

FIRE SAFETY INSPECTION REPORT

A.K.M. KNIT WEAR LTD
14 NO. GENDA, KARNOPARA, ULAIL, SAVAR



ACC  **RD**
on Fire and Building Safety in Bangladesh

March 24, 2014

SUMMARY

A.K.M. Knit Wear Ltd was surveyed for fire safety on 3/24/2014 by Hughes Associates, Inc. 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 - 3 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 - A.K.M. Knitting Ltd.

No.	Category	Finding	Recommendation	Remediation Timeframe
F-1	Fire Rated Construction	<p>The boilers and generators on the ground floor of the Utility Building are not separated by fire rated construction.</p> <p>The transformer and generators in the northwest building are not separated by fire-rated construction.</p>	Separate these utilities by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations	Within 3 months





F-2	Fire Rated Construction	Areas used for combustible storage noted on the 1, 3, 4 and 5th floors are not separated by fire-rated construction.	<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 2.4m and maximum area of 23m² - If sprinkler protected: maximum height of 3.66m and maximum area of 93m² <p>Separate areas of unenclosed combustible storage by a minimum clear distance of 3m.</p>	Within 3 months
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F-3	Fire Rated Construction	The exit stairs are not separated on each floor by fire-rated construction.	Provide minimum 1.5-hr fire rated doors and 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.	Within 3 months
			If fire doors are required to be held open for functional reasons, provide automatic-closing devices tied to the fire alarm system.	



F-4	Fire Rated Construction	Unsealed penetrations and openings are located in the fire-rated floor/ceiling assemblies including plumbing and electrical utility risers.	Provide a minimum 2-hr fire-rated shaft to separate the utility risers from each floor level.	Within 3 months
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F-5	Fire Rated Construction	A shaft (possibly for future elevator) is located adjacent to the north exit stairs. The shaft is open to the stairwell in several locations including an impromptu linen shaft.	Provide a minimum 2-hr fire-rated shaft to separate the shaft from each floor level and stairwell. Seal all penetrations and openings in shaft assemblies to maintain the fire separation.	Within 3 months
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F-6	Egress	<p>Doors / gates with locking features are provided along some egress paths.</p> <p>All gates/doors were open and unlocked during the inspection.</p>	<p>Remove locking features from all egress doors / gates.</p> <p>If locks are required for security reasons, utilize special door locking features complying with NFPA 101.</p>	Immediate
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F-7	Egress	<p>Storage was located in the exit stair (storage lockers).</p>	<p>Remove all storage from exit stairs and egress paths.</p>	Immediate
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F-8	Egress	Collapsible gates / sliding doors are provided at building exits, exit stairs, along egress routes, and at exit discharge locations.	<p>Replace all gates / sliding doors along the means of egress with side-hinged, swinging egress doors.</p> <p>If locks are required for security reasons, utilize special door locking features complying with NFPA 101.</p>	Within 1 month
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F-9	Egress	North exit stairs at the main entrance discharge inside the building on the ground floor floor.	Modify stair to discharge directly outside or provide 2-hr fire-rated exit passageway leading directly outside.	Within 6 months
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F-10	Fire Protection	The fire alarm system is antiquated, not a listed system, and does not provide alarm and notification features consistent with acceptable standards.	Replace the fire alarm system with a new, listed addressable fire alarm system in accordance with NFPA 72.	Design within 4 months, install within 9 months
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F-11	Fire Protection	Inspection, testing, and maintenance records for the fire alarm system were 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	The fire alarm system does not appear to provide adequate audible notification coverage based upon 3rd floor observation during functional testing.	Provide additional notification appliances such that the fire alarm system is audible throughout the building in accordance with NFPA 72.	Within 6 months
F-13	Fire Protection	The building is equipped with single-station smoke alarms. Smoke alarm activation sounds only a local alarm and does not provide automatic fire alarm notification of occupants.	Remove the single-station smoke alarms. Provide automatic smoke detectors throughout the building in accordance with NFPA 72.	Within 6 months
F-14	Egress Lighting	Manual on-off switch is provided for some emergency lighting exit sign units.	Remove manual on/off switches from emergency lighting / exit sign units to prevent them from being switched off.	Within 1 month
F-15	Egress Lighting	Directional exit signage missing from northwest corner of 2nd floor.	Provide directional exit signs where exit pathway may not be obvious.	Within 3 months

Table 2. Findings And Recommendations - Al-Muslim Accessories Ltd.

