

FIRE SAFETY INSPECTION REPORT

NETWORK CLOTHING LTD.

ACCORD ID: 12170

**228/3, SHAHID RAWSHAN SARA, CHANDANA,
GAZIPUR-1702.**

Other Factories: Network Apparels Ltd.



October 11, 2015

Fire Safety Inspection Report Network Clothing Ltd.

Introduction

Network Clothing Ltd. manufacturing complex was surveyed for fire safety on 10/11/2015 by Jensen Hughes.

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.

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, Jensen Hughes 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):

Network Clothing Ltd.

Factory Address:

228/3, Shahid Rawshan Sarak, Chandana, Gazipur-1702.

Points of Contact:

MD. Muzibul Hoque, Manager

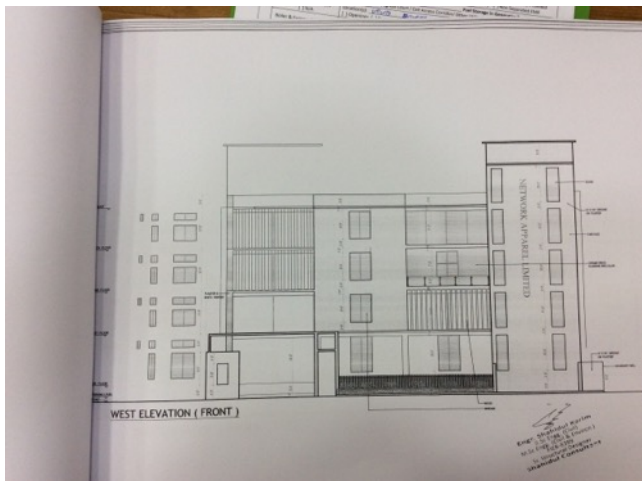
Network Apparels Ltd.

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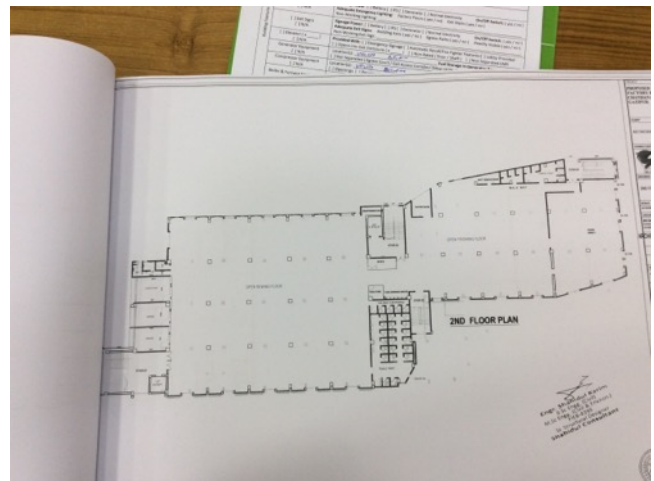
muzibul.ncl@gmail.com

General Building Information - Main building

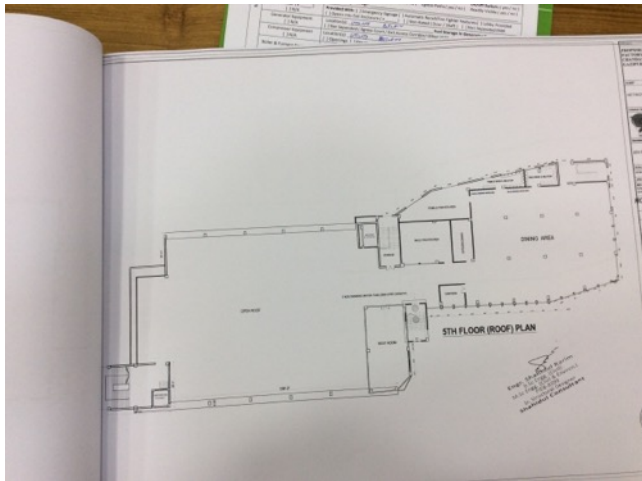
Number of Stories Below / Above Grade	0 / 5
Highest Occupied Floor Level / Height	Roof / 22.5 m
High Rise (Accord 3.2.1)	Yes
Occupiable Roof (Accord 3.2.2)	Yes
Occupiable Roof Provided with Adequate Parapets / Guards (Accord 6.12.2.4)	Yes
Occupancy Classifications	F Business G2 Industrial H2 Storage
Floor Plans Available	Yes



Building section plan.



