

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory : Tulaga Sweater
Address of the Factory : Plot # A (8-9), BSCIC, Konabari, Gazipur
Present Status of the Factory : Under Operation
Structural Assessment Conducted by : BUET
Date of Structural Inspection : 4th 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 : Garments Factory
- ii. Structural System : RC beam column frame structure
- iii. Floor System : Edge supported RC solid floor slab system on RC beam
- iv. Floor Area : Approx.7680 sft/floor (as per structural drawings)
- v. No. of Stories : Six
- vi. Construction Year : 2009-2010
- vii. Foundation Type : Individual footing of different sizes (2.95 m × 2.95 m for central columns, 2.49 m × 2.49 m for some interior and some edge columns, and 2.21 m × 2.21 m for corner and some edge columns as per structural drawing)
- viii. Design Drawings : Available (Engr. Mir Mizanur Rahman, Mir Engineering & Consultants, KA-1/A, Kuril, Dhaka).
- ix. Soil Investigation Report : Available (By The Soil & Foundation Engineers, B-219, Khilgaon Chowdhury Para, Dhaka-1219, Phone: 7216864)
- x. Construction Materials : Reinforced Concrete with brick chips (as reported) and deformed 60 Grade rebars (as observed).
- xi. Generator : One Generator is located in the Ground Floor of the building

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) : A Detail Engineering Assessment (DEA) has to be completed. Necessary remediation's after completion of DEA.

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

Name of the Factory : Tulaga Sweater
Fire & Electrical assessment conducted by : BUET
Date of Fire & Electrical Inspection : 12 November 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>Confirm adequate numbers of fire drills.</p> <p>Make sure that portable extinguishers are 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, assembly areas, offices, and work areas as per the Guidelines.</p> <p>Prepare plan to ensure all exit access doors are side- swinging type and open to the direction of traffic flow.</p> <p>Show methods to demonstrate how exit doors are to satisfy the occupancy load according to the Guideline</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>Also show methods to ensure proper separation of high risk areas (e.g., generator, boiler rooms) as per the Guidelines.</p> <p>Provide design to install proper detection and alarm system.</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, assembly areas, offices, and work areas.</p> <p>Ensure all exit access doors are side-swinging type and open to the direction of traffic flow.</p> <p>Ensure proper separation of high risk areas (e.g., generator, boiler rooms) as per the Guidelines.</p> <p>Install proper detection and alarm system.</p> <p>Provide fire rated enclosure, install 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>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 style="text-align: center;">N/A</p>