

# INITIAL FIRE SAFETY INSPECTION REPORT

**Tropical Knitex Ltd (Extension 2)**

**RSC ID: 26521**

**Geographical Coordinates: 24.036089685723162, 90.25615487102908**

**Address: Chandra, Kaliakoir, 1751, Gazipur**

Other Factories: Tropical Knitex Ltd [ID:23816]; Tropical Knitex Ltd (Extension) [ID:24581]



**Inspected By: Md. Anisuzzaman & Md. Kawsar Rubaiat**

**Date: 19-November-2025**

# Fire Safety Inspection Report

## Tropical Knitex Ltd (Extension 2)

### Introduction:

**Tropical Knitex Ltd (Extension 2)** complex was surveyed for fire safety on **19-Nov-2025** by The RSC Inspection Team. The purpose of the survey was to identify significant fire safety issues and to provide recommendations for remediation based on applicable standards specified by the RSC. 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.

### Limitations

The information in this fire safety inspection report was obtained during a visit to the facility and during interviews with local factory management. It has not been possible to provide independent verification for all the information and data collected, and, therefore, The RSC cannot accept general responsibility for omissions or errors arising from inaccuracies in this report from the information obtained.

The findings and recommendations in this report are not intended to imply, guarantee, ensure or warrant compliance with any government regulations. Additionally, the results do not imply in any way that compliance with the findings or recommendations as stated in this report will eliminate all hazards, risks or exposures or that hazards, risks or exposures not referred to in this report do not exist. Compliance with the findings and recommendations stated in this report does not relieve the factory owner from obligation to comply with specific project requirements, industry standards, or the provisions of any local government regulations.

**General Factory Information**

**One (03) structure is covered under this RSC ID-26521. Building information as follows:**



SL No	Building Name	Building Construction Period	Approval Date & Authority	Occupied	Structure type	Construction Category
1	Building-22: G+10 Storied with Mezzanine on 2nd Floor Total Floor Area: 2,25,703 Sq. ft	Sep-2022 to Dec-2024	Approved from Kaliakoir Poursava on 29-Aug-2022	Jan-2025	RCC	New
2	Cement Shed Total Floor Area: 366 Sq. ft	Dec-2022 to Jan-2023	No approval was found	Feb-2023	Steel	New
3	Salt Shed Total Floor Area: 60 Sq. ft	Dec-2024 to Dec-2024	No approval was found	Jan-2025	Steel	New

**Factory Address: Chandra, Kaliakoir, 1751, Gazipur**

## Findings & Recommendations :

Table-1 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 RSC for review.

**Table-1: All structures under this ID**



SI No.	Category	Findings	Required Action	Remediation Time Frame
F-1	Means of Egress	<p>During the inspection, fire doors accessories appeared to be damaged.</p> <p><b>Location(s): Building-22.</b></p>	<p>Replace/install the non-functional/missing fire door accessories and properly inspect, test &amp; maintain the fire door as per NFPA 80.</p> <p>In cases of a field modification, the laboratory with which the product or component being modified is listed shall be contacted through the manufacturer, and a written or graphic description of the modifications shall be presented to that laboratory. A written authorization from that laboratory is required. Field modification shall be conducted as per NFPA 80.</p>	Within 3 Months
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F-2	Means of Egress	<p>The exit stair enclosures are not separated from work areas and other spaces on each floor by fire-rated construction.</p> <p><b>Location(s): All floors, Building-22.</b></p> <p><b>Non-Compliance reason: Fire door non-functionality, fire doors held open in unauthorized manner, smoke seal damaged, opening from the adjacent Building-4 shed, non-fire-separated AC outdoors &amp; electrical appliances (5th F, 8th F, etc. S-E stair)</b></p>	<p>The exit stair enclosure shall be provided with a minimum of 2-hr. fire resistance rating for buildings 4 or more stories. Provide 1.5-hr fire-rated door and seal all penetrations and openings by 2 hr. fire-rated barrier construction for buildings with 4 or more stories in accordance with section 6.3.1.2 of RSC Technical Guidelines (Standard)<sup>1</sup> V1.0.</p> <p>Ensure that the fire doors are self-closing and positive latching. If fire doors are required to be held open for operational purposes, provide automatic closing devices tied to the fire alarm system.</p> <p>Keep proper datasheet &amp; certifications for installed fire doors &amp; accessories on-site for verification. The clearance under the bottom of a door shall be a maximum of 3/4 in. (19 mm).</p>	Within 3 Months
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F-3	Means of Egress	<p>Posted Fire evacuation maps are not updated as per site conditions.</p> <p><b>Location(s): Building-22.</b></p>	<p>Update the fire evacuation map and shall be posted at the entrance to each exit stair in accordance with RSC Technical Guidelines (Standard)<sup>1</sup> V1.0 Section 13.3.</p>	<p>Within 1 Month</p>
F-4	Means of Egress	<p>Aisles were found missing in several locations.</p> <p><b>Location(s): Building-22.</b></p>	<p>Provide minimum aisle widths of 36-in. Aisles mark shall be clearly visible.</p>	<p>Within 1 Month</p>