2nd floor.



Roof top.

Date Of Construction	October 20, 2000
Major Renovations / Additions	No
Other Tenants In Building	Yes
Comments	Network Clothing Ltd. on ground, 1st and shared at 5th floor.
Floors Occupied By Factory	2nd, 3rd, 4th and 5th floor.

Floor	Use	Occupant Load
2nd	Sewing, Inspection, Finishing, Sub-accessorie store	500
3rd	Office, Sewing, Sub-store, finishing, sample, Lab.	80
4th	Cutting, fabric store and Cad room.	100

Construction Features

Non-Combustible Construction	Yes
Fire-Resistive Construction	No

Building Exposures

North	3 meters away from JC printing & knitting.
South	Open space
East	Open space
West	Open to road

Vertical Openings

Exit Stairs Enclosed in Fire-Rated Construction (Accord 6.14)	Yes
Exit Stair Penetrations are Fire Rated (Accord 6.14)	Yes
Exit Stair Openings are Fire Rated (Accord 6.14)	Yes
Exterior Exit Stairs Separated From Building (Accord 6.3.1.3)	N/A
Shafts Enclosed in Fire-Rated Construction (Accord 4.5.7)	Yes
Openings / Penetrations in Fire-Rated Floors are Protected (Accord 4.5.3)	No
Atrium Protected As Required (Accord 3.7)	N/A

Egress Features

Four (4) exit stairs serve the five story building. Egress from the ground floor was provided by four (4) exits. Each floor had an adequate number of exits with sufficient exit capacity based on occupant load. All exits were remotely located. All exits discharged to the exterior of the building. Handrails were not present on both sides of the exit stairs on all floors. All doors were open and unlocked during the inspection. Emergency evacuation plans were located at exit entrances of each floor. Fire drills are conducted monthly, records were provided during the inspection. Daycare is located on the ground floor and is provided with the proper travel distance requirements. The building was five stories and re-entry was provided within Accord standard. All exit stairs are provided with 1.5-hr fire-rated doors. Certification documentation for the doors was not provided during the inspection. UL testing certification tags were provided on the doors.

Floor	Occupant Load	No. Exits	Exit Capacity
2nd	500	4	950
3rd	80	4	950
4th	100	4	950

General

Number of Exits Per Floor is Compliant (Accord 6.6)	Yes
Capacity of Exits Per Floor Is Compliant (Accord 6.5.3)	Yes
Exits Remotely Located (Accord 6.6.6)	Yes

Exit Doors

Egress Doors are Side-Hinged (Accord 6.8.1)	Yes
Egress Doors Swing Correctly (Accord 6.8.1)	Yes

Egress Doors Without Locking Hardware in Direction of Travel (Accord 6.8.2)	Yes
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Exit Stairs

All Exit Stairs Discharge Directly to the Exterior (Accord 6.17)	Yes
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Handrails Provided on Both Sides (Accord 6.9.2.4)	No
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Exit Stairs Free of Storage and Obstructions (Accord 6.3.8, 6.3.9)	Yes
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Electrical Panels Located Outside of Exit Stairs	Yes
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Exit Stairs Serving More than 5 Stories Provided with Re-Entry (Accord 6.8.3)	N/A
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Exit Access & Arrangement

