

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory : UMEDA SB INDUSTRIES LTD.
Address of the Factory : Plot # 23, Road # 10, Kadamtali, Shyampur, Dhaka
Present Status of the Factory : Under Operation
Structural Assessment Conducted by : BUET
Date of Structural Inspection : 29th October 2014

BASIC INFORMATION:

The garment factory building is a seven-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” assumed
- iv. Floor Area : Approximately 1162 sq. m (12500 sft) per floor
- v. No. of Stories : Six stories, also approved & designed as a 6-storied building
- vi. Construction Year : No reliable information available.
- vii. Foundation Type : Pile foundation (50 feet long RCC piles of 20 inch diameter; interior column: 4 nos, exterior column: 3 nos, corner column: 2 nos)
- viii. Design Drawings : RAJUK approved Drawing available (RAJUK No. 881/96/1273, dt. 19/5/1996; Designer: Engr. Md. Jahangir Kabir, M-7007)
- ix. Soil Investigation Report : Available (Done by Creative Design & Development, 58/9 Panthapath, Dhaka-1205, March/April 2011)
- x. Construction Materials : Reinforced Concrete with Stone Chips (verified) and reinforcing steel (assumed 40 grade)
- xi. Generator : At the ground floor (300 kVA)

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) : None

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

Name of the Factory : Umeda SB Ind. Ltd.

Fire & Electrical assessment conducted by : BUET

Date of Fire & Electrical Inspection : 10th 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>Remove all combustible materials from boiler and generator room, if exists.</p> <p>Confirm adequate numbers of fire drills.</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, offices, and work areas as per the Guidelines.</p> <p>Prepare drawings to add and distribute the exits as remote as possible with regular interval.</p> <p>Show methods to demonstrate how exit doors are to satisfy the occupancy load according to the Guideline.</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>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>Add and distribute the exits as remote as possible with regular interval.</p> <p>Ensure all exit access doors are side-swinging type and open to the direction of traffic flow.</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 from exposure to electrical shock</p> <p>Remove obstruction to ensure access to MDB/DB Box Ensure well-dressed cabling with lugs</p> <p>Remove combustible materials from DB's nearest zone.</p>
<p>Mid Term <i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<p>Provide earthing to body & door.</p> <p>Provide clear identification mark on distribution board.</p> <p>Enclose all installed MCCB & Sockets properly.</p> <p>Provide service ducts or insulated conduits</p> <p>Provide design drawings for the fire detection and alarm system in accordance with the Guideline requirements and hazard situation, (with appropriate specifications and drawings) showing how they will be implemented along with implementation plan.</p>
<p>Long Term <i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	<p>Provide appropriate Lightning protection system.</p> <p>Install the fire detection and alarm systems in accordance with the Guideline requirements and hazard situation (based on appropriate specifications and drawings).</p>