

FIRE SAFETY INSPECTION REPORT

RATUL FABRICS LTD

ACCORD ID: 9726

ZOHAR SANDA, ASHULIA, SAVAR

OTHER FACTORIES: RATUL ACCESSORIES



ACCORD
on Fire and Building Safety in Bangladesh

April 19, 2015

SUMMARY

Ratul Fabrics Ltd was surveyed for fire safety on 4/19/2015 by Jensen Hughes. This summary identifies the major deficiencies that were identified during the inspection.

The purpose of this survey was to identify significant fire safety issues and to provide recommendations for remediation based on applicable standards specified by the Accord. The scope of this initial fire safety inspection was limited to the review and identification of major fire safety issues. The inspection did not include identification of minor deficiencies, which will be further addressed as part of follow-up inspections.

Tables 1 - 2 summarizes the major fire safety issues identified during the inspection. Recommendations have been provided to address each issue.

An 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 Accord for approval.

Table 1. Findings And Recommendations - Ratul Fabrics

No.	Category	Finding	Recommendation	Remediation Timeframe
F-1	Fire Rated Construction	The exit stairs are not separated from work areas and other spaces on each floor by fire-rated construction.	<p>Provide minimum 1-hr rated doors for buildings with 3 or fewer stories. Seal all unprotected openings to separate the exit stairs from work areas and other building spaces on all floor levels. Ensure that the fire doors are self-closing and positive latching and that they are provided with fire exit (panic) hardware where serving production floors.</p> <p>If fire doors are required to be held open for functional reasons, provide automatic-closing devices tied to the fire alarm system.</p>	Within 3 months





F-2	Fire Rated Construction	The boiler room is not separated by fire-rated construction due to openings and non-rated doors on the ground floor.	Separate the boiler room by a minimum 1-hr fire-rated construction for non-high rise. Seal and protect all openings to maintain the required fire separations. When located to the exterior of a building, 3m (10 ft.) separation is required. Provide proper ventilation and consult a qualified engineer.	Within 3 months
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F-3	Fire Rated Construction	Areas used for combustible storage open to the factory are not separated by fire-rated construction on ground and first floor.	<p>Provide defined storage areas and limit the storage arrangement as follows:</p> <ul style="list-style-type: none"> - Maximum height of 2.45m (8ft.) and maximum area of 23m² (250 ft²) - If sprinkler protected: maximum height of 3.66m (12ft.) and maximum area of 93m² (305ft²) <p>Separate areas of unenclosed combustible storage by a minimum clear distance of 3m (10ft.).</p>	Within 3 months
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F-4	Fire Rated Construction	Rooms used for combustible storage are not separated by fire-rated construction on all floors except the second floor.	<p>Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction.</p> <p>Where separate storage rooms are not feasible, provide defined storage areas and limit the storage arrangement as follows:</p> <ul style="list-style-type: none"> - Maximum height of 2.45m (8ft.) and maximum area of 23m² (250 ft²) - If sprinkler protected: maximum height of 3.66m (12ft.) and maximum area of 93m² (305ft²) <p>Separate areas of unenclosed combustible storage by a minimum clear distance of 3m (10ft.).</p>	Within 3 months
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F-5	Fire Rated Construction	The exit discharge paths serving the north east and north west exits are less than 3 m (10 ft.) wide and are not separated from the building interior.	Seal all penetrations and openings to the interior of the building along the discharge path, up to a height of 10 ft., to provide a minimum 1-hr fire separation.	Within 6 months
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F-6 Egress

Building did not have stair designation signs at exit stairs. Building did not have occupant load signs at factory floors.

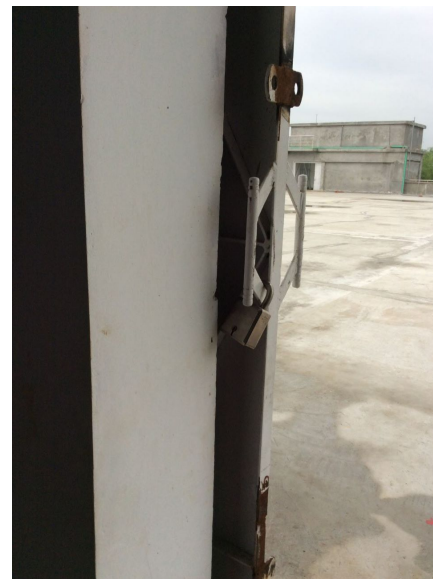
Provide stair designation signs and occupant load signs at required locations.

