INITIAL FIRE SAFETY INSPECTION REPORT

AR-TEX COMPOSITE LTD. (EXTENSION)

RSC ID: 25963

23°37'11.6"N 90°28'35.5"E

Bholail, Kashipur, Fatullah, Narayangonj.

Other Factory : AR-TEX COMPOSITE LTD. (24289)

RSC RMG SUSTAINABILITY COUNCIL

Inspected By: Md. Rakibul Islam and Tanvir Jubayer Rahman

Date: 18-November-2024

Fire Safety Inspection Report
AR-TEX COMPOSITE LTD. (EXTENSION)

Introduction:

AR-TEX COMPOSITE LTD. (EXTENSION) complex was surveyed for fire safety on **18-Nov-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): A short description of the structures of this RSC ID are following,-

Sl	Name	Construction year	Type
01	**Building-4 (11-Storied Garments Building)** (G+10) Approx. Total Area: 2,55,800 Sft **Note:** During the initial inspection 3rd, 5th, 6th, 7th, 9th and 10th floor of the building were found vacant / unoccupied	Construction year : April-2021 to June-2023. Occupied year : October-2024. Approval Date: Not available. **Note:** No valid building approval copy from government authority was found during the inspection.	New Construction
02	**Building-5 (3 storied Utility Building)** (G+M+2) Approx. Total Area: 36,820 Sft **Note:** During the initial inspection Mezzanine and 1st floor of the building were found vacant / unoccupied	Construction year : June-2021 to June-2023. Occupied year : July-2023. Approval Date: Not available. **Note:** No valid building approval copy from government authority was found during the inspection.	New Construction

Other Structures in the factory premises:

1. Building-01 (Two storied Steel Structure), **2. Building-02** (Ancillary Building), **3.Building-03** Single storied boiler shed**.**

Above mentioned 3 (Three) structures are covered under RSC ID: 24289.

Note: There were two other buildings found under construction during the initial inspection.

Factory Address: Bholail, Kashipur, Fatullah, Narayangonj.

Points of contact:

Name:	**Md. Mahabobur Rahman**	**Md. Afzal Hossain**
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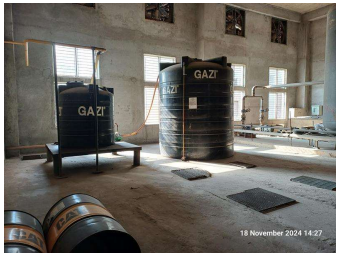
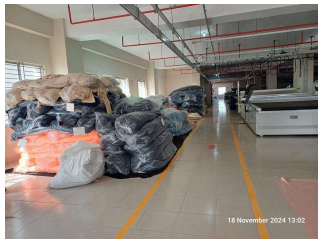
Findings & Recommendations :

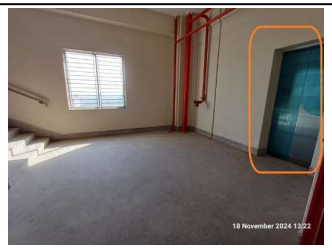
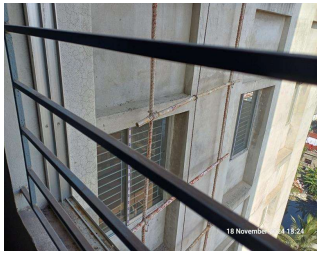
AR-TEX COMPOSITE LTD. (EXTENSION)

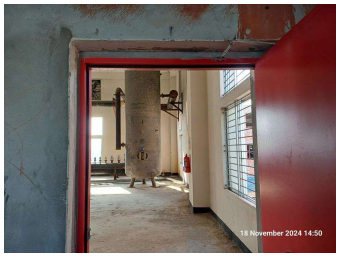
Table 1 summarizes the major fire safety issues identified during the inspection of main buildings. Recommendations have been provided to address each issue. An implementation schedule shall be developed by the factory to remediate each of the similar types of findings throughout the premises. The specific timing of improvements, including any requested extensions due to design / installation constraints, shall be submitted to the RSC for approval.

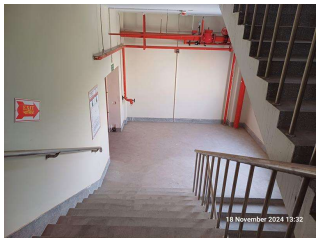
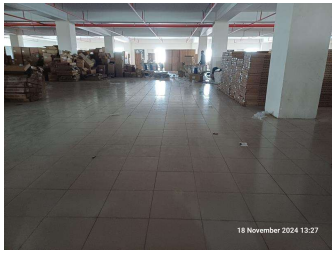
Table-1:

