

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: Nine Star Apparels Ltd.
Address of the Factory	: House No. 116, Plot No. 56, Road No 05 (Noorani Madrasa Road), Mouza - Hatulia, Kamarpara, Turag, Dhaka
Present Status of the Factory	: Under Operation
Structural Assessment Conducted by	: BUET
Date of Structural Inspection	: 3 rd November 2014

BASIC INFORMATION:

The present garment factory is a commercial building with beam-column frame system. The following information were noted:

i. Building Usage Type	: Primarily as Garments Factory.
ii. Structural System	: Beam-column frame system.
iii. Floor System	: Two-way solid floor slab with beam supported
iv. Floor Area	: Approx. 2000.45 sq. ft from ground to 6 th (as per approval drawings).
v. No. of Stories	: Three
vi. Construction Year	: Phase 1: 20013 to 2014 (as per verbal information)
vii. Foundation Type	: Individual column footing
viii. Design Drawings	: Approval drawing available and approved for six storied building (approval from RAJUK, date of approval 29-12-2013).
ix. Soil Investigation Report	: Not available
x. Construction Materials	: Reinforced Concrete with brick chips (as reported) and steel plain rebar 60 Grade (assumed as per construction year).
xi. Generator	: One generator having 125kVA capacity is on ground floor.

RECOMMENDATIONS FOR CORRECTIVE ACTION:

The recommendations of corrective action for both Structural and Fire & Electrical Safety comprises in Short Term, Mid Term and Long Term basis.

The recommendations for **Structural Safety** corrective action are:

Short Term (Immediate)	: The factory owner has been instructed to prepare and submit a load plan for vetting.
Mid Term (6-weeks)	: None
Long Term (6-months)	: Extra construction beyond approval (i.e., the 6th floor) is to be removed. Necessary remedial measures to be taken for efflorescence and proper painting should be done.

The recommendations for **Fire & Electrical Safety** corrective action are:

Name of the Factory	: Nine Star Apparels Ltd.
Fire & Electrical assessment conducted by	: BUET
Date of Fire & Electrical Inspection	: 29 th October 2014

(A): Recommendations for Fire Safety corrective actions:

Fire Safety Issues	
Immediate <i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i>	N/A

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<p>Short Term <i>(Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity)</i></p>	<p>Remove obstructions from all escape routes, aisles and passageways.</p> <p>Maintain minimum effective width of corridors, passageways and aisles.</p> <p>Remove all combustible materials from transformer, substation, boiler and generator room, if exists.</p> <p>Confirm adequate numbers of fire drills.</p> <p>Make sure that portable extinguishers are easily accessible, monitored and maintained at regular interval as per the Guidelines.</p> <p>Provide proper directional signs and exit signs in Bangla and English as per the Guidelines.</p>
<p>Mid Term <i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<p>Prepare drawings to ensure adequate horizontal and vertical fire-rated separation inside one floor and between different floors, e.g. separation with stairways, storage, lift lobby, offices, and work areas as per the Guidelines.</p> <p>Prepare plans to ensure all exit access doors are side- swinging type and open to the direction of traffic flow.</p> <p>Produce drawings to demonstrate how stairways are to be made of adequate dimensions and appropriate specifications and to be converted into fire-rated enclosures equipped with fire-rated doors.</p> <p>Prepare plans to install lift or close lift shaft.</p> <p>Also show methods to ensure proper separation of high risk areas (e.g., generator, boiler, transformer and substation rooms) as per the Guidelines.</p> <p>Provide design to install proper detection and alarm system. Establish command station as per the Guidelines.</p>
<p>Long Term <i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	<p>Ensure adequate horizontal and vertical fire-rated separation inside one floor and between different floors, e.g. separation with stairways, storage, lift lobby, offices, and work areas.</p> <p>Ensure proper separation of high risk areas (e.g., generator room) as per the Guidelines.</p> <p>Ensure all exit access doors are side-swinging type and open to the direction of traffic flow.</p> <p>Install lift or close lift shaft.</p> <p>Install proper detection and alarm system.</p> <p>Provide fire rated enclosure, install self-closing fire rated door as per guidelines.</p>

(B): Recommendations for Electrical Safety corrective actions:

Electrical Safety Issues	
<p>Immediate <i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i></p>	<p>N/A</p>

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<p>Short Term <i>(Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity)</i></p>	<p>Provide instructions for first aid and artificial respiration from exposure to electrical shock.</p> <p>Provide cable trench with cover and rubber mat in front of the panel.</p> <p>Ensure well-dressed cabling with lugs and remove loose cabling.</p> <p>Ensure earthing of panel body & door with fitted condition.</p> <p>Provide distribution board as per guideline and put identification mark on distribution panel.</p> <p>Remove burn/broken/loose MCB/MCCB box/socket.</p>
<p>Mid Term <i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<p>Provide separate service ducts for electrical cables.</p> <p>Provide new Emergency Lighting system.</p> <p>Provide appropriate Lightening Protection System as per guidelines.</p>
<p>Long Term <i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	<p>N/A</p>