

INITIAL FIRE SAFETY INSPECTION REPORT

KDS Apparels Ltd. (Extension)

RSC ID: 24439

ADDRESS: 251-252, Nasirabad I/A, Chittagong.

Geographical Coordinates of factory building: 22.392195 91.819786

Other Factories: KDS Textile Mills Ltd., KDS Apparels Ltd. & KDS Washing Plant.



Inspected By: Md. Kamrul Hasan, Md. Tarif Raihan

Date: 21-July-2022

Fire Safety Inspection Report

KDS Apparels Ltd. (Extension)

Introduction:

KDS Apparels Ltd. (Extension) complex was surveyed for fire safety on **21/07/2022** 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.

Findings & Recommendations :

Table 1 - summarizes the fire safety non-compliant issues identified **(for all structures)** during the inspection. Recommendations have been provided to address each issue with specific remediation timeline.

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-1	Fire-Rated Construction	Exit Enclosures are not properly fire separated from other occupancy on each floor by fire rated construction. Location: 7-Storied Factory Budling (Block-B)	Provide minimum 2-hr fire rated separation in exit enclosures with minimum 1.5-hr fire rated doors and seal all unprotected openings and penetration to separate the exit stairs from work areas and other building spaces on all floor levels with similar rating of fire door. 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

				
F-2	Fire-Rated Construction	Chemical storage room is not separated from production area due unprotected openings and penetrations. Location: 6th floor in 7-Storied Factory Budling (Block-B)	Separate the chemical storage room by 2-hr fire rated construction. Seal all penetrations and protect the openings to maintain the required fire separations.	Within 3 months
 				

F-3	Fire-Rated Construction	Compressor is not properly separated by fire rated construction with production area. Location: 6th floor in 7-Storied Factory Budling (Block-B).	Compressor shall be separated from other occupancies by a minimum 1-hr fire rated construction (wall, floor, slab etc). Seal all penetrations and openings (door, window etc.) should be protected by 0.75-hr (45 min) fire rated materials to maintain the fire separation if required. All exhaust systems shall discharge to the exterior of the building in a safe location. Or Relocate it to exterior of the building and maintain a minimum 3m (10 ft.) spatial separation distance from the building.	Within 3 months
 				

F-4	Means of Egress	Aisles mark not provided on the 6th floor machine store area. Location: 7-Storied Factory Budling (Block-B).	Aisles shall be provided with a minimum unobstructed clear-width of 0.9 m (36 in.).	Within 1 month
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F-5	Egress lighting	Exit signage not provided in the south exit on the 4th floor. Location: 7-Storied Factory Budling (Block-B).	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. Lighted exit signs shall be provided with either battery backup or uninterruptable power supply systems and shall be continuously illuminated.	Within 1 Month

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F-6	Egress lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes. Location: 4th Floor in the 7-Storied Factory Budling (Block-B).	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. 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

				
F-7	Egress lighting (ITM)	Inspection, testing, and maintenance for the exit sign and emergency lighting system was not in accordance with the RSC standard. Location: 7-Storied Factory Budling (Block-B).	Inspect, test and maintain the exit sign and emergency lighting system in accordance with the RSC standard. Keep written records on-site.	Within 3 Months
F-8	Fire Alarm System	Fire alarm and detection system installation complete which requires detailed review to confirm compliance with NFPA 72 and RSC Technical Guidelines (Standard). (7-Storied Factory Budling (Block-B))	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 building 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.	Design within 1 month & Installation within 3 months

				
F-9	Fire Alarm System (ITM)	Inspection, testing and maintenance for the fire alarm system is not in accordance with NFPA 72. (7-Storied Factory Budling (Block-B))	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 5 months
F-10	Fire Pump System	Factory did not review & verify the fire pump system installation detailed to conform compliance with NFPA 20, 22 and RSC standards. (7-Storied Factory Budling (Block-B))	Submit as-built drawing, calculations, equipment certifications and other relevant documentation to the RSC for review and approval, modification (if required) shall have to be done as per the reviewed design, NFPA 20, 22 & RSC standards. & Upon approval & modification (if required) the factory shall verify the system by RSC for final acceptance.	Design within 1 month & Installation 3 months

