

FIRE SAFETY INSPECTION REPORT

Southeast Sweaters Ltd. NEW

ACCORD ID: 23154

278/A, Mehernagar, Dobadia, Uttarkhan
(GPS: 23.862169N, 90.446609E)

Other Factories: None



Inspected By: Safawan Abyaz

Date: 19 February, 2018

Fire Safety Inspection Report

Factory Name: Southeast Sweaters Ltd. NEW

Introduction:

Southeast Sweaters Ltd. NEW was surveyed for fire safety on 19 February, 2018 by the Accord 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 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, The Accord 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. Main Building - 5 storied
2. Utility Building- 2 storied
3. Sub-staion Building- Single Storied

Factory Address:

278/A, Mehernagar, Dobadia, Uttarkhan, Dhaka

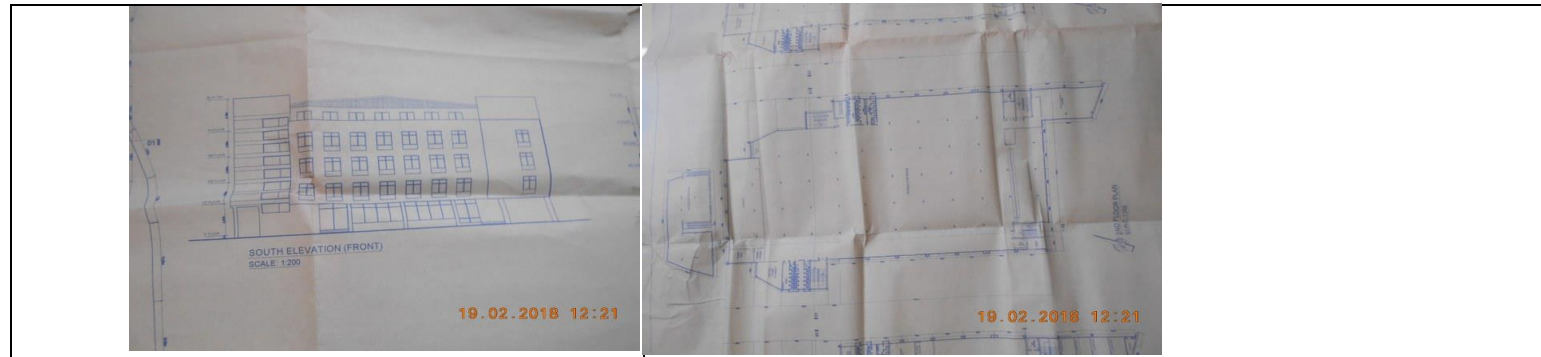
Points of contact:

Name: Md. Mahbubur Rahman lucky Designation: CEO Cell: 01912203999 E-mail: mahbub@southeastswaters.com	Name: Md. Nuruddin Talukder Designation: Manager (HR, Admin & Compliance) Cell: 01729780280 E-mail: nuruddin@southeastswaters.com
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General Information

Number of Stories Below / Above Grade	Main Building	0/5
	Utility Building	0/2
	Sub-station Building	0/1
Highest Occupied Floor Level / Height	4/16.5 m	Main Building
High Rise (Accord 3.2.1)	No	
Occupiable Roof (Accord 3.2.2)	Yes (Main Building)	
Occupiable Roof Provided with Adequate Parapets / Guards (Accord 6.12.2.4)	No	
Occupancy Classifications	G (Industrial) H (storage) F (Business) E (Assembly)	
Floor Plans Available	Yes	



Elevation View

Typical Floor Plan



Date of Construction	Main Building	May, 2015- February, 2017
	Utility Building	May, 2015- February, 2017
	Sub-station Building	May, 2015- February, 2017
Comments	Based on verbal information provided by the factory	
Other Tenants In Building/Factory Premises	No	
Floors/Structures Occupied By Factory	All	



Occupant load by floor

Building Name(s)	Floors/Use	Occupant Load	Comments
Sub-station Building	Substation Room, Generator Room, Meter Room	3	
Main Building	Ground/Winding Section, Yarn Store, Left Over Store, Accessories Store, Medical Room, Child Care Room, Finished Goods Area, Inspection Room, Loading-Unloading Area	60	
	1st/Sewing, Wash, PQC, Iron, Light Check, PQC Final, Packing, Inspection Room, Spot Removing Room, Chemical Room. Lab room	270	
	2nd/Sample Section, Linking, Over Lock, Side Seam, Light Check, Trimming, Mending, QC Room	650	
	3rd/Jacquard, Part winding, Distribution, Inspection	310	
	Roof/Office, Dining, Canteen, Prayer Room. Training Room	410	Dining & training room capacity
Utility Building	Ground/Boiler, Compressor, Pump room, Wastage Room, Miscellaneous Room	5	
	1st/Proposed Sewing Attached	0	



