

INITIAL FIRE SAFETY INSPECTION REPORT

Refat Garments Ltd (Extension 2)

RSC ID: 25492

144,147,148 Narashinghpur, Ashulia, Savar, Dhaka

Geographical Coordinates of factory building: 23.929766, 90.303905

Other Factories: Refat Garments Ltd. ID: 23459



Inspected By: Md. Rafat Arefin and Muntasir Ahmad Nasif

Date: 20-February-2024

Fire Safety Inspection Report

Refat Garments Ltd (Extension 2)

Introduction:

Refat Garments Ltd (Extension 2) Complex was surveyed for fire safety on **20-February-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): There are nine (08) structures in the premises under this ID-25492. They are :

1. Building - Dining & Printing Building (Single Storied RCC):
Construction: Jan 2012 to Jun 2012 & Occupied: Jul 2012
Approval Date: 04 Sep 2022
Approval Authority: Local Authority
Construction Period: Existing.
Total area of the Building: 26800 sft.
2. Building - Chemical Store Building (Single Storied RCC):
Construction: Dec 2018 to Feb 2019 & Occupied: Apr 2019
Approval Date: 04 Sep 2022
Approval Authority: Local Authority
Construction Period: Interim
Total area of the Building: 7447 sft.
3. Building - ETP Large Building (G+1 Storied RCC with Roof Shed):
Construction: Oct 2016 to Dec 2018 & Occupied: Oct 2018
Approval Date: 04 Sep 2022
Approval Authority: Local Authority
Construction Period: Interim
Total area of the Building: 25513 sft.
4. Building - ETP Substation Building (Single Storied RCC Building):
Construction: Dec 2017 to Feb 2018 & Occupied: Oct 2018
Approval Date: 04 Sep 2022
Approval Authority: Local Authority
Construction Period: New.
Total area of the Building: 1501 sft.

5. **Building - Guard Room (Single Storied RCC Building):**
Construction: Dec 2003 to Dec 2003 & Occupied: Jan 2004
Approval Date: 04 Sep 2022
Approval Authority: Local Authority
Construction Period: Existing.
Total area of the Building: 300 sft.
6. **Building - Utility & Storage Building (G+5 Storied RCC Building):**
Construction: Jan 2023 to Dec 2023 & Occupied: Dec 2023
Approval Date: 04 Sep 2022
Approval Authority: Local Authority
Construction Period: New.
Total area of the Building: 20410 sft. Per Floor: 3401 sft.
7. **Building - ETP Small (Old) (Single Storied RCC with steel roof):**
Construction: Dec 2003 to Jun 2004 & Occupied: Jul 2004
Approval Date: 04 Sep 2022
Approval Authority: Local Authority
Construction Period: Existing
Total area of the Building: 10005 sft.
8. **Building - Substation & Generator Building (G+1 Storied RCC)**
Construction: Oct 2022 to Mar 2023 & Occupied: Jun 2023.
Construction Period: New.
Approval Date: 04 Sep 2022
Approval Authority: Local Authority
Construction Period: New.
Total area of the Building: 3101 sft. Per Floor: 1550 sft.

Factory Address: 144,147,148 Narashinghpur, Ashulia, Savar, Dhaka



Points of contact:

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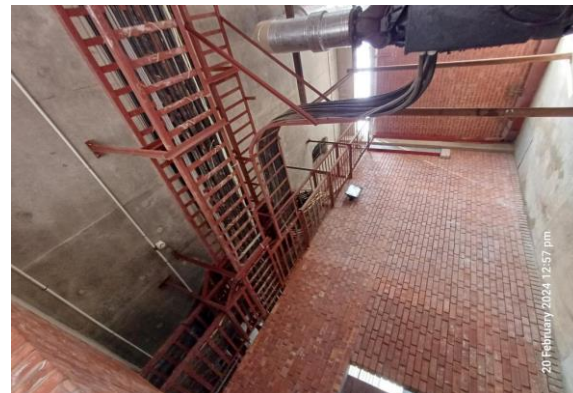
Table-1: Finding & recommendation