Immediately





F-7	Egress	Egress doors with locking features are provided along egress routes. Egress gates with locking features are provided at building exits and exit stairs. All doors were not open and unlocked during the inspection.	Remove locking features from all egress doors and gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101 and ACCORD standard 6.8.2.	Immediately
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F-8	Egress	Storage was located in the south east and south west exit stairs.	Remove all storage from exit stairs and egress paths.	Immediately
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F-9	Egress	Collapsible gates are provided at building exits and exit stairs. Sliding doors are provided along egress routes and exit discharge.	Replace all gates and sliding doors along the means of egress with side-hinged, swinging egress doors in accordance with ACCORD standard 6.8.1.	Within 1 month
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F-10	Egress	The day-care room does not meet ACCORD standard 3.4.2.1.1. on the first floor.	Day-care shall be located on the ground floor with a maximum travel distance of 9 m (30 ft) or located one story above level of exit discharge with direct access to an exit enclosure.	Within 3 months
		If the above is not possible provide a minimum 2-hr fire-rated exit corridor between the day-care room and exit stair with ACCORD approval.		



F-11 Egress

Handrails are not provided on both sides of the exit stairs.

Provide handrails on both sides of the exit stairs. New handrails shall have a minimum height of 865 mm (34 in.) and a maximum height of 965 mm (38 in.) as measured from the leading edge of the tread. Intermediate handrails shall be provided when the stair width exceeds 2.2 m (87 in.)

Within 3 months



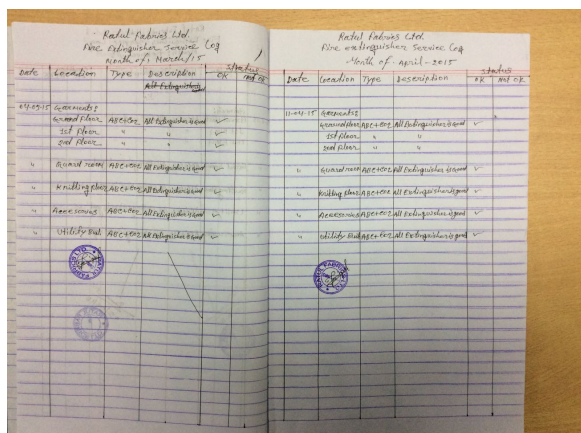
F-12	Egress	Single means of egress are provided from prayer spaces where the occupant load is exceeded.	Reduce occupant load to not more than 30 persons. Or provide additional means of egress in accordance with Accord Standard.	Within 3 months
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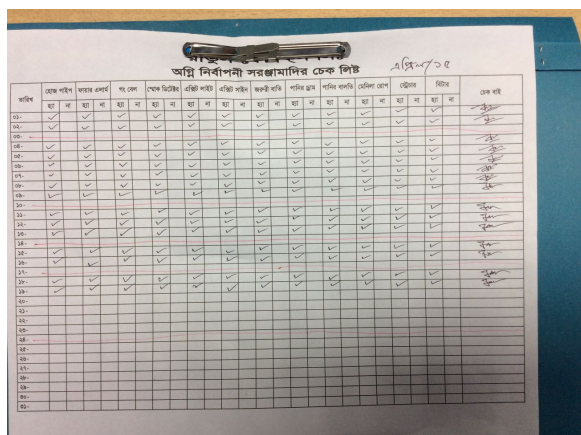
F-13	Fire Protection	The required no smoking signs are not present in the factory.	Smoking is prohibited in any garment factory building or separate storage building. Signs shall be posted in Bengali and English at all building entrances. If the factory creates a designated smoking area outside the building, information of these areas will be posted on the signs.	Within 1 months
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F-14	Fire Protection	Inspection, testing and maintenance of portable fire extinguishers is not in accordance with NFPA 10.	Inspect, test and maintain the portable fire extinguishers and keep written records on-site, in accordance with NFPA 10.	Within 3 months
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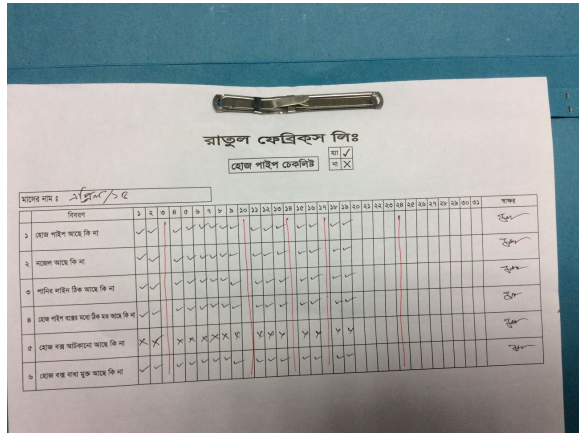


- F-15 Fire Protection** Inspection, testing and maintenance for the fire alarm system is not in accordance with NFPA 72. Inspect, test and maintain the fire alarm system and keep written records on-site, in accordance with NFPA 72. Within 3 months