Means of Egress Free of Storage & Obstructions (Accord 6.3.8, 6.3.9)	Yes
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Means of Egress of Adequate Width (Accord 6.5)	Yes
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Travel Distances, CPT, DE's Within Limits (Accord 6.13)	Yes
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Exit Access Corridors Provided with Proper Fire Protection / Separation (Accord 6.3.1.1)	N/A
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Daycare Within Limits (Accord 3.4.2.1.1)	Yes
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**Egress Court Provided
With Adequate Fire Rated
Separation (Accord
6.17.2)** N/A

**Utility / Storage Rooms
Adequately Separated
from Exit Enclosures
(Accord 6.14.3)** Yes

Emergency Planning

**Emergency Evacuation
Plans Provided (Accord
13.3)** Yes

**Fire Drills Conducted &
Records Maintained
(Accord 13.2)** Yes

**Smoking Prohibited
(Accord 13.5)** Yes



Emergency evacuation plan



Emergency evacuation plan

Fire Protection Features

Sprinkler System

Partial automatic sprinkler protection was provided in the building for the storage room on 4th floor. However, automatic sprinkler protection is not required based on the height of the highest occupiable floor. Sprinkler installation is not per NFPA 13. No records or assertions of regular testing or maintenance of the automatic sprinkler system were provided.

Sprinkler Protection Required No

Type of System Installed Automatic wet sprinkler

Location/Coverage 4th floor

ITM Per NFPA 25 No



Sprinkler piping



Sprinkler piping

Standpipe System

A Class III standpipe system was provided in the building. Hose cabinets with 1.5 in. hoses were provided adjacent to exit stair entrances and 2.5 in. standpipe hose connections were provided within the exit stairs. The factory building was over 10 m (33 ft) and requires a Class III standpipe system. Records of regular testing or maintenance of the standpipe system were provided however they were not in accordance with NFPA 25.

Standpipe System Required	Yes
Type of System Installed	Class III
Hose Connection Locations	Adjacent to exit stair.
ITM Per NFPA 25	No



Hose cabinet



65mm hose connection

Fire Water Supply

The standpipe system was supplied by fire pumps fed from a cistern that is accessed from ground floor. The cistern had a reported capacity of 35,000 Gal. The fire pump system consisted of a diesel fire pump, an electric fire pump and jockey pump. The fire pump did not appear to comply with NFPA 20 requirements. Hydraulic calculations were not available, the fire pump was not properly maintained and may not provide an adequate water supply for the required standpipe and sprinkler demand. The fire pump room was properly separated from other hazards. A fire department inlet and outlet connection was provided for the building. No records or assertions of regular testing or maintenance of the fire pump were provided.

Source, Location, & Capacity Cisterns, Ground floor, 35,000 Gal.

Fire Pump Provided Yes

Fire Department Inlet & Outlet Connections Provided (Accord 5.5.4) Yes

Fire Pump Adequate (Accord 5.5.1) No

Fire Pump Room Provided With Adequate Fire Rated Separation (NFPA 20) Yes

Fire Pump ITM Per NFPA 25 No

Fire Alarm System

The building had an addressable fire alarm system built around a Simplex alarm panel. The system supported smoke detectors, heat detectors, manual pull stations and horn with strobe units installed throughout the building. A functional test was conducted on the system during the inspection. Records of regular testing or maintenance of the fire alarm system were provided however they were not in accordance with NFPA 72.

Type of System Addressable fire system (visual and audible)

Fire Panel Location Security room

Visible Notification Per NFPA 72 Yes

Audible Notification Per NFPA 72 Yes

Alarm Annunciation Automatic
Manual
Whole Building

ITM per NFPA 72 No

Functional Test Conducted

Yes



Visual and audible notification appliances



Manual pull alarm



Fire alarm panel

Fire Detection System

Interconnected smoke and heat detectors were located in various places throughout the factory. These detectors were tied into the fire alarm system. In the event they detect smoke or heat, they will send a signal to the fire alarm control panel to activate the fire alarm. Several smoke detector still has the cover on the unit. Records of regular testing or maintenance of the fire detection system were provided however they were not in accordance with NFPA 72.

