

Fire Assessment Report for Blisswood Global Impex Pvt. Ltd.

June 24, 2024

Introduction

Blisswood Global Impex Pvt. Ltd. is currently facing significant fire safety challenges that pose an imminent threat to the safety of the facility, its employees, and the continuity of its operations. This report outlines the critical fire hazards identified and provides potential remedies to mitigate these risks. Immediate action is required to prevent a catastrophic event.

Fire Safety Assessment

1. Obsolete Fire Detection Panel

Issue: The facility is equipped with a 15-year-old conventional fire detection panel. It is generating random faults and errors in unmapped zones. The system is currently shut down due to these persistent bugs, rendering the facility highly vulnerable to undetected fire incidents.

Risk Level: High

Impact: High risk of undetected fires leading to extensive damage and potential loss of life.

Relevant IS Code: IS 2189:2018

2. Insufficient Fire Extinguishers

Issue: The facility requires over 60 fire extinguishers but currently has only 44, with only 11 recently maintained.

Risk Level: High

Impact: Inadequate firefighting equipment increases the risk of fire spread and limits the ability to control small fires.

Relevant IS Code: IS 2190:2010

3. Smoke Detector Maintenance

Issue: Although smoke detectors are maintained regularly, the dusty environment necessitates more frequent maintenance, potentially once every couple of months.

Risk Level: Moderate

Impact: Accumulated dust can impair smoke detector functionality, leading to delayed detection of fires.

Relevant IS Code: IS 11360:1985

4. High-Risk Autospray Machines

Issue: Autospray machines have been retrofitted and operate manually, creating significant fire hazards:

- Fans intended to maintain temperature are manually controlled.
- Inadequate response to power cuts and post-heater cooling.

Risk Level: Critical

Impact: Manual operation increases the likelihood of overheating, leading to fire outbreaks, especially in leather manufacturing.

Relevant IS Code: IS 1646:1997



Image 1 : Aged Electrical System in Auto Sprayer

5. Toggling Machine with Heater in Basement

Issue: The toggling machine with a heater is located in the basement amidst a large stockpile of leather.

Risk Level: Critical

Impact: The combination of heat and flammable materials elevates the fire risk dramatically.

Relevant IS Code: IS 1641:1988



Image 2: The toggling machine with heater in close proximity to stored leather

6. Exposed Electrical Panels

Issue: Exposed electrical panels are located next to stored leather.

Risk Level: Critical

Impact: Electrical sparks or faults could ignite the leather, causing rapid fire spread.

Relevant IS Code: IS 1646:1997



Image 3: Exposed electrical panels right in the middle of leather storage

7. Deactivated Fire Detection Zone in Basement

Issue: The fire detection system in the basement is deactivated due to frequent false alarms.

Risk Level: High

Impact: The absence of fire detection in a high-risk area significantly increases the danger of undetected fires.

Relevant IS Code: IS 2189:2018

8. Skiving Machine Sparks

Issue: The skiving machine generates sparks during tool sharpening.

Risk Level: High

Impact: Sparks can easily ignite flammable materials, especially in a leather manufacturing environment.

Relevant IS Code: IS 3034:1993



Image 4: Skiving Machine

9. Water Suppression Pumps

Issue: Although regularly maintained, the water suppression system requires a full demo run and tank cleaning.

Risk Level: Moderate

Impact: Without regular testing, the reliability of the suppression system in an emergency is uncertain.

Relevant IS Code: IS 15325:2003

Recommended Remedies

1. Immediate Replacement of Fire Detection Panel:

- Install a modern, addressable fire detection system with enhanced reliability and reduced false alarms. Addressable fire detection infrastructure increases robustness and reduces response times and may help in reducing fire insurance premium as well.

Relevant IS Code: IS 2189:2018

2. Increase Fire Extinguisher Inventory:

- Acquire at least 16 additional fire extinguishers and ensure all units are regularly maintained.

Relevant IS Code: IS 2190:2010

3. Enhanced Smoke Detector Maintenance:

- Implement a bi-monthly maintenance schedule for smoke detectors to ensure optimal performance in a dusty environment.

Relevant IS Code: IS 11360:1985

4. Automate Autospray Machine Operations:

- Retrofit machines with automated controls for fans and heaters to ensure they operate safely under all conditions, including power outages and postoperative cooling. Auto shutoff if critical temperature thresholds are reached, this ensures that multiple checks and systems are in place to stop any incident from happening and report an incident as quickly as possible in case of any emergency.

Relevant IS Code: IS 1646:1997

5. Relocate or Upgrade Toggling Machine Setup:

- Move the machine away from the leather stockpile or enhance fire safety measures in the basement, including improved ventilation and fire barriers. Toggling machine also needs to be set up with automated temperature controls and an IOT based reporting system that ensures safety in case of emergency.

Relevant IS Code: IS 1641:1988

6. Secure Electrical Panels:

- Encase electrical panels in fire-resistant enclosures and maintain a safe distance from flammable materials. The sections inside the basement should also be isolated with fire retardant materials like intumescent paints to ensure that in case of a fire event the fire does not spread unchecked.

Relevant IS Code: IS 1646:1997

7. Reactivate and Upgrade Basement Fire Detection:

- Address false alarm issues and ensure the basement fire detection system is operational and reliable.

Relevant IS Code: IS 2189:2018

8. Spark Containment for Skiving Machine:

- Implement spark arrestors and improve local exhaust ventilation to reduce fire risks from the skiving machine.

- The scrap generated from this machine should also be collected in a separate bin with fire retardant materials.

Relevant IS Code: IS 3034:1993

9. Comprehensive Testing of Water Suppression System:

- Conduct a full demonstration of the suppression system, including tank cleaning and flow tests, to verify its readiness.

Relevant IS Code: IS 15325:2003

Conclusion

Blisswood Global Impex Pvt. Ltd. is at a critical juncture regarding fire safety. The identified hazards represent severe risks that necessitate urgent and comprehensive mitigation measures.

Failure to address these issues promptly could result in devastating consequences. It is imperative that management takes immediate action to implement the recommended remedies to safeguard the facility, its employees, and its operations.

Signed:

Avi Rajput

Fire Safety Consultant

A handwritten signature in blue ink, appearing to read 'Avi Rajput', with a long horizontal flourish extending to the right.