SI No.	Category	Findings	Required Action	Remediation Time Frame
F-1	Fire Rated Construction	<p>Rooms used for storage of combustibile materials are not separated from the exit stair enclosures. Storage discharges directly to the exit stair enclosures. Location: Utility and Storage Building: Ground, 1st floor to 5th floor Exit Stairs.</p>	<p>Openings from exit enclosure to storage and machine room spaces shall be provided with a vestibule 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 storage and machine room side. Ensure that the fire rating of the vestibule construction matches that of the exit stair enclosure. Seal all penetrations and unprotected openings to maintain the rated fire separation.</p>	Within 3 Months
<div style="display: flex; justify-content: space-around;">   </div>				

F-2	Fire-Rated Construction	<p>Elevator shafts are directly open into exit enclosure at ground floor which is a violation of RSC Technical Guidelines (Standard)-6.14.3. (Location: Utility and Storage Building: Ground, 1st floor to 5th floor Exit Stairs-1)</p>	<p>An exit stairway shall not be built around a lift shaft unless both of them are located in a smoke proof enclosure and made of a material with fire resistance rating required for the type of construction of smoke proof enclosure. (As per 6.14.3 of RSC Technical Guidelines (Standard) V1.0)</p> <p>Ensure the lift shaft is enclosed by a minimum 3-hour fire rated wall with minimum 2.0-hr fire rated door.</p> <p>Recommended to follow "SUPPLEMENTARY PAPER ON REMEDIATION GUIDANCE ELEVATOR OR LIFT SHAFT OPENING IN EXIT ENCLOSURES" for remediation.</p>	Within 3 Months
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F-3	Fire Rated Construction	<p>Floor to floor unsealed penetrations and unprotected openings are located throughout the floors at fire rated floor/ceiling assemblies due to electrical cable BBT riser.</p> <p>Location: Utility and Storage Building: Ground, Ground floor to 1st floor.</p>	<p>Seal all penetrations and openings in floor/ceiling (full thickness of the floor/ceiling) assemblies by fire rated materials to maintain the fire resistance rating. Provide a minimum 2-hr fire rated shaft to separate the utility risers from each floor if required.</p> <p>If fire stopping materials with proprietary design are used for seal, then it shall be classified for the purpose it is used for. Also the installation shall be as per the proprietary design it has been tested with.</p>	Within 3 Months
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F-4	Fire-Rated Construction	Unsealed penetrations and unprotected openings are located in exit stair enclosures. Location: Utility and Storage Building	Seal all penetrations and openings and provide a minimum 2-hr fire rated construction in exit stair enclosure walls to maintain the required fire separation. Penetrations into and through an exit enclosure shall be prohibited with the exception as per RSC 6.14.4. If fire stopping materials with proprietary design are used for seal, then it shall be classified for the purpose it is used for. Also the installation shall be as per the proprietary design it has been tested with.	Within 3 months
<div style="display: flex; justify-content: space-around;">   </div>				
F-5	Egress Lighting	No emergency lights were provided at Utility and Storage Building and Based on the number and location of emergency lights were observed in other buildings, adequate illumination levels are not anticipated along egress routes.	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 1 Month



