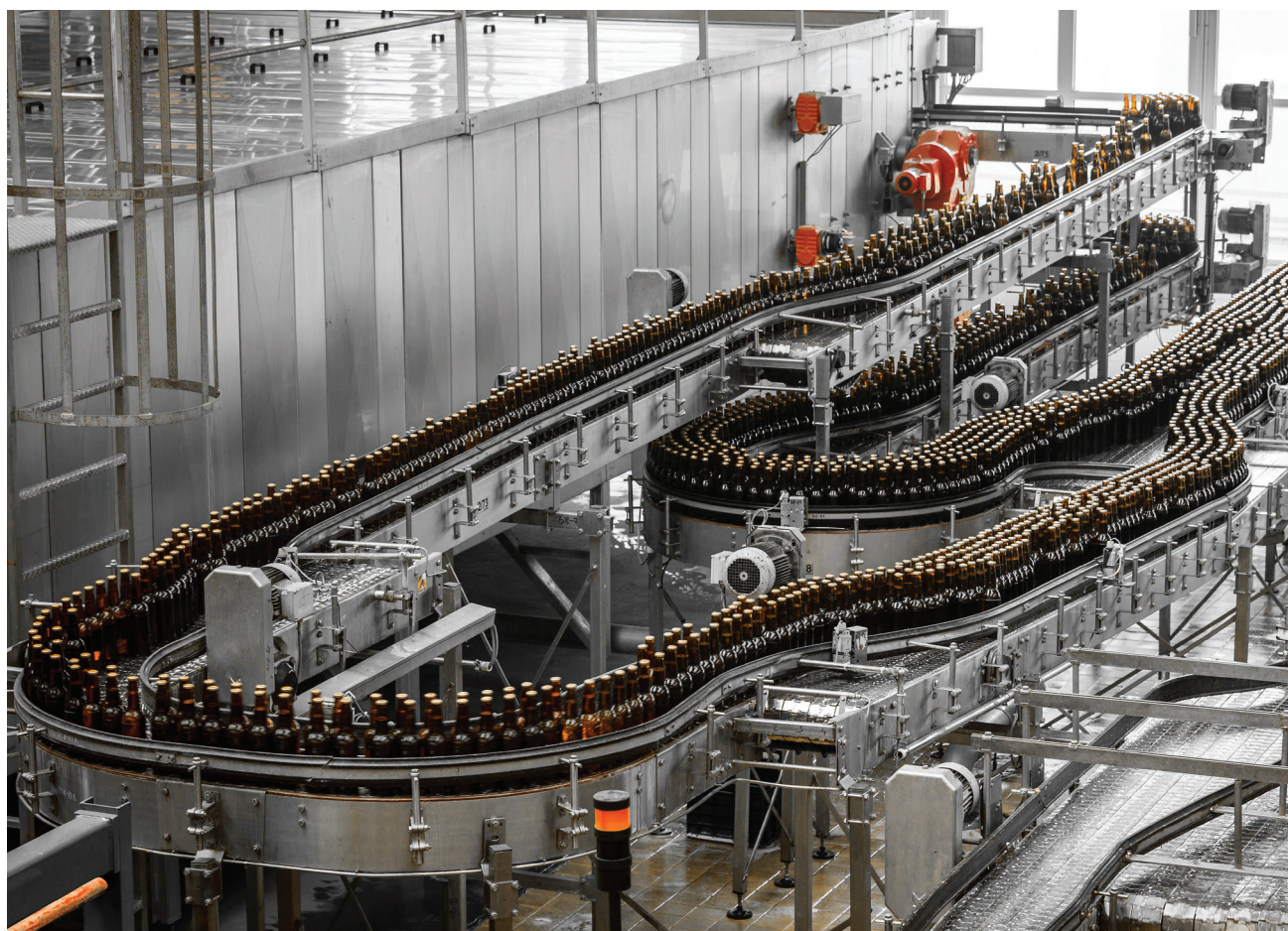
In a fruit and vegetable packaging facility, MRC experts helped prevent losses associated with expansion. The inputs from the experts were tested when there was a fire in the office area. This fire was controlled due to the noncombustible construction materials used.


MRC experts worked with a one of the major soft drink manufacturers in the country to evaluate the loss prevention process in the facility evaluation of the site, including their existing sprinkler system.

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For more information about Marsh Risk Consulting and other solutions from Marsh, visit <http://marsh.co.in/service/riskconsulting/> or contact riskconsulting.india@marsh.com or contact your local MRC representative.

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