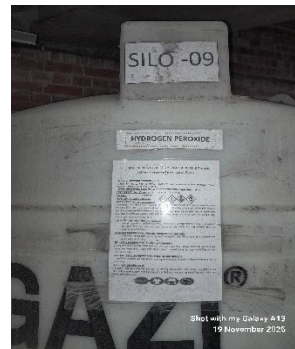
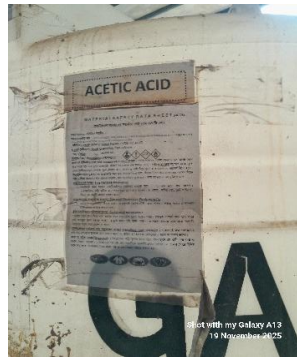



F-5	Means of Egress	<p>Directional signs are not provided where direction of the path of travel to an exit has changed.</p> <p><b>Location(s): All floors, Building-22.</b></p>	<p>Illuminated directional signs shall be provided where there is a change in the direction for the path of travel and the direction to an exit is not obvious in accordance with RSC Technical Guidelines (Standard)<sup>1</sup> V1.0 Section 6.11.3.</p>	Within 1 Month
				


F-6	Means of Egress	<p>Based on the number and location of emergency lights observed, adequate illumination levels are not anticipated along egress routes.</p> <p><b>Location(s): All floors, Building-22.</b></p>	<p>Test the emergency lighting system on each floor and provide additional emergency fixtures to provide adequate illumination along the means of egress. Provide a minimum illumination of 10 lux at the floor level within exit stairs and exit discharge paths and minimum 2.5 lux along exit access aisles. Illumination on means of egress shall meet in accordance with RSC Technical Guidelines (Standard)<sup>1</sup> V1.0 Section 10.12.2.</p>	Within 3 Months
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F-7	Means of Egress	<p>Exit stairs serve more than 5 stories and do not have the required reentry provisions on all floors.</p> <p><b>Location: Building-22.</b></p>	<p>Every door in a stair enclosure serving more than 5 stories shall be provided with re-entry unless it meets RSC Technical Guidelines (Standard)<sup>1</sup> V1.0. Section 6.8.3.1.</p>	Within 3 Months


F-8	Means of Egress	<p>A single means of exit has been provided in the south portion of the building.</p> <p><b>Location(s): 1st (Chemical), 8th, 9th floors (Office portion), etc. Building-22.</b></p>	<p>The number of means of egress from any floor, story or portion thereof shall not be less than 2 except where a single exit is permitted by RSC Technical Guideline (Standard), section 6.6.2.</p> <p>Provide additional exit and ensure that the exit doors or means of egress openings are located a distance apart as per RSC Technical Guideline (Standard) section 6.6.6</p>	Within 3 Months
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F-9	Means of Egress	<p>Common path of egress travel exceeds 8 m for Group J (high hazard)</p> <p><b>Location: 1st Floor, Building-22</b></p>	<p>Reconfigure the egress arrangement to reduce the maximum common path of travel to not more than 8m.</p> <p>The common path of egress travel for Group J (high hazard) occupancies shall not exceed 8 m (25 ft).</p> <p>Section 6.13.2 of RSC Technical Guidelines (Standard) shall meet.</p>	Within 3 Months
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F-10	Means of Egress	<p>Minimum ceiling height is less than 3.3 meters for New Building.</p> <p><b>Location: GF, 1st F; Building-22.</b></p> <p><b>Available Height: 3.02M</b></p>	<p>The ceiling height of a production floor shall not be less than 3.3 meter as per article 1.2, chapter 1, part III and article 2.11, Part III, Chapter -2, BNBC 2020.</p>	<p>Within 3 Months</p>
				



