

INITIAL FIRE SAFETY INSPECTION REPORT

AKH KNITTING & DYEING LTD. (Extension)

RSC ID: 24750

92 PHULBARIA, TETULJHORA, SAVAR, DHAKA

Geographical Coordinates of factory building: 23.810097029, 90.2496412402

Other Factories: AKH KNITTING & DYEING LTD.-ID: 9210



Inspected By: Shahina Imam and Muntasir Ahmad Nasif

Date: 01 November-2023

Fire Safety Inspection Report

AKH KNITTING & DYEING LTD. (Extension)

Introduction:

AKH KNITTING & DYEING LTD. (Extension) Complex was surveyed for fire safety on **01/11/2023** 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 (09) structures in the premises under this ID-24750. They are :

1. Store & Dinning Building (Steel Structure) Building-10 (G+ 4 Storied):
Construction: 21 July 2018 to Jun 2019 & Occupied: July 2019,
Construction Period: Interim.
Total area of the Building-10: 46940 sft. Per Floor 9450.704 sft
2. Utility Building -2 (RCC Structure) Building-12 (G+1 Storied):
Construction: 25 December 2014 to August 2015 & Occupied: January 2016
Construction Period: Interim.
Total area of the Building-12: 5420 sft.
3. Waste Heat Boiler (EGB) & Compressor (RCC Structure) Building-18 (G+1)
Construction: February, 2018 to April, 2018 & Occupied: May 2018
Construction Period: Interim.
4. Fair Price Shop - Shed BLD (RCC Structure) B-14 (Single Storied):
5. ETP (Building-16)
6. Kitchen (Building-17)
7. Wastage Store (Building-19)
8. Workshop (Building-23)
9. Gate House 04 (Building-24)

Factory Address: 92 PHULBARIA, TETULJHORA, SAVAR, DHAKA

Points of contact:

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Table-1: Finding & recommendation

Sl No.	Category	Findings	Required Action	Remediation Time Frame
F-1	Fire Rated Construction	The Building-10 is interim construction where structural members are constructed by steel and found insulating of 3 hrs fire rated cementitious spray paint.	Construction must be of type 1 or type 2 (See BNBC 2006 Part 3 Section 3.2.4, page 10356) For type 2 construction, the maximum permissible height of the building shall be 5 stores or 20 meters. (See BNBC 2006 Part 3, Table 3.1.9, page 10319). Provide/ensure required fire rating on the structural elements by following Section 4.4 and Table 4.4.1 of the RSC Technical Guidelines (Standard) or Table 3.3.1 and Table 4.1.1 from BNBC. Consult a qualified fire protection engineer to design the rated construction barriers.	Within 6 months



F-2	Fire Rated Construction	The exit stairs are not separated from storage area and other spaces on each floor by fire rated construction due to doors were found non functional, unprotected opening, penetration. Location: B-10, B-12, B-18	The exit stair enclosure shall be provided with a minimum 1-hr fire resistance rating with 1-hr. fire rated door and seal all penetrations and openings by 1 hr. fire rated materials for buildings with 3(three) or fewer stories and a minimum of 2-hr. fire resistance rating exit stair enclosure for buildings 4(four) or more stories. 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
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F-3	Fire-Rated Construction	Elevator shafts are directly open into exit enclosure which is a violation of RSC Technical Guidelines (Standard)-6.14.3.	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) Ensure the lift shaft is enclosed by a minimum 3-hour fire rated wall with minimum 2.0-hr fire rated door. Recommended to follow "SUPPLEMENTARY PAPER ON REMEDIATION GUIDANCE ELEVATOR OR LIFT SHAFT OPENING IN EXIT ENCLOSURES" for remediation.	Within 3 Months
 				

F-4	Fire Rated Construction	Store room discharged directly into the exit stair enclosures.	Openings from exit enclosure to storage shall be provided with a vestibule with fire rated construction and openings. Provide a 2 hr. fire rated door on the exit stair side and a 1- hr. fire rated door on the storage side. Ensure that the fire rating of the vestibule construction matches that of the exit stair enclosure.	Within 3 Months
 				
F-5	Fire Rated Construction	The dining Hall (E4-3rd floor and 4th floor) and Chemical store (J2-2nd floor) were found on Building-10, where as per BNBC 2006, Table 3.2.1. is not permitted.	Remove or relocate the Dining or Chemical store from the Building.	Within 3 Months



F-6	Fire Rated Construction	Unsealed penetrations and openings are located at 3rd floor of Building-10, Building-12 in the fire rated floor/ceiling assemblies due to passing BBT cables.	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.	Within 3 Months
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F-7	Fire-Rated Construction	Electrical Panel box was located in the stair of Building-12.	Remove all electrical panel box from exit stairs.	Within 3 months
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F-8	Fire Rated Construction	The Compressor room is not separated by fire rated construction (Openings, Non-rated wall from other occupancy.	Separate the compressor room by a minimum 1-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.	Within 3 Months
 				
F-9	Fire Rated Construction	Hazardous materials / flammable liquid storage area is not separated by fire-rated construction (openings, non-rated doors, penetrations). Location: Beside the ETP Building-16.	Hazardous materials / flammable liquid storage shall be in compliance and separated in accordance with BNBC 2006 Part 3 Section 2.13. Seal and/or protected all openings to maintain the required fire separations.	Within 3 months



F-10	Mean of Egress	Handrails are not provided on both sides at the stair of Utility 02 Building-12.	Provide handrails on both sides of the exit stair and ramp. Existing handrails shall have a minimum height of 30 inch and a maximum height of 44 inch. as measured from the leading edge of the tread.	Within 3 months
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F-11	Mean of Egress	Headroom in the exit of the stair at 1st floor of Utility 02, Building-12 measured less than 6 ft 8 inch.	Ensure minimum headroom 6ft 8 inch or re-route the egress way to avoid the critical path.	Within 1 month.
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F-12	Mean of Egress	The occupiable roof at Building-12 & Building-18 not provided with an adequate guard rail.	All occupiable roofs shall be provided with parapets or guards with a minimum height of 1067 mm (42 in.)	Within 2 months
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F-13	Mean of Egress	Aisles mark is not provided at 2nd Floor of Building-10	Aisles shall be provided with a minimum unobstructed clear-width of 0.9 m (36 in.).	Within 1 month
				

F-14	Egress Lighting	Based on the number and location of emergency lights observed, 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-15	Egress Lighting	Directional signs are not provided where direction of the path of travel to an exit has changed.	Illuminated 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 3 months

F-16	Egress Lighting	Illuminated Exit sign was not provided of exit at ETP Building-16.	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.	Within 1 Month
				
F-17	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-18	Fire Alarm & Detection System (FADS)	Automatic fire alarm & detection system installation requires detailed review to confirm compliance with NFPA 72 and RSC standards.	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. After installation/modification, the owner shall contact the RSC for witness of conducting the final acceptance testing of the fire detection & alarm system installation. Also inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.	Design Review within 2 months and installation within 4 months.
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F-19	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-20	Fire Protection System(Standpipe)	Standpipe system installation requires detailed review to confirm compliance with NFPA 14 and RSC standards.	Submit as-built drawings, testing records, equipment certification and other relevant documentation to the RSC for review and approval.	Within 6 Months
 				
F-21	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-22	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-23	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
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