

Amagasaki, Hyogo Prefecture: Nagasakiya Department Store

PHOTO

1. Characteristics of the fire

A fire in the bedding and interior department on the 4th floor of the Nagasakiya Department Store in Amagasaki burned for more than 4 hours and caused approximately 814 m² of damage to the 4th-floor sales area. Worse, it resulted in the death of 15 people (12 employees and 3 boys), who died as smoke rising up through stairwells filled a 5th-floor employee cafeteria. The fire broke out among goods that had received a safety certification seal, leading to a review of not only sprinkler installation standards but safety certification standards as well.

2. Overview of the fire outbreak

(1) Date and time of outbreak

Approximately 12:30, Sunday, March 18, 1990

(2) Detection

12:37, Sunday, March 18, 1990 (emergency call to fire department)

(3) Under control

17:06, Sunday, March 18, 1990

3. Overview of fire origin

(1) Location

4-166 Kanda Naka-Dori, Amagasaki, Hyogo Prefecture, Japan

(2) Building of fire origin

(K.K.) Nakasakiya Amagasaki Store

(3) Structure of building of fire origin, etc.

(1) Date of construction

April 6, 1970

(2) Additions/renovations

None

(3) Building utilization

Merchandise sales establishment (Category 4)

(4) Building structure

Reinforced concrete, 5 stories (fire resistant)

(5) Area

Building area: 814.64 m²

Floor area: 5,151.20 m²

(6) Building capacity

996 people

(7) Building occupancy at time of outbreak

60 employees, 130 customers

(8) Area and utilization by floor

| Floor | Area | Utilization |
|--------------|-----------------------|--|
| Roof 2 | 47.925 m ² | |
| Roof 1 | | |
| 5 | | Office, Cafeteria, Storerooms, Games center, etc. |
| 4 | | Bedding, Interior, Women's undergarments, etc. |
| 3 | | Men's clothing, Men's undergarments, Dress shirts, etc. |
| 2 | | Women's clothing, Kimonos, Children's clothing, Crafts, etc. |
| 1 | | Daily goods, Cosmetics, Watches, etc. |
| Basement 1 | | Appliances, Shoes, etc. |
| Total | | |

(4) Firefighting equipment, etc.

(1) Firefighting equipment

Fire extinguishers, interior fire hydrants

(2) Alarm devices

Automatic fire alarm, emergency broadcast system

(3) Evacuation facilities

Exit lights, fire escape ladders

(4) Other facilities necessary for firefighting

Fire hose station (basement floor)

(5) Other

In-house generator (power source for interior hydrants)

(5) Fire prevention system

(1) Fire prevention officer

Appointed March 16, 1979

(2) Fire prevention plan

Presented February 16, 1990 (revised)

(3) Fire drills

Comprehensive fire drills (including evacuation drills) conducted on the following dates: November 23, 1986; April 19, 1987; December 6, 1987; April 17, 1988; January 22, 1989; and November 12, 1989.

4. Weather conditions

(1) Weather

Clear

(2) Wind direction, speed

West southwesterly, speed 9.0m/s

(3) Temperature, humidity

Temperature: 11.9°C, humidity: 50.0%

(4) Weather warnings, bulletins, etc.

Gale, high wave, and dry air advisories

5. Cause of fire

(1) Ignition source

Unclear

(2) Route

Unclear

(3) Ignited substance

Unclear

6. Fire damage

(1) People

(1) Fatalities

15 persons (employees: 2 males, 10 females; customers: 3 male children)

(2) Injuries

6 persons (employees: 1 male, 3 females; customers: 2 males (seriously injured upon jumping))

(2) Property

(1) Fire-source building

a. Extent of fire loss

4th floor (bedding, interior department)

b. Area of fire loss

814 m²

c. Monetary loss

174,047,000 yen

(2) Other buildings

7. Fire route (progression)

(1) Overview of outbreak location

The fire apparently broke out on a curtain within the 4th floor interior department, where a large quantity of bedding/textile merchandise is on display, including curtains, futons, and nightwear.

(2) Situation up to the outbreak

There were 8 employees on the 4th floor at the time of the outbreak. There were also about 14 or 15 customers, mostly toward the north side. One employee was tending to customers near the bedding department.

(3) Progression up to fire detection

Employee A (female), who was in the bedding department, heard an automatic fire alarm (bell) ring twice. An in-house phone placed near the escalator rang; and, when she picked it up, she was told “We have a fire indication for the 4th floor, please check,” whereupon she turned to see a curtain burning across approximately 1 m of its width. The flames had already risen to the level of the ceiling.

