

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: TAURUS STYLES LTD.
Address of the Factory	: Plot no. M-1/3, Section-14, Mirpur, Dhaka-1206, Bangladesh.
Present Status of the Factory	: Under Operation
Structural Assessment Conducted by	: ACCORD
Date of Structural Inspection	: 2014-05-05
Fire Assessment Conducted by	: VERITAS Engineering & Consultant
Date of Fire Inspection	: 2015-02-15
Electrical Assessment Conducted by	: VERITAS Engineering & Consultant
Date of Electrical Inspection	: 2015-02-15
BGMEA Membership No.	: 1342

BASIC INFORMATION:

The following general information was noted:

- i. Building Usage Type : Garment Factory (Rented).
- ii. Structural System : One number of 09 storied reinforced concrete building with a Shed at roof.
- iii. Floor System : Beam slab system
- iv. Floor Area : Total floor area is 15457 sft (main building).
- v. No. of Stories : 03 occupied floors out of 09 floors.
- vi. Construction Year : Not mentioned in Accord reports at website.
- vii. Foundation Type : Spread square footing.
- viii. Design Drawings : Available
- ix. Soil Investigation Report : Available
- x. construction Materials : Not mentioned in Accord reports at website.
- xi. Generator : Not mentioned in Accord reports at website.

RECOMMENDATIONS FOR CORRECTIVE ACTION: The following general information was noted:

Short Term (Immediate) : N/A

Mid Term (6-week) : 1. Detail Engineering Assessment is required.
2. Factory Engineer to develop a loading plan for each floor within the factory complex, giving consideration to slab, beam and column capacity.

Long Term (6-months) : 1. Implement any works deemed necessary by the Detail Engineering Assessment.
2. Implement and actively manage the loading plan.

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

The recommendations for **Fire & Electrical Safety** corrective action are:

(A): Recommendations for Fire Safety corrective actions:

<p>Immediate</p> <p><i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i></p>	<p>N/A</p>
<p>Short Term</p> <p><i>(Actions that must be incorporated into a Fire Safety Management Plan immediately (1 ~ 2 weeks) and should be a regular activity</i></p>	<p>N/A</p>
<p>Mid Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<ul style="list-style-type: none"> • Factory needs to prepare as built drawing with floor machine layout showing means of escape with proper dimension. • All the exit doors need to be replaced by side swinging so that unlockable doors can be opened easily in the direction of evacuation without the use of a key. • Factory needs to provide handrail on both sides of all the stairways.
<p>Long Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	<ul style="list-style-type: none"> • Fire department pre-plan needs to be developed. • Factory needs to maintain minimum width of exit 0.9 m and height 2 m. • Increase the ramp slope up to 1 in 8 as required in guide line. • Factory needs to ensure at least minimum width of stair 0.9 m. • Final exit route-1 (Stair-1 route) need to be protected by 4 hours rated construction with 2 hours rated door/opening at each floor level entrance in ground floor and need to be protected with boiler room at ground floor by 4 hours rated construction with 2 hours rated door/opening, also need to be protected from office and security waiting room at ground floor by 2 hours rated construction with 1.5 hours rated door/opening, but need to have 4 hours fire rated protected escape route till to reach safe refuse area.

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

	<ul style="list-style-type: none">• Final exit route-2 (Stair-2 route) need to be protected by 4 hours rated construction with 2 hours fire rated door/opening at each floor level entrance including ground floor and need to be protected with boiler room at ground floor by 4 hours rated construction with 2 hours rated door/opening, also need to have the protected escape route till to reach safe refuse area.• Final exit- 3needs to be protected by4 hours fire rated construction with 2 hours fire rated doors/opening till to reach safe refuse area.• Storage area (bonded ware house and accessories store with dining area) need to be protected with 2 hours rated construction and 1.5 hours rated opening or doors.• Boiler: Boiler room need to be protected by 4 hours rated construction with 2 hours rated opening / door from stair-2 as well as from the final exit route-2 located at ground floor.• Generator and substation: Generator and substation room need to be protected by 4 hours rated construction with 2 hours rated opening / door from the final exit route-3 located at ground floor.• Both of the staircase-1 and 2 need to be protected by fire and smoke resistant enclosures with lobby(4 hours rated enclosure and 2 hour rated door at entrance of each floor level including ground floor (and provide the protected route from all though the stairway to the final exits.• Stair-3 need to be protected by closing all opening with 2 hours rated construction within 3m (both side) of the stair and fitted 1.5 hours rated doors/opening at each floor (7th and 8th floor) level entrance.• Factory needs protect the lift with 2 hours rated enclosure & 1hour rated auto closing fire door• All the stairs (for stair-1 and 2 only) need to be protected with a 4hours fire resistant and smoke proof lobby (4hours rated enclosure and 2 hour rated door) at each floor entrance and provide the protected route from all though the stairway to the final exits.• Factory needs to establish command station on the entrance lobby and equipped with detailed floor plans along with clearly demarcated locations of fire detection and fighting devices and through the panel board able to detect fire alarm from any floor. It needs to be managed with properly trained personnel having responsibility of maintenance and operating firefighting facilities within the building
--	--

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

(B): Recommendations for Electrical Safety corrective actions:

<p>Immediate</p> <p><i>(the factory should not continue to be occupied until these non-conformities have been rectified):</i></p>	<p>N/A</p>
<p>Short Term (Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity)</p>	<p>N/A</p>
<p>Mid Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<ul style="list-style-type: none"> • Provide Instruction board for first aid and artificial respiration in the substation room and generator room. • Provide dedicated & adequate size of earthing with proper identification for each circuit from the earth busbar of distribution boards and ensure continuous earth path is back to main building intake. • Find out the cause (improper cable/over current selection, over loading, improper lug, improper cable joints, rusted connection, insulation damage, multiple cables at single point,) of overheating { ambient+(200C-400C)} and take proper action.
<p>Long Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 months)</i></p>	<ul style="list-style-type: none"> • Ensure the substation room has adequate fire separation from the production. • Ensure underground cable for electrical distribution in the premises of the building are encased in GI or PVC pipes and laid in earth trenches of sufficient depth as per mentioned standard. • Ensure the generator room has adequate fire separation from the production area. • Ensure proper identification of cable is provided as per circuit list for each distribution board. • Run cable in a designated route with mechanical protection and fire sealing of floor slab and wall penetrations.

