

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

Name of the Factory	: A.R.R. Dismatics Ltd.
Address of the Factory	: 3 No. Madrasa Bazar Road, Matuail, Jatrabari, Demra, Dhaka
Present Status of the Factory	: Under Operation
Structural Assessment Conducted by	: BUET
Date of Structural Inspection	: 22 <sup>nd</sup> October 2014

### **BASIC INFORMATION:**

The factory building is a 6 storied RCC structure on C.S Plot # 2353, R.S Plot # 4296, Mouza # 332, Mutuail, Jatrabari, Demra, Dhaka. The following information was noted:

i.	Building Usage Type	: Garment factory building and residence
ii.	Structural System	: Combination of RC Frame Building and flat plate system
iii.	Floor System	: Edge supported RCC slabs and flat plate, (Only ground floor and 5 <sup>th</sup> floor slabs are edge supported slabs)
iv.	Floor Area	: Approximately 241 sq. m (2600 sft) per floor
v.	No. of Stories	: Existing 6-Stories, also designed as 6-storied residential-cum-commercial building.
vi.	Construction Year	: 2004-2005
vii.	Foundation Type	: Isolated individual footing
viii.	Design Drawings	: Available (Undated)
ix.	Soil Investigation Report	: Available
x.	Construction Materials	: Reinforced Concrete, Brick Chips (verified), Reinforcing steel (Frogmark-AHR)
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)	: None
Mid Term (6-weeks)	: None
Long Term (6-months)	: No vertical extension or increase in loading in any portion of the building is allowed.

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

Name of the Factory	: A.R.R Dismatics Ltd.
Fire & Electrical assessment conducted by	: BUET
Date of Fire & Electrical Inspection	: 16 <sup>th</sup> October 2014

#### ***(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

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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 transformer, substation, boiler and generator room, if exists.</p> <p>Confirm adequate numbers of fire drills.</p> <p>Ensure that portable extinguishers are easily accessible, monitored and maintained at regular interval as per the Guidelines.</p> <p>Appropriate placement of 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 plans to ensure all exit access doors are side-swinging type and open to the direction of traffic flow. 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., boiler room) as per the Guidelines.</p> <p>Provide design to install standard standpipe, hose and fire pump system.</p> <p>Provide design to install proper detection and alarm system.</p> <p>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., generator, boiler, transformer and substation rooms) as per the Guidelines.</p> <p>Install standard standpipe, hose and fire pump system.</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	
<p>Immediate <i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i></p>	N/A
<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/MCB Box</p> <p>Ensure well-dressed cabling with lugs</p> <p>Ensure proper door &amp; properly enclose MDB panel.</p>
<p>Mid Term <i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<p>Provide clear identification mark on distribution board.</p> <p>Install MDB/SDB/SB or MCB on metal board.</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>