F-11	Means of Egress	<p>Uneven path of travel was observed in the exit discharge path.</p> <p><b>Location: N-E exit, Building-22.</b></p>	<p>Remove unnecessary items and level exit path to the public way. Means of egress shall be maintained continuously free and clear of all obstructions</p>	Within 3 Months
				
F-12	Means of Egress	<p>Building does not have updated occupant load signs at the required locations.</p> <p><b>Location: Building-22.</b></p>	<p>Post the occupant load for every assembly and production floor in a facility in a conspicuous space near the main exit or exit access doorway for the space in accordance with RSC Technical Guidelines (Standard)<sup>1</sup> V1.0 Section 6.4.4.</p>	Within 1 Month

F-13	Means of Egress	<p>Abrupt changes in the elevation of walking surfaces were observed, not meeting the RSC Technical Guidelines (Standard)<sup>1</sup> V1.0 Section 6.3.4.</p> <p><b>Location: 3rd floor, Building-22.</b></p>	<p>Abrupt changes in elevation of walking surfaces shall not exceed ¼ in. unless provided with a beveled slope of 1 in 2 that do not exceed ½ in. Changes greater than ½ in. shall meet the requirements for RSC Technical Guidelines (Standard)<sup>1</sup> V1.0 Section 6.3.5.</p>	Within 3 Months
				