Construction Features:

Non-Combustible Construction	Yes	
Fire-Resistive Construction	No	Main Building

Main Building Exposures:

North	Utility Building at 14 ft. distance
South	Assembly point
East	12 ft. wide service road
West	Substation Building at 12 ft. distance



Vertical Openings:

Stairs Enclosed in Fire-Rated Construction?	Yes	
Unsealed Penetrations in Stairs	No	
Unprotected Openings From Stairs	No	
Shafts Enclosed in Fire-Rated Construction	Yes	Elevator Shaft
Floors with Openings/Penetrations	No	
Other Vertical Openings	Yes	BBT riser

Egress Features:

The main building is provided with 4 exit stairs. These stairs connect all floors from ground to fourth. UL listed, self closing, positive latching fire doors have been provided at each floor exit. These doors swing open in the direction of egress travel and are provided with panic exit hardware. There was an active provision of magnetic door hold open device interfaced with the addressable fire alarm control panel. Ground floor has individual sections and each section has adequate number of exits based on occupancy, travel distance and occupant load.

Evacuation maps have been posted for all three buildings near the exits. Fire drills are conducted on monthly basis. Records have been shown.



Buildings/Structures	Floor/Use	Occupant Load	
Sub-station Building	Substation Room, Generator Room, Meter Room	3	
Main Building	Ground/Winding Section, Yarn Store, Left Over Store, Accessories Store, Medical Room, Child Care Room, Finished Goods Area, Inspection Room, Loading-Unloading Area	60	
	1st/Sewing, Wash, PQC, Iron, Light Check, PQC Final, Packing, Inspection Room, Spot Removing Room, Chemical Room. Lab room	270	
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	3rd/Jacquard, Part winding, Distribution, Inspection	310	
	Roof/Office, Dining, Canteen, Prayer Room. Training Room	410	Number of seating arrangements at dining & training room
Utility Building	Ground/Boiler, Compressor, Pump room, Wastage Room, Miscellaneous Room	5	
	1st/Proposed Sewing Attachment	0	Not in use



General:

Number of Exits Per Floor is Compliant (Accord 6.6)	Yes	Main Building
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	



Exit Stairs:

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

Exit Access & Arrangement:

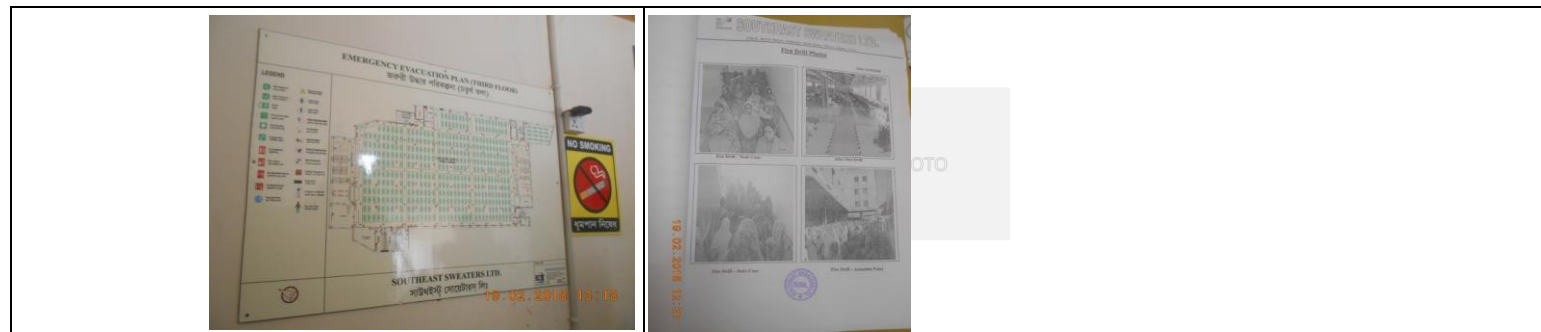
Means of Egress Free of Storage & Obstructions (Accord 6.3.8, 6.3.9)	Yes	
Means of Egress of Adequate Width (Accord 6.5)	Yes	
Travel Distances, CPT, DE's Within Limits (Accord 6.13)	Yes	
Exit Access Corridors Provided with Proper Fire Protection / Separation (Accord 6.3.1.1)	N/A	



Day-care Within Limits (Accord 3.4.2.1.1)	Yes	
Egress Court Provided With Adequate Fire Rated Separation (Accord 6.17.2)	Yes	
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	Monthly
Smoking Prohibited (Accord 13.5)	Yes	



Evacuation Map

Fire Drill Record



Fire Protection Features:

Fire Detection and Alarm System

Current System Overview: An addressable fire alarm & detection system is built around 2 inter-connected control panels for all structures. The panels were located inside the fire control room near the main gate. No functional test has been conducted. System commissioning verification has also not been done.