Sl No.	Category	Findings	Required Action	Remediation Time Frame
F-01	Fire Rated Construction	Unsealed penetrations and openings due to plastic sanitary pipes, electrical cable risers and electrical busbar risers are located in the fire-rated floor/ceiling assemblies in many places throughout the building. **Location:** Building-4.	Provide a minimum 2-hr fire-rated shaft to separate the sanitary pipe and electrical busbar riser from each floor level. or, Seal all penetrations and openings in floor/ceiling assemblies by 3-hr fire rated listed/certified materials. The installation of such fire-rated materials shall be following certified design and manufacturer's guidelines.	Within 3 Months
		    		
F-02	Fire Rated Construction	Unsealed penetrations and openings are located in the fire-rated floor/ceiling assemblies due to electric cable riser and as a provision for proposed utility machineries installation. These penetrations are located in many places throughout the building. **Location:** Building-5.	Provide a minimum 2-hr fire-rated shaft to separate the sanitary pipe and electrical busbar riser from each floor level. or, Seal all penetrations and openings in floor/ceiling assemblies by 3-hr fire rated listed/certified materials. The installation of such fire-rated materials shall be following certified design and manufacturer's guidelines.	Within 3 Months
		  		

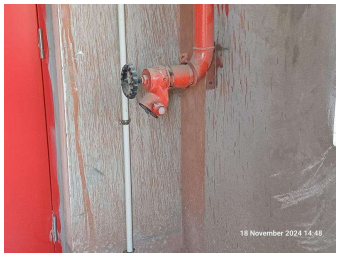
F-03	Fire Rated Construction	Diesel fuel storage (12,000 Ltr) was located on the ground floor of utility building without proper fire separation from surrounding occupancies. **Location:** Building-5.	Separate the diesel fuel storage with 2- hr fire rated construction. Seal and/or protected all openings to maintain the required fire separations. There shall be no diesel fuel storage in a factory production building.	Within 3 Months
		 		
F-04	Fire Rated Construction	At the production floors, large area for in-process storage of combustible materials were found open to the surrounding occupancy. **Location:** 9th floor cutting section of Building-4.	Provide defined storage areas and limit the storage arrangement as follows: - 1. General Condition: Maximum height of 2.4m and maximum area of 23m2. Separate areas of unenclosed combustible storage by a minimum clear distance of 3m. 2. If sprinkler protected: maximum height of 3.66m and maximum area of 93m2. Separate areas of unenclosed combustible storage by a minimum clear distance of 3m. or 3. Enclose the storage area from the surrounding occupancy with a minimum 1-hour construction. Accessory occupancies shall not exceed 10 percent of the building area of the story in which they occur.	Within 3 Months
		 		
F-05	Fire rated Construction	Elevator shafts are directly open into exit enclosure which is a violation of RSC Standard-6.14.3. **Location:** Building-4, Stair-1 & Stair-2.	An exit stairway shall not be built around a lift shaft unless both are located in a smoke-proof enclosure and made of a material with a fire-resistance rating required for the type of construction of a smoke-proof enclosure. (As per 6.14.3 of RSC Technical Guidelines (Standard) V1.0) Ensure the lift shaft is enclosed by a minimum 2-hour fire-rated wall with a minimum 1.5-hr fire-rated protective openings.	Within 3 Months

		 		
F-06	Means of Egress	The exit stairs are not separated from work areas and other spaces on each floor by fire-rate construction due to non-functional fire rated doors where gap beneath fire rated doors found more than 19mm. Moreover, Unsealed penetrations and openings were found in the rated wall of exit stair enclosures on different floors. Additionally, Stair enclosure -1 of both building are not separated from the interior of the building due to the exterior window opening within 10 feet and at 90 degree of the stair enclosure. **Location:** Building-4 & building-5.	Provide minimum 1-hr rated doors for buildings with 3 or fewer stories and 1.5-hr fire rated doors for buildings that are 4 or more stories. Seal all unprotected openings to separate the exit stairs from work areas and other building spaces on all floor levels. 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. The factory should ensure smoke proofing for the fire doors installed in the high-rise building. (building-4)	Within 3 Months
		    		
F-07	Means of Egress	Storage room at building-4 and utility machineries room at building-5 discharges directly into exit stair enclosure without vestibules.	Openings from exit enclosures to storage areas, basements, utility machineries, and similar normally unoccupied spaces shall be provided with vestibules with fire rated construction and openings. Provide a 1.5 hr. fire rated door on the exit stair side and a 1-hr. fire rated door on the Store, basement, machine room side. Ensure that the fire rating of the vestibule construction matches that of the exit stair enclosure. The minimum width for vestibules shall not be less than 1.1 m and length 1.8 m.	Within 3 Months

		  		
F-08	Means of Egress	A single means of egress is provided on mezzanine floor of building-5 and travel distance exceeds the allowable travel distance (75 feet) permitted by RSC Technical Guideline (Standard)-6.6.2	The number of means of egress from any floor, story or portion thereof shall not be less than 2 except where a single exit is permitted by RSC Technical Guideline (Standard)-6.6.2. For Basement/Ground floor, maintain maximum 50 occupants having a travel distance of 23m (75 ft). Or Provide additional exit. For First Floor: Maintain maximum 30 occupants having a travel distance of 23m (75 ft) for occupancy F,G & H only. Or Provide additional exit.	Within 3 Months
		 		
