

INITIAL FIRE SAFETY INSPECTION REPORT

N.K. Sweaters Ltd.

RSC ID: 25538

Geographical Coordinates of factory building: 24.057096, 90.292672

Mazukhan, Ratonpur, Kaliakoir, Gazipur-1751.

Other Factories: N/A



Inspected By: Shahina Imam & Muntasir Ahmad Nasif

Date: 10 March 2024

Fire Safety Inspection Report

N.K. Sweaters Ltd.

Introduction:

N.K. Sweaters Ltd. was surveyed for fire safety on **10/03/2024** 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):

1. Shed-01. (G+1), Partial Two storied Steel Structure
Start Date: December, 2012
End Date: August, 2013
Production Star: October, 2013(Deva Ltd.)/ Nov 2020 (N.K Sweater)
Design Approved by Local Authority on 10/03.2013 and layout plan approved by DIFE on 12/04/2021.
2. Shed-2 (G+M), Partial Two storied Steel Structure
Start Date: December, 2012
End Date: August, 2013
Production Star: October, 2013(Deva Ltd.)/ Nov 2020 (N.K Sweater)
Design Approved by Local Authority on 10/03.2013 and layout plan approved by DIFE on 12/04/2021.
3. Shed-3 (G+1), Two Storied Steel Building.
Start Date: December, 2012
End Date: May, 2013
Production Star: October, 2013(Deva Ltd.)/ Nov 2020 (N.K Sweater)
Design Approved by Local Authority on 10/03.2013 and layout plan approved by DIFE on 12/04/2021.
4. Security Post (Single Story RCC)
Start Date: December, 2012
End Date: August, 2013
Production Star: October, 2013(Deva Ltd.)/ Nov 2020 (N.K Sweater)
Design Approved by Local Authority on 10/03.2013 and layout plan approved by DIFE on 12/04/2021.
5. Prayer and Child Care, Doctors Room & Store (Single Story steel shed)
Start Date: December, 2012
End Date: August, 2013
Production Star: October, 2013(Deva Ltd.)/ Nov 2020 (N.K Sweater)
Design Approved by Local Authority on 10/03.2013 and layout plan approved by DIFE on 12/04/2021.

6. Toilet Block (Single Shed)
Start Date: December, 2012
End Date: August, 2013
Production Star: October, 2013(Deva Ltd.)/ Nov 2020 (N.K Sweater)
7. Dining Shed (Steel) Single story
Start Date: December, 2012
End Date: August, 2013
Production Star: October, 2013(Deva Ltd.)/ Nov 2020 (N.K Sweater)
Design Approved by Local Authority on 10/03.2013 and layout plan approved by DIFE on 12/04/2021.
8. Utility Building (Single Story RCC)
Start Date: December, 2012
End Date: May, 2013
Production Star: October, 2013(Deva Ltd.)/ Nov 2020 (N.K Sweater)
Design Approved by Local Authority on 10/03.2013 and layout plan approved by DIFE on 12/04/2021.
9. Cycle Stand, Shop, Thread Sucker & Spot Remove Room (Steel)
Start Date: December, 2012
End Date: August, 2013
Production Star: October, 2013(Deva Ltd.)/ Nov 2020 (N.K Sweater)
Design Approved by Local Authority on 10/03.2013 and layout plan approved by DIFE on 12/04/2021.
10. Boiler Room (Single story steel shed)
Start Date: December, 2012
End Date: August, 2013
Production Star: October, 2013(Deva Ltd.)/ Nov 2020 (N.K Sweater)
Design Approved by Local Authority on 10/03.2013 and layout plan approved by DIFE on 12/04/2021.

11. Wastage Room (Single Story Steel)

Start Date: December, 2012

End Date: May, 2013

Production Star: October, 2013(Deva Ltd.)/ Nov 2020 (N.K Sweater

Design Approved by Local Authority on 10/03.2013 and layout plan approved by DIFE on 12/04/2021.

12. Staff Dining (Single story Steel)

Start Date: December, 2012

End Date: August, 2013

Production Star: October, 2013(Deva Ltd.)/ Nov 2020 (N.K Sweater)

Design Approved by Local Authority on 10/03.2013 and layout plan approved by DIFE on 12/04/2021.

Mazukhan, Ratonpur, Kaliakoir, Gazipur.

Points of contact:

A.H.M Showkat Imran

Director

+8801713508879

Email: showkatimran@nkslknit.com

Md. Rafiqul Islam

Manager, HR & Admin

+8801671070363

Email: rafiqbd2014@nkslknit.com



Findings & Recommendations :

N.K. Sweaters Ltd.