Type of System	Addressable	
Fire Panel Location	Fire Control Room	
Visible Notification Per NFPA 72	To be checked while T&Cx VI	
Audible Notification Per NFPA 72	To be checked while T&Cx VI	
Alarm Annunciation	Yes	
Inspection, Testing & Maintenance per NFPA 72	Yes	
Functional Test Conducted	No	



Fire Alarm Control Panel



Visual Alarm Unit



Standpipe System

Current System Overview: A class-III wet type standpipe system is installed currently. 65 mm hose connections were provided inside the staircase. 40 mm hose rack assembly is provided inside the floors and staircases. The system was reported to be connected to fire pumps. Fire pumps have been selected and installed based on hydraulic design and furnished design without any approval from AHJ.



Class II Hose Rack Assembly



65 mm Landing Valve

Sprinkler System

Current System Overview: A wet type water sprinkler system has been provided for the main building. System riser(s) was provided with zone control valves equipped with butterfly valve with supervisory switch. The system was installed based on a furnished design without approval from AHJ.



Sprinkler Protection Required	Yes	
Type of System Installed	Wet Type	
Location/Coverage	Full	
Inspection, Testing & Maintenance as per NFPA25	Yes	
Comments		



Fire Water Supply

Current System Overview: A dedicated underground reservoir is provided for fire fighting purpose. There are total 3 fire pumps provided to pump water from the underground reservoir. One electrical motor driven pump connected as main duty pump, one diesel engine driven pump as standby one and a pressure booster pump to maintain the system pressure. All pumps appear to be UL listed based on visual inspection. Separate listed controllers have been provided for each pump.

Source, Location, & Capacity	Underground reservoir, Beneath utility building, 90000 us gallon	
Fire Pump Provided	Yes	
Fire Department Inlet & Outlet Connections Provided (Accord 5.5.4)	Yes	
Fire Pump Adequate (Accord 5.5.1)	To be verified while T&Cx VI	
Fire Pump Room Provided With Adequate Fire Rated Separation (NFPA 20)	Yes	
Inspection, Testing & Maintenance Per NFPA 25	Yes	



Fire Pump



Fire Department Connection



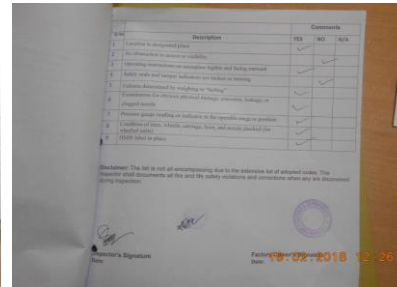
Portable Fire Extinguishers

Current System Overview: Portable fire extinguishers, consisting of a mixture of CO2 and dry chemical extinguishers were provided throughout the building. There were foam extinguisher located in the utility room. Inspection tags show recent and up-to-date inspections.

Type of Extinguisher Provided	ABC, Foam and CO2	
Adequate Number/Spacing	Yes	
Inspection, Testing & Maintenance Per NFPA 10	Yes	



ABC Dry Powder



ITM Checklist



Manual Fire Fighting Equipment

Current System Overview: Each floor had firefighting equipment staged inside staircases. Types of manual firefighting equipment provided included: buckets, escape hoods, bolt/lock cutters, shovels, stretchers and personal protection equipment.

Type of Equipment Provided	Buckets, escape hoods, bolt/lock cutters, shovels, stretchers and personal protection equipment	
Location of Equipment	Inside the staircase	



Other Features

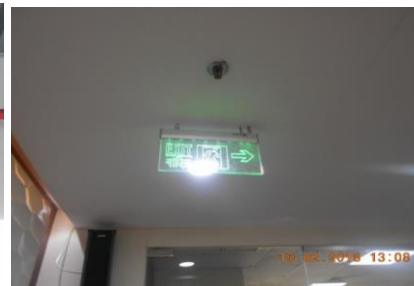
Emergency Lighting & Exit Signage

Overview: There were multiple industrial lamps provided over the aisles & exit access doors at each floor with self battery back up. Each floor had a number of illuminated exit signs located at exits. Directional exit signs were provided in adequate number & properly located. The factory management reported that these are all serviced by normal electricity as well as by "Instant Power Supply" (IPS) units. Records of regular testing or maintenance of the emergency lighting system were provided and they were in accordance with The ACCORD Standard

Exits and Exit Access Properly Marked with Exit Signage	Yes	
Emergency Power	Yes	
Adequate Emergency Lighting for Exits & Exit Access	Yes	
Adequate Inspection / Testing (Accord 10.12)	Yes	



Fog Light (Self Battery)



Directional Sign (IPS Connected)



Elevator

Overview: There was an elevator shaft in the main building discharges inside the floor. Rated shaft enclosure was provided with listed opening protective.

