

Building Name Address	Use (as per FSA Annexed Table 1)	Date and Time of Incident	Structure and Stories Area	Extent of Damage (Damaged Area/ Total Area)	No. of Casualties
<p>Itoya Department Store, Tateyama</p> <hr/> <p>1625 Hokujo, Tateyama, CHIBA</p>	Department store (4)	Dec. 7, 1973	Fireproof structure, 4 stories above ground and 0 below	<p>All, Half, Partial, Small</p> <p>2,044.68 m²</p> <p>(100 %)</p>	<p>Fatalities 0</p> <hr/> <p>Injured 5 (5)</p>
		Breakout at 15:30 (approx.)	Partially wooden, 2 stories above ground		
		Noticed at 15:43	Building area 817.71 m ²		
		Notified by emergency call	Total floor area 2,044.68 m ²		
		Extinguished by 19:07			

I. Summary of Fire Incident

This department store fire occurred during business hours. The fire received much public and professional attention because it occurred 1 week later than the historic Taiyo Department Fire, which also occurred during business hours.

Floor	Total area	Damaged area	Use (Purpose)	No. of persons	Fatalities	Fire escape equipment	Firefighting equipment
	m ²	m ²				Inside stairs: 2 sets from 1st to 4th floor 1 set from 1st to 2nd floor 1 slow descending machine on 4th floor Metal ladder: on 3rd floor, 2 sets on 2nd floor	Fire extinguishers Indoor fire hydrants Automatic fire detection system Guiding lights
R	23.76	23.76	Games center				
4	217.79	217.79	Retail	14			
3	387.34	387.34	Retail	16			
2	598.08	598.08	Retail	18			
(1)	817.71	817.71	Retail	40			
Total	2,044.68	2,044.68					

(Floor, Room, Part, Combustibles, Habitable/Non-habitable Rooms, Present/Absent)

The origin of the fire is believed to be near the bathroom on the 1st floor, which was located in the wooden portion of the building.

(5) Fire Propagation Path	<div><div>(Location of Fire Source)</div><div><div>Near the bathroom on the 1st floor</div><div>Windows of the 2nd-floor sales section in the wooden building</div><div>Unclosed fire shutters between old and new buildings</div><div>Inside stairs with no fire compartments</div><div>Unclosed fire shutters between the old and new buildings</div><div>Sales floors and goods</div></div></div>	
	<div><div><div><div><div>o The origin of the fire was on the windy side of the wooden building and the strong winds facilitated the fire to develop further. The fire ignited the roof of the bathroom and spread to the window (size of 3.89 m²) of the 2nd floor and then to the main building.</div><div>o From the unclosed shutters on the 1st floor, the fire propagated to the sales floor, igniting the sales goods and then spreading to the upper floors through the stairwell.</div></div></div><div><div>○ Main Reasons for Propagation of the Fire</div><div><div>o Because of the bad weather conditions, the inclined hallway on the 1st floor of the wooden building and the stairwells became a wind tunnel and strong winds blew in to facilitate the fire spreading further.</div><div>o Because of the unclosed fire shutters on the 1st floor, the fire propagated along the ceiling and ignited the sales goods.</div></div><div>○ Smoke Propagation Path</div><div><div>o The smoke propagated through the service lift that was next to the ventilation fan of the bathroom and the stairwell that was not protected by a fire compartment system.</div></div></div></div></div>	
II. Summary of the Building		
(1) Built	Construction, Completion, and Major Renovations (Completion) June 1957, (Expansion) June 1960, since then 3 more expansions	
Fire Prevention Management	(2) Vertical Shafts	(3) Fire Prevention
	<div><div>Stairwells [X] Duct spaces []</div><div>Elevators [] Pipe Shafts []</div><div>Escalators [] Other () []</div></div> <div>No fire compartments in the vertical shaft (stairwell).</div>	<div><div>o The store had a fire-prevention manager appointed and had organized an in-house firefighting team according to the fire defense plan.</div><div>o Soon after the Taiyo Department Store Fire, the store owner carried out a fire drill.</div></div>
	(4) Fire Compartments	(5) Firefighting Equipment
	Fire shutters between the old and new buildings.	The firefighting equipment was well maintained.