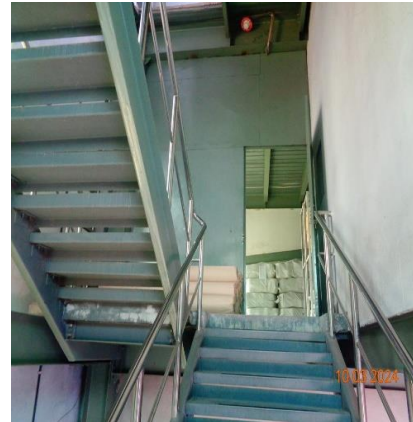
Table 1 summarizes the major fire safety issues identified during the inspection. Recommendations have been provided to address each issue.

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-1	Fire Rated Construction	Steel sheds are interim constructed where structural members are constructed by steel and have been found in exposed condition without any fire protection.	Interim construction shall be type-1 or type-2 construction in accordance with the RSC Technical Guidelines (Standard) 3.5.2.1 and BNBC Part-2, Table-3.2.4. Construction of new non-high-rise buildings shall be Type 1 or Type-2 construction [RSC Technical Guidelines (Standard) 3.5.2.2]. Provide required fire rating on the structural elements by following Section 4.4 and Table 4.4.1 of the RSC Technical Guidelines (Standard) or Table 3.3.1 and Table 4.1.1 from BNBC Part 4. Consult a qualified fire protection engineer to design the rated construction barriers in between two floors and in structural members.	Within 6 Months
				

F-2	Fire Rated Construction	The exit stairs are not separated from [work areas, other spaces] on each floor by fire-rated construction. Location: Shed-01, Shed-02 & Shed-03.	Provide minimum 2-hr fire rated construction for buildings 4 storied or more and 1-hr for up to 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) 6.8.3.1If fire doors are required to be held open for functional reasons, provide automatic-closing devices tied to the fire alarm system.	Within 3 Months
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F-3	Fire Rated Construction	Storage rooms discharges directly into the exit stair discharge. Location: Shed-03 & Shed-02	Openings from exit enclosure to storage room, generator and hazard spaces shall be provided with a vestibule with fire rated construction and openings. Provide a 1.5 hr. fire rated door on the exit stair side and a 1-hr. fire rated door on the Store, generator, substation room side. Ensure that the fire rating of the vestibule construction matches that of the exit stair enclosure.	Within 3 Months
 				

F-4	Fire Rated Construction	All discharge of Shed-03 to the interior of the Building.	1. Modify stair to discharge directly outside. Or 2. provide 1-hr fire-rated exit passageway leading directly outside (Vestibule to separated any storage areas.) Or 3. Provide sprinkler protection for for discharge floor in accordance with NFPA 13.	Within 3 months
				
F-5	Fire Rated Construction	Rooms used for storage of combustible materials are not separated from the surrounding occupancy/areas & floors. Location: Ground Floor of Shed-03.	Rooms used for storage of combustible materials shall be separated from the surrounding occupancy with a minimum 1 hour construction. Store rooms directly discharge in exit stair enclosure shall be separated in accordance with the RSC Technical Guidelines (Standard) Section 6.14.3	Within 3 Months



F-6	Fire Rated Construction	Areas used for in-process storage of combustible materials are open to the surrounding occupancy. Location: Shed-01 & Shed-03.	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
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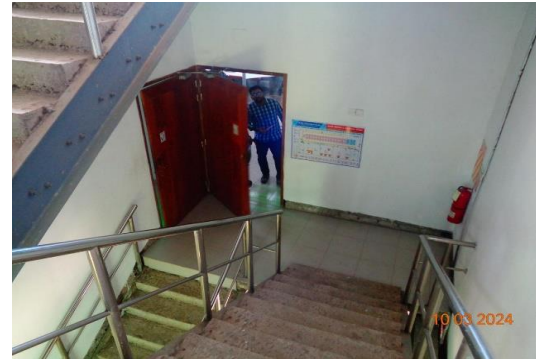


