Name of the Factory	: RONY FASHION INTERNATIONAL LTD.
Address of the Factory	: Dewanpara, Kashipur, Fatullah, Narayanganj
Present Status of the Factory	: Under operation.
Structural Assessment Conducted by	: TUV
Date of Structural Inspection	: 7th June, 2015
Fire Assessment Conducted by	: TUV
Date of Fire Inspection	: 7th June, 2015
Electrical Assessment Conducted by	: TUV
Date of Electrical Inspection	: 7th June, 2015
BKMEA Membership No.	: 851

BASIC INFORMATION:

The factory building is a three storied RCC building with beam and column system and flat slab system. The following information was noted:

i.	Building Usage Type	: Garment Factory.
ii.	Structural System	: RCC Beam Slab Frame.
iii.	Floor System	: Beam slab.
iv.	Floor Area	: Ground floor = 3329.2 sft , Entire building = 11055 sft (Approx.).
v.	No. of Stories	: GF+ 2 floors + partial floor at 3rd floor level
vi.	Construction Year	: Construction started in 2008 and completed in a single phase.
vii.	Foundation Type	: Spread foundation on arrays of timber piles.
viii.	Design Drawings	: Not available.
ix.	Soil Investigation Report	: Available.
x.	Construction Materials	: Brick aggregate in all columns, beams and slabs in all floors.
xi.	Generator	: At the ground floor on the building plinth at the south side.

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)	: N/A
Mid Term (6-weeks)	: 1. As built architectural and engineering drawings to be prepared and submitted for approval by appropriate authorities. As part of this process the building engineer will be required to make a number of checks on the structural design as described in the following recommendations.
Long Term (6-months)	: N/A

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

(A): Recommendations for Fire Safety Corrective Actions:

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 (1 ~ 2 weeks) and should be a regular activity*	• The minimum clear width of the pathway should be 0.9 meter • Remove all temporary items from all escape routes, aisles and passageway. • Provide aisle marking with arrow guiding and exit signage on all Evacuation pathways or provided with overhead signage fixed at ceiling level. - Illuminated exit sign should be posted above the exit door, - It should be clearly visible at all time, - Provide directional signs wherever necessary. - All exit doors should be clearly marked for easy identification. • Factory management should be checked alarm call points, alarm & detection system periodically and maintained the record properly. • The first aid hose and standpipe performance should be checked periodically and properly tagged. • Provide additional firefighting equipment like sand & water buckets near exit or easily accessible area for first phase fire fighting. • Combustible materials should keep away from electrical source. • Fire drill should be conducted quarterly (4 times a year) in existing buildings as detailed under the Fire Safety Plan & should kept record properly.
Mid Term (*The remedial works indicated must be carried out within a period of 6 weeks)*	• Prepare proper plan and design for one more exit in between Stair-1 & Stair-2 and directly way to outside of building, or If the factory design to equip with an automated fire alarm, portable fire-fighting system and appropriate standpipe and hose system through the entire building the length of travel should not be exceed 60 meter. • Replace all existing exit doors on evacuation routes, exit doors with side hinged type door, which swing outward and in the direction of travel. Swinging of the door should not constrict the width of the corridor / passage below 0.9 meter. • Remove all locking device from all egress door. All exit doors should be open-able from the side they serve without the use of a key. • Provide handrails on both side of each stairway with height of 0.9m measured from the nose of stair to the top of the handrail.

	• Doors in stair should be outward opening, side-swing, self closing, non-lockable 0.75 hours fire rated doors in all stair way encloses. • The egress paths should be illuminated with emergency lighting with power back-up supply & illumination should be a minimum of 10 lux for all corridors & exit doors. Aisles should be provided with a minimum 2 lux. • The stairway should be illuminated with emergency lighting with power back-up supply & illumination should be a minimum of 10 lux for stairway. • Produce design and plan for automatic detection system with automatic fire alarm. • Install Manual activation call point at all exit routes • Automatic alarm systems must be provided throughout the factory; the alarm must be automatically triggered on detection of a fire. • Prepare proper design and plan for dedicated fire pump with alternate backup power supply. • Prepare plan and design for dedicated water storage tank for firefighting operation as per RMG guideline. • Power backup supply should be provided for fire alarm system. • Obtain building approval from issuing authority
Long Term (*The remedial works indicated must be carried out within a period of 6 months)*	• Implement the plan and design for one more exit in between Stair-1 & Stair-2 or implement with an automated fire alarm, portable fire-fighting system and appropriate standpipe and hose system through the entire building. • Install automatic detection system with automatic fire alarm. • Install dedicated fire pump with alternate backup power supply. • Provide sufficient number of hose pipe with respect to area and travel distance as per RMG guideline. • Stand pipe supplying first aid hose should have minimum pressure of 200 KPa. • Provide dedicated storage tank for firefighting operation

(B): Recommendations for Electrical Safety Corrective Actions:

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*	N/A
Mid Term (*The remedial works indicated must be carried out within a period of 6 weeks)*	• Provide electrical graded rubber mats of adequate size in front of distribution panels. • 1. Exit signs should be illuminated either by lamps external to the sign or by lamps contained within the sign. 2. The source of illumination should be providing not less than 50 lux. • Provide cable connections with properly soldered / welded lugs at DB's. Ensure that all the electrical connections are properly secured with lugs. • Select conductors and MCCB/MCB with adequate sizing without exceeding permissible current carrying capacity for insulation. • Avoid bunch of cable at MCCB/MCB or bus bar terminal, use individual circuit and over current device for every incoming and outgoing circuit at the distribution board. • Provide cable joints of porcelain / PVC connectors with PIB tape wound around before placing the cable in the box. • Provide adequate earthing to body and doors to DB's. Ensure that all electrical panels provided with proper and separate earth potential.
Long Term (*The remedial works indicated must be carried out within a period of 6 months)*	• 1. Design to have proper segregation of different end used loads. 2. Wiring design to have separate and distinct sub-circuits for power and heating system. 3. All DBs to be placed conveniently. 4. Wiring to be neat, tidy and located near ceiling. • Provide and maintain easy access to the panel boards. • 1. Wooden panel boards should be replaced by non-flammable materials. 2. Prefer switchboards made of non-flammable materials. • Each circuit should have a separate neutral (use of common neutral for more than one circuit shall not be permitted). • Seal the cable entry-exit points of DB's with non-flammable materials. In addition: 1. Ensure that DB panels / Switchgears to be vermin / damp proof. 2. Ensure all unused holes / openings in DBs to be blocked properly. • 1. Provide the ECC to meet minimum cross-sectional area as

	per table 4.5. 2. Ensure that connections between conductors / equipment provided to durable electrical continuity and adequate mechanical strength and protection. 3. The continuous earth connection is provided back to the main intake supply earth. • Provide adequate protection against lightning depending on the probability of a strike and acceptable risk levels at roof top of building.