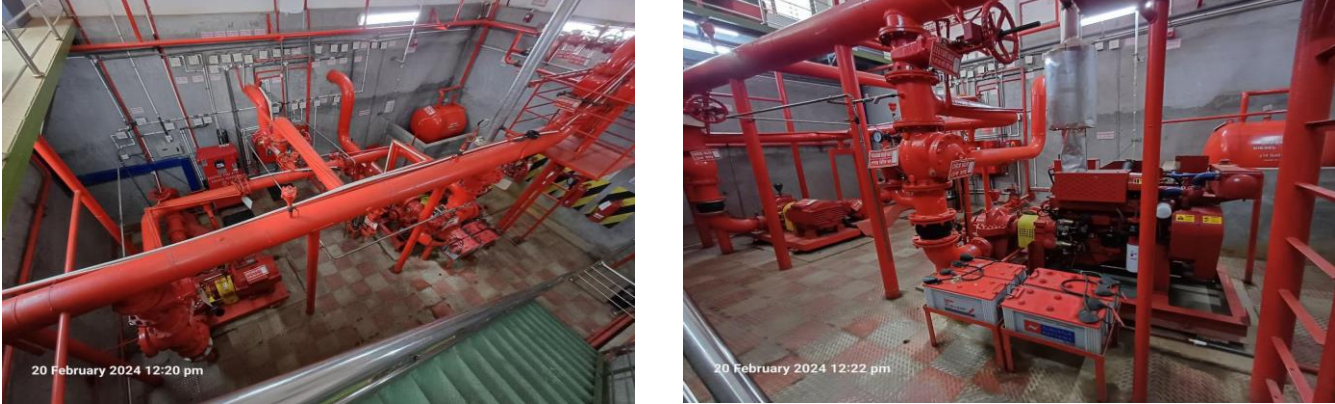
F-6	Egress Lighting	Illuminated Exit sign was not provided at exit on several locations. Location: Utility and Storage Building, all floor levels.	Illuminated exit signs shall be placed at entrance to an exit. Additional exit signs shall be placed throughout the facility anywhere the continuation of the egress is not obvious.	Within 1 month
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F-7	ITM of Emergency light and Exit Sign	Inspection, testing, and maintenance for the exit sign and emergency lighting system was not in accordance with The RSC Technical standard.	Inspect, test and maintain the exit sign and emergency lighting system in the accordance with The RSC Technical standard. Keep written records on-site.	Within 1 Month after installation
F-8	Fire Alarm & Detection System (FADS)	Automatic fire alarm & detection system installation requires detailed review to confirm compliance with NFPA 72 and RSC standards.	<p>Design & Installation of Fire Alarm & Detection system shall be in accordance with RSC standard and NFPA 72. Submit as-built design, documents and calculations to RSC for review prior installation/modification.</p> <p>After installation/modification, the owner shall contact the RSC for witness of conducting the final acceptance testing of the fire detection & alarm system installation.</p> <p>Also inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.</p>	Design Review within 2 months and installation within 4 months.



F-9	Fire Detection System (ITM of FADS)	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 Table-14.3.1 of NFPA 72.	Within 1 Month after installation.
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F-10	Fire Protection System(Fire Pump)	Fire pump installation requires detailed review to confirm compliance with NFPA 20 and RSC Technical Guideline (Standard).	Submit as-built drawings, testing records, equipment certification and other relevant documentation to the RSC for review and approval. Once reviewed, install or modify the Fire Pump system with RSC Technical Guideline (Standard) and NFPA 20,22 and 24. After installation the owner shall contact the RSC for witness of conducting the final acceptance testing of the Fire Pump system.	Within 3 Months
				
F-11	Inspection, testing, and maintenance of the Fire Pump (ITM).	Inspection, testing and maintenance of the fire pump system is not in accordance with NFPA 20.	Inspect, test and maintain the fire pump system and keep written records on-site, in accordance with NFPA 25.	Within 1 Month after installation.
F-12	Fire Protection System (Standpipe)	The Utility and Storage Building has an occupied floor greater than 10 meter (33 feet) and is not provided with standpipe protection. Fire water supply & standpipe system installation is required to confirm compliance with NFPA 14, 20, 22, 25 and RSC Technical Guidelines (Standard) V1.	Install a class III standpipe system & fire department connection in RSCance with NFPA 14 & Install fire pump dedicated for firefighting or fire protection following NFPA 20 requirements. A class I system shall be permitted in buildings protected throughout by an automatic sprinkler system.	Design within 4 months, Installation within 6 months

