

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: BLUETEX KNITWEAR LTD.
Address of the Factory	: 120/5, Konapara, Savar, 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	: 26 April, 2014
Fire & Electrical assessment conducted by	: Accord (Full report available at bangladeshaccord.org)
Date of Fire & Electrical Inspection	: 5 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	: R.C Beam and column frame with a 2-way solid slab
iii. Floor System	: Beam slab
iv. Floor Area	: Floor area of the building is 9,750 sq. ft. on each floor
v. No. of Stories	: 5 storied
vi. Construction Year	: 2003
vii. Foundation Type	: Unavailable
viii. Design Drawings	: Available (Permit drawing)
ix. Soil investigation Report	: Unavailable
x. Construction Materials	: Unavailable
xi. Generator	: Ground floor (utility shed)

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):

1. Restrict access to the inadequate sheds.
2. Commence a full Detailed Engineering Assessment of sheds.
3. Follow recommendations of assessment in full.

Mid Term (Within 6 Weeks):

1. A Detail Engineering Assessment should be carried out with regard to the torsional resistance of the receiving beam.

Long Term (Within 6 Months):

1. Limit stacking to design loads of structural capacity of slab and beams.
2. Develop floor loadings plans, implement and enforce.
3. Apply a new waterproofing membrane.

The recommendations for Fire Safety corrective actions are:

Immediate (Within 1 month):

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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. Separate the generator room from the working areas and egress routes by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.
2. Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction.
3. 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.
4. Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separation.
5. 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.

6. Separate the hazardous materials / flammable liquid storage room by a minimum 2- hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.
7. Inspect, test and maintain the fire alarm system, and keep written records on-site, in accordance with NFPA 72.
8. Inspect, test and maintain the emergency lighting system in accordance with The ACCORD standard. Keep written records on-site.

Mid Term (within 6 Months):

1. Remove roof and ensure that the exterior wall adjacent to the passageway s rated 1-hr up to 10 ft. above grade. Provide rated enclosure (exterior building wall and roof) , the fire rating can vary between 1-2 hr depending upon exit enclosure rating.
2. Remove single-station smoke alarms. Provide automatic smoke detection throughout the building, tied into the fire alarm system, 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. HT cable terminating at transformer must be firmly supported on riser to avoid stress at the termination (transformer bushing).
2. Cable must be supported at the panel base plate and terminated without stressing at the termination point.
3. Cable trench should be covered with concrete slab covers.
4. HT cable dropping from HT pole must be protected in steel conduit of required size at least 2m from the ground level to protect from physical injury by moving objects.
5. Aluminum cover must be fully covered to avoid any intrusion of dust/lint.
6. All cables entering the panel should be properly affixed using appropriate cable glands and any remaining openings should be tightly sealed.
7. Adequate working space must be provided in front of every panel for operators (operating platform). Panel installed on raised plinth must have platform constructed for operators.

Short Term (Within 3 Months): NA

Mid Term (Within 6 months): NA

Long Term (More than 6 months): NA