

INITIAL FIRE SAFETY INSPECTION REPORT

Masco Printing and Embroidery Ltd.

RSC ID: 24424

318/A, Kha Para road, Sataish , Tongi, Gazipur

23.914489, 90.375208

Other Factories: None



Inspected By: Md. Ferdaus Jaman and Md. Sadid Rahman

Date: 30-May-2022

Fire Safety Inspection Report

Masco Printing and Embroidery Ltd.

Introduction:

Masco Printing and Embroidery Ltd. complex was surveyed for fire safety on 30/May/2022 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 total 04 structures under this ID [Masco Printing and Embroidery Ltd.]

1. Building 1- Production & ETP Building
2. Building 2- Utility Building
3. Building 3- RMU Building
4. Building 4- Security Building

Factory Address: 318/A, Kha Para road, Sataish , Tongi, Gazipur

Findings & Recommendations :

The below table-1 summarizes the major fire safety issues identified during the inspection of all building. 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.

SI No.	Category	Findings	Required Action	Remediation Time Frame
F-01	Fire Rated Construction	Building-01: The exit stairs are not separated from [work areas, other spaces] on each floor by fire-rated construction.	Provide minimum 2-hr fire rated construction for buildings 4 storied or more and 1-hr for upto 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 and provide vestibules to avoid direct discharge from storage to exit stair enclosure. If fire rated 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 RSC Technical Guidelines (Standard) 6.8.3.1 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

SI No.	Category	Findings	Required Action	Remediation Time Frame
		   		

SI No.	Category	Findings	Required Action	Remediation Time Frame
F-02	Fire Rated Construction	Elevator open directly inside of exit enclosure which is a violation of RSC Technical Guidelines - 6.14.3. Location: Stair-1, and stair-3 of Building-1.	In new construction, elevators shall not open into an exit enclosure [RSC Technical Guidelines - 6.14.3]. So, 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 4 months
				

SI No.	Category	Findings	Required Action	Remediation Time Frame
F-03	Fire Rated Construction	Unsealed penetrations and openings (non-rated exterior walls within 3050 mm (10 ft) horizontally and an angle of less than 180 degrees of stair-5) are located in the exit stair enclosures. Location: Most of the stairs of building-1.	Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separations.	Within 3 months



SI No.	Category	Findings	Required Action	Remediation Time Frame
F-04	Fire Rated Construction	Areas used for in-process storage of combustible materials are open to the surrounding occupancy. Location: On 2nd and 3rd floor of production building (B-1)	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
				

SI No.	Category	Findings	Required Action	Remediation Time Frame
F-05	Fire Rated Construction	Dining and prayer halls (E-3, capacity more than 300) were located on 4th floor with Chemical (J2) and Storage (H2) occupancy. The above and bottom floor of the dining and prayer were occupied for production (G2) and Chemical (J2). Location: On 4th floor of building-1.	The dining and prayer areas (E3) is not permitted with moderate hazard occupancies (G2) and chemical hazard occupancy (J2) following table 3.2.1 of BNBC-2006. Relocate the dining and prayer hall(s) as table 3.2.1 of BNBC-2006 (or BNBC-2020 where applicable).	Within 3 months
				

SI No.	Category	Findings	Required Action	Remediation Time Frame
F-06	Fire Rated Construction	Chemical storage area is not properly separated by fire-rated construction due to openings & penetrations. Location: On 2nd to 8th floor of building-1.	Separate the chemical storage room by 4-hr fire rated construction. Seal all penetrations and protect the openings to maintain the required fire separations for 4-hrs. Opening is not permitted for 4-hrs fire rated separation. Keep 16-points SDS of all chemicals in the storage area. Note: Construction type shall be Type-1 and separation shall be as per Table 3.2.1 of BNBC-2006.	Within 3 months



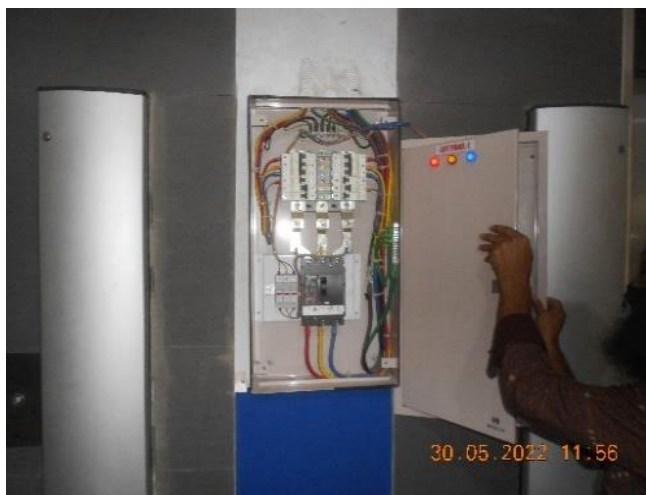
SI No.	Category	Findings	Required Action	Remediation Time Frame
F-07	Fire Rated Construction	Unsealed penetrations and openings are located in the fire rated floor/ceiling assemblies. Followings are the description of openings or penetrations indicating specific locations: 1. Passing of BBT through rated walls from MDB room to the production area in each floor of production building (B-1). 2. PVC pipes penetrate the floor slabs in toilet block of production building (B-1). 3. Floor penetrations due to fire alarm, IT and electrical cable riser in production building (B-1). 4. Chiller pipes penetrate the floor slabs of production building (B-1).	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

