

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

Name of the Factory : Vase Apparels Ltd.  
Address of the Factory : Plot # 15, Road # 1, Block # Kha, Mirpur Housing Estate, Mirpur, Dhaka  
Present Status of the Factory : Under Operation  
Structural Assessment Conducted by : BUET  
Date of Structural Inspection : 1<sup>st</sup> October 2014

### **BASIC INFORMATION:**

The factory building is a six storied RC frame building with tin shed on roof. The following information was noted:

- i. Building Usage Type : Garment factory building
- ii. Structural System : RC Frame Building
- iii. Floor System : RC beam supported slab
- iv. Floor Area : Approximately 4225 sft (392.52 sq. m) per floor (Grid spacing mostly 15 ft × 17 ft).
- v. No. of Stories : Existing six story with a tin shed on roof
- vi. Construction Year : 1980-1982
- vii. Foundation Type : Isolated column footing (2.44 m × 2.44 m for central columns, 2.13 m × 2.13 m for edge columns and 1.83 m × 1.83 m for corner columns as per structural drawing) and stepped brick wall footing as per approval drawing
- viii. Design Drawings : Structural & Architectural drawings are available
- ix. Soil Boring Report : available but not readable
- x. Construction Materials : Reinforced Concrete, Coarse Aggregate is Brick Chips
- xi. Generator : outside 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) : A Detail Engineering Assessment (DEA) has to be completed.

Long Term (6-months) : Necessary remediation's after completion of DEA.

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

Name of the Factory : Vase Apparels Ltd.

Fire & Electrical assessment conducted by : BUET

Date of Fire & Electrical Inspection : 24 September 2014

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

<b>Fire Safety Issues</b>	
Immediate (the factory should not continue to be occupied until these non-conformities have been rectified):	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>Remove all combustible materials from transformer, substation room.</p> <p>Maintain minimum effective width of corridors, passageways and aisles.</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>Remove temporary structures from roof top.</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, basement, offices, and work areas. Also show methods to ensure proper separation of high risk areas (e.g., boiler, transformer and substation rooms) 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>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>Provide design to install standard standpipe, hose and fire pump system.</p> <p>Provide design to install proper detection 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, 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, boiler, transformer and substation room) as per the Guidelines</p> <p>Install standard standpipe, hose and fire pump system. 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 cover on the cable trench 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 &amp; 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>
<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>