- F-16 Fire Protection** Inspection, testing and maintenance of the fire pump system is not in accordance with NFPA 20. Inspect, test and maintain the fire pump system and keep written records on-site, in accordance with NFPA 20. Within 3 months

F-17	Fire Protection	Inspection, testing and maintenance of the standpipe system is not in accordance with NFPA 14.	Inspect, test and maintain the standpipe system and keep written records on-site, in accordance with NFPA 14.	Within 3 months
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F-18	Fire Protection	Visible notification was not provided for the building in accordance with NFPA 72.	Provide visible notification for the building in accordance with NFPA 72.	Within 3 months
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F-19	Fire Protection	Fire pump did not meet ACCORD standard 5.5.1 and 5.5.1.1.	Update current fire pump or provide a new fire pump that meets ACCORD standard 5.5.	Within 6 months
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F-20	Egress Lighting	Exit signages were not provided at entrances to the exit stairs.	Provide exit signs above all building exits to the exterior, all doors to the exit stairs and along all paths of travel where a change of direction is not obvious.	Within 1 month
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F-21	Egress Lighting	Inspection, testing and maintenance for the emergency lighting system was not in accordance with The ACCORD standard.	Inspect, test and maintain the emergency lighting system in the accordance with The ACCORD standard. Keep written records on-site.	Within 3 months
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F-22 Egress Lighting

Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes on factory floors.

Test the emergency lighting system on each floor and provide additional emergency fixtures to supply adequate illumination along the means of egress. Provide a minimum illumination of 10 lux at the floor level within exit stairs and along exit discharge paths and a minimum 2.5 lux along exit access aisles.

Within 3 months



Table 2. Findings And Recommendations - Ratul Knitting

No.	Category	Finding	Recommendation	Remediation Timeframe
F-1	Fire Rated Construction	The compressor area is not separated by fire-rated construction in the utility building.	Separate the compressor area by a minimum 1-hr fire-rated construction for non-high rise. Seal and protect all openings to maintain the required fire separations. When located to the exterior of a building, 3m (10 ft.) separation is required. Provide proper ventilation and consult a qualified engineer.	Within 3 months





F-2	Fire Rated Construction	Areas used for combustible storage open to the factory are not separated by fire-rated construction on the ground floor.	<p>Provide defined storage areas and limit the storage arrangement as follows:</p> <ul style="list-style-type: none"> - Maximum height of 2.45m (8ft.) and maximum area of 23m² (250 ft²) - If sprinkler protected: maximum height of 3.66m (12ft.) and maximum area of 93m² (305ft²) <p>Separate areas of unenclosed combustible storage by a minimum clear distance of 3m (10ft.).</p>	Within 3 months
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F-3	Fire Rated Construction	Rooms used for combustible storage are not separated by fire-rated construction on the mezzanine floor.	Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction. Where separate storage rooms are not feasible, provide defined storage areas and limit the storage arrangement as follows: - Maximum height of 2.45m (8ft.) and maximum area of 23m ² (250 ft ²) - If sprinkler protected: maximum height of 3.66m (12ft.) and maximum area of 93m ² (305ft ²) Separate areas of unenclosed combustible storage by a minimum clear distance of 3m (10ft.).	Within 3 months
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F-4	Egress	The shed did not have occupant load signs at factory floors.	Provide occupant load signs at required locations.	Immediately
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F-5	Egress	Egress doors with locking features are provided at exits and along egress routes. All doors were open and unlocked during the inspection.	Remove locking features from all egress doors and gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101 and ACCORD standard 6.8.2.	Immediately
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F-6 Egress

Sliding doors are provided at exits and along egress routes.

Replace all gates and sliding doors along the means of egress with side-hinged, swinging egress doors in accordance with ACCORD standard 6.8.1.