SI No.	Category	Findings	Required Action	Remediation Time Frame
		   		

SI No.	Category	Findings	Required Action	Remediation Time Frame
F-08	Fire Rated Construction	Rooms used for combustible storage are not separated by fire rated construction. Location: On 4th floor of building-1.	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 1 hr. fire rated fire rated barrier construction.	Within 3 months
 				
F-09	Means of Egress	The day-care room does not have the direct access to an exit stair. Location: On 2nd floor of building-1.	Relocate day-care room to ground floor with a maximum travel distance of 9 meter (30 feet). Or Relocate to first floor where direct access to an exit enclosure is provided.	Within 3 months

SI No.	Category	Findings	Required Action	Remediation Time Frame
				

SI No.	Category	Findings	Required Action	Remediation Time Frame
F-10	Means of Egress	Electrical DB panel has been found in the exit stair. Location: Stair-2 (North-west) on roof floor, Stair-1 (South-west) on 9th floor and stair-3 (North-east) on 1st floor of building-1.	Remove the electrical DB panel from exit stair to a safe location.	Within 1 month



SI No.	Category	Findings	Required Action	Remediation Time Frame
F-11	Means of Egress	Storage (shoe rack/storage/office/operation) was located in the exit stair. Location: On 2nd to 9th floor of stair-1 and stair-3 of building-1.	Remove storage from the exit stairs and egress path.	Immediately



SI No.	Category	Findings	Required Action	Remediation Time Frame
F-12	Means of Egress	Fire evacuation maps are not posted at the entrance to each exit stair.	Fire evacuation maps shall be posted at the entrance to each exit stair.	Within 1 month
F-13	Means of Egress	Building did not have stair designation signs and occupant load signs at the required locations.	Provide stair designation signs and occupant load signs at the required locations.	Within 1 month
F-14	Means of Egress	The stairway treads was not found uniform, it may lead tripping/dropping hazard. Location: Stair-4 on roof floor of buiding-1.	Stair treads shall be of nominal uniformity. The maximum riser height for any stair shall be 215 mm (8.5 in.).	Within 1 month



SI No.	Category	Findings	Required Action	Remediation Time Frame
F-15	Egress Lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes. Location: On 1st, 2nd, 3rd, 5th, 7th and 8th floor of building-1.	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
				

SI No.	Category	Findings	Required Action	Remediation Time Frame
F-16	Egress Lighting	The directional signs are not provided where there is a change in direction and where the continuation of the egress path is not obvious. Location: On all floors of building-1.	Install 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



SI No.	Category	Findings	Required Action	Remediation Time Frame
F-17	Egress Lighting ITM	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). Keep written records on-site.	Within 3 months
F-18	Fire Alarm & Detection system	Fire alarm and detection system installation complete which requires detailed review to confirm compliance with NFPA 72 and RSC Technical Guidelines (Standard).	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, 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 within 6 months



SI No.	Category	Findings	Required Action	Remediation Time Frame
F-19	ITM of Fire Alarm & Detection system	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 NFPA 72 and RSC Technical Guidelines (Standard).	Within 1 month (after installation)
F-20	Fire Protection System	Sprinkler system installation requires detailed review to confirm compliance with NFPA 13, 14, 20, 22 and RSC Technical Guideline (Standard). Location: Building-1.	Submit the fire pump, standpipe and sprinkler system drawing to RSC for review. Once reviewed, install or modify the standpipe system throughout the building in accordance with RSC Technical Guideline (Standard) and NFPA 13, 14, 20,22 and 24. After installation the owner shall contact the RSC for witness of conducting the final acceptance testing of the standpipe system.	Design Review within 2 months and installation within 4 months.



SI No.	Category	Findings	Required Action	Remediation Time Frame
F-21	ITM of Fire Protection System	Inspection, testing and maintenance of the automatic sprinkler system is not in accordance with NFPA 25 or as per the RSC Technical Guidelines (Standard).	Inspect, test and maintain the automatic sprinkler system and keep written records on-site, in accordance with NFPA 25 and the RSC Technical Guidelines (Standard) (After installation).	Within 1 month (after installation)
F-22	ITM of Fire Protection System	Inspection, testing and maintenance of the standpipe system is not in accordance with NFPA 25 or as per the RSC Technical Guidelines (Standard).	Inspect, test and maintain the standpipe system and keep written records on-site, in accordance with NFPA 25 and the RSC Technical Guidelines (Standard) (After installation).	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 month
F-24	Human Element Program	The required no smoking signs are not present in the factory.	Smoking is prohibited in any garment factory building or separate storage building. Signs shall be posted in Bengali and English at all building entrances. If the factory creates a designated smoking area outside the building, information of these areas will be posted on the signs.	Within 1 month
F-25	Fire Rated Construction	B-2 Sub-station, compressor and air handling unit are not separated by fire rated construction. Location: On 1st floor of utility building (B-2).	Separate the substation compressor and air handling unit by a minimum 2-hr fire rated construction. Seal and/or protected all openings to maintain fire separations.	Within 3 month

SI No.	Category	Findings	Required Action	Remediation Time Frame
		  		
F-26	Fire Rated Construction	B-2 Unsealed penetrations and openings (generator to sub-station room) are located in the fire rated floor/ceiling assemblies. Location: Ground to 1st floor of building-2.	Seal all penetrations and openings in floors/ceiling assemblies to maintain the fire separation.	Within 3 month

SI No.	Category	Findings	Required Action	Remediation Time Frame
				