

ELECTRICAL SAFETY INSPECTION REPORT

STANDARD STITCHES LTD.(UNIT-2) (EXTENSION)

10/4, Karnapara, Genda, Savar, Dhaka.

GPS Coordinates: 23.825562, 90.260540



Factory List: Standard Stitches Ltd. (Unit -2) (12515)
Standard Stitches Ltd.(Unit-2) (extension) (24417)

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Reviewed by : Banna Kasemi
Approved by : Banna Kasemi

Inspected on: June 5, 2022

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Address: 10/4, Karnapara, Genda, Savar, Dhaka.

1. INTRODUCTION

The Factory was surveyed for electrical safety by RMG Sustainability Council. The purpose of the survey was to identify significant electrical safety issues and to provide recommendations for remediation based on applicable standards specified by the RSC.

Electrical Safety Audit is a methodical approach to evaluate potential electrical hazards and to recommend suggestions for improvement. The scope of this initial electrical safety inspection was limited to the review and identification of major electrical safety issues. The inspection did not include identification of minor deficiencies, which would be further dealt with as part of follow-up inspections.

2. LIMITATIONS

The information in this electrical safety inspection report was obtained during a visit to the facility and during discussion with local factory management. Services performed by the auditors are conducted in a manner consistent with that level of care and skill generally exercised by members of the engineering and auditing profession. However, an effort has made to discover all meaningful areas under the stipulated time available.

In evaluating subject site, Inspector relies in good faith on information provided by factory management or employees. The Inspector assumes that the information provided is factual, accurate and accepts no responsibility for any deficiency, misstatement or inaccuracies contained in this report as a result of omission or misrepresentation of any person interviewed or contacted.

The findings and recommendations in this report are not intended to imply, guarantee, ensure or warrant compliance with any government regulations. Additionally, the results do not imply in any way that compliance with the findings or recommendations as stated in this report will eliminate all risks or exposures not referred to in this report do not exist. Compliance with the findings and recommendations stated in this report does not relieve the factory owner from obligation to comply with specific project requirements, industry standards, or the provisions of any local government regulations.

3. DEFINITION

3.1. TIME FRAME

The amount of time being allocated based on the remediation work volume of the electrical issues considering the feasibility and ideal status of materials, capital and working condition. Criticality and priority level of the issue is not taken into consideration. It is bound only for the particular finding unless mentioned 'typical', shall include the whole typical findings.

3.2. PRIORITY LEVEL

- 3.2.1. Electrical issues related to code violation and/or non-conformity with codes possessing immediate fire hazard, direct threat to human safety, shall be considered as **P1** Level of priority. The execution of remediation works shall commence immediately without compromising with any other issues and must strictly complete within the allocated remediation time frame. It shall include only the critical issues
- 3.2.2. Electrical issues related to code violation and/or non-conformity with codes, protection of electrical switchgears and equipment, spatial arrangement and location of switchgears and equipment, design and drawings, shall be considered as **P2** Level of priority. The execution of remediation work of **P2** shall commence along with or soon after the **P1** level remediation work has commenced. It shall include only the moderately-critical issues.
- 3.2.3. Electrical issues related to violation of code and/or non-conformity with codes, workmanship of operation and maintenance and obsolete technology of electrical system, shall be considered as **P3** Level of priority. The execution of remediation work of **P3** shall commence along with or soon after the **P2** level remediation work has commenced. It shall include only the non-critical issues.
- 3.2.4. It doesn't take into consideration the remediation time frame and feasibility of remediation. It doesn't take into consideration the capital, materials and working environment.

4. GENERAL BUILDING INFORMATION

- | | |
|-----------------------------------|--|
| 1. Factory Name | : Standard Stitches Ltd.(Unit-2) ((extension) |
| 2. Factory Address | : 10/4, Karnapara, Genda, Savar, Dhaka. |
| 3. ID | : 24417 |
| 4. Inspection participates | : Md. Shahjahan
Admin Manager
Cell: +8801712327710
E-mail: shahjahan.h@standard-group.com |
| | Mst. Sonali
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| | Md. Shamim Parvaz
Electrical Safety Manager
Cell: +8801727557062
E-mail: shamim.p@standard-group.com |

5. BUILDING DATA

A. General

Standard Stitches Ltd.(Unit-2) ((extension). is established in its 2 RCC buildings (Building 1 and Building 2). As reported by the Factory Management, Buildings-1 was constructed in around January, 2016 and the production began in around June 2017. During the time of the Inspection, the factory accommodated a total of 650 workers working in this factory.

