

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: BONIAN KNIT FASHION LTD.
Address of the Factory	: Latipur, Shreepur, Sardagoni, Sadar, Gazipur, Bangladesh
Dhaka Present Status of the Factory	: Under Operation
Structural assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Structural Inspection	: 17 June, 2014
Fire & Electrical assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Fire & Electrical Inspection	: 16 June, 2014

Basic Information: The present garment factory is a commercial building with beam-column frame system. The following general information was noted:

i.	Building Usage Type	: Garment factory
ii.	Structural System	: Steel frame with a profiled metal deck slab
iii.	Floor System	: Beam slab
iv.	Floor Area	: The factory has total floor area of 9,000Sq. ft.
v.	No. of Stories	: 3 storied
vi.	Construction Year	: 2012
vii.	Foundation Type	: Unavailable
viii.	Design Drawings	: Available (Permit drawing)
ix.	Soil investigation Report	: Unavailable
x.	Construction Materials	: Unavailable
xi.	Generator	: In a separate single storied shed on the western end of the factory complex

Recommendations for Corrective Action: The recommendations of corrective action for both Structural and Fire & Electrical Safety are as follows:

The recommendations for Structural Safety corrective actions are:

Immediate (Now): NA

Mid Term (Within 6 Weeks):

1. Carry out an Engineering Assessment on the building to verify that it is stable under lateral loading.
2. Carry out an Engineering Assessment on connection between concrete columns and steel trusses over.
3. Carry out an Engineering Assessment on light steel roofs to determine if they are adequate and securely fixed.
4. Carry out assessment on roof to determine correct joist size required.
5. Fireproofing material for structural steel element is recommended as suggested in BNBC Codes.

Long Term (Within 6 Months):

1. Carry out the recommendations of the Engineering Assessment.
2. Retrofit new joists between existing joists.
3. Maintain standard of quality control and protection of the fire protection.

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

The recommendations for Fire Safety corrective actions are:

Immediate (Within 1 month):

1. Remove locking features from all egress doors / gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.
2. Remove all storage from exit stairs and egress paths.
3. Replace all gates / sliding doors along the means of egress with side-hinged, swinging egress doors. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.

Short Term (Within 3 Months):

1. Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction.
2. Separate the boiler room by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.
3. Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separation.
4. Provide minimum 1.5-hr fire rated doors and seal all unprotected openings to separate the exit stairs from work areas and other building spaces on all floor levels. Ensure that the fire doors are self-closing and positive latching and that they are provided with fire exit (panic) hardware where serving production floors. If fire doors are required to be held open for functional reasons, provide automatic closing devices tied to the fire alarm system.
5. Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.
6. Inspect, test and maintain the emergency lighting system in accordance with The ACCORD standard. Keep written records on-site.
7. Separate the generator room from the discharge pathway by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.

Mid Term (within 6 Months):

1. Seal all penetrations and openings to the interior of the building along the discharge path, up to a height of 10 ft., to provide a minimum 1-hr fire separation. Alternatively, provide a second remote discharge path to the public way (only include this if feasible).
2. Replace the single-station smoke alarms with automatic smoke detectors tied into the fire alarm system. Configure the fire alarm system to initiate occupant notification upon activation of any two smoke detectors in addition to the manual fire alarm stations.

Long Term (More than 6 months):

1. Replace the fire alarm system with a new, listed addressable fire alarm system in accordance with NFPA 72.

The recommendations for Electrical Safety corrective actions are:

Immediate (Within 1 month):

1. Cable trench covered with wooden must remove and replaced with checkered plates. Generator must have two separate and distinct frame earth connections.

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

2. Large exhaust fans/motors having rating more than 0.376KW must be connected through control device such that it will not restart automatically when power resumed back to the fan/motor. DOL may be used.

Short Term (Within 3 Months):

1. Install a vertical cable tray (instead of using flexible pipes) or duct ranging from generator terminal (output) box to cable trench to support the generator output cables. Use cable glands to minimize stress at terminals. Provide earth connection for body and doors of metallic distribution boards using green cables preferably braid so that the metallic door remains at zero potential all the time.
2. Terminate each cable providing individual lug according to the cable size. Multiple cables shall not be terminated on a single point.
3. Relocate the Changeover Switch and PFI panel to an adequate working space, so that it is convenient to maintenance work very easily.
4. The existing panels should be fixed with the foundation plinth (wall or floor) with nuts and bolts at an accessible height (top end of panel shall be at 2 meter max). Provide cable support for incoming and outgoing cables. All electrical panels must be grouted.
5. Control device (MCB) mounted on aluminum channel must be installed with DIN rail inside metal clad enclosure.
6. Power extension board made of wooden board must remove and replace with PVC box/ ebonite.

Mid Term (Within 6 months): NA

Long Term (More than 6 months): NA