

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: Tex Tech Co. Ltd.
Address of the Factory	: Safwan Tower, Sharifpur, Maleker Bari, National University, Gazipur
Present Status of the Factory	: Under Operation
Structural Assessment Conducted by	: BUET
Date of Structural Inspection	: 4 th November 2014

BASIC INFORMATION:

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

i.	Building Usage Type	: As Garments Factory building
ii.	Structural System	: RC Frame structure
iii.	Floor System	: Edge supported RCC slabs; thickness= 5.5" (as reported by the site engineer)
iv.	Floor Area	: Approximately 2588 sq. meter (27847 sqft) per floor
v.	No. of Stories	: Four stories, but designed as a 6-storied factory building
vi.	Construction Year	: First phase: 2010, up to 1 st floor; 2 nd phase: 2011-12, 2 nd floor; 3 rd phase: 3 rd floor
vii.	Foundation Type	: Isolated individual footing (Interior F3-12.5'x12.5'; interior F4-10.5'x10.5'; exterior F2-10'x10'; corner F1- 8'x8'; rest at 8' below EGL, as per design drawing)
viii.	Design Drawings	: Drawing available (Approved by LGED/UP, dt. 25/1/2009; Consultant: ACI Engineers, House # 499, Road # 34, Mohakhali DOHS, Dhaka)
ix.	Soil Investigation Report	: Available, done in 2009 by Rupali Soil Investigator & Survey Experts, Ga-118, Middle Badda, Dhaka
x.	Construction Materials	: Reinforced Concrete with Stone Chips (verified) and reinforcing steel (BSRM 500W, verified)
xi.	Generator & Sub-station	: Two generators at ground floor (200 & 50 kVA); sub-station also at ground floor (730 kVA)

Comment [u1]: Report needed to fill up this section.

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. A thorough structural adequacy check will also be needed in future for vertical extension of the building beyond the proposed limit.

Mid Term (6-weeks) : None

Long Term (6-months) : None

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

Name of the Factory	: Tex Tech Co. Ltd.
Fire & Electrical assessment conducted by	: BUET
Date of Fire & Electrical Inspection	: 8 th November 2014

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(A): Recommendations for Fire Safety corrective actions:

Fire Safety Issues	
Immediate (the factory should not continue to be occupied until these non-conformities have been rectified):	N/A
Short Term (Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity)	<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 generator room. 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>
Mid Term (The remedial works indicated must be carried out within a period of 6 weeks)	<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, 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 close the Lift shaft if not used or to install Lift and enclose Lift lobby to ensure proper fire protection.</p> <p>Also show methods to ensure proper separation of high risk areas (e.g., generator, boiler and substation rooms) as per the Guidelines.</p> <p>Provide design to install proper detection and alarm system.</p>
Long Term (The remedial works indicated must be carried out within a period of 6 months)	<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 and substation rooms) as per the Guidelines.</p> <p>Close the Lift shaft if not used or to install Lift and enclose Lift lobby to ensure proper fire protection.</p> <p>Install proper detection and alarm system.</p> <p>Provide fire rated enclosure, install self-closing fire rated door as per guidelines.</p>

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(B): Recommendations for Electrical Safety corrective actions:

Electrical Safety Issues	
Immediate (the factory should not continue to be occupied until these non-conformities have been rectified):	N/A
Short Term (Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity)	<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 burnt/broken/loose MCB/MCCB box/socket.</p>
Mid Term (The remedial works indicated must be carried out within a period of 6 weeks)	Provide appropriate Lightning Protection System as per guidelines.
Long Term (The remedial works indicated must be carried out within a period of 6 months)	N/A