

ELECTRICAL SAFETY INSPECTION REPORT

ABM Fashions Ltd.

1143, 1145 Horinacala, Kashimput Road, Konabari Gaziput, Dhaka, Bangladesh.



Factory List
ABM Fashions Ltd.

Inspected by: Dawa
Report Generated by: Dawa

Inspected on 21 October 2015

ACCORD
on Fire and Building Safety in Bangladesh

4 GENERAL INFORMATION

Factory Name: ABM Fashions Ltd.

Inspected on: October 21, 2015

Factory Address: 1143, 1145 Horinacala,
Kashimput Road,
Konabari Gaziput,
Dhaka,
Bangladesh.

Factory ID: 12252

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5 BUILDING DATA

5.1 ABM Fashions Ltd. factory is established in 1 building plus utility buildings, and is rented by the factory. Although the building construction is complete, few installation works were under process on the 1st and 5th floors of the building.

The factory was constructed in 2015, production started in 2015, and during the inspection the number of workers was approximately 2030.

5.2 The building and shed utilization is as detailed below:

| Building | Number of Floors | Area of Building | Height of Building |
|------------------|------------------|------------------|--------------------|
| Main Building | 6 | 17,650 sq. m | 19.00 m |
| Utility Building | 1 | 170 sq. m | 4.00 m |

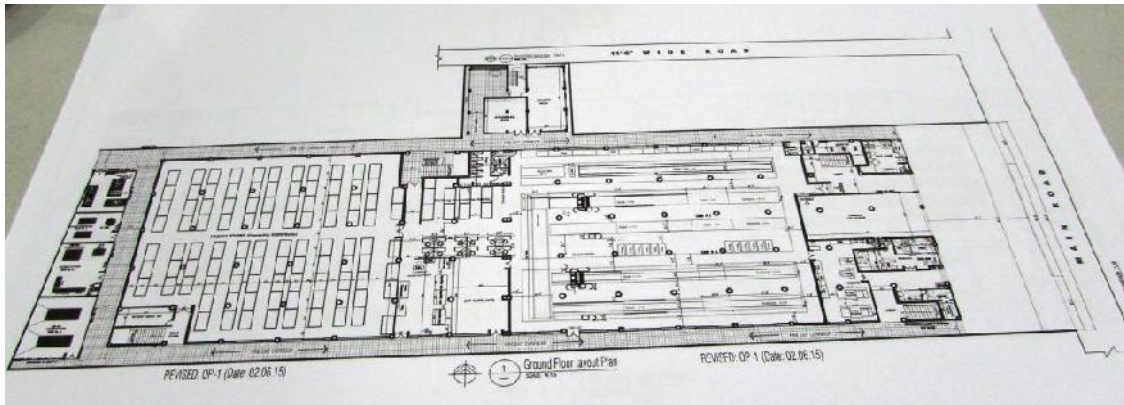


Figure 1: Ground floor plan of factory building.

| Main Building | | |
|-------------------------|--|---------------|
| Ground floor: | Cutting, Store, Day-care, Doctor room, Fusing. | (175 Workers) |
| 1st floor: | Finishing, Finished goods store, Accessories store, Inspection room. | |
| 2nd floor: | Cutting, Store, Day-care, Doctor room, Fusing. | (395 Workers) |
| 3rd floor: | Sewing, Sample section. | (780 Workers) |
| 4th floor: | Sewing, Offices. | (610 Workers) |
| 5th floor: | Sewing, Dining, Accessories store. | (70 Workers) |
| Utility Building | | |
| Ground floor: | Transformer, Generator, Boiler, Compressor. | (2 Workers) |

5.3 Electrical System:

ABM Fashions Ltd. gets its grid power from REB. There is 1 generator used as backup power. The generator and transformer setup is as below.

The factory building is connected to an 11kV OH line, and protected by a DO fuse and delivered through a HT cable. The outputs from transformer and backup diesel generator are fed to the factory's electrical system through an Auto Transfer Switch. The current 630kVA transformer is planned to be replaced by a 1,250kVA transformer, and a 600kVA backup diesel generator will be added to the system when 1st and 5th floors become fully functional.

The installation work for 1,250kVA transformer, 600kVA diesel generator in utility building and electrical panel on 1st and 5th floors was underway at the time of inspection.

The factory officials presented the as-built SLD of substation and also the SLD of future expansion with 1250kVA transformer and two 600kVA diesel generators.

