

FIRE SAFETY INSPECTION REPORT

Factory Name: MNR Design Ltd.

ACCORD ID: 23628

ADDRESS: Baraider Chala, Sreepur, Gazipur.

Other Factories: None



ACCORD
on Fire and Building Safety in Bangladesh

Inspected By: Mahfuza Khanom & Md. Tarif Raihan
Date: 20th February, 2019

Fire Safety Inspection Report

Factory Name: MNR Design Ltd.

Summary

MNR Design Ltd. was surveyed for fire safety on 20/02/2019 by The Accord 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 Accord. 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.

The following "Table" 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 Accord for approval.



Findings & Recommendations

SI No.	Category	Findings	Required Action	Remediation Time Frame
1	Fire Rated Construction	The exit stairs are not separated from [work areas, other spaces] on each floor by fire rated construction.	<p>Complete the separation work of the exit stairs from work areas and other building spaces on all floor levels by minimum 2- hr fire-rated construction. Provide minimum 1.5- hr fire rated doors and seal all unprotected openings and penetrations to maintain the fire separation. Ensure that all fire doors are self-closing and positive latching, and are provided with fire exit (panic) hardware where serving production floors or assembly occupancies.</p> <p>If fire doors are required to be held open for functional reasons, provide automatic-closing devices tied to the fire alarm system.</p> <p>And</p> <p>The factory have to provide Certificate/Listing documents of existing fire doors to Accord for review.</p>	Within 3 months





SI No.	Category	Findings	Required Action	Remediation Time Frame
				



SI No.	Category	Findings	Required Action	Remediation Time Frame
2	Fire Rated Construction	Penetrations through floor/ceiling assemblies are found unsealed.	Seal all penetrations and openings in the wall of exit enclosure walls (full thickness of the wall) 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
				
3	Fire Rated Construction	<p>Rooms used for storage of combustible materials are not separated from the surrounding occupancy/areas. Fire Alarm Control Panel located at Ground floor in Main Building is also not separated from storage room.</p> <p>Location: Main building: Ground floor, 3rd floor</p>	<p>Rooms used for storage of combustible materials shall be separated from the surrounding occupancy with a minimum 1 hour construction.</p>	Within 3 months





SI No.	Category	Findings	Required Action	Remediation Time Frame
				





SI No.	Category	Findings	Required Action	Remediation Time Frame
4	Fire Rated Construction	Areas used for in-process storage of combustible materials are open to the surrounding occupancy.	<p>Provide defined storage areas and limit the storage arrangement as follows:-</p> <ol style="list-style-type: none"> 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. <p>or</p> <ol style="list-style-type: none"> 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
				
5	Fire Rated Construction	Unsealed penetrations and openings are located in exit stair enclosures.	Re-route the pipes/channel and seal all penetrations and openings in the wall of exit enclosure walls (full thickness of the wall) by fire rated materials to maintain the fire resistance rating.	Within 3 months




SI No.	Category	Findings	Required Action	Remediation Time Frame
				
6	Fire Rated Construction	Chemical storage area is not separated by fire-rated construction having non rated door and unsealed penetrations and openings.	Separate the chemical storage room by 2-hr fire rated construction. Seal all penetrations and protect the openings to maintain the required fire separations. Keep 16-points MSDS of all chemicals in the storage area.	Within 3 months





SI No.	Category	Findings	Required Action	Remediation Time Frame
				
7	Fire Rated Construction	<p>The factory is using/storing liquified gas cylinders without proper separations. Location: Main Building (4th floor)</p>	Remove them from the factory building.	Within 3 months





SI No.	Category	Findings	Required Action	Remediation Time Frame
				
8	Fire Rated Construction	<p>The fire pump room is not provided with adequate fire separation. Location: Building-3 (Utility building)</p>	<p>Provide fire pump room with 2 hr rated fire separation when not sprinklered and 1 hr rated fire separation when provided with automatic sprinklers in accordance with NFPA 20. Or, Physically separate the pump room from the protected building by a minimum of 50 ft (15.3 m) in accordance with NFPA 20.</p>	Within 3 months