The floor wise utilization of the buildings are as detailed below:

Six Storied Main Production Building (Extension Part) (33600 sft):

Ground Floor	:	Store
First Floor	:	Sewing
Second Floor		Cutting
Third Floor		Sewing
Fourth Floor		Sewing
Fifth Floor		Sewing

Four Storied Office Building (17600 sft):

Ground Floor	:	Medical
First Floor	:	Finished Good
Second Floor		Office
Third Floor		Training Center

FLOOR LAYOUT INFORMATION

The six storied (G+5) extension part of the main factory building is 84 feet tall and has a total floor area of approx. 33,600 sqft. Figure 1 shows the second floor layout plan of the factory:



Figure 1: Floor layout plan

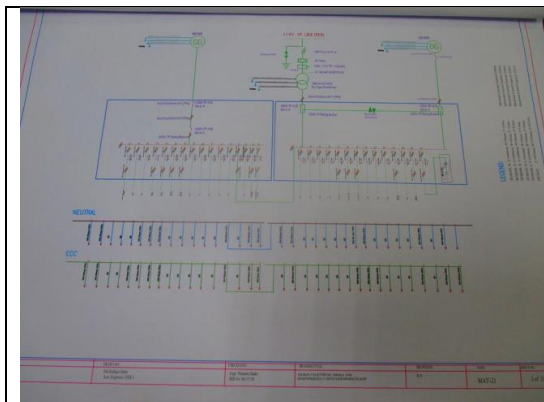
ELECTRICAL SYSTEM & UTILITY INSTALLATION INFORMATION

Standard Stitches Ltd.(Unit-2) ((extension) premise is connected to grid (REB) supply, which is the main source of power supply tapped from 11kV Over Head line and delivered through High Tension cable. The 11kV supply is stepped down by 1250 kVA, 11/0.415kV, 3 phase power transformer installed in Utility Shed. All Utilities belongs to Standard Stitches Ltd. (Unit -2) (ID: 12515) which is already inspected by RSC.

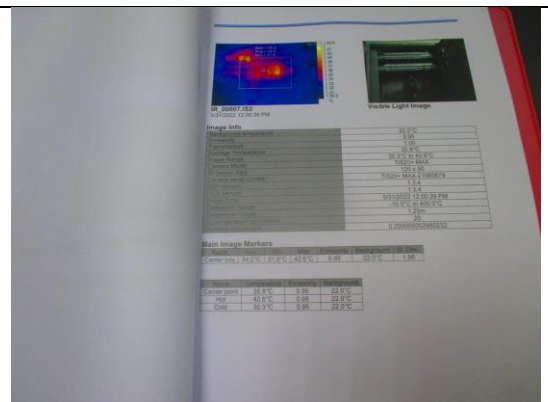
B. ELECTRICAL PRACTICES IN OPERATION AND MAINTENANCE

Maintenance and Operations is done by in-house electrical and maintenance team of the factory. However, the maintenance of major equipment like transformer, generator and boilers are sometimes outsourced to the service centers.

Inspecting teams were presented with the maintenance programs, logs and maintenance schedule of the factory's electrical facilities; Some typical practices are shown below.



