

INITIAL FIRE SAFETY INSPECTION REPORT

S.M. Knitwears Limited. (Extension)

RSC ID: 24545

Shirirchala, Bhabanipur, Gazipur

Geographical Coordinates: 24.176250, 90.424780

Other Factories: S M Knitwears Limited. [11557]



Inspected By: Mohammad Anayet Hossain and Md. Najmul Huda

Date: 21-Jan-2024

Fire Safety Inspection Report

S.M. Knitwears Limited. (Extension)

Introduction:

S.M. Knitwears Limited. (Extension) complex was surveyed for fire safety on **21-Jan-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):

Number of Building	Name of Building	Building Description
B#1	Building No.: 4; (6 Storied RCC Building)	Type of construction: RCC Year of construction: 16-Mar-2016 to 15-Jun-2017 Construction period: Interim Building Building approval from: LGED Building approval date: 31-Dec-2020
B#2	Building No.: 5; (6 Storied RCC Building)	Type of construction: RCC Year of construction: 26-Oct-2020 to 31-Oct-2022 Construction period: Interim Building Building approval from: LGED Building approval date: 31-Dec-2020
B#3	Building No.: 6; (2 Storied Steel Fabricated Building with Mezzanine floor)	Type of construction: Steel Year of construction: 01-Oct-2019 to 01-Mar-2020 Construction period: Interim Building Building approval from: LGED Building approval date: 31-Dec-2020

B#4	Building-8 (Pump Room)	Type of construction: RCC Year of construction: Aug 2007 to Feb 2008 Construction period: Existing Building
B#5	Building-9 (Utility Office)	Type of construction: RCC Year of construction: Feb 2002 to May 2002 Construction period: Existing Building
B#6	Shed-1 (Security Office)	Type of construction: Shed Year of construction: Jan 2022 to Mar 2022 Construction period: New Building
B#7	Shed-6 (Fire Pump Room)	Type of construction: Shed Year of construction: Apr 2018 to Aug 2018 Construction period: Interim Building
B#8	Shed-7 (Workshop)	Type of construction: Steel Year of construction: Mar 2018 to Sep 2018 Construction period: Interim Building
B#9	Shed-13 (Diesel Generator)	Type of construction: Shed Year of construction: Jan 2014 to Mar 2014 Construction period: Interim Building
B#10	Shed-14 (RMS Room)	Type of construction: Shed Year of construction: Feb 2002 to Apr 2002 Construction period: Existing Building

Factory Address: Shirirchala, Bhabanipur, Gazipur

Findings & Recommendations :

Table 1 summarize the fire safety non-compliant issues identified during the inspection. Recommendations have been provided to address each issue with specific remediation timeline. 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:

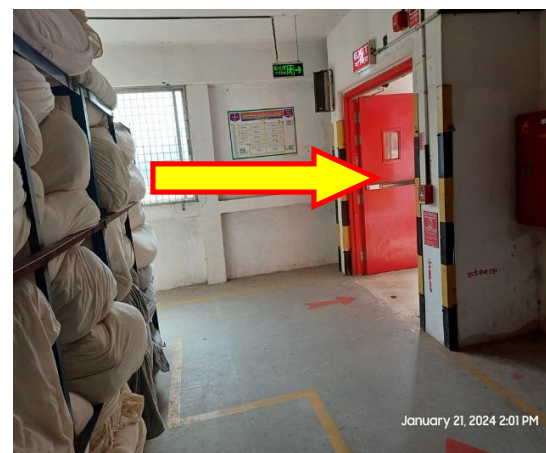
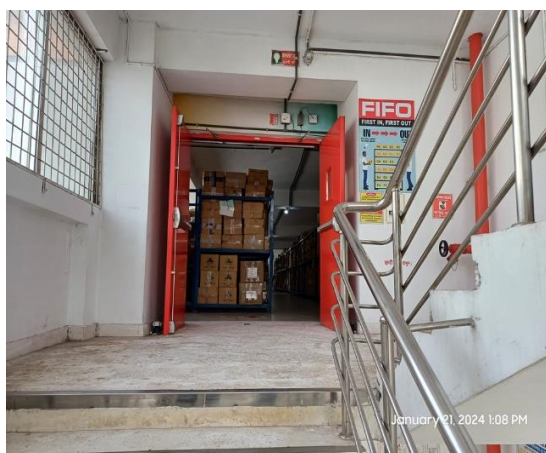
Sl No.	Category	Findings	Required Action	Remediation Time Frame
F-01	Fire Rated Construction	The exit stairs are not separated from work areas, other spaces on each floor by fire-rated construction. Location: Building No.: 4 Building No.: 5	Provide minimum 2-hr fire rated construction for buildings 4 storied or more and 1-hr for up to 3 storied. Seal all unprotected openings to separate the exit stairs from work areas and other spaces on all floor levels by 90 minutes for 2 hr. construction and 60 minutes for 1-hr construction. Ensure that the fire rated doors are self-closing and positive latching and that they are provided with fire exit (panic) hardware where serving production floors. If fire rated doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system.	Within 3 months



