

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: Texas Dresses Ltd.
Address of the Factory	: 79/B Malibag, Chowdhury para, Dhaka-1219, Bangladesh
Present Status of the Factory	: Under operation.
Structural Assessment Conducted by	:
Date of Structural Inspection	:
Fire Assessment Conducted by	: TUV
Date of Fire Inspection	: 4 May, 2015
Electrical Assessment Conducted by	: TUV
Date of Electrical Inspection	: 4 May, 2015
BGMEA Membership No.	: 2950

BASIC INFORMATION:

There is one 8 storied building within the factory premises. The following information was noted:

- i. Building Usage Type :
- ii. Structural System :
- iii. Floor System :
- iv. Floor Area :
- v. No. of Stories : 8 Storied
- vi. Construction Year : 1993
- vii. Foundation Type :
- viii. Design Drawings :
- ix. Soil Investigation Report :
- x. Construction Materials :
- xi. Generator :

RECOMMENDATIONS FOR CORRECTIVE ACTION:

The recommendations of corrective action for both Structural and Fire & Electrical Safety comprises in Short Term, Mid Term and Long Term basis.

The recommendations for **Structural Safety** corrective action are:

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|------------------------|---|
| Short Term (Immediate) | : |
| Mid Term (6-weeks) | : |
| Long Term (6-months) | : |

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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>	<ul style="list-style-type: none"> • Factory management should check alarm call points, alarm & detection system periodically and maintained the record properly. • The first aid hose and standpipe performance should be checked periodically and properly tagged.
<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"> • Replace all existing collapsible security type gate, on evacuation routes, which swing outward and in the direction of travel. Swinging of the door should not constrict the width of the corridor / passage below 0.9 meter. • Remove all locking device from of a key. • Install exit door as per plan all egress door. All exit doors should be open-able from the side they serve without the use and design. - Minimum clear width should be 0.9 meter. • Provide handrails on both side of each stairway with height of 0.9m measured from the nose of stair to the top of the handrail. • Doors in stair should be outward opening, side-swing, self closing, non-lockable 2 hours fire rated doors in all stair way encloses. (Also require fire rated door at the floor occupied by other tenants) • Prepare design for installation of fire rating smoke proof enclosure. 2 hours fire rating doors for exit should not be less than that of 4 hours fire resistance rating of the walls of the smoke proof fire rated entry lobby. (Also require fire rated entry lobby at the floor occupied by other tenants) • Install discharge floor exit door as per plan and design. - Minimum clear width should be 0.9 meter. • Prepare proper plan and design for 2 hrs fire rated door at ground floor production area to protect the corridor. or proper plan & design for another staircase close to the façade exit to avoid long protected corridor at discharge floor. • Prepare proper plan and design for 4 hours fire rated barriers

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	<p>with 2 hours fire rated doors at basement generator room, which located at the adjacent to store area.</p> <ul style="list-style-type: none"> • Prepare proper plan & design for 2 hrs fire rated door for generator room & 1.5 hrs fire rated door for store at basement level, also 4 hrs fire rated wall with 2 hrs fire rated door for entry lobby at basement • Provide 1.5 hours fire rated door at 7th floor bonded ware house and store room for separation from other operational area. • The stairway should be illuminated with emergency lighting with power back-up supply & illumination should be a minimum of 10 lux for stairway. • Produce design and plan for automatic detection system with automatic fire alarm. (Also needs to cover the floors occupied by other tenants) • Prepare proper design and plan for dedicated fire pump with alternate backup power supply. • Prepare plan and design for dedicated water storage tank for firefighting operation. • Prepare proper design and plan for fire lifts equipped with approved intercommunication (including two way voice communications) with the fire command station or control room on the ground floor lobby of the building. • Power backup supply should be provided for fire alarm system. • Visual alarm should be placed at the generator room. • Obtain fire license from issuing authority
<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"> • Install smoke proof fire rated entry lobby at emergency stairways to separate from the area of incidence. (Also require fire rated entry lobby at the floor occupied by other tenants) • All stairway to have direct access to any designated refuge area which requires 2 hrs fire rated door at ground floor production area to protect the corridor. or Install another staircase close to the façade exit to avoid long protected corridor at discharge floor. • Provide 4 hours fire rated barriers with 2 hours fire rated

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	<p>doors at basement generator room, which located at the adjacent to store area.</p> <ul style="list-style-type: none"> • Install 2 hrs fire rated door for generator room & 1.5 hrs fire rated door for store at basement level, also 4 hrs fire rated wall with 2 hrs fire rated door for entry lobby at basement • Install automatic detection system with automatic fire alarm (Also needs to cover the floors occupied by other tenants). • Install dedicated fire pump with alternate backup power supply. • Stand pipe supplying first aid hose should have minimum pressure of 200 KPa. • Provide dedicated storage tank for firefighting operation • Install fire lifts equipped with approved intercommunication (including two way voice communications) with the fire command station or control room on the ground floor lobby of the building. • Provide fire command station 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.
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(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</p> <p><i>(Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity</i></p>	<ul style="list-style-type: none"> • Re-locate oil / fuel tanks away from control panels in generator room.
<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"> • Install smoke detection and provide firefighting equipment in the substation and generator room. • Provide and maintain clear and legible identifications numbers & names on all incoming

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	<p>and outgoing circuits of HT / LT panels.</p> <ul style="list-style-type: none"> • 1. Remove all the inflammable materials from surrounding of electrical circuitry at MDBs/SDBs. 2. Ensure that all electric circuitry clean of inflammable materials. 3. Conduct periodic maintenance and maintain the records. <ul style="list-style-type: none"> • Provide circuit diagram /circuit list with proper current ratings and fuse size, marking for DBs identifying end use load, voltage, number of phases. <ul style="list-style-type: none"> • Provide cable joints of porcelain / PVC connectors with PIB tape wound around before placing the cable in the box. <ul style="list-style-type: none"> • Seal the cable penetrations through walls adequately with fire resistive elements. <ul style="list-style-type: none"> • Provide adequate earthing to body and doors to all MDBs / DBs. Ensure that all electrical panels provided with proper and separate earth potential
<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"> • 1. Provide updated SLD matching the existing installation at the factory. 2. SLD to indicate exact positions of all points of switch boxes and other outlets. 3. SLD to be approved by the engineer-in-charge. <ul style="list-style-type: none"> • 1. Provide updated Electrical layout drawing prepared after proper locations of all outlets for lamps, fans, fixed and transportable appliances, motors etc. 2. Drawings to indicate exact positions of all points of switch boxes and other outlets to match existing installation. 3. As built drawing to be approved by the engineer-in-charge. <ul style="list-style-type: none"> • Provide 4 hour fire rated walls all around the transformer / generator room on ground level. <ul style="list-style-type: none"> • Relocate generator set in substation building / adjacent to substation room. <ul style="list-style-type: none"> • Modify Area of generator room to meet requirements of Table 4.4, RMG Guideline; the area should be 40m², or relocate the generator room. <ul style="list-style-type: none"> • Provide calibrated Ammeters / Voltmeters at distribution boards (LT/MDBs). <ul style="list-style-type: none"> • For buildings > 20m high, provide at least one vertical shaft of

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	<p>200 x 400 mm for every 1500 sq.m. floor area.</p> <ul style="list-style-type: none">• Provide adequate protection against lightning depending on the probability of a strike and acceptable risk levels at roof top of building.
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