

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: BAXTER BRENTON LTD.
Address of the Factory	: SFB #7, 1st Floor, DEPZ(Old Zone), Ganakbari, Ashulia, Savar, Dhaka -1349
Dhaka Present Status of the Factory	: Under Operation
Structural assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Structural Inspection	: 10 May, 2014
Fire & Electrical assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Fire & Electrical Inspection	: 7 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 and Slab Construction
iii.	Floor System	: Beam slab
iv.	Floor Area	: Unavailable
v.	No. of Stories	: 3 storied
vi.	Construction Year	: 1996
vii.	Foundation Type	: Unavailable
viii.	Design Drawings	: Available
ix.	Soil investigation Report	: Available (Dated 1991)
x.	Construction Materials	: Stone aggregate
xi.	Generator	: Southwest corner

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. Building Engineer to carry out a design check for heavy loads associated with the water tanks and storage areas as indicated, and advice on any necessary alterations, taking account of floor capacity.
2. Building Engineer to produce a loading plan for all floor plates within the Main Factory Buildings, giving consideration to floor capacity and column capacity.
3. Factory Engineer to review design, loads and columns stresses in Main Factory Buildings.
4. Verify in-situ concrete stresses either by 100mm diameter cores or existing cylinder strength data for cores from four columns.
5. Building Engineer to review the design of the walkways, with special emphasis on the connection detail with the buildings.
6. Building Engineer to carry out a design check of the concentrated loads imposed on the main factory buildings from the walkways and confirm that the existing structure has the capacity to accommodate these loads.
7. Building Engineer to check the design and capacity of the lightweight structures, with special emphasis on connections and bracing, and make any necessary alterations.

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Long Term (Within 6 Months):

1. Factory Management to actively implement and manage Loading Plan with clear instructions to the staff in this regard.
2. Produce and actively manage a loading plan for all floor plates within the factory, giving consideration to floor capacity and column capacity.
3. Building Engineer to produce a full set of as-built drawings.
4. Monitor cracks to beams, slabs, columns and facades. Building Engineer to investigate if cracking extends beyond the external render / internal plastering.
5. Building Engineer to advice on load reduction and repair and strengthening of the structure if required.

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 ramp.
3. Keep egress paths and stairs clear of storage.
4. Provide exit signs above all exits to the exterior and all doors to the exit stairs ramps.
5. 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 hazardous materials / flammable liquid storage room by a minimum 2hr 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 aisle widths of 36-in.
5. Provide handrails on at least one side of exit ramp.
6. Inspection, testing, and maintenance for the fire alarm system it was not 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.
8. Test the emergency lighting system on each floor and provide additional emergency fixtures to provide adequate illumination along the means of egress. Provide a minimum illumination of 10 lux at the floor level within exit stairs and exit discharge paths and minimum 2.5 lux along exit access aisles.

Mid Term (within 6 Months):

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

1. Remove single-station smoke alarms. Provide automatic smoke detection throughout the building in accordance with NFPA 72.

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. Electrical room must not be used as storage room.
2. All panels must be checked regularly for overheating inside panel. Check for loose terminations and tighten it. Overloading and unbalanced loading can be the cause of overheating cables and gadgets.
3. Install phase separator between MCCB terminals.
4. Control device must be installed at a safe place protected in enclosure.
5. Provide bonds for panel doors of distribution boards.

Short Term (Within 3 Months):

1. Generator cables must be protected and supported throughout its length. Cables may be supported in risers near terminal box and laid in cable trench OR the cables may be supported in cable trays at safe height and through safe routes.
2. Rearrange and fix cables/wires inside panel securely to avoid unintentional contacts.
3. Cables passing through permanent wall must be protected either in rigid conduit and remaining gaps around it must be sealed with fire resistant materials.
4. Wirings and cables inside panel may be rearranged for working space. Additional panel may be installed to share loads.
5. Cables and wirings in flexible PVC conduits must be protected and securely fixed. Suggested that the flexible conduits may not be used for wiring long points. Existing flexible conduit wirings may be supported in cable trays/ducts/ladders securely fixed at regular intervals between panel cable raceways.
6. Cable raceways must be cleaned thoroughly and it must be installed with all its accessories like cover, junction and bends to prevent ingress of lint and dust.
7. IPS and generator battery may be placed on acid resistant stand.

Mid Term (Within 6 months): NA

Long Term (More than 6 months): NA