

INITIAL FIRE SAFETY INSPECTION REPORT

Factory Name: Tosrifa Industries Ltd (Extension)

RSC ID: 25788

Factory Address: 4/2 A, 135 Gopalpur, Post Office - Munnunagar , Tongi , Gazipur-1710 .

Other Factories: Tosrifa Industries Ltd (ID-9452; Same premises)



Inspected By: Mahbub Alam Sami

Date: 20th Oct 2024

Fire Safety Inspection Report

Tosrifa Industries Ltd (Extension)

Introduction:

"**Tosrifa Industries Ltd (Extension)**" complex was surveyed for fire safety on **20 Oct 2024** by The RSC Inspection Team. The purpose of the survey was to identify significant fire safety issues and to provide recommendations for remediation based on applicable standards specified by the RSC. The scope of this initial fire safety inspection was limited to the review and identification of major fire safety issues. The inspection did not include identification of minor deficiencies, which will be further addressed as part of follow-up inspections.

Limitations

The information in this fire safety inspection report was obtained during a visit to the facility and during interviews with local factory management. It has not been possible to provide independent verification for all the information and data collected, and, therefore, The RSC cannot accept general responsibility for omissions or errors arising from inaccuracies in this report from the information obtained. The findings and recommendations in this report are not intended to imply, guarantee, ensure or warrant compliance with any government regulations. Additionally, the results do not imply in any way that compliance with the findings or recommendations as stated in this report will eliminate all hazards, risks or exposures or that hazards, risks or exposures not referred to in this report do not exist. Compliance with the findings and recommendations stated in this report does not relieve the factory owner from obligation to comply with specific project requirements, industry standards, or the provisions of any local government regulations.

General Factory Information

Factory Building name(s):

- 01. 5-Storeyed Admin Building (RCC Structure)**
- 02. Single Story Kitchen Shed (Steel Shed)**
- 03. Single Story Boiler Shed and Diesel Room (Steel Shed)**
- 04. Parking Shed-1 (Steel Shed)**
- 05. Parking Shed-2 (Steel Shed) &**
- 06. Single Story ETP Shed (Steel Shed)**

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Findings & Recommendations :

Table 1 summarizes the major fire safety issues identified during the inspection. Recommendations have been provided to address each issue.

An implementation schedule shall be developed by the factory to remediate each of the findings. The specific timing of improvements, including any requested extensions due to design / installation constraints, shall be submitted to the RSC for review.

Table-1:

SI No.	Category	Findings	Required Action	Remediation Time Frame
F-1	Fire Rated Construction	Unsealed penetrations and openings are located in the fire-rated floor/ceiling assemblies due to Plumbing Pipes, Electrical Cable Riser and unprotected opening connecting ground floor to 1st floor having different occupancies. Location: Admin Building.	Seal all penetrations and openings in floor/ceiling assemblies to maintain the fire separation at least by 3-hr. The used sealer shall be 3rd party certified and installation shall be as per manufacturer's guideline. (Type-1 Construction). or, Provide a minimum 2-hr fire rated shaft to separate the utility risers from each floor if required. (Type-1 Construction). Floor penetration is not required where meet 4.7 (RSC Technical Guidelines)	Within 3 months
				
F-2	Fire Rated Construction	Elevator shaft was directly open into exit enclosure and floors. Location: Admin Building.	Ensure minimum 1.5-hr fire rating for the doors of elevator shafts otherwise close the shafts area with 2-hr fire rated construction barrier and 1.5-hr fire rated doors. So, rearrange the facility to provide separate enclosure for lifts. If not possible anyway provide a minimum 2-hr fire- rated elevator shaft with listed fire rated lift landing door to separate from each floor level as per RSC Technical Guidelines Standard V 1.0 (Section: 6.14.3). Recommended to follow "SUPPLEMENTARY PAPER ON REMEDIATION GUIDANCE ELEVATOR OR LIFT SHAFT OPENING IN EXIT ENCLOSURES" for remediation. Plumbing shaft shall separate by 2-hr fire rated construction.	Within 3 months