F-09	Means of Egress	Building did not have evacuation map posted at required locations on all floors. **Location:** Building-4 & building-5.	Provide evacuation map at all required locations.	Within 1 Month

		 		
F-10	Means of Egress	Aisles marking were not provided on all the floors. **Location:** Building-4 & building-5.	The factory shall ensure minimum aisle widths of 36-inch and mark properly at all floors.	Within 1 Month
		 		
F-11	Means of Egress	Exit stairs serve more than 5 stories and do not have required reentry provisions on all floors. **Location:** Building-4.	Every door in a stair enclosure serving more than 5 stories shall be provided with re-entry unless it meets RSC standard 6.8.3.1.	Within 1 Month
F-12	Emergency Lighting	Required exit signs are not provided at all exits and directional signs are not provided where there is a change in direction and where the continuation of the egress path is not obvious. **Location:** Building-4 & Building-5.	Illuminated exit signs shall be provided at all required exits and directional signs shall be provided where there is a change in the direction for the path of travel and the direction to an exit is not obvious.	Within 1 Month

		 		
F-13	Emergency Lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes and at exit stairs on all floors. **Location:** Building-4 & Building-5.	Test the emergency lighting system on each floor and provide additional emergency fixtures to supply adequate illumination along the means of egress. Provide a minimum illumination of 10 lux at the floor level within exit stairs and along exit discharge paths and a minimum 2.5 lux along exit access aisles.	Within 1 Month
		 		
F-14	ITM Emergency Lighting	Inspection, testing and maintenance for the emergency lighting system was not in accordance with The RSC Technical Guidelines (Standard).	Inspect, test and maintain the emergency lighting system in the accordance with The RSC standard. Keep written records on-site.	Within 1 Month
F-15	ITM extinguisher	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.	Within 1 Month
F-16	Fire Suppression System (SUPS)-Standpipe System	The Utility building (building-5) has an occupied floor greater than 10 meter (33 feet) where required standpipe system found under installation. Standpipe installation requires detailed review to confirm compliance with NFPA 14, 20 and RSC Technical Guidelines (Standard).	Submit the standpipe system drawing to RSC for review. Once reviewed, install or modify the standpipe system throughout the building in accordance with RSC Technical Guideline (Standard) and NFPA 14, 20,22 and 24. After installation the owner shall contact the RSC for witness of conducting the final acceptance testing of the standpipe system.	Design-2 Months Modification if required-3 Months

		  		
F-17	Fire Suppression System (SUPS)-Standpipe System	The high-rise building has an occupied floor greater than 23 meters (75 feet) where required automatic sprinkler protection along with standpipe system installation found on-going. Sprinkler and Standpipe system installation requires detailed review to confirm compliance with NFPA 13, 14, 20 and RSC Technical Guidelines (Standard). **Location:** Building-4.	Submit the standpipe system drawing to RSC for review. Once reviewed, install or modify the standpipe system throughout the building in accordance with RSC Technical Guideline (Standard) and NFPA 13, 14, 20,22 and 24. After installation the owner shall contact the RSC for witness of conducting the final acceptance testing of the standpipe system.	Design-2 Months Modification if required-4 Months
		  		
F-18	ITM of Standpipe system	Inspection, testing and maintenance of the standpipe system is not found in accordance with NFPA 14 and 25.	Inspect, test and maintain the standpipe system and keep written records on-site, in accordance with NFPA 14 and 25.	Within 1 Month after installation
F-19	ITM of fire pump	Inspection, testing, and maintenance for the fire pump is not in accordance with NFPA 20 and 25 or as per RSC standard.	Inspect, test and maintain the fire pump, and keep written records on-site, in accordance with NFPA 20 and 25 or as per RSC standard.	Within 1 Month after installation

F-20	ITM of fire pump	Inspection, testing and maintenance of the sprinkler system is not found in accordance with NFPA 13 and 25.	Inspect, test and maintain the sprinkler system and keep written records on-site, in accordance with NFPA 13 and 25.	Within 1 Month after installation
F-21	Fire Alarm & Detection System (FADS)	The fire alarm system installation found on-going. Fire alarm system installation requires detailed review to confirm compliance with NFPA 72 and RSC standards. **Location:** Building-4 & Building-5.	Design & Installation of Fire Alarm system shall be in accordance with RSC standard and NFPA 72. Submit design, documents and calculations to RSC for review prior installation/modification. After installation/modification, the owner shall contact then RSC for witness of conducting the final acceptance testing of the fire detection & alarm system installation.	Design-2 Months. Installation-4 Months.
		  		
F-22	ITM of Fire Alarm and Detection System	Inspection, testing, and maintenance for the fire alarm system is not in accordance with NFPA 72.	Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72. (After Installation)	Within 1 Month after installation