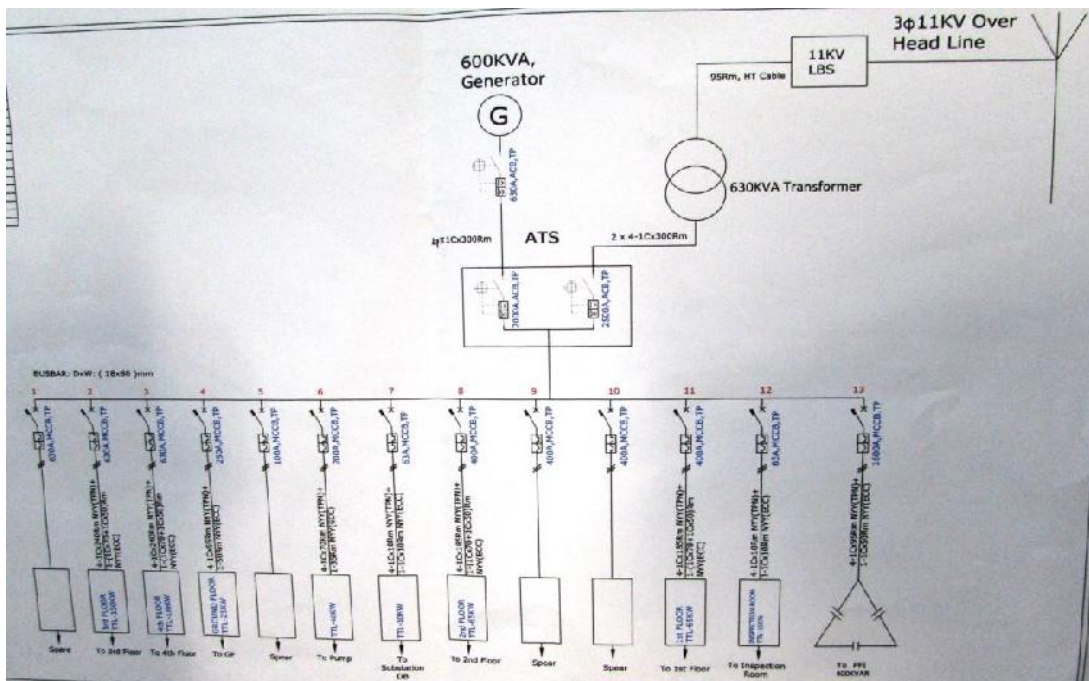


Figure 2: As-built SLD of Substation.

| Transformer #1 | |
|-------------------------|---|
| Owner | Factory owned |
| Location | Floor mounted transformer in the substation |
| Transformer Type | Oil immersed type |
| Arrangement | 1 three-phase transformer |
| Single phase or 3 phase | 3 |
| Primary Voltage (kV) | 11.0 kV |
| Secondary Voltage (kV) | 0.42 kV |
| Capacity | 630 kVA |
| Network System | 3-Phase, 4-Wire |

| Generator #1 | |
|-----------------------|--------------|
| Generator Type | Diesel |
| Capacity | 600 kVA |
| Rated Voltage | 415 V |
| Number of hours/day | 3 |
| Backup or Main supply | Backup power |

5.4 Electrical Installation

The cabling systems in the factory are mostly supported in cable raceways made of aluminum channels above the working tables. However, some sections of distributions are made through surface PVC conduit and concealed conduit wires.

The cable raceway and electrical panel installation works were ongoing on 1st and 5th floors at the time of inspection.



Figure 3: Electrical Installation on the factory floor.

5.5 Operation and Maintenance:

The factory has 3 qualified engineers, 4 certified electricians, and 1 non-certified electrical staff on its electrical maintenance team. The factory keeps adequate maintenance records, and maintenance of major equipment is carried out by the factory.

At the time of inspection, the electrical inspector found the panels on production floors were all in good condition and in accordance with standard codes.

6 LIGHTNING PROTECTION RISK ASSESSMENT

There is no adequate lightning protection system in the building, and there is no LPS drawing for the system. The calculation of the risk index for lightning protection for this building is below.

| Sl.no. | Index category | Index Figure |
|--------|-----------------------------------|--------------|
| A | Usage of Structure | 6 |
| B | Type of construction | 4 |
| C | Contents or consequential effects | 5 |
| D | Degree of isolation | 2 |
| E | Type of area and terrain | 2 |
| F | Height of structure | 8 |
| G | Lightning prevalence | 21 |
| | Total index figure | 48 |

Recommendation:

The total risk index figure is more than 40; hence a lightning protection system is required. An LPS drawing must be drawn up