No.	Category	Finding	Recommendation	Remediation Timeframe
F-1	Fire Rated Construction	Hazardous materials / flammable liquid storage area in the 5th floor is not separated by fire-rated construction (openings, non-rated doors, penetrations).	Separate the hazardous materials / flammable liquid storage room by a minimum 2-hr fire-rated construction. Seal and/or protected all openings to maintain the required fire separations.	Within 3 months



F-2	Fire Rated Construction	Areas used for combustible storage room in the 1st and 5th floors are not separated by fire-rated construction.	Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction.	Within 3 months
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F-3	Fire Rated Construction	The exit stairs are not separated from work areas or other spaces on each floor by fire-rated construction.	<p>Provide minimum 1.5-hr fire rated doors and 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
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F-4	Fire Rated Construction	Unsealed penetrations and openings on several floors are located in the fire-rated floor/ceiling assemblies.	Provide a minimum 2-hr fire-rated shaft to separate the utility risers from each floor level.	Within 3 months
			Seal all penetrations and openings in floor/ceiling assemblies to maintain the fire separation.	





F-5	Fire Rated Construction	Buildings connected by raised walkways.	Provide a minimum 2-hr fire-rated construction between building and another building.	Within 3 months
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F-6	Fire Rated Construction	Unprotected openings are located in the 3rd and 4th floors between the building and utility building.	Provide a minimum 2-hr fire-rated construction between building and another building.	Within 3 months
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F-7	Fire Rated Construction	Areas used for combustible storage in ground, 1st and 2nd floors are not separated by fire-rated construction.	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 2.4m and maximum area of 23m ² - If sprinkler protected: maximum height of 3.66m and maximum area of 93m ² Separate areas of unenclosed combustible storage by a minimum clear distance of 3m.	Within 3 months
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F-8	Egress	Exit capacity and number in 4th floor are not adequate for the occupant load. The occupant load for 4th floor is 600 persons, however this exceeds the egress capacity provided which is 353 persons.	Reduce occupant load to not more than available exit capacity and Provide additional exits in the future to increase capacity.	Immediate
F-9	Egress	Egress doors / gates with locking features are provided at building exits and exit stairs All gates/doors were open and unlocked during the inspection.	Remove locking features from all egress doors / gates. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.	Immediate



F-10 Egress

Storage was located in the exit stairs.

Remove all storage from exit stairs and egress paths.

Immediate





F-11 Egress

Collapsible gates / sliding doors are provided at building exits and exit stairs

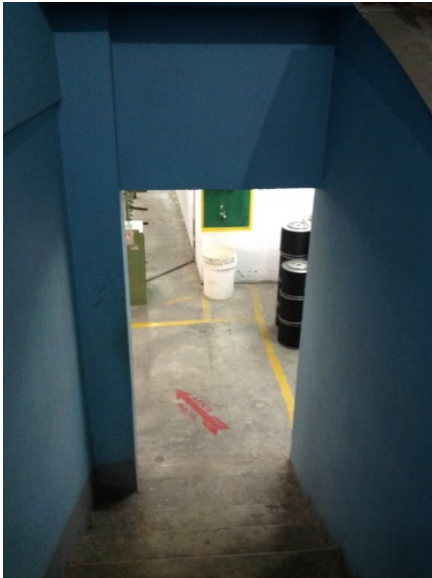
Replace all gates / sliding doors along the means of egress with side-hinged, swinging egress doors.

Within 1 month

If locks are required for security reasons, utilize special door locking features complying with NFPA 101.



F-12	Egress	The SW exit stairs discharge inside the building.	Modify stair to discharge directly outside or Provide 2-hr fire-rated exit passageway leading directly outside (vestibules to separate any storage areas) or Provide sprinkler protection for discharge floor in accordance with NFPA 13.	Within 6 months
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F-13	Fire Protection	The fire alarm system is antiquated, not a listed system, and does not provide alarm and notification features consistent with acceptable standards.	Replace the fire alarm system with a new, listed addressable fire alarm system in accordance with NFPA 72.	Design within 4 months, install within 9 months
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F-14	Fire Protection	Inspection, testing, and maintenance for the fire alarm system was 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-15	Fire Protection	The building is equipped with single-station smoke alarms. Smoke alarm activation sounds only a local alarm and does not provide automatic fire alarm notification of occupants.	Remove the single-station smoke alarms. Provided automatic smoke detectors throughout the building in accordance with NFPA 72.	Within 6 months



