

INITIAL FIRE SAFETY INSPECTION REPORT

Knit Plus Limited (Extension)

RSC ID: 25891

24.02608, 90.29892

Plot-2036,Mouchak,Kaliakair,Gazipur

Other Factory : Knit Plus Ltd (RSC ID: 10342)



Inspected By: Tanvir Jubayer Rahman

Date: 06-October-2024

Fire Safety Inspection Report

Knit Plus Limited (Extension)

Introduction:

Knit Plus Limited (Extension) complex was surveyed for fire safety on **06-Oct-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): A short description of the structures of this RSC ID are following,-

SI	Name	Construction year	Type
01	Building# 3- Extension Building * (8 Storied RCC Building with underground Fire Pump room Water Reservoir) Approx. Area: 51,200 Sft (Only extension part)	Construction year : March-2019 to July 2021. Occupied year : August 2021 Approval Date: 25-Nov-2019 (from LGED)	Interim Construction
02	Building# 5- Boiler Room (1 Storied Masonry Construction) Approx. Area: 200 Sft	Construction year : January-2016 to March-2016. Occupied year : June-2016 Approval Date: 25-Nov-2019 (from LGED)	Interim Construction
03	Building# 6- RMS Room (Single Storied RCC Building) Approx. Area: 270 Sft	Construction year : January 2021 to July 2021. Occupied year :August 2021 Approval Date: 25-Nov-2019 (from LGED)	Interim Construction

Other Structures in the factory premises:

Building-1 (7 std RCC Production Building; 80,715 sft), **Building-2** (3 std RCC Admin building; 2510 sft) covered by RSC ID: 10342.

Building-4 (Proposed 10 std building under construction) not occupied and no RSC ID till inspection.

* **Note:** Building-3 is the horizontal and vertical extension of building-1 where Building-1 & 3 are independent RCC structures, but architecturally connected as a single fire compartment. All the occupancy shares the buildings & production facilities with means of egress at each floor.

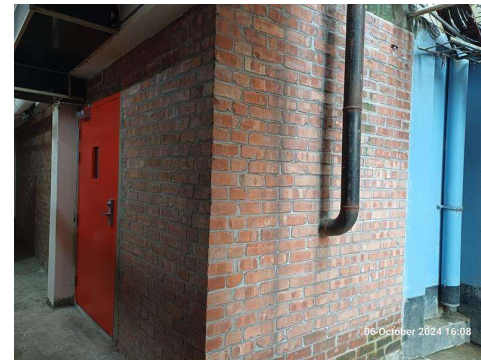
Factory Address: Plot-2036,Mouchak,Kaliakair,Gazipur

Additional Information:

1. Building-3 is the horizontal and vertical extension of building-1 (covered under RSC ID: 10342) where Building-1 & 3 are independent RCC structures, but architecturally connected as a single fire compartment. All the occupancy shares the buildings & production facilities with means of egress at each floor.
2. Fire alarm and detection system (FADS), water based sprinkler, standpipe and fire pump system (SUPS) are common for both RSC ID: 10342 & 25891.
3. RSC conducted pre-T&C for the FADS and SUPS of RSC ID: 10342 on December 4, 2023. During the pre-T&CVI entire FADS and SUPS (RSC ID: 10342 & 25891) were covered as building-1 & 3 are architecturally connected and creates single fire compartment. Moreover, the fire pump room is located at the basement of building-3(RSC ID: 25891).
4. Initial design of FADS & SUPS for RSC ID: 25891 does not require further separate review. T&CVI process of FADS & SUPS of RSC ID: 10342 & 25891 will be conducted combinedly.



Building# 5- Boiler Room



Building# 6- RMS Room

Findings & Recommendations :

Table 1 summarizes the major fire safety issues identified during the inspection of main buildings. Recommendations have been provided to address each issue. An implementation schedule shall be developed by the factory to remediate each of the similar types of findings throughout the premises. The specific timing of improvements, including any requested extensions due to design / installation constraints, shall be submitted to the RSC for approval.

Table-1:

SI No.	Category	Findings	Required Action	Remediation Time Frame
F-1	Fire Rated Construction	Areas used for combustible storage open to the factory are not separated by fire rated construction. Locations: 1st floor and 2nd floor in Main Production Building .	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. Where separate storage rooms are not feasible, provide defined storage areas and limit the storage arrangement as follows: Where the building/floor is sprinkler protected: maximum height of 3.66m (12ft.) and maximum area of 93m2 (1000 ft2) and 3m (10ft.) clear distance from adjacent another unenclosed combustible storage. In-process storage area shall not exceeds 10% of total floor area.	Within 3 Months
 				

F-2	Fire Rated Construction	The exit stair is not separated from other occupancy due to the non-functionality of the hardware of the fire rated door. Furthermore, the gap beneath the fire rated door has been found more than 19 mm. Location: Main Production Building stair-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. The clearance beneath the fire rated door shall be a maximum of 19 mm. From edges and top shall be limited to a maximum 4.8 mm. All measurement shall be taken from the ""pull side"" of the door. Any modification of fire doors beyond the job site preparation shall be approved by the door manufacturer. Install the fire door as per NFPA 80. Factory shall ensure the integrity of the functionality of the fire rated door through proper datasheet, certificate and listing label.	Within 3 Months
				