 				
F-3	Fire Rated Construction	The main structural element of the building is constructed by steel which is non-rated and were found in exposed condition without any fire protection. Location: Kitchen Shed (Interim Construction; Height-18'08") & Boiler Shed (Interim Construction; Height-18'05").	For interim construction, the building shall be Type 1 or Type 2 construction as required in BNBC 2006 Part 3 Table 3.2.4. So, provide require rating for the structural elements of the building following BNBC 2006-Table 3.2.4, 3.1.9 and 3.3.1 & Section 4.4 and Table 4.4.1 of the RSC Technical Guidelines (Standard) V1. Consult a qualified fire protection engineer to design the rated construction barriers in between two floors and in structural members. Factory shall ensure that, all the design, datasheet, certificate, and the design-philosophy has been reviewed from the RSC prior to install the passive fire protection system.	Within 6 months
 				

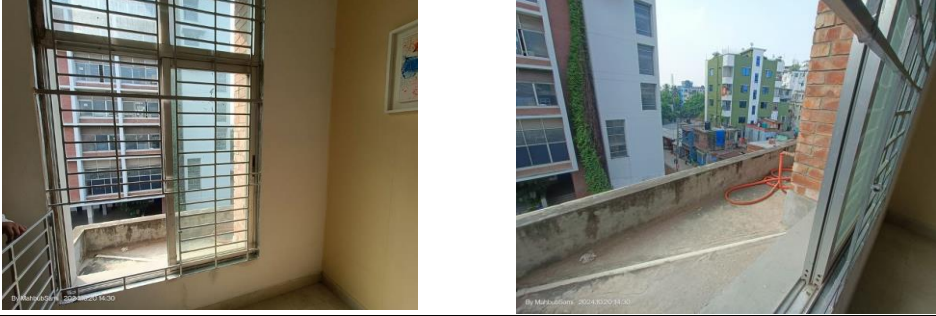
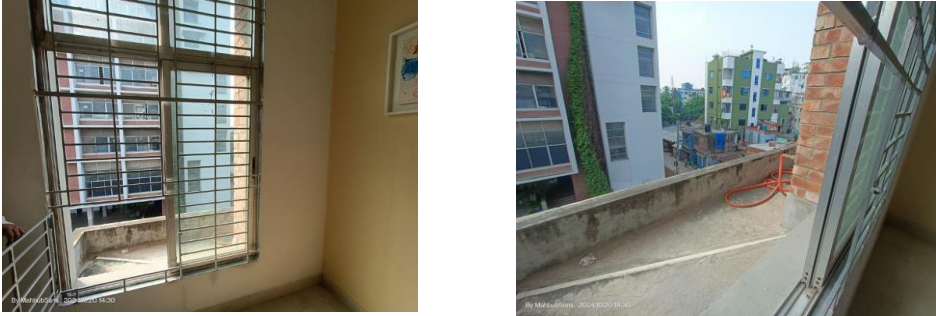
F-4	Fire Rated Construction	The Cutting area is not separated from Kitchen area by fire rated construction. Location: Kitchen Shed.	Relocate the Cutting area from Kitchen area.	Within 3 months
				
F-5	Means of Egress	Width of exit stair is less than 1.5 m (60 in.) and means of egress continuity was not maintained. Location: Stair-1 (South-West) & Stair-2 (South-Middle), Admin Building.	The capacity of the means of egress shall not be reduced along the path of travel in accordance with RSC standard 6.5.2. Provide adequate exit discharge width of exit stair minimum clear and unobstructed exit stair widths of 1.5 m(60 in.) in accordance with RSC standard 6.5.6.2.1 to maintain the means of egress continuity.	Within 3 months

			 	
F-6	Means of Egress	The exit stair enclosures are not separated from work areas and other spaces on each floor by fire-rated construction due to unprotected opening, non-functional/missing door accessories, less than 2-hr rated wall enclosure, exceeds clearance between door bottom to floor etc. Location: Admin Building.	The exit stair enclosure shall be provided with a minimum 1-hr fire resistance rating for buildings with 3 or fewer stories and a minimum of 2-hr. fire resistance rating for buildings 4 or more stories. Provide 0.75 hr. fire rated door and seal all penetrations and openings by 1 hr. fire rated fire rated barrier construction for building with 3 or fewer stories. Provide 1.5 hr. fire rated door and seal all penetrations and openings by 2 hr. fire rated fire rated barrier construction for building with 4 or more stories. Provide a fire-resistive rated assembly between the exterior exit stairs and the building up to 10 ft. beyond the end of the stair to achieve the required separation. The rated assembly shall be approved and/or designed by a qualified fire protection engineer. Ensure that the fire doors are self-closing and positive latching and that they are provided with fire exit (panic) hardware where serving production floors. If fire doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system.	Within 3 months

