

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Name of the Factory	: Amir Shirts Ltd.
Address of the Factory	: Supua, Chouddagram, Comilla.
Present status of the factory	: Under Operation.
Structural Assessment Conducted by	: TÜV SÜD Bangladesh (Pvt.) Ltd.
Date of Structural Inspection	: 2015-11-09
Fire Assessment Conducted by	: TÜV SÜD Bangladesh (Pvt.) Ltd.
Date of Fire Inspection	: 2015-11-09
Electrical Assessment Conducted by	: TÜV SÜD Bangladesh (Pvt.) Ltd.
Date of Electrical Inspection	: 2015-11-09
BGMEA Membership No.	: 5796

BASIC INFORMATION: The following general information was noted:

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| i. Building Usage Type | : Garment Factory. |
| ii. Structural System | : PEB Building. |
| iii. Floor System | : Steel Beam Column frame structure. |
| iv. Floor Area | : The typical plinth area of 3 storied Steel building is 8295 sft.
Total operational area is 24885 sft. |
| v. No. of Stories | : 3-Storey building, No basement. |
| vi. Construction Year | : 2011 |
| vii. Foundation Type | : Isolated Footing. |
| viii. Design Drawings | : Available for 3- storied industrial building from Union Parishad,
Chouddogram, Comilla on 06th December, 2013. |
| ix. Soil Investigation Report | : Available |
| x. construction Materials | : 50 ksi steel (as per structural drawing) |
| xi. Generator | : The generator room is located at the north side of the factory
premises on a separate ancillary shed. |

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:

No critical or high risk observation was found at the factory which may pose harm to production and workers as well during assessment. A non- conformity was found at the factory on the day of assessment, for which long term corrective action has been recommended. There is no need to suspend operation in the factory.

Short Term (Immediate) : N/A

Mid Term (6-weeks) : N/A

3. Building Engineer to

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

Long Term (6-months)

: 1. As built architectural drawing & layout to be prepared. As part of this process building engineer will be required to make a number of checks on the structural design.

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"> • Remove all temporary items from all escape routes, aisles and passageway. • Provide aisle marking with arrow guiding on evacuation pathway - It should be clearly visible at all time. • Factory management should be checked alarm call points, alarm & detection system periodically and maintained the record properly. • Provide fire extinguisher at ground floor and to keep the record for re filling & properly tagged. • The first aid hose and standpipe performance should be checked periodically and properly tagged. • Combustible materials should keep away from electrical appliances and all the lighting in storage area must have protecting covers and wiring must be in conduits.
<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 exit doors on evacuation routes, exit doors with side hinged type door, 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 all egress door. All exit doors should be open-able from the side they serve without the use of a key. • Doors in stair should be outward opening, side-swing, self-closing, non-lockable 0.75 hours fire rated doors in all stair way encloses. • Prepare proper plan and design for 4 hours fire rated barriers with 2 hours fire rated door at 2nd floor boiler room, which located at the adjacent to finishing section. • The stairway should be illuminated with emergency lighting with power back-up supply & illumination should be a minimum of 10 lux

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

	<p>for stairway.</p> <ul style="list-style-type: none"> • 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 as per RMG guideline. • Obtain the boiler license from the proper issuing authority. • Obtain the boiler operator license from the proper issuing authority.
<p>Long Term</p> <p>(The remedial works indicated must be carried out within a period of 6 months)</p>	<ul style="list-style-type: none"> • Provide 4 hours fire rated barriers with 2 hours fire rated door at 2nd floor boiler room, which located at the adjacent to finishing section. • 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

(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>	N/A
<p>Short Term (Actions that must be incorporated into a Fire Safety Management Plan immediately (a week) and should be a regular activity)</p>	N/A
	<ul style="list-style-type: none"> • Provide Electrical graded rubber mats of adequate size in front of all distribution panels. • Install smoke detection and provide firefighting equipment in the

Summary of Preliminary Assessment on Structural, Fire and Electrical Safety

<p>Mid Term</p> <p><i>(The remedial works indicated must be carried out within a period of 6 weeks)</i></p>	<p>substation and generator room.</p> <ul style="list-style-type: none"> • Avoid looping of cable at MCB terminal, use individual circuit and over current device for every incoming and outgoing circuit at the distribution boards. • Provide circuit diagram /circuit list with proper current ratings and fuse size, marking for DBs identifying end use load, voltage, number of phases. • Provide proper separate earthing/grounding to generator. Ensure that generator body frame to have two separate and distinct connections to the earth / ground.
<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. • 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. • Area of substation to meet requirements of Table 4.3 of RMG Guideline; the area should be (45+30) m², or relocate the substation room. • Provide adequate protection against lightning depending on the probability of a strike and acceptable risk levels at roof top of building.