Type of Detectors	Smoke Detector Tied to Fire Alarm System Heat Detectors
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Smoke Detection Per NFPA 72	No
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Smoke detector



Heat detector

Portable Fire Extinguishers

Portable fire extinguishers, consisting of a mix of CO2 and dry chemical extinguishers, were provided throughout the building. There was a foam extinguisher located in the boiler and generator rooms. Inspection tags show recent and up-to-date inspections. Assertions of regular testing or maintenance of the portable fire extinguishers were made however no records were provided.

Types Provided	Dry chemical, CO and foam fire extinguisher
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Adequate Number/Spacing	Yes
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ITM Per NFPA 10	No
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Dry chemical extinguisher



Dry chemical and CO fire extinguisher

Manual Fire Fighting Equipment

Each floor had firefighting equipment staged adjacent to exit stair entrances. Types of manual firefighting equipment provided included: buckets, escape hoods, bolt/lock cutters, shovels, stretchers and personal protection equipment.

Types of Equipment Provided	Buckets, escape hoods, bolt/lock cutters, shovels, stretchers and personal protection equipment.
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Location of Equipment	Adjacent to exit stair entrances
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Other Features

Emergency Lighting & Exit Signs

Emergency lighting appliances (battery pack driven) were located inside and outside the exit enclosure walls. There were multiple LED lights that had an alternate “Instant Power Supply” (IPS) on each floor. Upon random testing of these units, some were not in working order. Each floor had a number of illuminated exit signs, a mix of directional and non-directional, located along the exit access and at exits. The factory management reported that these are all serviced by normal electricity as well as by multiple “Instant Power Supply” (IPS) units. Assertions of regular testing or maintenance of the emergency lighting system were made however no records were provided.

Exits and Exit Access Properly Marked with Exit Signage	Yes
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Emergency Power IPS
 Battery

**Adequate Emergency
Lighting for Exits & Exit
Access** Yes

**Adequate Inspection /
Testing (Accord 10.12)** No



Directional exit sign



Exit sign and emergency light



IPS powered emergency light

Elevator

There was an elevator that serves all floors. Emergency signage was provided outside the elevators on all floors. No switch was provided near the elevator that may allows firefighters to use the elevators in the event of a fire. The elevator shaft and doors was provided with proper fire-rated separations. No elevator recall was provided.

Elevator Opens Into Exit Enclosure Yes

Elevator Shaft / Doors Fire-Rated Yes

Automatic Recall No



Elevator

Compressor Equipment

Two (2) compressors serve the building. They were located in the utility building. The building had proper fire-rated separations.

Location(s) Utility building

Fire Rated Separation Yes



Compressor units

Boiler & Furnace Equipment

Single boiler serves the building. It was located in the utility building. The building had proper fire-rated separations.

Location(s)	Utility building
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Fire Rated Separation (Accord 3.4.2.1.2)	Yes
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Industrial Dryers Provided with Adequate Fire Rated Separation (Accord 3.4.2.1.2)	N/A
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Gas fired boiler

Storage Areas

Rooms used for the storage of combustible materials were separated by fire-rated construction on 4th floors. Areas are used for combustible storage that are open to the factory floor, were also present within the factory building. These areas were located on 3rd floor and it meets the pile dimension requirements. Storage areas were separated from exit stairs and discharge paths. Storage of liquefied gas cylinders were not present in the factory building. Hazardous material / flammable liquid storage was provided in the factory building. Additional fuel was not present in the generator area.

