

FIRE SAFETY INSPECTION REPORT

MASCO INDUSTRIES LTD

22-23, SHATAISH ROAD, GAZIPURA, TONGI, GAZIPUR

**OTHER FACTORIES: BLDG #1 MASCO PRINT
BLDG #2 LAWRALS FASHION, OISHY FASHION,
HOPLUN (BD) LTD**



ACCORD
on Fire and Building Safety in Bangladesh

March 23, 2014

SUMMARY

Masco Industries Ltd was surveyed for fire safety on 3/23/2014 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 - 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 - Masco Industries Ltd

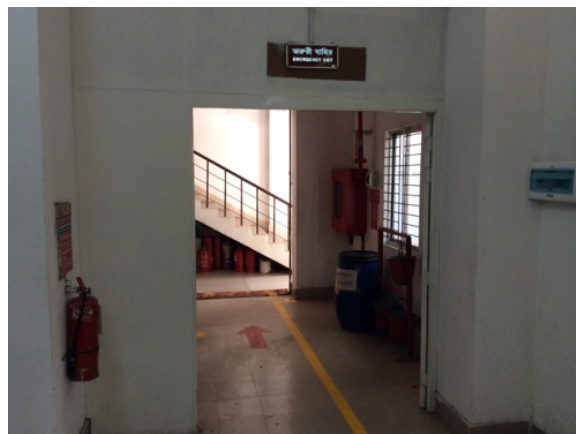
No.	Category	Finding	Recommendation	Remediation Timeframe
F-1	Fire Rated Construction	Areas used for combustible storage on the ground and 1st floor are not separated by fire-rated construction.	Provide dedicated storage rooms separated by minimum 1-hr fire-rated construction. Where separate storage rooms are not feasible, provide defined storage areas and limit the storage arrangement as follows: - Maximum height of 2.4m and maximum area of 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.	Within 3 months



F-2	Fire Rated Construction	The boiler, generator and transformer room on the ground floor are not separated by fire-rated construction (openings, non-rated doors, penetrations).	Separate the boiler, generator and transformer 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-3	Fire Rated Construction	The exit stairs are not separated from work areas and storage floors 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. If fire doors are required to be held open for functional reasons, provide automatic-closing devices tied to the fire alarm system.	Within 3 months
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F-4	Fire Rated Construction	Unsealed penetrations and openings are located in the fire-rated floor/ceiling assemblies adjacent to the southwest hose cabinet and the northwest exit stair on each floor.	Provide a minimum 2-hr fire-rated shaft to separate the hose system pipe riser from each floor level. Seal all penetrations and openings in floor/ceiling assemblies to maintain the fire separation.	Within 3 months
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F-5	Egress	Egress doors / gates with locking features by a padlocks are provided at building exit, exit stairs and exit discharge.	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
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F-6	Egress	Collapsible doors and sliding door are provided at building exit, exit stairs and exit discharge.	Replace all gates / sliding doors along the means of egress with side-hinged, swinging egress doors. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.	Within 3 months
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F-7	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
F-8	Fire Protection	The high-rise building has an occupied floor greater than 23m (75 ft) and is not provided with automatic sprinkler protection. The large occupant loads, heavy fuel loading, and anticipated extended egress times warrant sprinkler protection.	Provide automatic sprinkler protection throughout the building in accordance with NFPA 13.	Design within 6 months, install within 12 months
F-9	Fire Protection	Inspection, testing, and maintenance of 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-10	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 accordance with The ACCORD standard. Keep written records on-site.	Within 3 months
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Table 2. Findings And Recommendations - Masco Group #2

No.	Category	Finding	Recommendation	Remediation Timeframe
F-1	Fire Rated Construction	Hazardous materials (gas measure meter) space is not separated by fire-rated construction on the exit discharge route for NW stair.	Separate the hazardous materials 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 exit stairs are not separated from outside corridor and work area on 1st 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. If fire doors are required to be held open for functional reasons, provide automatic-closing devices tied to the fire alarm system.	Within 3 months
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F-3	Fire Rated Construction	Unsealed penetrations and openings are located in exit stair enclosures.	Seal all penetrations and openings in exit stair enclosure walls to maintain the fire separation.	Within 3 months
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F-4	Egress	Exit capacity is not adequate for the 1st floor occupant load. The occupant load for the 1st floor is 619 persons, however this exceeds the egress capacity provided which is 559 persons.	Reduce occupant load to not more than 559 persons available exit stairs capacity.	Immediate
F-5	Egress	Egress doors and gates with locking features by a padlocks are provided at building exits and exit stairs.	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-6	Egress	Collapsible doors, sliding gates and roll down shutters are provided at building exits and exit stairs.	Replace all gates and sliding doors along the means of egress with side-hinged, swinging egress doors. If locks are required for security reasons, utilize special door locking features complying with NFPA 101.	Within 1 month
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F-7	Egress	SE exit stair was discharged to the unprotected passageway between Masco #2 building and other building.	Provide 1-hr fire-rated exit passageway leading directly public way or Modify stair to discharge directly outside.	Within 6 months
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F-8	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-9	Fire Protection	Inspection, testing, and maintenance of 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
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F-10	Fire Protection	Activation of the fire alarm system by a manual fire alarm station provides automatic occupant notification only on the floor of alarm and not throughout the building.	Configure the fire alarm system to initiate automatic occupant notification on all floor levels to facilitate whole-building evacuation upon any manual fire alarm station activation.	Within 6 months
F-11	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 accordance with The ACCORD standard. Keep written records on-site.	Within 3 months
