

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: CONSUMER KNITEX LIMITED
Address of the Factory	: Dhamsur, Bhaluka, Mymensingh; Dhaka, Bangladesh
Dhaka Present Status of the Factory	: Under Operation
Structural assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Structural Inspection	: 14 May, 2014
Fire & Electrical assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Fire & Electrical Inspection	: 10 May, 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	: RC beam slab
iii.	Floor System	: Beam slab
iv.	Floor Area	: The floor area of the building-1 is 6,022 sqm.
v.	No. of Stories	: 2 storied
vi.	Construction Year	: 2006
vii.	Foundation Type	: Unavailable
viii.	Design Drawings	: Available
ix.	Soil investigation Report	: Available (Dated 2011)
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): NA

Long Term (Within 6 Months):

1. Structural Engineer to survey existing childcare building and propose any strengthening/remedial works if necessary. As-built drawings for the structure to be produced.
2. Structural Engineer to survey the lookout post, in particular how the building structure is connected to the columns and propose any strengthening/remedial works if necessary.
3. Structural engineer to review existing structure and update the drawings to reflect as-built design.
4. Building engineer to monitor cracking, should cracks increase in size or length, Engineer to undertake detailed checks of strength and capacity and propose remedial works if necessary.
5. Structural Engineer to propose alternative bracing configuration which does not obstruct door opening whilst maintaining building stability.

The recommendations for Fire Safety corrective actions are:

Immediate (Within 1 month):

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

1. Replace all gates and roll-up 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.
2. Reduce occupant load to not more than available exit capacity of 600 occupants and in the future provide an additional emergency exit on the northwest part of the building.
3. Remove locking features from all egress doors / gates. 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. Where separate storage rooms may not be feasible, provide defined storage areas and limit the storage arrangement as follows:
 - Maximum height of 2.4m and maximum area of 23m²
 - If sprinkler protected: maximum height of 3.66m and maximum area of 93m².Separate areas of unenclosed combustible storage by a minimum clear distance of 3m.
2. Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.
3. Inspect, test and maintain the emergency lighting system in accordance with The ACCORD standard. Keep written records on-site.
4. Separate the hazardous materials room per BNBC Part 3 Section 2.1.13.
5. Modify the egress door to swing in the direction of egress travel.
6. Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.
7. 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): NA

The recommendations for Electrical Safety corrective actions are:

Immediate (Within 1 month):

1. 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. Install graded separators between different phases of MCCB.
3. Make circular hole at the base plate and provide cable gland according to the respective cable size for cable entry and exit so that the cables are not stressed on the sharp edges of the hole of panels. Provide covers (of noncombustible material) if any additional gap remains after installing cable glands. Cut off the excess cable and dress up them.
4. Multiple cables connecting at a MCCB terminal must be removed. Individual circuit breaker must be used for each load according to the respective cable-size.

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

5. Cable must be kept in dry place with proper support.
6. Provide cable ladder or tray made of noncombustible material preferably metal to support and protect the cables. Seal the penetrations by fire rated material.

Short Term (Within 3 Months):

1. Install the panel base plate to make it dust and vermin proof and use proper size of cable glands for cable entry and exit.
2. Cables/wirings passing through permanent wall must be protected and remaining gaps must be sealed with fire resistant materials.

Mid Term (Within 6 months): NA

Long Term (More than 6 months):

1. Provide cover made of noncombustible material preferably metallic sheet on the duct to prevent ingress of dust and lint.