F-13	Fire Protection System(ITM of Standpipe)	Inspection, testing, and maintenance for the standpipe system is not in accordance with NFPA 25 or as per RSC standard.	Inspect, test and maintain the fire pump and standpipe system, and keep written records on-site, in accordance with NFPA 14 and 25 or as per RSC standard.	Within 1 Month after installation.
F-14	Fire Protection System(Fire Extinguisher)	The Building is not provided with any portable Fire Extinguisher.	Provide portable Fire Extinguisher throughout the Building as per NFPA 10 and The RSC Technical Guidelines (Standard).	Within 3 Months
F-15	Inspection, testing, and maintenance (ITM) of Fire Extinguishers	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 The RSC Technical Guidelines (Standard).	Within 1 Month after installation.
F-16	Means of Egress	Building did not have occupant load signs/Stair designation signs posted at required locations. Location: Utility and Storage Building, Exit Stair-01 & 02.	Post the occupant load signs/Stair designation signs for every assembly and production floor in a facility in a conspicuous space near the main exit or exit access doorway for the space and exit stair enclosures.	Within 1 month





F-17	Means of Egress	Building did not have Emergency evacuation map posted at required locations. Location: Utility and Storage Building, all floor levels.	Emergency evacuation maps shall be posted at the entrance to each exit stair.	Within 1 month
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F-18	Means of Egress	Illuminated directional exit sign was not provided or inadequate at required locations. Location: Utility & Storage Building and Dining & Printing Building.	<p>Lighted exit signs shall be placed at entrance to an exit. Additional exit signs shall be placed throughout the facility anywhere the continuation of the egress is not obvious. All required exit signs shall be illuminated continuously at all times. 10.12.1.2 Exit signs may be illuminated either by lamps external to the sign or by lamps contained within the sign. The source of illumination shall provide not less than 50 lux at the illuminated surface with a contrast of not less than 0.5. Approved self-luminous signs which provide evenly illuminated letters having a minimum luminance of 0.2cd/m² may also be used. Lighting for exit signs shall either be provided with emergency power or battery backup.</p>	Within 1 Month
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F-19	Means of Egress	Aisles is not provided where necessary. Location: All floor levels of Utility & Storage Building and Ground floor of Dining & Printing Building.	Aisles shall be provided with a minimum unobstructed clear- width of 0.9 m (36 in.).	Within 1 Month
<div style="display: flex; justify-content: space-around;">   </div>				
F-20	Means of Egress	The common path of egress travel exceed 23 m (75ft) Location: Dining & Printing Building (washroom area/dining).	Modify the egress arrangement and/or Provide additional exits so that common path of travel shall not exceeds 23m	Within 3 Months



F-21	Means of Egress	Handrails are not provided on both sides of both exit stairs and landings. Location: Dining & Printing Building.	Provide handrails on both sides of the exit stair. New handrails shall have a minimum height of 865 mm (34 in.) and a maximum height of 965 mm (38 in.) as measured from the leading edge of the tread. Rail guards shall be such patterned so that a sphere 200mm (8 in.) in diameter cannot pass through any opening up to a height of 865mm (34in.).	Within 1 month
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F-22	Fire Rated Construction	Dining area (E3-540 capacity) is not separated from production occupancies (Sewing section). Location: Ground floor, Dining & Printing Building.	Provide 3 Hr. fire separation of Assembly occupancy (E3) from Production (G2) occupancy to meet the requirement as per BNBC 2006, part III chapter 2 table 3.2.1. Seal all penetration and opening to maintain the separation.	Within 3 months
<div style="display: flex; justify-content: space-around;">   </div>				
F-23	Inspection, testing, and maintenance	No hot work permit was issued and found in the factory premises.	A hot-work permit system in accordance with NFPA 51B shall be provided for any construction in an occupied facility. (RSC Technical standard 9.1.7.)	Within 1 month
F-24	Means of Egress	Common path of travel exceeds 8m on chemical store. Location: Chemical Store Building	Modify the egress arrangement & common path of travel shall not exceeds 8m on chemical store.	Within 3 months



F-25	Means of Egress	<p>The maximum travel distance exceeds 25 m for occupancy type J (BNBC 2006) Location: Chemical Store Building</p>	<p>Exits shall be arranged in such a manner that the travel distance from any point in the area served shall not exceed 25 meter (82 ft.).</p>	<p>Within 3 months</p>
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