

INITIAL FIRE SAFETY INSPECTION REPORT

Metro Knitting & Dyeing Mills Ltd. (Factory-02) New Building

Factory ID: 24231

Address: Charabag, Ashulia, Savar, Dhaka- 1341

Google Coordinate: 23.885049, 90.390004

Other Factories: None



Inspected By: Nirmal Chandra Sinha and Nainin Nowrose

Date: 04 October 2021

Introduction:

Metro Knitting & Dyeing Mills Ltd. (Factory-02) New Building complex was surveyed for fire safety on **04/10/2021** 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.

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 Findings & Recommendations:

Sl No.	Category	Findings	Required Action	Remediation Time Frame
1	Fire Rated Construction	The exit stairs are not separated from work areas and other spaces on each floor by fire-rated construction. During inspection it was observed that the factory has installed fire doors at exit.	Submit installed fire rated door documents to the RSC for review. Provide minimum 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. Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separation as per Accord standard 6.3.1.3. 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. Once fire doors are installed, every door in a stair enclosure serving more than 5 stories shall be provided with re-entry unless it meets ACCORD standard 6.8.3.1.	Within 3 months



2	Fire Rated Construction	Storage rooms (Basement, Ground floor and 8th floor) used for combustible storage are not separated by fire rated construction from exit stair enclosure and production area on several floors.	Rooms used for storage of combustible materials shall be separated from the surrounding occupancy with a minimum 1 hour construction. Store rooms directly discharge in exit stair enclosure shall be separated in accordance with the Accord standard 6.14.3.	Within 3 months
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3	Fire Rated Construction	Areas used for combustible storage open to the factory are not separated by fire rated construction on several floors. Cutting input areas and Fabric for relaxation areas are not separated from the sample section on 7th floor.	Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction. Where separate storage rooms are not feasible, provide defined storage areas and limit the storage arrangement as follows: 1. General Condition: Maximum height of 2.4m and maximum area of 23m² (250 sq.ft). 2. If sprinkler protected: maximum height of 3.66m and maximum area of 93m² (1000 sq.ft). Separate areas of unenclosed combustible storage by a minimum clear distance of 3m (10 ft).	With 3 months
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4	Fire Rated Construction	Unsealed penetrations and openings are located in connecting bridge throughout the building which is directly connected to the building-1 exit stair-4 enclosure.	Seal all penetrations and openings in connecting bridge and exit stair enclosure walls to maintain the fire separation as per the standard. The rating of the exterior wall shall extend 3.05 m (10ft) beyond the ends of the stair structure.	Within 3 months
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5	Fire Rated Construction	Unsealed electrical cable and electrical (BBT) shafts are located in the fire-rated floor/ceiling assemblies on basement and others floor respectively.	Provide a minimum 2-hr fire rated shaft to separate the utility risers from each floor level and seal all penetrations in floor/ceiling assemblies to maintain the fire separation.	Within 3 months

						
6	Fire Rated Construction	Store rooms are not separated from car parking area and sewage treatment plant (STP) on basement.	Separate the store rooms by a minimum 2-hr fire-rated construction from parking areas and STP. Seal and/or protect all openings to maintain the required fire separations.	Within 3 months		

				
7	Egress	Electrical cable and water pipe passing through south-west exit stair enclosure on basement.	South-East exit stair enclosure on basement shall be separated from electrical cable and water pipe as per Accord standard 6.14.4.	Within 3 months

									
8	Egress	Elevator/Lift shafts provided in North-East (Stair-1), North-West (Stair-3), South-East (Stair-2) exit stair enclosure.	Modify the elevator and stair enclosure arrangement in a way to satisfy Accord standard 6.14.3. Elevator shall not open into an exit enclosure.	Within 4 months					

				
9	Egress	North-East (Stair-1), South-East (Stair-2) and South-West (Stair-4) exit stairs discharge on ground floor of the building and not separated from the building interior of the building.	Modify stair to discharge directly outside or Provide 2- hr fire-rated exit passageway leading directly outside (vestibules to separate any storage areas).	Within 6 months



10	Egress	Exit capacity (1476) is not adequate for the occupant load (1000) on the 1st floor in dining area.	Reduce occupant load / sitting arrangement to not more than available exit capacity (1000) on the 1st floor in training and dining area.	Within 7 days
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11	Fire Detection & Alarm System	An addressable Advanced (MxPro) brand fire alarm system has installed in the factory building premises. Fire detection system installation requires to detailed review to confirm compliance with NFPA 72 and Accord standard for all buildings in the factory premises.	Submit as-built drawings, testing records, equipment certification and other relevant documentation to the RSC for review and approval.	Design submission (Within 2 months), Modification within 4 months (if required)



12	Inspection, Testing, and Maintenance of the Fire Detection & Alarm System	Inspection, testing, and maintenance for the fire alarm system is not in accordance with NFPA 72 or as per Accord standard.	Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.	Within 1 months (after complete installation of listed fire alarm system)
13	Fire Protection	The high-rise building has an occupied floor greater than 23m (75 ft.). Automatic sprinkler system has installed in the factory building premises. Automatic sprinkler system installation requires to detailed review to confirm compliance with NFPA 13 and Accord standard for the buildings in the factory premises.	Provide automatic sprinkler protection installation throughout the building in accordance with NFPA 13. Submit as-built drawings, testing records, equipment certification and other relevant documentation to the RSC for review and approval.	Design submission (Within 2 months), Modification within 6 months (if required)

14	Inspection, testing, and maintenance of the standpipe system	Inspection, testing, and maintenance of the pump is not in accordance with NFPA 20 or as per Accord standard.	Inspect, test and maintain the pump, and keep written records on-site, in accordance with NFPA 25 or as per Accord standard.	Within 1 months (after complete installation of listed fire pump set)
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 1 month
 				

16	Emergency 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 3 months
				
17	Inspection, testing, and maintenance of Fire 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 3 months

18	Inspection, testing, and maintenance of Emergency light and Exit Sign	Inspection, testing and maintenance for the emergency lighting system was not in accordance with The ACCORD standard.	Inspect, test and maintain the emergency lighting system in the accordance with the standard. Keep written records on-site.	Within 3 months
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