				
F-11	Fire Protection System	The existing factory building with an occupiable floor greater than 10 m (33 ft) above the finished grade which required standpipe system. Standpipe system installation complete which requires detailed review to confirm compliance with the RSC Technical Guidelines (Standard) and NFPA 14. (7-Storeyed Factory Building (Block-B))	Submit the standpipe system design to RSC for review. Once the design is reviewed, install and modify the system throughout the building in accordance with review comment, RSC Technical Guidelines (Standard) and NFPA 14. After installation the owner shall conduct internal testing and commissioning and then contact the RSC for witness of final acceptance testing.	Design within 1 month & Installation 3 months
				

F-12	Fire Standpipe System (ITM)	Inspection, testing and maintenance of the fire standpipe system is not in accordance with NFPA 25. (7-Storied Factory Budling (Block-B))	Inspect, test and maintain fire standpipe system and keep written records on-site, in accordance with NFPA 25 and RSC standards.	Within 5 months
F-13	Fire Pump System (ITM)	Inspection, testing and maintenance of the fire pump system is not in accordance with NFPA 25. (7-Storied Factory Budling (Block-B))	Inspect, test and maintain fire pump system and keep written records on-site, in accordance with NFPA 25 and RSC standards.	Within 5 months
F-14	Fire Extinguishers (ITM)	Inspection, testing and maintenance of portable fire extinguishers is not in accordance with NFPA 10. (7-Storied Factory Budling (Block-B))	Inspect, test and maintain the portable fire extinguishers and keep written records on- site, in accordance with NFPA 10 and RSC standards.	Within 2 months

F-15	Fire-Rated Construction	Exit Enclosures are not properly fire separated from other occupancy on each floor by fire rated construction. Location: 6-Storied Factory Budling (Block-C)	Provide minimum 2-hr fire rated separation in exit enclosures with minimum 1.5-hr fire rated doors and seal all unprotected openings and penetration to separate the exit stairs from work areas and other building spaces on all floor levels with similar rating of fire door. 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
 				

F-16	Fire-Rated Construction	One part of Block- C (5 storied Steel Building) is made of steel and found exposed without any fire protection which is defined as non-rated construction and a violation of BNBC-2006. (6-Storied Factory Budling (Block-C))	Construction must be of type 1 (See BNBC 2006 Part 3 Table 3.2.4, page 10356 and 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 Guideline standard or Table 3.3.1 and Table 4.1.1 from BNBC 2006. Consult a qualified fire protection engineer to design the rated construction barriers.	Within 6 months
				

F-17	Fire-Rated Construction	Areas used for in-process storage of combustible materials are open to the surrounding occupancy (Location: 3rd & 4th Floor in the 6-Storied Factory Building (Block-C))	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 2 months
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F-18	Fire-Rated Construction	The exit discharge paths (Egress Court) serving the South-West Exit were less than 10 ft wide and were not separated from the building interior. (6-Storied Factory Budling (Block-C))	Egress discharge path less than 3050 mm (10 ft) in width (as measured from the building and the adjacent property line) shall be provided with walls having a 1-hr fire resistance rated construction for a distance of 3050 mm (10 ft) above the floor of the path. Openings within such walls shall be protected by opening protectives having a fire protection rating of not less than ¾ hour.	Within 3 months
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F-19	Fire-Rated Construction	Elevator shafts are directly open into the production floor without proper fire separation. (6-Storied Factory Budling (Block-C))	Ensure minimum 2-hr listed/3rd part certified fire rated lift landing doors for elevator shafts otherwise close the area of the shaft with a 2-hr fire-rated construction barrier.	Within 3 months