(4) Notification of fire department

Part-time Employee B, who was up in the 5th floor office, had checked the automatic fire alarm panel and noticed an alarm indicator for the 4th floor. That employee called the 4th floor and, having been told that there was a fire, placed an emergency call to the fire department.

(5) Initial firefighting attempts

Employee A, the person who discovered the fire, tried fighting it with a fire extinguisher but abandoned those efforts because the flames were too strong. Then, together with 2 other employees who ran over to help, she took out a hose from an interior fire hydrant. However, they could no longer approach the fire by that time because of a power outage and heavy smoke, so they

abandoned that effort and evacuated.

(6) Fire spread

The fire spread from one merchandise section to another, and by the time firefighters arrived the 4th floor was entirely covered in flames. Smoke freely billowed up to the upper floor because, among other reasons, (1) fire doors were not closed and (2) obstacles were placed in front of fire doors, etc.

(7) Evacuation

Customers on the 4th floor (site of the fire) and the 3rd floor were led to safety without injury by employees. There were 22 people up on the 5th floor, which contains an employee cafeteria and other facilities. Of them, 1 person successfully evacuated using the stairs, and 3 females and 1 male remaining within the office were rescued by firefighters. Also, 2 children within the games center jumped to safety through a window and, although suffering serious injuries, were nonetheless saved. Smoke claimed the lives of the remaining 15 people.

(8) Activities of internal firefighting unit

No organized activities were carried out. Employees, acting under their own judgment, led customers to safety.

(9) Fatalities

Twenty-two people within the 5th-floor cafeteria, games center, and other rooms were cut off from escape when smoke filled the north and south stairwells. They generally waited within the rooms for rescue; but, because of severe smoke, 15 of them died as a result of carbon monoxide poisoning.

8. Activities of firefighting units

(1) Dispatched units, etc.

(1) Dispatched vehicles: 57 (on station), 30 (emergency assignment)

(2) Dispatched personnel: 120 (on station), 180 (emergency assignment)

(2) Firefighting and rescue activities

(1) Firefighting activities

Advancing with 2 ladder trucks to the north and 2 ladder trucks in a parking lot to the south, firefighters began to fight the fire by spraying water through building openings. They also ran ladders up to the roof and, making use of an interior hydrant on the south side, worked to extinguish the fire on the 5th and 4th floors. Firefighters ascending from the ground made their way up to the 4th floor while utilizing internal hydrants to fight the fire.

(2) Rescue activities

Rescue squad members ran a ladder from the roof of a building on the east side to a 5th-floor window of the department store. Entering the store building through that window, they rescued 1 male and 3 males trapped on the 5th floor.

9. Problems, lessons

The Amagasaki branch of the Kobe District Court presented a ruling on the fire on September 13, 1993. The court found the store manager and the general manager (both as of the time of the fire) guilty and sentenced them to a 2-year 6-month suspended sentence with 3 years' probation. The main points of the ruling are as follows.

(1) Responsibilities of the 2 defendants and company management

a. Store Manager A

- Had responsibility as store manager to show due caution regarding fire safety.

b. General Manager B

- Failed to conduct proper evacuation drills, as was his responsibility as a fire prevention officer. Warnings regarding the placement of objects in front of fire doors were insufficient and inappropriate.

c. Company management

- The court sees a problem with management's attitude of putting profits before fire safety.

(2) Control of fire doors

Merchandise and trash bags had been placed in front of fire doors; and, because the situation had been left that way, the fire doors did not operate properly during the fire.

(3) Lack of evacuation drills

Evacuation drills were not conducted as appropriate. People on the 5th floor could have escaped to safety if fire evacuation had been carried out properly.

(4) Possibility of arson; fire control

The reason that many people died is that fire-related responsibilities were not met. Note that this is not to deny the possibility of arson.