F-14	Means of Egress	<p>Exit signage/directional signage not illuminated during testing (burned out, broken, etc.).</p> <p><b>Location: Building-22.</b></p>	<p>Regularly inspect all exit signage/directional signage as per RSC Technical Guidelines (Standard)<sup>1</sup> V1.0. and replace/install lights as needed to illuminate signs.</p>	<p>Within 1 Month</p>
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<p><b>F-15</b></p>	<p>Fire rated construction</p>	<p>Areas used for in-process storage of combustible materials are open to the surrounding occupancy.</p> <p><b>Location: 1st floor, Building-22.</b></p>	<p>Provide defined storage areas and limit the storage arrangement as follows:</p> <p>Maximum height of 2.45 m and maximum area of 23 m<sup>2</sup> and is separated by a minimum 3.0 m (10ft) from other storage areas and they do not exceed 10 percent of the building area of the story in which they occur.</p> <p>or,</p> <p>If sprinkler protected, Maximum height 12 ft (3.66 m) and maximum area of 1000 ft<sup>2</sup> (93 m<sup>2</sup>) and separated by at least 25 ft (7.62 m) and does not constitute more than 10 percent of the building area or 4000 ft<sup>2</sup> (372 m<sup>2</sup>) of the sprinklered area, whichever is greater.</p> <p>or,</p> <p>Enclose the storage area from the surrounding occupancy with a minimum 1 hour construction.</p>	<p>Within 3 Months</p>
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<p><b>F-16</b></p>	<p>Fire rated construction</p>	<p>Elevator shafts open directly into the exit enclosure, which doesn't comply with RSC Technical Guidelines (Standard), section 6.14.3.</p> <p><b>Location(s): Both exits, Building-22</b></p>	<p>Provide a minimum 2-hr fire rated elevator shaft to separate it from stair enclosure. No discharge is accepted through elevator shaft. Seal all openings to maintain fire separations.</p>	<p>Within 3 Months</p>
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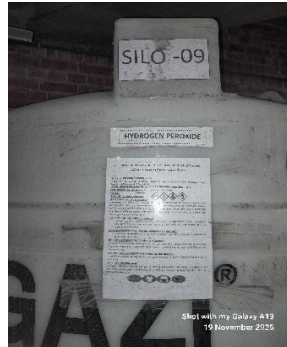
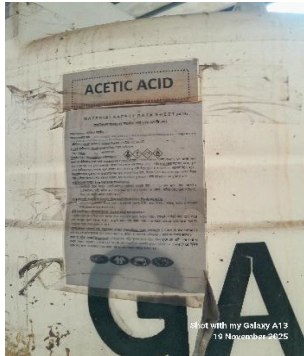
F-17	Fire Rated Construction	<p>Penetrations through floor/ceiling assemblies are found unsealed due to plastic pipe penetrations</p> <p><b>Location: Building-22.</b>  <b>Non- Compliance: Unseal penetration through plastic pipe</b></p>	<p>Seal all penetrations and openings in floor/ceiling assemblies by a listed through-penetration fire stop system tested in accordance with ASTM E814 or approved alternative standard to maintain minimum 3-hr. fire resistance rating. Installation shall be as per manufacturer's published installation guideline and the certification authority guideline to ensure the fire-rating in accordance with section 4.7 of RSC Technical Guideline (Standard)</p> <p>Or,</p> <p>Provide a minimum 2-hr fire-rated shaft to separate the penetration from each floor if required.</p>	Within 3 Months
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F-18	Fire Rated Construction	<p>Rooms used for the storage of combustible materials are not separated from the surrounding office area.</p> <p><b>Location(s): 5th floor, 9th floor, etc. Building-22.</b></p>	<p>Rooms used for storage of combustible materials shall be separated from the surrounding occupancy with a minimum 1 hour construction in accordance with section 3.4.2.1.5 of RSC Technical Guideline (Standard).</p>	Within 3 Months
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F-19	Fire Rated Construction	<p>Chemical storage [J2 (Hydrogen peroxide, acetic acid)] area is not separated by fire-rated construction, having 2hr-rated door and unsealed penetrations and openings.</p> <p><b>Location: 1st floor &amp; Ground Floor Building-22.</b></p>	<p>Provide a 4-hour fire-rated construction barrier to separate the chemical store from the surrounding production/combustible storage areas. The 4-hour fire-resistive separation shall have no openings/ no unprotected openings therein and shall provide a fire resistance for at least four hours.</p> <p>Chemical stores shall comply with BNBC 2020, Part 3, Section 2.14 or, Ensure exempt amounts of chemicals as per Table 3.2.5 (BNBC 2020) with a nearly resemble occupancy group. Provide fire separation if required.</p>	Within 3 Months
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<p><b>F-20</b></p>	<p>Fire Rated Construction</p>	<p>It was observed that the first floor (claimed mezzanine floor, which is more than one-third of the ground floor) is not separated from the ground floor by fire-rated construction.</p> <p><b>Location: Building-22.</b></p>	<p>Separate each floors by fire rated construction as per BNBC-2020, Part-3, chapter-3 and Tables 3.3.1 (a) and (b). 3-hr fire rated separation is required from claimed mezzanine floor (actually first floor) to ground floor other surroundings as well as separation is needed at required number of exit stairs.</p> <p>Or, Maintain 1st floor mezzanine area as per BNBC 2020, Part III, Chapter 1</p>	<p>Within 3 Months</p>
				



<p><b>F-21</b></p>	<p>Fire Rated Construction</p>	<p>Unprotected openings in the exterior wall on two consecutive floors lying within 1.5 m, and vertical spread of fire is not restricted.</p> <p><b>Location: Building-22.</b></p>	<p>Provide flame barriers similar to sunshades or cornices, or projected walls at least 750 mm from the external face of the exterior wall.</p> <p>The flame barrier shall have a fire resistance rating of not less than three-fourths hour.</p> <p>BNBC 2020 Part III chapter 3 clause 3.1.9.2</p>	<p>Within 6 Months</p>
 <p>The first photograph shows the exterior of a multi-story building with balconies. The second photograph shows a balcony with a metal mesh floor and a railing. The third photograph shows a window with a metal railing. All photographs have a timestamp of 19/11/2025 12:05 pm.</p>				