SI No.	Category	Findings	Required Action	Remediation Time Frame
				
9	Fire Rated Construction	The [boiler/generator/transformer/air compressor] room is not separated by fire rated construction (openings, non-rated doors, penetrations). Fire Alarm Control Panel is located at utility building.	Separate the boiler room by a minimum 2-hr fire rated construction (for high rise building)/ 1-hr fire rated construction (for low rise building). Seal and/or protected all openings to maintain fire separations. Separate the [generator/transformer/EMR/gas meter/air compressor] room by a minimum 2-hr fire rated construction. Seal and/or protected all openings to maintain fire separations.	Within 3 months




SI No.	Category	Findings	Required Action	Remediation Time Frame
				
10	Egress	<p>Doors along means of egress are provided with non compliant locking system. Location: Main Building</p>	<ol style="list-style-type: none"> 1. Remove all non compliant locking features from egress doors. 2. If locks are required for security reasons, utilize special door locking features complying with NFPA 101. 3. Doors may be locked where the latch and lock are disengaged with one motion where the occupant load does not exceed 49 persons. 4. Doors may be provided with locking hardware from the ingress side provided that a panic bar is installed on any door with an occupant load exceeding 49 persons. 	<p>Immediate</p>





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11	Egress	Rear exit stair (Facility building) discharge path is unusable.	Provide unobstructed road / egress path for smooth discharge of occupants. Means of egress shall be maintained continuously free and clear of all obstructions and storage.	Within 1 month




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12	Egress	<p>Dining located at 4th floor having more than 500 fixed seats with only 2 exit stair. Location: Main Building</p>	<p>Reduce occupant load to not more than available exit capacity as per Accord 6.6.3.</p>	<p>Immediate</p>



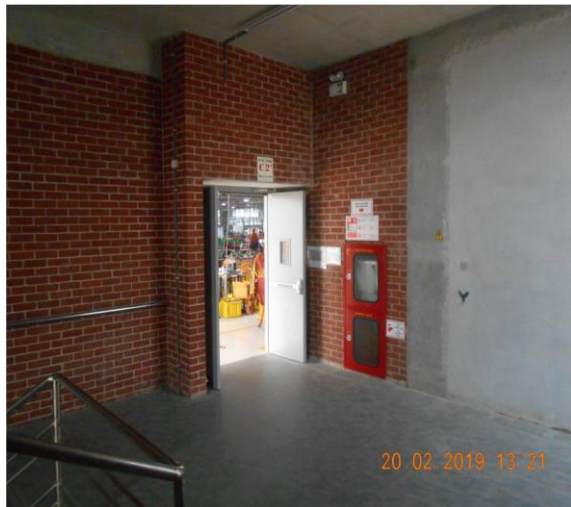
SI No.	Category	Findings	Required Action	Remediation Time Frame
				
13	Fire Detection & Alarm System	Fire detection system installation requires detailed review to confirm compliance with NFPA 72 and ACCORD standards.	Submit as-built drawings, testing records, equipment certification and other relevant documentation to the ACCORD for review and approval.	Design within 2 months, Install within 4 months (If modification required)



SI No.	Category	Findings	Required Action	Remediation Time Frame
14	Fire Detection & Alarm System (ITM)	 <p>Inspection, testing, and maintenance for the fire alarm system is not in accordance with NFPA 72 or as per Accord standard.</p>	<p>Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72 or as per Accord standard.</p>	<p>Within 7 months</p>



SI No.	Category	Findings	Required Action	Remediation Time Frame
15	Fire Protection	Fire pump, water supply & standpipe system installation requires detailed review to confirm compliance with NFPA 14, 20, 22, 25 and ACCORD standards.	Submit as built drawings, testing records, listing information and other relevant documentation to the ACCORD for review and approval, modification shall have to done as per the reviewed design (if required).	Design within 2 months, Install/Modify within 4 months




SI No.	Category	Findings	Required Action	Remediation Time Frame
16	Fire Protection (ITM)	Inspection, testing and maintenance of the standpipe system is not in accordance with NFPA 14.	Inspect, test and maintain the standpipe system and keep written records on-site, in accordance with NFPA 14 and ACCORD standards.	Within 7 months
17	Fire Protection (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 20 and ACCORD standards.	Within 7 months



SI No.	Category	Findings	Required Action	Remediation Time Frame
18	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 3 months



SI No.	Category	Findings	Required Action	Remediation Time Frame
19	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
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SI No.	Category	Findings	Required Action	Remediation Time Frame
20	Egress Lighting	Exit signage not illuminated (burned out, broken, etc.).	Regularly inspect all exit signage and replace/install lights as needed to illuminate signs.	Within 1 month

