

INITIAL FIRE SAFETY INSPECTION REPORT

Metro Knitting & Dyeing Mills Ltd (Factory-02) (Extension 2)

RSC ID: 25505

Address: Charabag, Ashulia, Savar

Geographical Coordinates: 23.8851840150, 90.3101394483

Other Factories:

1. Metro Knitting & Dyeing Mills Ltd (Factory-02) (ID: 9510)
2. Metro Knitting & Dyeing Mills Ltd (Factory-02) New Building (ID: 24231)



Inspected By: A N Faisal Ahmed

Date: 29 February, 2024

Fire Safety Inspection Report

Metro Knitting & Dyeing Mills Ltd (Factory-02) (Extension 2)

Introduction:

Metro Knitting & Dyeing Mills Ltd (Factory-02) (Extension 2) Complex was surveyed for fire safety on **29 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):

1. Building-05 (Extension Building) ; 9 storied RCC building ; 4934 sqm.
Construction: Dec'2016 to January'2018 ; Occupying date: March'18 ; **Interim Building**
2. Utility Building ; 3 storied RCC building ; 492 sqm.
Construction: Dec'2016 to January'2018 ; Occupying date: March'18 ; **Interim Building**

Factory Address: Charabag, Ashulia, Savar

Note: There are two (02) exits serve the building from each floor and stair discharge to exterior of the building. Portion of the floor is identified as "Extension Building", which is vertical & horizontal extension of old building and connected with Building covered on RSC ID : 9510 on each floor except Ground & 1st floor. As per architectural layout, its a single fire compartment. Total 6 stair supports the entire building for emergency evacuation. Stair no-05 & 06 supports "Extension Building" portion.

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 approval.

Table-1: Finding & recommendation

SI No.	Category	Findings	Required Action	Remediation Time Frame
F-1	Fire Rated Construction	The exit stairs are not separated from lift machine room by fire rated construction. Electrical cable raceway is located on stair enclosure. Door accessories were found non-functional/broken/missing. Sign of field modification of fire door was observed without approval from listing authority.	Provide minimum 2-hr rated fire wall 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. Fire door shall install as per manufacturer guidelines. Clearance under the bottom of a door shall be a maximum of 3/4in. (19 mm). Product datasheet, certificate shall keep available at site for fire door, frame & accessories. Fire door shall inspect, test & maintain as per NFPA 80. Penetration is prohibited in stair enclosure except clause 6.14.4 (RSC Technical Guidelines)	Within 3 Months

				
F-2	Fire-Rated Construction	Building expansion joint has been observed without protection to prevent smoke or fire propagation from one floor to another floor.	Expansion and contraction joints provided to accommodate expansion, contraction, wind or seismic movement shall be protected with an approved material having the same degree of fire resistance as that of the floor/ceiling in which it is installed.	Within 3 Months
				

F-3	Fire Rated Construction	Unsealed penetrations and openings are located in the fire-rated floor/ceiling assemblies. Penetration Area: Cable Penetration & Snaitary Pipe	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 and certified design by listing authority. or, Provide a minimum 2-hr fire rated shaft to separate the utility risers from each floor if required.	Within 3 Months
				
F-4	Fire Rated Construction	Unprotected penetrations/opening are located in the fire-rated floor/ceiling assemblies adjacent to glass curtain wall due to non rated aluminum frame.	Seal/protect 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 & certified design by listing authority.	Within 3 Months

				
F-5	Fire rated Construction	Unprotected openings in the exterior wall due to non-rated glass curtain wall in two consecutive floors lying within 1.5 m and vertical spread of fire is not restricted. Location: Glass curtain wall (Facade)	Openings in the exterior wall in two consecutive floors lying within 1.5 m laterally shall be separated with a flame barrier as similar as sunshades or cornices or projected wall at least 75 cm from the external face of the exterior wall. The flame barrier shall have a fire resistance rating of not less than three-fourths hour. For Interim Building, BNBC 2006 Part III chapter 3 clause 3.1.7.2 and for new building, BNBC 2020 Part III chapter 3 clause 3.1.9.2	Within 3 months
 				

F-6	Fire Rated Construction	Rooms used for combustible storage are not separated by fire rated construction from other occupancy on ground, 1st & 6th floor.	Separate the dedicated storage rooms by minimum 1-hr fire-rated construction. Provide 0.75 hr. fire rated door and seal all penetrations and openings by 0.75 hr. (45 Minutes) fire rated fire rated barrier construction.	Within 3 months
  				
F-7	Fire rated Construction	The exit discharge path of stair-06 of extension building & stair of Utility Building is not separated from oil storage room.	Separate the oil storage room from egress path by 2-hr fire rated construction or remove the oil storage room.	Within 3 months



F-8	Fire Rated Construction	Elevator shafts are directly open into exit enclosure which is a violation of RSC Technical Guidelines (Standard)-6.14.3. Location: stair-05	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 2-hour fire rated wall with minimum 1.5-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
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F-9	Fire Rated Construction	Store room & Sub-station discharged directly into the exit stair enclosures without vestibules. Location: Ground , 1st , 6th floor. (Store), Ground floor (Sub-station)	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
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F-10	Fire Rated Construction	The boiler room is not separated by fire rated construction from combustible material storage. Location: 1st floor (Utility Building)	Separate the combustible material storage from boiler room by 1-hr fire rated construction.	Within 3 Months
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F-11	Means of Egress	Posted occupant load sign & evacuation map were not updated.	Update occupant load sign & evacuation plans at required locations. Fire evacuation maps shall be posted at the entrance to each exit stair.	Within 1 month
F-12	Means of Egress	Distance between intermediate rails on provided handrail at stair is more than 8 in. Location: Utility Building	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. Intermediate rails or pattern shall be in a such way, 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 month



F-13	Means of Egress	Parapets height was found less than 42 in. Location: Utility Building.	All occupiable roofs shall be provided with parapets or guards with a minimum height of 1067 mm (42 in.).	Within 3 month
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