

## Chapter 1

# **NON-CONFORMITIES BY DESCRIPTION**





Electrical Safety Assessment of **Combined Fabrics Limited, New Buildings (Extended Area), Lahore, Pakistan.**

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During the Electrical Safety Assessment of **M/s Combined Fabrics Limited, New Buildings (Extended Area) Atta Baksh Road, 17 KM Off Ferozepur Road, Lahore Pakistan**, deficiencies of various categories were observed & were communicated to the client instantaneously. Client's technical team deputed to clear the observations worked on the issues / observations, fixed them & got them verified by Bureau Veritas Inspectors.

1. "As built electrical drawings" of main/sub distribution circuits connecting electrical loads (Single Line Diagram/ electrical lay out) are available but required minor updates. This is a major document which reveals the visibility of electrical installations.

Drawings have been corrected / updated during the inspection.

2. Cables (tested) have qualified the Insulation Resistance (IR) test. Records of Insulation Resistance test results (IR test) are provided in Appendix – B of this report. This is an important test that provides early alerts about the degradation of cable insulation & may help from eventual hazards. The production unit is recommended to maintain records of all power cables & may be updated twice a year.
3. Standard color/markings for phases (Red, Yellow & Blue), neutral (black) & earth (green with yellow strip) followed.
4. Instruction board display of first aid procedure(s) & artificial respiration for attending personal(s) electrocuted were available.
5. Electrical graded rubber mats on floors of MDBs/DBs/SDBs & LT room are available.
6. Size of Earth Continuity Conductor (E.C.C.) installed is adequate. Presence of E.C.C. provide alternate path to the flow of current in case of any short circuit.
7. Identification & Markings at LTs (MSB)/MDBs/DBs/SDBs available.
8. Fire protection systems / Hydrant & fire extinguishers are being installed.
9. Electrical panels/distribution boxes & trenches are untidy.
10. Protective devices for all the circuits & load are available.
11. Indicator lamps are connected through protective devices.
12. No looping or cascading observed from input side of the breakers for lighting DB's.

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**Bureau Veritas Pakistan (Pvt.) Ltd.**

First Floor, Somia Ehsan Plaza, Plot No. 37, 2-C1, College Road, Township, Lahore, Pakistan.

Tel.: +92 (21) 111 786 013

Fax : +92 (21) 34392713

Email: [mubashir.baig@pk.bureauveritas.com](mailto:mubashir.baig@pk.bureauveritas.com)



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13. LT (MSB) /MDB/DB panels were dust & vermin free.
14. Multiple terminations observed at few circuit breakers using cables of different gauges. All multiple terminations have been removed during the inspection.
15. Cable termination quality & workmanship is poor at few locations – cables are terminated without lugs & glands not used at cable inlet / outlet.  
  
All such MDBs / DBs have been attended & fixed during the inspection.
16. Double Insulated hand tools & insulated gloves are used by technicians.
17. All electrical panels are located in safe environmental conditions.
18. Display sheet for designed load to be connected available inside every panel.
19. Identification & marking for all electrical panels available.
20. Socket circuits and lighting circuits are separate at all locations.
21. Lighting in storage areas is as per standards.
22. Standby generator for water hoses was connected.
23. Lightning arrestors are installed.

**Overall Assessment:** Satisfactory

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