<p><b>F-22</b></p>	<p>Fire Rated Construction</p>	<p>The required fire separation distance does not comply with the requirements of BNBC 2020.</p> <p><b>Location: All side, Building-22.</b></p>	<p>The exterior walls shall have a fire resistance and opening protection as specified in BNBC 2020 Part 3 Table 3.2.2 &amp; 3.2.3 and BNBC 2020 Part 3 Section 2.4.1.3.</p>	<p>Within 6 Months</p>


<p><b>F-23</b></p>	<p>Fire Rated Construction</p>	<p>Compressor room is not properly separated by fire-rated construction from the production floor.</p> <p><b>Location: GF, Building-22.</b></p>	<p>Compressor room shall be separated from other occupancies by a minimum 1-hr fire-rated construction (wall, floor, slab, etc.). Seal all penetrations and openings (door, window, etc.) should be protected by 0.75-hr (45 min) fire-rated materials to maintain the fire separation if required. All exhaust systems shall discharge to the exterior of the building in a safe location.</p> <p>Or</p> <p>Relocate it to the exterior of the building and maintain a minimum 3m (10 ft.) spatial separation distance from the building. Boiler room separation shall meet section 3.4.2.1.2 of RSC Technical Guideline (Standard).</p>	<p>Within 3 Months</p>
				



<p><b>F-24</b></p>	<p>Fire Alarm &amp; Detection System (FADS)</p>	<p>The factory has installed a fire alarm and detection system that requires a detailed review to confirm compliance with NFPA 72 and RSC Technical Guidelines (Standard).</p> <p><b>Location(s): All Buildings.</b></p>	<p>Submit the fire alarm and detection system design to RSC for review.</p> <p>Once the design is reviewed, install and modify the fire detection and alarm system throughout the building in accordance with review comment, RSC Technical Guidelines (Standard) and NFPA 72.</p> <p>After installation the owner shall conduct internal testing and commissioning and then contact the RSC for witness of final acceptance testing.</p>	<p>Design within 2 Month and modification/ installation with 4 Months</p>
				
<p><b>F-25</b></p>	<p>Inspection, Testing &amp; Maintenance (Fire)</p>	<p>Inspection, testing and maintenance for the fire alarm system is not in accordance with NFPA 72.</p>	<p>Inspect, test and maintain the fire alarm system and keep written records on-site, in accordance with NFPA 72 and RSC Technical Guidelines (Standard)<sup>1</sup> V1.0.</p>	<p>Within 1 Month after installation.</p>

<p><b>F-26</b></p>	<p>Fire Suppression System (SUPS)</p>	<p>The highest occupied floor of the main building is over 75 feet above grade, mandating a sprinkler system along with a class I standpipe. The factory has installed a sprinkler system with a class III standpipe, requiring a detailed review to ensure compliance with NFPA 13, 14, 20, 22, and 24 and RSC Technical Guidelines (Standard).</p> <p><b>Location: Building-22.</b></p>	<p>Submit the fire Suppression System (standpipe and sprinkler) design to RSC for review.</p> <p>Once the design is reviewed, install and modify the fire Suppression System throughout the building in accordance with review comments, RSC Technical Guidelines (Standard), and NFPA 13, 14, 20, 22 and 24.</p> <p>After installation, the owner shall conduct internal testing and commissioning, and then contact the RSC for witness of final acceptance testing.</p>	<p>Design within 2 Month and modification/ installation with 4 Months</p>
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<p><b>F-27</b></p>	<p>Fire Suppression System (SUPS)</p>	<p>Fire pump installation requires detailed review to confirm compliance with NFPA 20 and RSC Technical Guidelines (Standard)<sup>1</sup> V1.0.</p> <p><b>Location: Location: Building-22.</b></p>	<p>Submit as-built drawings, testing records, equipment certification and other relevant documentation to the RSC for review and approval.</p> <p>Submit the standpipe system drawing to RSC for review. Once reviewed, install or modify the standpipe system throughout the building in accordance with RSC Technical Guidelines (Standard)<sup>1</sup> V1.0. and NFPA 14 and 20. The factory management shall contact RSC to conduct the final acceptance testing after the installation, testing &amp; commissioning.</p>	<p>Design within 2 Month and modification/ installation with 4 Months</p>
<div style="display: flex; justify-content: space-around;">   </div>				
<p><b>F-28</b></p>	<p>Inspection, Testing &amp; Maintenance (Fire)</p>	<p>Inspection, testing and maintenance of the standpipe system, sprinkler system &amp; fire pump are not in accordance with NFPA 25.</p>	<p>Inspect, test, and maintain the standpipe system, sprinkler system &amp; fire pump and keep written records on-site, in accordance with NFPA 25 and RSC Technical Guidelines (Standard)<sup>1</sup> V1.0.s.</p>	<p>Within 1 Month after installation.</p>