F-02	Fire Rated Construction	Unsealed penetrations and openings are located on the fire-rated floor/ceiling assemblies. Located: Toilet plumbing PVC pipe, and Electrical BBT riser of Building No.: 4 & Building No.: 5	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 3-hr fire rated shaft to separate the utility risers from each floor if required.	Within 3 months
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F-03	Fire Rated Construction	Storage room discharges directly into exit stair enclosure. Located: Building No.: 4 Building No.: 5	Openings from exit enclosure to storage room, 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 store side. Ensure that the fire rating of the vestibule construction matches that of the exit stair enclosure.	Within 3 months
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F-04	Fire Rated Construction	Elevator shafts are directly open into the inside of exit enclosure. Located: Building No.: 4, Stair-01 Building No.: 5, Stair-01 & , Stair-02	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. Modify the elevator shaft as per The RSC Technical Guideline (Standard) V1-6.14.3.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.	Within 3 months
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F-05	Fire Rated Construction	Areas used for in-process storage of combustible materials are open to the surrounding occupancy. Combustible materials has kept under cutting table which is non compliant. Location: Building No.: 4 Building No.: 5	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.	Within 3 months
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F-06	Fire Rated Construction	Chemical storage area is not separated by fire-rated construction having non rated door and unsealed penetrations and openings in exit stair. Location: Ground floor of Building No.: 5	Separate the Chemical Storage area by a minimum 4-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations. Follow 2.13 of BNBC-2006. For the case of 4-hr fire separation no opening is permitted.	Within 3 months
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F-07	Fire Rated Construction	Goods storage area located in ground floor level is not properly fire separated from 1st floor due to the unsealed openings/penetrations. Location: Ground floor west side of Building: 4	Seal all penetrations and openings by a minimum 2-hr fire rated construction in floor/ceiling assemblies to maintain the fire separation.	Within 3 months
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F-08	Means of Egress	Aisles marking has not been provided on the floor properly. Location: Ground floor of Building No.: 5	Aisles shall be provided with a minimum unobstructed clear-width of 0.9 m (36 in.).	Within 3 months
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F-09	Means of Egress	Sliding-type doors have been provided at the building exits, along the exit discharge path at several locations.	Replace all collapsible gates/ sliding doors/ rolling shutter doors along the means of egress with side-hinged, swinging egress doors. If locks are required for security reasons, utilize specialized door locking features complying with NFPA101.	Within 1 month
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F-10	Means of Egress	Exit stair door/egress door serving 50 or more occupants does not swing in the direction of egress travel. Location: Building No.: 4 (from dining area)	Modify the egress door to swing in the direction of egress travel. (RSC Technical Guidelines Standard 6.8.1)	Within 3 months
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F-11	Means of Egress	Width of exit stair is less than 1.5 m (60 in.). Location: Stair-03 of Building No.: 5	Provide minimum clear and unobstructed exit stair widths of 1.5 m(60 in.) in accordance with RSC Technical Guidelines Standard 6.5.6.2.1	Within 3 months
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F-12	Means of Egress	Inadequate guards/rails are provided at open environment areas which is a falling hazard. Location: Stair-01, Stair-02, Stair-03 of Building No.: 5	Guards shall provide as per RSC Technical Guidelines (Standard V1.0.) Section 6.12.2. Minimum guard height shall be 42 in & 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	Building did not have stair designation signs, floor designation sign and occupant load signs at the required locations.	Provide stair designation signs, floor designation signs and occupant load signs at the required locations.	Within 1 month

F-14	Means of Egress	Fire evacuation maps is not posted inside the stair enclosure.	Provide updated fire evacuation maps at the entrance to each exit stair as per actual site condition.	Within 1 month
F-15	Means of egress	Exit stairs serve more than 5 stories and do not have required re-entry provisions. Location: Building No.: 4 Building No.: 5	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-16	Egress 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 No.: 4 Building No.: 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-17	Egress Lighting	Exit sign and Directional Sign are not provided at and towards exit at several floors.	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. Lighted exit signs shall be provided with either battery backup or uninterruptable power supply systems and shall be continuously illuminated.	Within 1 month

F-18	Fire Alarm & Detection system	Automatic fire alarm and detection system installation has been found complete which requires detailed review to confirm compliance with NFPA 72 and The RSC Technical Guidelines (Standard). Locations: All Buildings.	Submit the fire alarm system design to RSC for review. Once the design is reviewed, install and modify the fire detection and alarm system throughout the buildings in accordance with review comment, Accord/ RSC Technical Guidelines (Standard) and NFPA 72. After installation the owner shall conduct internal testing and commissioning and then contact the RSC for witness of final acceptance testing. Also inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with Table-14.3.1 of NFPA 72.	Design Review within 2 months and installation/modification within 4 months
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F-19	Fire Alarm & Detection system (ITM of FADS)	Inspection, testing and maintenance for the fire alarm system is not in accordance with NFPA 72 and The RSC Technical Guidelines (Standard).	Inspect, test and maintain the fire alarm system and keep written records on-site, in accordance with NFPA 72 and The RSC Technical Guidelines (Standard) and keep written records on-site	Within 1 month (after installation)
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F-20	Fire Protection System (Standpipe)	The height of the highest occupied floor is more than 33 ft and the factory has installed a class III standpipe system which is required to be reviewed and verified. Location: Building No.: 4 Building No.: 5	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 done as per the reviewed design and NFPA- 14. 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-21	Fire Protection System(ITM of fire pump)	Inspection, testing, and maintenance for the fire pump is not in accordance with NFPA 20, 25 and RSC Technical Guideline (Standard).	Inspect, test and maintain the fire pump in accordance with NFPA 20, 25 and RSC Technical Guideline (Standard) and keep written records on-site.	Within 1 month (after installation)

F-22	Fire Protection System(ITM of Standpipe)	Inspection, testing, and maintenance for the Standpipe system is not in accordance with NFPA 14, 25 and RSC Technical Guideline (Standard).	Inspect, test and maintain the standpipe system in accordance with NFPA 14, 25 and RSC Technical Guideline (Standard) and keep written records on-site.	Within 1 month (after installation)
F-23	ITM of Egress Lighting	Inspection, testing, and maintenance for the emergency lighting system were not in accordance with The RSC Technical Guidelines (Standard).	Inspect, test and maintain the emergency lighting system in the accordance with The RSC Technical Guidelines (Standard) and keep written records on-site.	Within 3 months
F-24	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 3 months