

INITIAL FIRE SAFETY INSPECTION REPORT

KAROONI KNIT COMPOSITE LIMITED (Extension)

RSC ID: 24854

RATANPUR, SHAFIPUR, KALIAKOIR

Other Factories: Karooni Fashions Ltd (ID:24232),KAROONI KNIT COMPOSITE LIMITED (ID-9211)



Inspected By: Day-1: 10-Dec-2023- Md Sadid Rahman & Md Tanvir Rahman.

Day-2: Date: 16-Jan-2024-Monsurul Akram Azim & Tanvir Jubayer Rahman.

Fire Safety Inspection Report

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Introduction:

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KAROONI KNIT COMPOSITE LIMITED (Extension) complex was surveyed for fire safety on 10-Dec-2023 & 16-Jan-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

SL No	Building Name	Building Construction Period	Occupied	Structure type	Construction time
1	Building-01 (Security Office)	Jan-2007 to March2007	Mar-07	RCC	Existing
2	Building-03 (ETP -1)	Dec-2016 to May-2019	Jun-19	RCC	Interim
3	Shed-01 (WTP-01)	Feb-2006 to July-2006	Aug-06	Steel	Existing
4	Shed-02 (Workers Dinning)	Dec-2022 to Feb-2023	Feb-23	Steel	New
5	Shed-03 (Soft Setting)	Jan-2013 to Oct-2013		Steel	Existing
6	Shed-04 (Main Chemical Store)	Dec-2022 to Jan-2023	Jan-23	Steel	New
7	Shed-05 (Sub-chemical store)	Dec-2006 to May-2007	May-07	Steel	Existing
8	Shed-06 (Wastage store)	May 2019 to Jun-2019	Jul-19	Steel	Interim
9	Shed-07 (E.T.P Chemical store)	Jun-2019 to July-2019	Jul-19	Steel	Interim
10	shed-08 (Fire pump room)	Dec-2022 to Jan-2023	Jan-23	Steel	New
11	shed-09 (Yarn Store)	Dec-2022 to Feb-2023	Feb-23	Steel	New
12	shed-10 (Batch Godown)	Mar-2013 to Mar-2014	Apr-14	Steel	Interim
13	shed-11 (Karoooni yarn dyeing (Printing section))	Nov-2016 to Mar-2018	May-18	Steel	Interim

14	Building-06 (Utility-02)	Mar-2013 to Feb-2014	Mar-14	RCC	Interim
15	Building-07 (33 KV Sub-Station)	Feb-2023 to June-2023	Nov-23	RCC	New
16	Building-08 (11 KV Sub-Station)	Feb-2023 to June-2023	Nov-23	RCC	New

Factory Address: RATANPUR, SHAFIPUR, KALIAKOIR

Points of contact:

<p>Md Mahabobur Rahman Deputy General Manager (HR & Compliance) 01713-430940 Mail : mahabobur@karooni.com</p>	<p>Md Nazrul Islam Deputy General Manager (M&U) 01713-430943 Mail : electrical@karooni.com</p>
	




Findings & Recommendations :

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 review.

Table-1:

SI No.	Category	Findings	Required Action	Remediation Time Frame
F-01	Fire Rated Construction	The dining area is not separated from adjacent utility area by fire rated construction. Location: Shed-02 (Workers Dinning)	Canteen shall be separated from utility area by minimum 3 Hr. rated separation. Seal and/or protect all openings to maintain the required fire separation.	Within 3 months






F-02	Fire Rated Construction	Sub-chemical store not Fire separated from the dyeing shed.	Ensure the chemical store fire separated by minimum 4-hr fire rated construction barrier with only occupancies with G and H following table 3.2.1 of BNBC-2020.	Within 3 months
F-03	Fire Rated Construction	The Interim constructed building has been found steel-composite type and the steel columns and girders has been found in exposed condition without any fire protection. Location : Shed-06 (Wastage store), Shed-07 (E.T.P Chemical store), shed-10 (Batch Godown), shed-11 (Karoooni yarn dyeing (Printing section))	The Interim constructed building shall be type-1 or type-2. Provide required fire rating on the structural elements by following Table-3.2.4, 3.1.9 & Table 4.4.1 of the RSC Technical Guidelines (StandardV1.0) or Table 3.3.1 of BNBC-2006. Consult a qualified fire protection engineer to design the rated construction barriers in between two floors and in structural members. TGN 7 requirements may apply if the building is fully sprinklered not limiting the size of fire compartments less than 2000 m ² and unprotected slab-beam assembly demonstrates a 0.5-hour fire rating. All columns are required to be protected with 1-hour fire rating. Or, Provide 1.5 hours fire rating to floor slab and beams & 2 hours fire rating to vertical columns assuming minimum front access requirement has been met as per BNBC 2006 Part 3 Table 3.1.9, where sprinkler system is not provided throughout the building	Within 06 months



F-04	Unprotected Exterior Discharge Path	Exit discharge are not fire separated at shed-03 (soft setting), Shed-10 (Batch Godown)	Seal all penetrations and openings to the interior of the building along the discharge path, up to a height of 10 ft., to provide a minimum 1-hr fire separation.	Within 3 months
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F-05	Means of Egress	The width of egress aisles is less than 36-inch at Shed -06(Wastage store) and aisles are missing at Shed-01 (WTP-01),Shed-02 (Workers Dinning),Shed-04 (Main Chemical Store),Shed -05 (Sub-chemical store)	Provide minimum aisle widths of 36-in.	within 1 month
				