<b>F-29</b>	Inspection, Testing & Maintenance (Fire)	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 and RSC Technical Guidelines (Standard) <sup>1</sup> V1.0.s.	Within 1 Month
<b>F-30</b>	Inspection, Testing & Maintenance (Fire)	Inspection, testing, and maintenance for the exit sign and emergency lighting system was not in accordance with the RSC Technical Guidelines (Standard) <sup>1</sup> V1.0.	Inspect, test and maintain the exit sign and emergency lighting system in the accordance with the RSC Technical Guidelines (Standard) <sup>1</sup> V1.0.. Keep written records on-site.	Within 1 Month
<b>F-31</b>	Inspection, Testing & Maintenance (Fire)	Written housekeeping policy was not found, which is required as per RSC Technical Guideline (Standard) section 13.6.	Establish written corporate and plant policies on housekeeping to ensure scheduled cleaning for floor, wall, ceiling, supply and return air ventilation systems. Promptly reschedule skipped cleanings. Provide a documented line of authority for authorizing a cleaning delay and rescheduling. As a general rule the maximum tolerable deposit thickness for loose fluffy lint is 13 mm (½ in.) over a maximum of 46.5 m2 (500 ft2). Limit dense deposits to 6 mm (¼ in.) and oil saturated deposits to 3.2 mm (¼ in.).	Within 1 Month

F-32	Inspection, Testing & Maintenance (Fire)	The Building approval from the appropriate authority is not available on-site.  <b>Location: Cement Shed &amp; Salt Shed.</b>	Get all the required licenses and permits from the proper issuing authority and keep it at site.	Within 1 Month
F-33	Fire Suppression System (SUPS)	Fire extinguishers were found in several areas, but were placed on the floors.  <b>Location: GF, Building-22</b>	The bottom of the fire extinguisher and the floor be less than 4 in.(102 mm).As per NFPA 10 section 6.1.3.8.3	Within 1 Month
				

F-34	Means of Egress	<p>Exit sign not provided at exit.</p> <p><b>Location: 3rd floor of the Building-22, Cement Shed &amp; Salt Shed.</b></p>	<p>Lighted exit signs shall be placed at entrance to an exit. Additional directional exit signs shall be placed throughout the facility anywhere the continuation of the egress is not obvious.</p> <p>Lighted exit signs shall be provided with either battery backup or uninterruptable power supply systems and shall be continuously illuminated at all times. Exit Sign shall provide in accordance with RSC Technical Guidelines (Standard)<sup>1</sup> V1.0 Section 6.11.</p>	Within 1 Month
<div style="display: flex; justify-content: space-around;">   </div>				
F-35	Inspection, Testing & Maintenance (Fire)	<p>Hot-work permit program is not established yet, although it is required. However, hot-work is not going on in the factory right now</p>	<p>Develop a hot-work permit program. The program must comply with the requirements of NFPA 51B. In general, this program should address the process of request and approval of authorities, necessary checks prior approval, standby fire watch and fire fighting equipment, sounding of alarm procedure, duration and expiry of permit and re-approval procedures, etc.</p>	Within 1 Month