F-7	Fire-Rated Construction	Dining area is not separated from Generator, compressor and fire pump room.	Seal all penetrations and openings to the interior of the Generator, Compressor and Fire pump room along the discharge path to provide a minimum 3-hr fire separation.	Within 3 months
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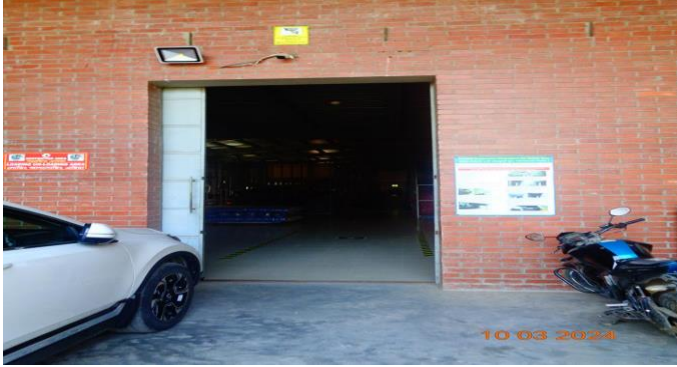
F-8	Means of Egress	Single exit provide at 1st floor of accessories store of shed-02 where travel distance exceed 75 ft.	Maintain maximum 50 occupants having a travel distance of 23m (75 ft). Or Provide additional exit.	Within 3 Months
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F-9	Means of Egress	Building did not have stair designation signs, floor designation at required locations.	Provide stair designation sign at each floor entrance from the stair to the floor in English and Bengali. Signs shall indicate the name of the stair and the floor level. Signs shall be posted adjacent to the door.	Within 1 Month
F-10	Means of Egress	Building did not have Evacuation map and occupant load signs at the required locations.	Provide stair designation signs and occupant load signs at the required locations.	Within 1 Month
F-11	Means of Egress	Most of the door at ground floor discharge over the landing.	Modify the egress door, door shall not swing out over exit stair landing.	Within 1 Month



F-12	Means of Egress	No stair landing is provided at ground floor of Shed-01, Shed-02 & shed-03.	Provide stair landing as per RSC Technical Guideline (Standard) 6.8.5 and 6.9.2.2.	Within 1 Month
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F-13	Means of Egress	Sliding doors are provided at ground floor of Shed-3. stair and along egress routes.	Replace all collapsible and sliding doors along the means of egress with side-hinged, swinging egress doors. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.	Within 1 Month
				
F-14	Means of Egress	Aisles mark is not provided 1st floor Shed-3.	Aisles shall be provided with a minimum unobstructed clear-width of 0.9 m (36 in.).	Within 1 Month



F-15	Means of Egress	Parapets or guards are provided in occupied roof which is less than 1067mm (42 inch.). Location: Shed-01, Shed-02 & Shed-03.	Provide parapets or guards with a minimum height of 1067mm (42 inch.).	Within 1 Month
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F-16	Mean of Egress	Safe guards are not provided at Shed-3 proposed office area	Provide parapets or guards with a minimum height of 1067mm (42 inch.).	Within 1 Month
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F-17	Mean of Egress	Handrails are not provided on both sides of shed-3.	Provide handrails on both sides of the exit stair and ramp. Interim handrails shall have a minimum height of 865 mm (34 in.) and a maximum height of 965 mm (38 in.) as measured from the leading edge of the tread.	Within 1 month
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F-18	Mean of Egress	Intermediate handrail is not provide at ground floor exit discharge way	Intermediate handrails shall be provided when the stair width exceeds 2.2 m (87 in.)	Within 1 Month.
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F-19	Egress Lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes on all floors.	Test the emergency lighting system on each floor and provide additional emergency fixtures to supply adequate illumination along the means of egress. Provide a minimum illumination of 10 lux at the floor level within exit stairs and along exit discharge paths and a minimum 2.5 lux along exit access aisles.	Within 1 Month
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F-20	ITM of Emergency light and Exit Sign	Inspection, testing, and maintenance for the exit sign and emergency lighting system was not in accordance with The RSC Technical standard.	Inspect, test and maintain the exit sign and emergency lighting system in the accordance with The RSC Technical standard. Keep written records on-site.	Within 1 Month after installation
F-21	Egress Lighting	Illuminated 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 1 Month
F-22	Fire Alarm and Detection System (FADS)	Fire alarm & detection system installation requires detailed review to confirm compliance with NFPA 72 and RSC Technical Guidelines (Standards).	Submit as-built drawings, testing records, equipment certification and other relevant documentation to the RSC for review and approval; modification (if required) shall have to done as per the reviewed design and standard.	Design Review within 2 months and installation within 4 months.



F-23	Inspection, Testing and Maintenance of FADS.	Inspection, testing and maintenance for the fire detection and alarm system was not in accordance with standard.	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 Month (after installation)
F-24	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 1 Month

F-25	Smoking Sign	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
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