 				
F-20	Means of Egress	The exit discharge path access to a public way was not direct and even. Location: South side of the 6-Storied Factory Budling (Block-C).	The exit discharge shall provide a even, direct and unobstructed access to a public way.	Within 2 Months
 				

F-21	Means of Egress	Aisles mark not provided in the west side of fabric godown area on the 5th floor. Location: 6-Storeyed Factory Budling (Block-C).	Aisles shall be provided with a minimum unobstructed clear-width of 0.9 m (36 in.).	Within 1 month
				
F-22	Means of Egress	Fire evacuation maps is not posted at the entrance of 5th floor exit. Location: 6-Storeyed Factory Budling (Block-C).	Fire evacuation maps shall be posted at the entrance to each exit stair.	Within 1 month
F-23	Egress lighting	Directional signs are not provided where direction of the path of travel to an exit has changed. Location: 3rd & 4th Floor of the 6-Storeyed Factory Budling (Block-C).	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

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F-24	Fire Alarm System	Fire alarm and detection system installation complete which requires detailed review to confirm compliance with NFPA 72 and RSC Technical Guidelines (Standard). (6-Storied Factory Building (Block-C).)	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 building 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.	Design within 1 month & Installation within 3 months
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F-25	Fire Alarm System (ITM)	Inspection, testing and maintenance for the fire alarm system is not in accordance with NFPA 72. (6-Storied Factory Budling (Block-C).)	Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with Table-14.3.1 of NFPA 72 and RSC Technical Guidelines (Standard).	Within 4 months
F-26	Fire Pump System	Factory did not review & verify the fire pump system installation detailed to conform compliance with NFPA 20, 22 and RSC standards. (6-Storied Factory Budling (Block-C).)	Submit as-built drawing, calculations, equipment certifications and other relevant documentation to the RSC for review and approval, modification (if required) shall have to be done as per the reviewed design, NFPA 20, 22 & RSC standards. & Upon approval & modification (if required) the factory shall verify the system by RSC for final acceptance.	Design within 1 month & Installation 3 months
				

F-27	Fire Protection System	The existing factory building with an occupiable floor greater than 10 m (33 ft) above the finished grade which required standpipe system. Standpipe system installation complete which requires detailed review to confirm compliance with the RSC Technical Guidelines (Standard) and NFPA 14. (6-Storied Factory Budling (Block-C).)	Submit the standpipe system design to RSC for review. Once the design is reviewed, install and modify the system throughout the building in accordance with review comment, RSC Technical Guidelines (Standard) and NFPA 14. After installation the owner shall conduct internal testing and commissioning and then contact the RSC for witness of final acceptance testing.	Design within 1 month & Installation 3 months
 				
F-28	Fire Standpipe System (ITM)	Inspection, testing and maintenance of the fire standpipe system is not in accordance with NFPA 25. (6-Storied Factory Budling (Block-C))	Inspect, test and maintain fire standpipe system and keep written records on-site, in accordance with NFPA 25 and RSC standards.	Within 5 months

F-29	Fire Pump System (ITM)	Inspection, testing and maintenance of the fire pump system is not in accordance with NFPA 25. (6-Storied Factory Budling (Block-C))	Inspect, test and maintain fire pump system and keep written records on-site, in accordance with NFPA 25 and RSC standards.	Within 5 months
F-30	Fire Extinguishers (ITM)	Inspection, testing and maintenance of portable fire extinguishers is not in accordance with NFPA 10. (6-Storied Factory Budling (Block-C))	Inspect, test and maintain the portable fire extinguishers and keep written records on- site, in accordance with NFPA 10 and RSC standards.	Within 2 months
F-31	Egress lighting (ITM)	Inspection, testing, and maintenance for the exit sign and emergency lighting system was not in accordance with the RSC standard. (6-Storied Factory Budling (Block-C))	Inspect, test and maintain the exit sign and emergency lighting system in accordance with the RSC standard. Keep written records on-site.	Within 2 Months