10. Documents



10. Materials

Figure 1: Floorplan (4th floor)



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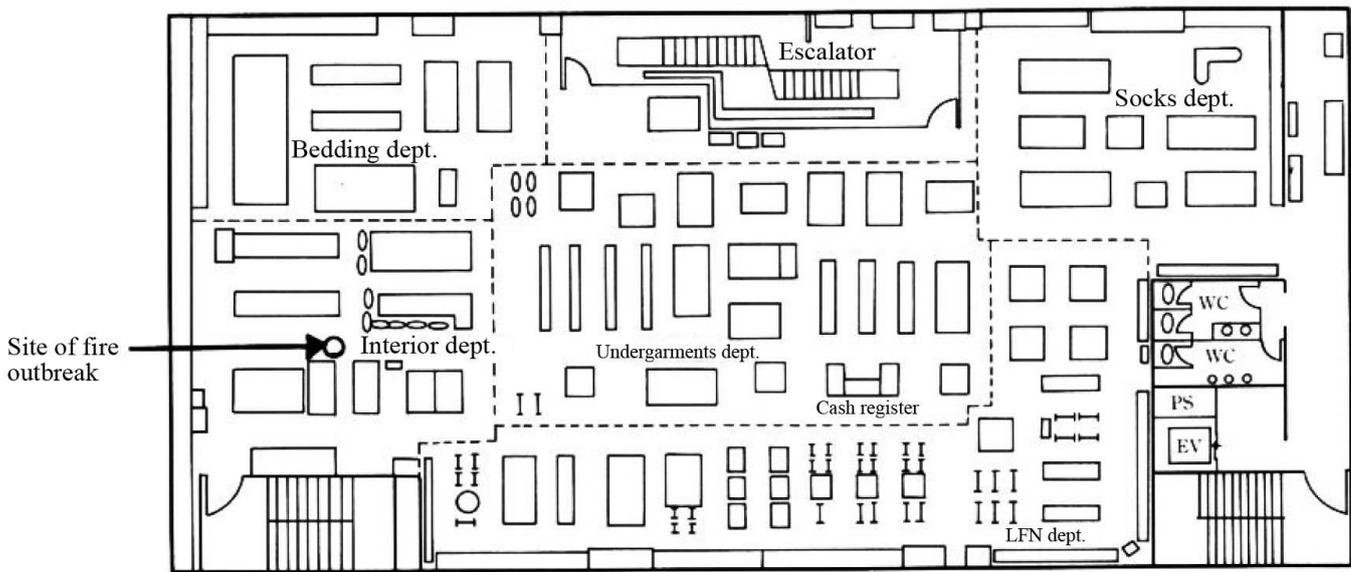


Figure 2: Floorplan (5th floor)

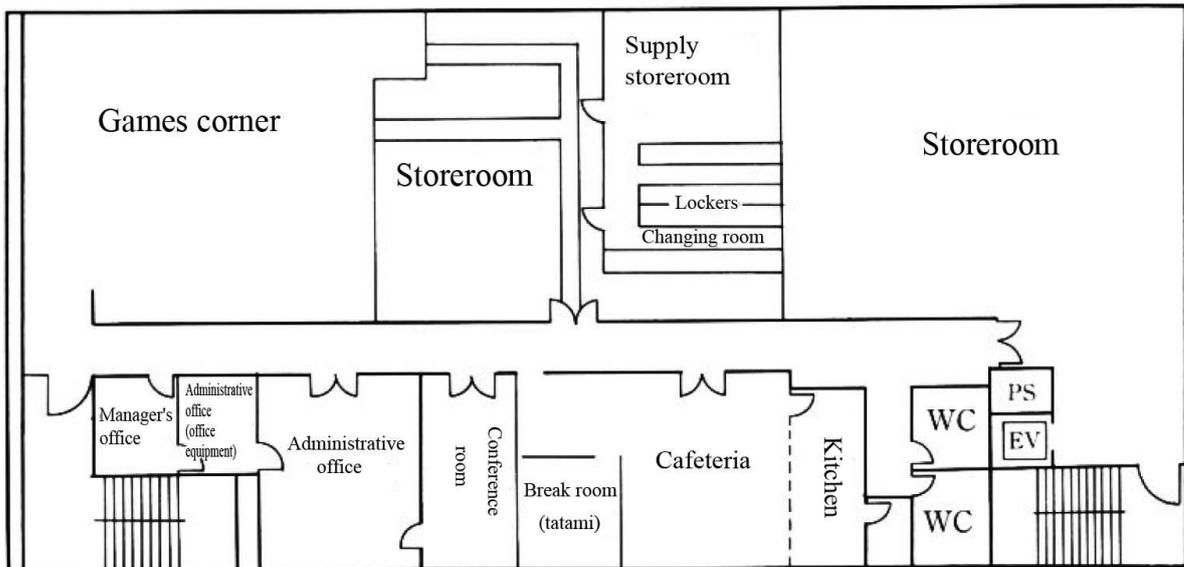




Figure 3: Floorplan (5th-floor employee cafeteria)