Within 1 month



F-7	Egress	Handrails are not provided on both sides of the west stair.	Provide handrails on both sides of the exit stairs. New handrails shall have a minimum height of 865 mm (34 in.) and a maximum height of 965 mm (38 in.) as measured from the leading edge of the tread. Intermediate handrails shall be provided when the stair width exceeds 2.2 m (87 in.)	Within 3 months
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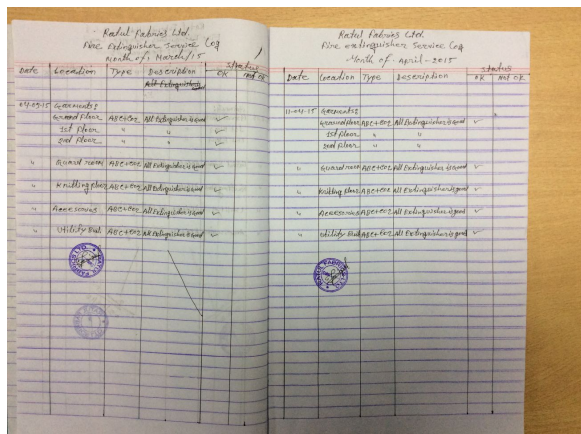
F-8	Egress	Common path of egress travel exceeds limit on the ground floor.	Reconfigure the egress arrangement to reduce the maximum common path of travel to not more than 23 m (75 ft.) or 30 m (100 ft.) when complete sprinkler protection is provided.	Within 3 months
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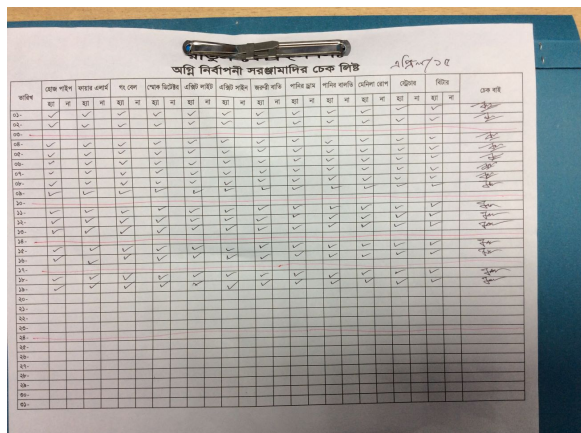
F-9	Egress	Dead-end aisles exceed 15 m (50 ft.) on the ground floor.	Reconfigure the egress arrangement to reduce the maximum dead-end distance to not more than 15 m (50 ft.).	Within 3 months
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F-10	Fire Protection	Inspection, testing and maintenance of portable fire extinguishers is not in accordance with NFPA 10.	Inspect, test and maintain the portable fire extinguishers and keep written records on-site, in accordance with NFPA 10.	Within 3 months
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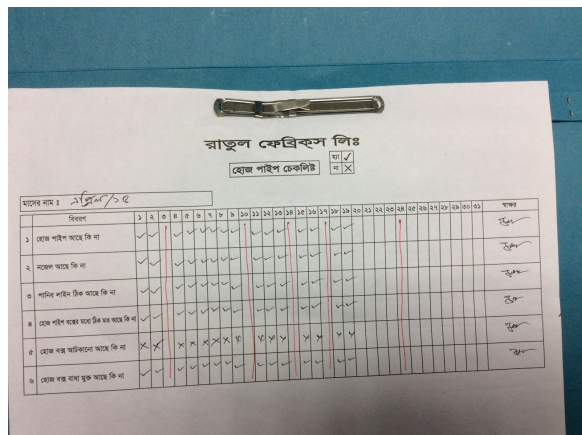


- F-11 Fire Protection** Inspection, testing and maintenance for the fire alarm system is not in accordance with NFPA 72. Inspect, test and maintain the fire alarm system and keep written records on-site, in accordance with NFPA 72. Within 3 months



- F-12 Fire Protection** Inspection, testing and maintenance of the fire pump system is not in accordance with NFPA 20. Inspect, test and maintain the fire pump system and keep written records on-site, in accordance with NFPA 20. Within 3 months

F-13	Fire Protection	Inspection, testing and maintenance of the standpipe system is not in accordance with NFPA 14.	Inspect, test and maintain the standpipe system and keep written records on-site, in accordance with NFPA 14.	Within 3 months
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F-14	Fire Protection	Visible notification was not provided for the shed in accordance with NFPA 72.	Provide visible notification for the building in accordance with NFPA 72.	Within 3 months
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F-15	Fire Protection	Fire pump did not meet ACCORD standard 5.5.1 and 5.5.1.1.	Update current fire pump or provide a new fire pump that meets ACCORD standard 5.5.	Within 6 months
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F-16	Egress Lighting	Exit signages were not provided at entrances to the stairs.	Provide exit signs above all building exits to the exterior, all doors to the exit stairs and along all paths of travel where a change of direction is not obvious.	Within 1 month
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F-17	Egress Lighting	Exit signage not illuminated above south exit door.	Regularly inspect all exit signage and replace/install lights as needed to illuminate signs. The source of illumination shall provide not less than 50 lux at the illuminated surface with a contrast of not less than 0.5. Approved self luminous signs which provide evenly illuminated letters having a minimum luminance of 0.2 cd/m ² may also be used.	Within 1 month
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F-18	Egress Lighting	Inspection, testing and maintenance for the emergency lighting system was not in accordance with The ACCORD standard.	Inspect, test and maintain the emergency lighting system in the accordance with The ACCORD standard. Keep written records on-site.	Within 3 months
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