				
F-7	Means of Egress	Parapets or guards are provided in occupied roof which is less than 1067mm (42 inch.). Location: Admin Building.	Provide parapets or guards with a minimum height of 1067mm (42 inch.).	Within 3 months
				
F-8	Means of Egress	Width of aisle is less than 0.9m (36-in.) or not marked properly at Admin Building.	Aisles shall be provided with a minimum unobstructed clear- width of 0.9m (36 in.).	Within 3 months

				
F-9	Means of Egress	Uneven path of travel and blockage in exit discharge. Locations: Rare exit, Kitchen Shed.	Remove unnecessary items and level exit path to the public way.	Within 3 months
				
F-10	Means of Egress	Provided guards at stairs are not as per standards. Location: Admin Building.	Open guards shall have intermediate rails or pattern such that a sphere 200 mm (8 in.) in diameter cannot pass through any opening up to a height of 865 mm (34 in.).	Within 3 months

				
F-11	Means of Egress	The Stair-2 (South-Middle) do not discharging directly to the outside of the building. Location: Ground Floor, Admin Building.	Provide 2-hr fire-rated exit passageway leading directly outside (vestibules to separate any storage areas). Or, Provide sprinkler protection for discharge floor in accordance with NFPA 13 and meet RSC Technical Guidelines Standard V1.0_Section 6.17.3.	Within 3 months
				
F-12	Means of Egress	No guard rails are provided at the required locations which may pose a falling hazard. Location: 3rd Floor, Admin Building.	Provide guard rails on open side with minimum height 42 inch. Open guards shall have intermediate rails or pattern such that a sphere 200 mm (8 in.) in diameter cannot pass through any opening up to a height of 865 mm (34 in.).	Within 3 months

				
F-13	Means of Egress	Direct access to an exit enclosure is not provided for Medical Room. Location: 1st Floor, Admin Building.	Daycare/ Medical shall be located on the ground floor with a maximum travel distance of 9 m (30 ft) or may be located one story above the level of exit discharge where direct access to an exit enclosure is provided.	Within 3 months
				
F-14	Means of Egress	Building did not have stair designation signs and occupant load signs at all required locations. Location: Admin Building.	Provide stair designation signs and occupant load signs at all the required locations.	Within 3 months

F-15	Fire Alarm & Detection System (FADS)	The factory has installed an addressable fire alarm & detection system which is required to be reviewed and verified. Location: For Single Story Boiler Shed and Diesel Room (Steel Shed), Parking Shed-1 (Steel Shed), Parking Shed-2 (Steel Shed) & Single Story ETP Shed (Steel Shed). Because 5-Storeyed Admin Building (RCC Structure), Single Story Kitchen Shed (Steel Shed) were covered in approved T&CVI of existing ID-9452.	Submit as-built drawings, testing records, equipment certification and other relevant documentation to the RSC for review and approval. Modification (if required) shall have to be done as per the reviewed design and NFPA- 72. Upon approval & modification (if required) the factory shall inform RSC to conduct final testing and commissioning verification of the system for final acceptance.	Design within 2 months, installation/modification on within 4 months
F-16	Fire Detection ITM	Inspection, testing, and maintenance for the fire detection system is not in accordance with NFPA 72.	Inspect, test and maintain the fire detection system, and keep written records on-site, in accordance with NFPA 72.	Within 1 month after installation
F-17	Fire Extinguishers ITM	Inspection, testing and maintenance of portable fire extinguishers is not in accordance with NFPA 10.	Inspect, test and maintain the portable fire extinguishers and keep written records onsite, in accordance with NFPA 10 and RSC standards.	Within 3 months

F-18	Egress Lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes. Location: Admin Building, Kitchen Shed & Boiler Shed.	Test the emergency lighting system on each floor and provide additional emergency fixtures to provide adequate illumination along the means of egress. Provide a minimum illumination of 10 lux at the floor level within exit stairs and exit discharge paths and minimum 2.5 lux along exit access aisles.	Within 3 months
F-19	Emergency Lighting ITM	Inspection, testing, and maintenance for the exit sign and emergency lighting system was not in accordance with The RSC standard. Location: Admin Building, Kitchen Shed & Boiler Shed.	Inspect, test and maintain the exit sign and emergency lighting system in the accordance with The RSC standard. Keep written records on-site.	Within 3 months