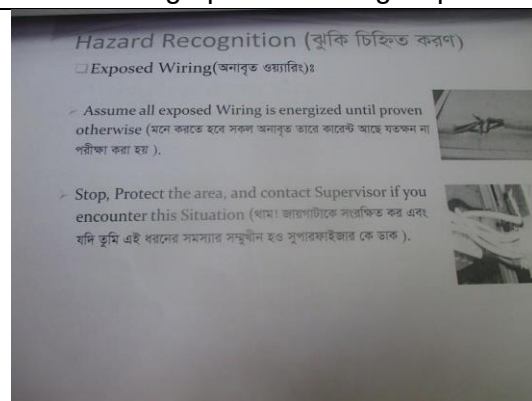
Electrical Single Line Diagram



Thermographic Scanning Report

Standard Stitches Ltd. (Unit-2)				
Electrical Maintenance Program/Schedule				
Equipment Task or Function	Task Line	Frequency	Next Inspection Date	Comments
Electrical Safety Training Program	See Manual	Annually	24/06/2022	
Thermographic Scanning Report	See Manual	Annually	24/06/2022	
Transformer Oil Test Report	See Manual	Annually	24/06/2022	
Insulation Resistance Measurement Program	See Manual	Annually	24/06/2022	
Earth Electrode Resistance Test Report (System Earthing)	See Manual	Annually	24/06/2022	
Earth Electrode Resistance Test Report (LTs)	See Manual	Annually	24/06/2022	
Transformer Inspection, Maintenance and Testing Procedure	See Manual	Annually	24/06/2022	
SPK & LPS Inspection, Maintenance and Testing Procedure	See Manual	Annually	24/06/2022	
All Electrical Panel Inspection, Maintenance and Testing Procedure	See Manual	Annually	24/06/2022	
Small Maintenance Program	See Manual	Annually	24/06/2022	
Compressor Inspection and Maintenance	See Manual	Annually	24/06/2022	
Boiler Inspection and Maintenance	See Manual	Annually	24/06/2022	
Capacity Information Label Update	See Manual	Annually	24/06/2022	
All Electrical Machines Earthing Connection	See Manual	Annually	24/06/2022	
Electrical Single Line Diagram Update	See Manual	Annually	24/06/2022	
Lightning Protection System Maintenance	See Manual	Annually	24/06/2022	

Electrical Maintenance Schedule Program



Electrical Safety Training Program

6. LIGHTNING PROTECTION RISK ASSESSMENT

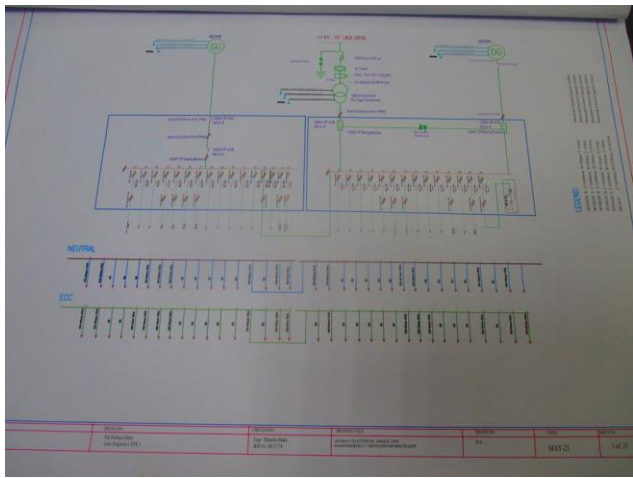
Calculation of Risk Index Factor (BNBC 2006) for Main Production Building			
Index A	Use of Structure	Small and medium size factories, workshops and laboratories	6
Index B	Type of Construction	Reinforced concrete with nonmetal roof	2
Index C	Contents or Consequential Effects	Industrial and agricultural buildings with specially susceptible contents	5
Index D	Degree of Isolation	Structure located in an area with a few other structures or trees of similar height	5
Index E	Type of Terrain	Flat terrain at any level	2
Index F	Height of Structure	18 – 24 m	8
Index G	Lightning Prevalence	Over 21	21
	Total Risk Index of the building		49
Requirement of installing LPS		Yes	

It is required to calculate risk index for all structures, design LPS as per standard and install it properly.

7. FINDINGS AND RECOMMENDATIONS

The table below summarizes the major electrical hazards identified during the walk through inspection. Recommendations have been provided to each finding.

The implementation schedule shall be developed by the factory to remediate each of the findings. The specific timing of improvements, including any requested extensions due to design / installation constraints, shall be submitted to the RSC for an approval.

FINDING NO:	E - 1	
CATEGORY:	DOCUMENTATION	
FINDING:	Field information has no/less reflection in existing SLD.	
RECOMMENDATION:	Draw as built electrical SLD mentioning all required information by qualified engineer and get it reviewed by RSC. Electrical SLD must be updated properly when electrical system is modified.	
PRIORITY:	P2	
REMEDATION TIME FRAME:	2 MONTHS	

FINDING NO:	E - 2	
CATEGORY:	DISTRIBUTION BOARD/PANEL	
FINDING:	Panel body is not connected to earth. Earthing bar installed on insulator.	
RECOMMENDATION:	All metal installation which are part of electrical system must be connected to earth to avoid electrical shock or electrocution.	
PRIORITY:	P2	
REMEDATION TIME FRAME:	1 MONTH	

FINDING NO:	E - 3
CATEGORY:	FLOOR DISTRIBUTION BOARD
FINDING:	
Combustible material are attached with cable duct/channels.	
RECOMMENDATION:	
Cable channels/ducts must be kept neat and clean; these must be free from combustible material and water pot.	
PRIORITY:	P2
REMEDIATION TIME FRAME:	1 MONTH