Compressor Equipment

Overview: There were 3 compressor units installed at the ground floor of utility building. Proper fire separation was provided for compressor room.

Location(s)	Utility Building	
Fire Rated Separation	Yes	



Compressor Equipment



Boiler & Furnace Equipment

Overview: There were two boilers & two generators installed at the ground floor of utility building. Proper fire separation was provided for the boiler & generator room.

Location(s)	Boiler, Generator	Utility Building
Fire Rated Separation (Accord 3.4.2.1.5)	Yes	
Generator Area Free of Additional Fuels	Yes	



Generator



Boiler

Additional Information:

At present the first floor of utility building is empty. Factory concerns have informed the place is proposed for a sewing attachment section. When the floor will be occupied the exit stairs shall be provided with fire separation. Electrical control panels were located under the stair at utility building. These panels shall be relocated or fire separated when the building will be occupied.



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.

SI No.	Category	Findings	Required Action	Remediation Time Frame
F-1	Structural Fire Protection	The new building construction is prefabricated steel type which is non rated and all the RCC deck slabs are resting on the steel columns and beams/girders. Hence the structural members of each floor require insulation by fire resistive rated construction materials to separate the floors from each other.	Provide fire-resistive rated insulation of the structural members of each floor following Section 4.4 and Table 4.4.1 of the Accord Standard or Table 3.3.1 (Part 3, BNBC 2006) and Table 4.1.1 from BNBC Part 4. Consult a qualified fire protection engineer to design the rated insulation.	Within 6 months
F-2	Egress	Parapets or guards are provided at occupied roof which is less than 1067mm (42 inch.).	Provide parapets or guards with a minimum height of 1067mm (42 inch).	Within 3 months





F-3	Fire Detection & Alarm System	Fire detection & alarm system installation requires detailed review to confirm compliance with NFPA 72 and ACCORD standards	<p>Submit as-built drawings, testing records, listing information and other relevant documentation to the ACCORD for review and approval, modification shall have to be done as per the reviewed design (if required)</p> <p>Upon approval & installation/modification the owner shall contact the Accord prior to conducting the final acceptance testing of the fire detection & alarm system installation.</p> <p>Also inspect, test and maintain the fire detection & alarm system and keep written records on-site, in accordance with NFPA 72 and ACCORD standards.</p>	Design submission within 2 months; Installation/modification within 4 months
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F-4	Fire Protection System	Fire pump, water supply & standpipe system installation requires detailed review to confirm compliance with NFPA 14, 20, 22, 25 and ACCORD standards	<p>Submit as built drawings, testing records, listing information and other relevant documentation to the ACCORD for review and approval, modification shall have to done as per the reviewed design (if required)</p> <p>Upon approval & installation/modification the owner shall contact the Accord prior to conducting the final acceptance testing of the sprinkler system installation.</p> <p>Also inspect, test and maintain the standpipe system & fire pumps, and keep written records on-site, in accordance with NFPA 14, 20, 25 and ACCORD standards.</p>	Design submission 2 months; Modification/installation within 6 months.
F-5	Fire Protection System	Sprinkler system installation requires detailed review to confirm compliance with NFPA 13 and ACCORD standards	<p>Submit as built drawings, testing records, listing information and other relevant documentation to the ACCORD for review and approval, modification shall have to done as per the reviewed design (if required)</p> <p>Upon approval & installation/modification the owner shall contact the Accord prior to conducting the final acceptance testing of the sprinkler system installation.</p> <p>Also inspect, test and maintain the standpipe system & fire pumps, and keep written records on-site, in accordance with NFPA 25 and ACCORD standards.</p>	Design submission 2 months; Modification/installation within 6 months.



F-6	Egress Lightng	Manual on-off switch is provided for emergency lighting & exit signage units.	Remove manual on/off switches from emergency lighting & exit signage units to prevent them from being switched off	Within 1 month
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F-7	Egress Lighting	Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes at winding section.	<p>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 exits and 2.5 lux along exit access aisles.</p> <p>Inspect, test and maintain the emergency lighting system in the accordance with The ACCORD standard. Keep written records on-site.</p>	Within 3 months
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