F-3	Fire Rated Construction	Unsealed penetrations and openings are located in the fire-rated floor/ceiling assemblies through out the main production building due to cable riser and building expansion joint. Location: Main Production Building.	Provide a minimum 2-hr fire rated shaft to separate the utility risers from each floor level or seal all penetrations and openings in floors/ceiling assemblies by 3-hr fire rated listed/certified materials. The installation of such fire rated materials shall be following certified design.	Within 3 Months
				
F-4	Means of Egress	The width of egress aisles found 33 inch. Location: 2nd floor (South side) of Main production building	Aisles shall be provided with a minimum unobstructed clear-width of 0.9 m (36 in.).	Within 1 Month
				

F-5	Means of Egress	Egress doors and gates with locking features are provided at exit discharge. Location: Stair-3 of Main production building.	Remove locking features from all egress doors and gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101 and RSC standard 6.8.2.	Immediately
				
F-6	Means of Egress	Handrails are not provided on the stairway serving as means of escape for ground floor of main production building and boiler room. Location: South side of main production building.	Stairways serving as means of escape shall have continuous guards and handrails on both sides. Where the width of the stair exceeds 2.2 m, intermediate handrails shall be provided so that no point on the stair is farther than 1 m from the handrails. (BNBC-3.10.5)	Within 1 Month
				
F-7	Means of Egress	No guard rail provided Infront of Boiler room (building-5) where open side height exceed 760 mm (30 in.) finished ground below.	Provide guards at all open sides of means of egress that exceed 760 mm (30 in.) with a minimum height of 42 inches. Open guards shall have intermediate rails or pattern such that a sphere 200 mm (8 in.) in diameter cannot pass through any opening up to a height of 865 mm (34 in.).	Within 1 Month

				
F-8	Fire Alarm & Detection System (FADS)	The fire alarm system installation found completed. The system requires detailed functional test to confirm compliance with NFPA 72 and RSC standard. Note: RSC conducted Pre-T&C of the FADS on December 4, 2023 for RSC ID: 10342. This ID was also covered during that Pre-T&C.	Modify the fire detection and alarm system throughout the factory premises in accordance with Pre-T&C comment, RSC Technical Guidelines (Standard) and NFPA 72. The factory shall complete the modification as per the standard and shall submit the design & documents to RSC for Pre-T&C accordingly.	Within 2 Months
  				

F-9	Fire Suppression System (SUPS) - Sprinkler System	The high-rise building has an occupied floor greater than 23 meter (75 feet) where required automatic sprinkler protection found installed. The system requires detailed functional test to confirm compliance with RSC Technical guideline (Standard) and NFPA 13,14,20,22 and 24. Note: RSC conducted pre-T&C of the SUPS on December 4, 2023 for RSC ID: 10342. This ID was also covered during that pre-T&C.	Modify the sprinkler/standpipe system throughout the building (Building-1 &3) in accordance with Pre T&C comments, RSC Technical guideline (Standard) and NFPA 13,14,20,22 and 24. The factory shall complete the modification as per the standard and shall submit the design & documents to RSC for Pre-T&C accordingly.	Within 2 Months
				
F-10	Fire Suppression System (SUPS)- Standpipe System	The main production building (building-1) has an occupied floor greater than 10 meter (33 feet) where required standpipe found installed. Standpipe installation functional test to confirm compliance with NFPA 14, 20 and RSC standards. Note: RSC conducted pre-T&C of the SUPS on December 4, 2023 for RSC ID: 10342. This ID was also covered during that Pre-T&C.	Modify the standpipe system throughout the building in accordance with RSC standard and NFPA 14,20,22 and 24. The factory shall complete the modification as per the standard and shall submit the design & documents to RSC for Pre-T&C accordingly.	Within 2 Months

				
F-11	ITM of Fire Alarm and 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. (After Installation)	Within 1 month
F-12	ITM of Standpipe system	Inspection, testing and maintenance of the standpipe system is not found in accordance with NFPA 14 and 25.	Inspect, test and maintain the standpipe system and keep written records on-site, in accordance with NFPA 14 and 25.	Within 1 month
F-13	ITM of Sprinkler system	Inspection, testing and maintenance of the sprinkler system is not found in accordance with NFPA 13 and 25.	Inspect, test and maintain the sprinkler system and keep written records on-site, in accordance with NFPA 13 and 25.	Within 1 month
F-14	ITM of fire pump	Inspection, testing, and maintenance for the fire pump is not in accordance with NFPA 10 and 25 or as per RSC standard.	Inspect, test and maintain the fire pump, and keep written records on-site, in accordance with NFPA 20 and 25 or as per RSC standard.	Within 1 month
F-15	Inspection Testing and Maintenance of Emergency lighting	Inspection, testing, and maintenance for the emergency lighting system was not in accordance with RSC technical guidelines (standard).	Inspect, test and maintain the emergency lighting system in accordance with RSC technical guidelines (standard). Keep written records on-site.	Within 1 month

F-16	Inspection Testing and Maintenance of Fire extinguisher (ITM)	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 1 Month
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