F-06	Means of Egress	The egress path along means of egress has interrupted by obstruction. Location: Main chemical store, Sub chemical store.	Means of egress shall be maintained continuously free and clear of all obstructions/storage. Or Keep egress paths and stairs clear of storage.	Immediate
				

F-07	Means of Egress	Dining area requires two or more exits or means of egress but the exit doors or means of egress shall not be located a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the building between the exit.	Modify exit arrangement to provide remote exits	within 1 month
F-08	Means of Egress	The directional signs are not provided where there is a change in direction and where the continuation of the egress path is not obvious. Shed-01 (WTP-01),Shed-02 (Workers Dinning),Shed-04 (Main Chemical Store),Shed -05 (Sub-chemical store), Shed-10 (Bacth godown), Shed-11 (Printing section), etc.	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





F-09	Means of Egress	Exit signs are not provided at many required area	Provide exit signs above all exits to the exterior and all doors to the exit.	within 1 month
F-10	Means of Egress	Fire evacuation map is not posted at the entrance of all exit stair.	Fire evacuation maps shall be posted at the entrance to each exit stair	Within 1 month
F-11	Means of Egress	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 1 month
				

F-12	Means of Egress	Uneven path of travel and blockage was observed in exit access.	Remove unnecessary items and level exit path to the public way.	Immediately
				
F-13	Fire Detection & Alarm System	Fire alarm and detection system installation complete which requires detailed review to confirm compliance with NFPA 72.	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, Technician NFPA 72. After installation the owner shall conduct internal testing and commissioning and then contact the RSC for witness of final acceptance testing.	Design-2 Months. Installation-4 months







F-14	ITM of Fire Alarm & Detection system	Inspection, testing and maintenance for the fire alarm system is not in accordance with NFPA 72.	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."	Within 1 months
F-15	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 1 month
F-16	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.	Within 1 month

F-17	Means of Egress	Egress doors/gates with locking features not complying with NFPA101 are provided at Shed-01 (WTP-01),Shed-02 (Workers Dinning),Shed-04 (Main Chemical Store),Shed -05 (Sub-chemical store)	Remove locking features from all egress doors/gates. If locks are required for security reasons, utilize specialized door locking features complying with NFPA101.	Immediate
<div style="display: flex; justify-content: space-around; align-items: center;">   </div>				
F-18	Means of Egress	Occupant load sign is not posted at the exit of all building & shed. Also, stair designation sign is not posted at the exit stair at all level of building	Occupant load sign and stair designation shall be posted at the entrance to exit stair at all level.	Within 1 Month

F-19	Means of Egress	<p>Width of exit stairs are less than 1.5 m (60 in.).</p> <p>Location: Shed-10 (Batch godown), stair-2, stair width-49 in.</p>	<p>Provide exit stair minimum clear and unobstructed width of 1.5 m (60 in.) in accordance with Accord standard 6.5.6.2.1.</p>	Within 3 Months
				
F-20	Fire rated construction	<p>Rooms used for storage of combustible materials are not separated from the surrounding occupancy.</p> <p>Location: Shed-11 (Printing section)</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

				
F-21	Fire rated construction	<p>Areas used for in-process storage of combustible materials are open to the surrounding occupancy/ areas. Location: Shed-11 (Printing section)</p>	<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
				

F-22	Means of Egress	Handrails & guard are not provided in the exit stair. Location: Shed-11 (Printing section)	Provide handrails on at least one side/both side of exit stair having a minimum height 34 in. & provide guard in required location.	Within 1 month
				
F-23	Fire rated construction	It has been observed that the ground floor to first floor (claimed mezzanine) are not separated from each other of Shed-11(Printing section). Ground floor exit is from ground level and 1st floor exit from 1st floor level. Factory Claimed Mezzanine floor which is occupying more than 33.33% of the building plinth area (measure full plinth area) are not properly separated from the ground floor.	Mezzanine floor shall not exceed 33.33% of the building plinth area as per BNBC-2006, clause 1.12.6.1. Separate each floors by fire rated construction as per BNBC, Part-3, chapter-3 and Table 3.3.1. 2-hr fire rated separation is required from claimed mezzanine floor (actually first floor) to ground floor other surroundings as well as separation is needed at required number of exit stairs.	Within 6 Months

				
F-24	Means of Egress & Gates	Collapsible gates/sliding doors/rolling shutter doors are provided at Shed-01 (WTP-01),Shed-02 (Workers Dinning),Shed-04 (Main Chemical Store),Shed -05 (Sub-chemical store), Shed-10 (Batch godown), Building-06 (Utility-2)	Replace all collapsible gates/ sliding doors/ rolling shutter doors along the means of egress with side-hinged, swinging egress doors. If locks are required for security reasons, utilize specialized door locking features complying with NFPA101.	Within 1 month
<div style="display: flex; justify-content: space-around;">   </div>				

F-25	Means of Egress & Gates	Internal discharge has been provided for Shed-11 .	<p>Rearrange the exit so that the exits shall discharge directly to the exterior of the building. Or</p> <p>A maximum of 50 percent of the number and capacity of the exit enclosures can discharge through areas on the level of exit discharge where all of the following are met:</p> <p>(1) Automatic sprinkler protection is provided throughout the level of exit discharge or portion of the level of discharge where separated from non sprinklered portions of the floor by fire barriers with the same fire resistance rating as the exit enclosure.</p> <p>(2) The interior discharge is not through a storage or hazardous occupancy.</p> <p>(3) The entire area of the level of exit discharge is separated from areas below by construction having a fire resistance rating not less than that required for the exit enclosure.</p> <p>(4) The way to the exterior shall be free and unobstructed and shall be readily visible and identifiable from the point of discharge of the interior exit.</p>	Within 1 month
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