Location(s) 4th floor

**Fire Rated Separation
(Accord 3.4.2.1.5)** Yes

**Open Storage Within
Limits (Accord 3.4.2.1.6)** Yes

**Storage Areas Separated
from Exit Stairs &
Discharge Paths** Yes

**Storage / Use of
Liquefied Gas Cylinders
Prohibited Within
Building (Accord
3.4.2.1.11)** Yes

**Hazardous Materials /
Flammable Liquid
Storage Area Provided
With Adequate Fire Rated
Separation (Accord
3.4.2.1.10)**

N/A

**Generator Area Free of
Additional Fuels**

Yes

Additional Information

None

Findings & Recommendations

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

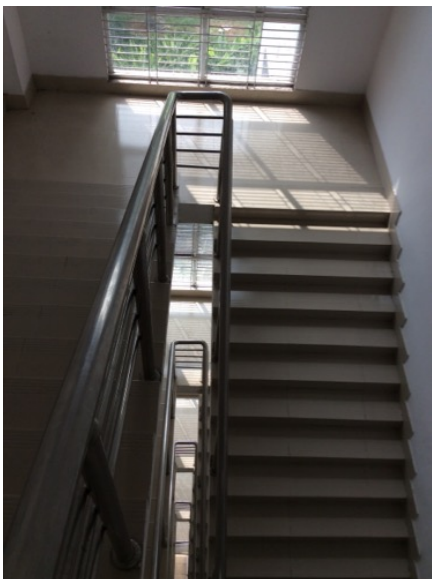
An implementation schedule shall be developed by the factory to remediate each of the findings. The specific timing of improvements, including any requested extensions due to design / installation constraints, shall be submitted to the Accord for approval.

Table 1. Findings And Recommendations

No.	Category	Finding	Recommendation	Remediation Timeframe
F-1	Fire Rated Construction	Proper certification was not available for fire rated doors installed in the exit stair and storage room.	Submit proper certifications for installed fire doors to the ACCORD for approval. If not available, or certification is not approved, install new, properly certified fire rated doors in accordance with ACCORD direction.	Immediately
				
F-2	Fire Rated Construction	Unsealed electrical shafts are located in the fire-rated floor/ceiling assemblies.	Provide a minimum 2-hr fire-rated shaft to separate the utility risers from each floor level and seal all penetrations in floor/ceiling assemblies to maintain the fire separation.	Within 3 months



F-3	Egress	Handrails are not provided on both sides of the exit stairs.	Provide handrails on both sides of the exit stair. New 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. Intermediate handrails shall be provided when the stair width exceeds 2.2 m (87 in.) .	Within 3 months
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F-4	Fire Protection	Several smoke detector still has the cover on the unit.	Remove the smoke detector cover, re-test and maintain the detection system and keep written records on-site, in accordance with NFPA 72 and ACCORD standards.	Immediately
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F-5	Fire Protection	Fire pump installation requires detailed review to confirm compliance with NFPA 20 and ACCORD standards.	Submit as-built drawings, testing records, equipment certification and other relevant documentation to the ACCORD for review and approval.	Within 1 month
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F-6	Fire Protection	Standpipe system installation requires detailed review to confirm compliance with NFPA 14 and ACCORD standards.	Submit as-built drawings, testing records, equipment certification and other relevant documentation to the ACCORD for review and approval.	Within 1 month
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F-7	Fire Protection	Fire alarm 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.	Within 1 month
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F-8	Fire Protection	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 and ACCORD standards.	Within 3 months
F-9	Fire Protection	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 on-site, in accordance with NFPA 10 and ACCORD standards.	Within 3 months
F-10	Fire Protection	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 3 months
F-11	Fire Protection	Inspection, testing and maintenance of the automatic sprinkler system is not in accordance with NFPA 25.	Inspect, test and maintain the automatic sprinkler system and keep written records on-site, in accordance with NFPA 25 and ACCORD standards.	Within 3 months
F-12	Fire Protection	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 3 months
F-13	Fire Protection	Sprinkler installation appears to not be in accordance per NFPA 13.	Submit as-built drawings, testing records, equipment certification and other relevant documentation to the ACCORD for review and approval.	Within 3 months



F-14	Egress Lighting	Several emergency lighting did not function in test mode (burned out, broken, etc.).	Regularly test the emergency lighting system on each floor and replace/repair lights as needed.	Within 1 month
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F-15	Egress Lighting	Inspection, testing and maintenance for the emergency lighting system was not in accordance with ACCORD standards.	Inspect, test and maintain the emergency lighting system in the accordance with ACCORD standards. Keep written records on-site.	Within 3 months
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