

## Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: T.J. Sweaters Ltd.
Address of the Factory	: Shataish Road, Gazipura, Tongi, Gazipur
Present Status of the Factory	: Under Operation
Structural Assessment Conducted by	: BUET
Date of Structural Inspection	: 21 <sup>st</sup> November 2013
Fire & Electrical Assessment Conducted by	: BUET
Date of Fire & Electrical Inspection	: 6 <sup>th</sup> December 2013

### **BASIC INFORMATION:**

The factory building is a five storied RC beam column frame structure. The following information was noted:

i.	Building Usage Type	: Garment Factory
ii.	Structural System	: RC Frame Building
iii.	Floor System	: Edge supported RCC slabs
iv.	Floor Area	: Approximately 600 sq. m (6500 sqft) per floor
v.	No. of Stories	: Five Story
vi.	Construction Year	: Not Available
vii.	Foundation Type	: Isolated footing (as per drawing)
viii.	Design Drawings	: Available (part; without any date and signature)
ix.	Soil Boring Report	: Available. Done by Soil & Foundation Consultant; Date of performance not mentioned.
x.	Construction Materials	: Reinforced Concrete, Coarse Aggregate: Brick Chips
xi.	Generator	: Outside the building

### **ACTIONS AND TIMESCALES:**

- As built drawings (structural and foundation details) should be prepared immediately and brought to the notice of Consultants.
- Depth of the footings (at least one interior, one exterior and one corner) from existing ground level should determined immediately.
- Distressed beam should be repaired immediately using appropriate technique.
- Recommended loading intensity should be strictly maintained.
- No modification of the structural configuration or further construction is to be carried out without detail analysis.

### **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)	:
Mid Term (6-weeks)	:
Long Term (6-months)	:

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

**(A): Recommendations for Fire Safety corrective actions:**

Immediate <i>(the factory should not continue to be occupied until these non-conformities</i>	N/A
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<i>have been rectified):</i>	
<p><b>Short Term</b></p> <p><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 all temporary obstructions from all escape routes, aisles and passageways.</p> <p>Remove all combustible materials from generator room.</p> <p>Ensure minimum width of corridors, passageways and aisles.</p> <p>Ensure adequate numbers of fire drills.</p> <p>Ensure easy access to portable extinguishers and monitor and maintain the same at required interval as per guidelines.</p> <p>Provide proper directional sign and exit sign in Bangla and English as per guidelines.</p>
<p><b>Mid Term</b></p> <p><i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<p>Produce proper drawing and plans to create horizontal and vertical fire-rated separation for stairways of appropriate specifications, grills, storage and assembly areas, offices, work areas. Also design to ensure proper separation of high risk areas (e.g., generator, boiler, transformer and substation rooms) as per guidelines.</p> <p>Remove all collapsible gates/roller shutters/sliding doors. Produce design 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 side swinging doors of required dimensions opening in the direction of travel at each floor.</p> <p>Provide design to install proper detection and alarm system.</p>
<p><b>Long Term</b></p> <p><i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	<p>Install horizontal and vertical fire-rated separation for stairways of appropriate specifications, grills, storage and assembly areas, offices, work areas.</p> <p>Ensure proper fire separation of high risk areas (e.g., generator, boiler, transformer and substation rooms) as per approved design.</p> <p>Install fire rated enclosure and doors of appropriate dimensions at exit to the stairs to prevent smoke and fire propagation as per approved design.</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:***

<p><b>Immediate</b></p> <p><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</p> <p><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>Ensure well-dressed cabling with lugs and remove loose cabling.</p> <p>Ensure earthing of panel body &amp; door with fitted condition.</p> <p>Provide distribution board as per guideline and put identification mark on distribution panel.</p> <p>Remove burn MCB/MCCB box/socket.</p>
<p>Mid Term</p> <p><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 Lightning Protection System as per guidelines.</p>
<p>Long Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	<p>N/A</p>