F-16	Egress Lighting	Manual on-off switches in several locations are provided for emergency lighting / exit signage units.	Remove manual on/off switches from emergency lighting / exit signage units to prevent them from being switched off.	Within 1 month
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F-17	Egress Lighting	Exit sign not provided at the southwest exits.	Provide exit signs above all exits to the exterior and all doors to the exit stairs.	Within 3 months
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Table 3. Findings And Recommendations - Utility Building

No.	Category	Finding	Recommendation	Remediation Timeframe
F-1	Fire Rated Construction	Hazardous materials / flammable liquid storage area in the ground floor and ground is not separated by fire-rated construction (openings, non-rated doors, penetrations).	Separate the hazardous materials / flammable liquid storage room by a minimum 2-hr fire-rated construction. Seal and or protected all openings to maintain the required fire separations.	Within 3 months





F-2	Fire Rated Construction	The boiler, generator and transformer rooms are not separated by fire-rated construction (openings, non-rated doors, penetrations).	Separate the boiler, generator and transformer rooms by a minimum 2-hr fire-rated construction. Seal and or protected all openings to maintain the required fire separations	Within 3 months
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F-3	Fire Rated Construction	Areas used for combustible storage in the 2nd floor are not separated by fire-rated construction.	Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction.	Within 3 months
			<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 2.4m and maximum area of 23m² - If sprinkler protected: maximum height of 3.66m and maximum area of 93m² 	
			Separate areas of unenclosed combustible storage by a minimum clear distance of 3m.	



F-4	Fire Rated Construction	The exit stairs are not separated from work areas or other spaces on each floor by fire-rated construction.	<p>Provide minimum 1.5-hr fire rated doors and 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
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F-5	Fire Rated Construction	The compressor room in ground floor is not separated by fire-rated construction (openings, non-rated doors, penetrations).	Separate the compressor room by a minimum 2-hr fire-rated construction. Seal and or protected all openings to maintain the required fire separations	Within 3 months
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F-6	Fire Rated Construction	Storage rooms used for combustible storage in the 1st and 2nd floors are not separated by fire-rated construction.	Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction.	Within 3 months
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F-7	Egress	<p>Egress doors / gates with locking features are provided at building exits and exit stairs.</p> <p>All gates/doors were open and unlocked during the inspection.</p>	<p>Remove locking features from all egress doors / gates.</p> <p>If locks are required for security reasons, utilize special door locking features complying with NFPA 101.</p>	Immediate
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F-8	Egress	<p>Storage was located in the north exit stairs.</p>	<p>Remove all storage from exit stairs and egress paths.</p>	Immediate
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F-9	Egress	Collapsible gates / sliding doors are provided at building exits and exit stairs	Replace all gates / sliding doors along the means of egress with side-hinged, swinging egress doors.	Within 1 month
			If locks are required for security reasons, utilize special door locking features complying with NFPA 101.	



F-10	Egress	Exit stair door / egress door serving 50 or more occupants in the 2nd floor does not swing in the direction of egress travel.	Modify the egress door to swing in the direction of egress travel.	Within 3 months
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F-11	Fire Protection	The fire alarm system is antiquated, not a listed system, and does not provide alarm and notification features consistent with acceptable standards.	Replace the fire alarm system with a new, listed addressable fire alarm system in accordance with NFPA 72.	Design within 4 months, install within 9 months
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F-12	Fire Protection	Inspection, testing, and maintenance for the fire alarm system was 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-13	Fire Protection	The building is equipped with single-station smoke alarms. Smoke alarm activation sounds only a local alarm and does not provide automatic fire alarm notification of occupants.	Remove the single-station smoke alarms. Provided automatic smoke detectors throughout the building in accordance with NFPA 72.	Within 6 months



F-14	Egress Lighting	Manual on-off switches in several locations are provided for emergency lighting / exit signage units.	Remove manual on/off switches from emergency lighting / exit signage units to prevent them from being switched off.	Within 1 month
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F-15	Egress Lighting	Exit sign not provided at the 2nd floor exit.	Provide exit signs above all exits to the exterior and all doors to the exit stairs.	Within 3 months
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