

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: TASNIAH FABRICS LTD.
Address of the Factory	: Nayapara, Konabari, Kashimpur, Garzipur
Dhaka Present Status of the Factory	: Under Operation
Structural assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Structural Inspection	: 25 May, 2014
Fire & Electrical assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Fire & Electrical Inspection	: 12 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	: R.C Beam and column frame with a 2-way solid slab
iii.	Floor System	: Beam slab
iv.	Floor Area	: Unavailable
v.	No. of Stories	: 4 storied
vi.	Construction Year	: 2000
vii.	Foundation Type	: Unavailable
viii.	Design Drawings	: Available (Approved by 'Local Authority' since 7th June 2012)
ix.	Soil investigation Report	: Unavailable
x.	Construction Materials	: Unavailable
xi.	Generator	: Ground Floor

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. Factory engineer to review design, loads and column stresses in areas identified above.
2. Produce and actively manage a loading plan for all floor plates within the factory giving consideration to floor slab and column capacity.
3. A Detailed Engineering Assessment of the factory is to be carried out.
4. The distress found is to be suitably repaired.
5. Simply plastering over is not allowed.
6. Factory Engineer to review design and Detailed Engineering Assessment to be completed.
7. Request that the Detail Engineering Assessment of the overall building to be carried out and in particular, stability and foundation aspects should be investigated in detail.

Long Term (Within 6 Months):

1. Maintain standards of quality control to ensure that loading plan is correctly followed so that overloading problems do not arise in the future.

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2. Continue to implement load plan.
3. Fireproofing material for structural steel element is recommended as suggested in BNBC Codes.
4. Maintain standard of quality control.

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. 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.
3. Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separation.
4. Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.
5. Inspect, test and maintain the automatic sprinkler system, and keep written records onsite, in accordance with NFPA 25.
6. Inspect, test and maintain the emergency lighting system in accordance with The ACCORD standard. Keep written records on-site.

Mid Term (within 6 Months): NA

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. Breather oil cup must be filled with transformer oil to required level as instructed by the manufacturer.
2. Phase barriers between different phases supplied by the breaker manufacturer must be installed to avoid arc flashing.

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3. Provide covers on the trench made of non-combustible material preferably concrete slab to protect the cables' insulation from physical damage as well as prevent entering debris, dust and lint.
4. Install cable duct to protect the generator output cables and provide covers made of non-combustible material preferably metal to protect the cables' insulation from any physical damage as well as prevent the ingress of debris, dust and lint.
5. Provide earth connection for body and doors of metallic distribution boards using green cables preferably braid so that the metallic door and body remain at zero potential all the time.

Short Term (Within 3 Months):

1. HT cable dropping from 11kV pole must be protected in steel pipe of required size at least 2m from the ground level to protect from physical injury by moving objects.
2. Construct a separate room for the transformer by constructing barrier (brick) walls (fire rated wall) up to the ceiling; the minimum area of the transformer room should be 10-13 sq m (according to BNBC 2006, Section-2.6.3).
3. Install tray/ladder to support the cables and provide covers made of non-combustible material preferably metal to protect the cables' insulation from physical damage as well as prevent entering debris, dust and lint.

Mid Term (Within 6 months): NA

Long Term (More than 6 months): NA