III. Actions Taken after the Fire was Detected			
(1) First Detected	<ul style="list-style-type: none"> ◦ Detected by (1st-Floor Supervisor) ◦ How and why (Alarm sound coming from the automatic fire detection system) ◦ Action taken (Looked for location of the fire) 		
	<p>The 1st-Floor Supervisor heard an alarm coming from the local alarm terminal of the automatic fire detection system and went to look for the location of the fire. He noticed smoke coming out of the left corner of the partition shutters to the old building, but could not find the origin of the fire. He checked the employee bathroom on the left. As soon as he opened the door to the women's bathroom, smoke poured out of the room.</p>		
(2) Emergency Call	Emergency Call Yes [X] (Telephone Operator) No []	Time elapsed since the discovery (1) minute	
	<p>The telephone operator heard the alarm sound of the automatic fire detection system in her office. As soon as she confirmed white smoke coming out of the service lift of the main building, she made a 119 call.</p>		
(3) Initial Firefighting Activities	Initiated Successful [] Failed [X] ◦ Extinguished timing [] ◦ Firefighting difficulties [X] ◦ Firefighting method [X]	(Reasons or Conditions) ◦ The supervisor who confirmed the fire broke the glass window of the men's bathroom and tried to extinguish the fire with a fire extinguisher, but was unsuccessful. ◦ Store clerks used the indoor fire hydrant to extinguish the fire on the 1st floor, but they only extended the hoses from the hydrants on the 2nd to 4th floors.	
	Not Initiated ◦ Extinguished timing [] ◦ Firefighting difficulties [] ◦ Firefighting method [] ◦ Other []		
(4) Summary of Firefighting Activities	(Obstacles or Difficulties in Fire Control) ◦ As soon as firefighters arrived, they undertook a search and rescue operation; however, it was a challenge because the heavy smoke and flames prevented them from entering the building. ◦ The weather advisory had issued warnings of strong winds, high waves, and dry weather that day.		

(5) Evacuation	Means of Escape (No. of Persons)		Obstacles to Evacuation	
	<ul style="list-style-type: none"> ◦ Stairs [X] (40) ◦ Elevators/Escalators [] () ◦ Escape equipment [X] (3) ◦ Directly to ground from windows or openings [] () ◦ Rescued [] () ◦ Other () [] () 		<ul style="list-style-type: none"> ◦ No windows [] ◦ Barred openings [] ◦ Locked emergency doors (Exits) [] ◦ Alarm system [] (Poorly controlled, Malfunctioned, Not installed) ◦ Power outage [] ◦ Other [] 	
<ul style="list-style-type: none"> ◦ The customers learned of the fire by hearing the alarm from the automatic fire detection system and the emergency announcement made over the PA system, and immediately started to evacuate. ◦ On each floor, the employees assisted customers to evacuate and most people were able to evacuate via the main entrance and stairs to the back of the building. ◦ From the 4th floor, 3 employees (1 male and 2 females) used the fire escape equipment (slow descending device) to reach the ground. 				
(6) Casualties	Healthy individuals (Drunk persons) Individuals in need of assistance Infants Elderly Handicapped Patients/ill persons		Obstacles to Evacuation	
			<ul style="list-style-type: none"> ◦ No windows [] ◦ Barred openings [] ◦ Locked emergency doors (Exits) [] ◦ Alarm system [] (Poorly controlled, Malfunctioned, Not installed) ◦ Power outage [] ◦ Other [] 	
None				
IV. Issues and Lessons Learned				
<ol style="list-style-type: none"> 1. Since this fire occurred shortly after the historic Taiyo Department Store Fire, the store management and the fire-prevention manager had just provided fire safety training to the employees in case of emergency. Because of this, as soon as the employees heard the alarm from the automatic fire detection system, they were able to guide the customers in a safe evacuation. 2. The firefighting equipment was well maintained and therefore people were able to respond smoothly according to the three principals of detection, communication, and evacuation. 				

