

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	:	THANIS APPAREL LTD.
Address of the Factory	:	Road No.1&2, Chittagong Export Processing Zone, Chittagong, 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 August, 2014
Fire & Electrical assessment conducted by	:	Accord (Full report available at bangladeshaccord.org)
Date of Fire & Electrical Inspection	:	29 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 1-way solid roof slab
iii.	Floor System	:	Beam slab
iv.	Floor Area	:	Total floor area for one storied building is 25,000sq. ft.
v.	No. of Stories	:	Single storied
vi.	Construction Year	:	1990
vii.	Foundation Type	:	Unavailable
viii.	Design Drawings	:	Available
ix.	Soil investigation Report	:	Unavailable
x.	Construction Materials	:	Unavailable
xi.	Generator	:	There are no generators for this 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 steel stairs to determine the extent of strengthening works required to the connections.
2. Carry out an Engineering Assessment on the building to verify that it is stable under lateral loading.

Long Term (Within 6 Months):

1. Carry out connection strengthening repair highlighted in the Engineering Assessment.
2. Place rubber sheeting (or similar isolating material) under the cutting tables.
3. Monitor ceiling for any water leaking into the building.
4. Inspect the roof membrane on a 6 monthly basis and repair any damaged areas.

The recommendations for Fire Safety corrective actions are:

Immediate (Within 1 month):

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1. Remove locking features from all egress doors and gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.
2. Replace all gates and 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 boiler and transformer rooms 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. Remove all combustible construction materials and replace by non-combustible to maintain building fire resistive.
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 emergency lighting system in accordance with The ACCORD standard. Keep written records on-site.

Mid Term (within 6 Months):

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

Long Term (More than 6 months): NA

The recommendations for Electrical Safety corrective actions are:

Immediate (Within 1 month):

1. Transformer breather must be installed to prevent the ingress of moisture into the oil. During the breathing process, the incoming air may consist of moisture and dirt which should be removed in order to prevent any damage to the insulating property of transformer oil.

Short Term (Within 3 Months):

1. Cable must be supported by cable tray or ladder with cover to ensure the mechanical protection of the cables.
2. Overhead tapping point must be protected by standard HT Fuse.
3. Phase barriers between different phases must be installed to avoid arc flashing. Size of MCCB and termination of cables should be check to reduce the temperature rise.
4. Panel(s) installed in production or work areas must not obstruct the egress and should be placed at safe distance from the exits.
5. Cable tray or conduit must be passed across the wall to support and protect the cables. The openings after the passage of cable tray or conduit (the wiring system) should be sealed with the fire rated materials.
6. Service cable must be supported on tray or riser.

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7. Cables and wiring inside panels must be arranged and firmly fixed away to avoid unintended touching other parts.
8. Cables must be protected, supported and installed through safe routes. Cables passing through window and ventilators must be removed immediately. Install the cables on the ladder/tray. Ensure the cables are tightly latched inside the ladder and provide covers made of non-combustible material.
9. Disconnect the electric supply to the duct and clean all the cables and other components of the duct. Provide cover made of non-combustible material preferably metallic sheet on the duct to prevent ingress of dust and lint.
10. Cables connecting electrical machines should be laid in GI pipe or rigid conduit and not with PVC flexible conduit to protect from physical damage.
11. Items and materials around/near panel(s) must be cleared.
12. Wires terminating from switch board with flexible PVC conduit should be replace with rigid conduit and must laid in straight conduit till the fitting points.

Mid Term (Within 6 months): NA

Long Term (More than 6 months): NA