

# 火災事例

지난 4월 18일 大邱直轄市에서 發生한 디스코클럽의 火災事故는 작은 規模의 建物에서 무려 27名이나 되는 死亡者를 냈다는 事實만 가지고도 足히 社會的으로 큰 事件이 되겠지만, 특히 이 事故에서 人命被害를 더욱 크게 한 主原因은 火災 그 自體보다도 避難施設 및 警報體系의 缺陷으로 비롯되었다는 데에서 그에 대한 深刻性을 더해주는 것 같다.

그래서 當協會 技術部署에서는 點檢業務에 參考資料로 活用하기 위하여 事故가 發生한 直後 調査要員을 現場에 派遣, 多角的인 調査를 實施했으며, 또한 本 報告書를 英譯하여 添附함으로써 海外 有關機關에서도 參考資料로 活用할 수 있도록 作成했다.

## 1. 火災 概況

- 가. 發火場所 : 大邱直轄市 中區 香村洞 51~7 디스코클럽 “초원의 집”
- 나. 發火日時 : 1983. 4.18. 01:40頃
- 다. 消防隊出動 : 1983. 4.18. 01:45
- 라. 完全鎮火 : 1983. 4.18. 03:00

## 2. 被害 狀況

- 가. 人命被害 : 死亡 27名, 負傷 67名(1983.5.2. 現在)
- 나. 財産被害 : 建物 및 動産 約 5,000만 원 (推定)

## 3. 建物 概要

### 가. 建物構造

發火建物は 1940年代에 建築된 木造(지붕: 함석이음) 및 철근 콘크리트 슬라브, 延面積 750.32 m<sup>2</sup>(1層 390.91 m<sup>2</sup>, 2層 359.41 m<sup>2</sup>)의 낮은 建物로서 木造部分이 建物の 2/3程度를 차지하고 있다.

1層(쌍쌍클럽)과 2層(초원의 집)은 디스코 클럽으로 使用되고 있었으며 建物内部는 燬天井의 合板과 布紙, 바닥 카펫 등 多量의 可燃性 内裝材로 인하여 火災荷重이 상당히 큰 建物이었다.

### 나. 附近의 狀況

發火建物は 大邱直轄市의 中心街인 香村洞에 位置하고 있으며 이 一帶의 建物は 老朽된 木造建물이 많아 火災 脆弱地域으로 常時 巡察 코오스에 들어있는 地域이며 建物周圍는 前面(南側)을 除外하고는 建物群과 隣接해 있고 前面 또한 幅 6m 道路와 接하여 있어 消防車의 接近等 消火活動이 比較的 困難한 狀況이었다.

## 4. 發火 및 待避 狀況

火災는 01時 40分頃 2層 “초원의 집” 南쪽 天井에서 發火되었으며 火因은 照明配線의 合線으로 인한 Spark가 天井의 可燃性 内裝材에 引火되면서 延燒擴大된 것으로 推定되고 있다.

불은 처음 外部行人이 目擊하고 “불이야” 하고 소리치자 出入口 쪽에서 勤務하던 從業員이 2層 지붕 쪽에서 불길에 쫓고 있는 것을 確認하고 2層으로 올라가 入場客에게 “불이야” 하고 火災를 알렸으나 醉中에 홀 내의 騒音으로 火災를 早期에 알지 못하였다.

뒤늦게 火災를 感知한 從業員이 室内照明燈을 켜고 確認次 照明을 發火地點 天井에 비추자 이미 天井에서는 불타가 떨어지고 있었으며 이를 본 入場客들은 놀라 한꺼번에 主出入口로 밀어닥쳤다.

當時 홀 내에는 10~20代の 靑少年 150餘名이 있었으며 이 중 80餘名은 춤을 추고 있었고 나머지는 客席에서 쉬고 있었다.

主階段의 幅이 좁고 傾斜가 급하여 入場客中 절반 가량이 階段을 빠져 나왔을 때 쯤, 1名이 失足, 넘어지면서 잇달아 수십 명이 쓰러지고 겹겹이 쌓여 階段을 막아 버렸다.

다른 非常口를 찾지 못한 人員은 계속 이 階段으로 몰렸으며 빠져 나오려고 한데 엉겨붙어 壓死 또는 窒息 燒死하였다.

한편 1層 “쌍쌍클럽”에서도 같은 時間에 40~50名이 춤추고 있었으나 한 從業員이 위層에서 불길이 솟는 것을 보고 홀 안에 들어가 音樂을 中止시키고 放送으로 “消防訓練中이니 손님들은 動搖하지 말고 밖으로 천천히 나갔다 들어와 주십시오” 라고 침착하게 待避시킴으로써 被害者가 없었다.

## 5. 消防隊의 活動狀況

管轄 大邱消防署에서는 01時 44分에 火災申告를 接受하고 消防車 9臺를 出動시켜 現場에 到着 하였을 때에는 이미 “초원의 집” 동쪽 창문 및 天井에서는 불길이 치솟고 있었고 좁은 階段에는 50~60名이 겹겹이 쌓여 消防隊員들이 이들을 救助하려 했으나 많은 人員이 엉켜 있어 빨리 끌어낼 수가 없었으며 消防隊員들은 特攻隊를 組織, 엉켜 있는 靑少年들을 넘어 2層 홀 出入口 앞까지 들어가 옷에 불이 붙은 채 아우성치는 靑少年들을 救出하기도 했다.

| 人 員        | 裝 備       |
|------------|-----------|
| 消防隊員 135名  | 펌 프 차 23臺 |
| 警 察 官 100名 | 사다리차 2臺   |
| 의용소방대원 30名 | 조 명 차 1臺  |
|            | 기 타 9臺    |
| 計 265名     | 計 35臺     |

곧 이어 消防車 26臺가 增援되었으나 木造建物인데다가 可燃性 內裝材로 인하여 延燒速度가 빠르고, 窓門이 內裝材 또는 창살로 막혀 있어 鎮火活動이 困難하였으며, 消防隊員들은 北側 屋外 非常階段으로 올라가 門을 부수고 들어가려 했으나 안쪽이 의자 등으로 막혀 있어 문을 부수는데 時間을 消費, 人命救助가 늦어졌다.

한편 이 事故에 動員된 消防隊員 및 裝備는 左側 表와 같다.

## 6. 避難施設狀況

發火建物の 1層에는 主出入口 및 北側 非常口 1個所가 있었으며 火災時에는 全部 主出入口로 避難이 이루어졌다.

2層에는 主階段, 屋外非常階段과 屋上으로 통하는 階段이 設置되어 있었다.

홀 내에서 主階段으로 통하는 出入門은 避難方向으로 열 수 있도록 設置되었으며 階段은 幅 1.2 m, 길이 5 m, 傾斜 40度, 階段室 天井높이 1.8 m로 設置되어 있었다.

屋外 非常階段으로 통하는 非常口 앞 客席部分 (約150m<sup>2</sup>)에는 280餘個의 의자와 70餘個의 테이블이 뻐뻐이 들어차 있어 이 非常口를 利用하지 못했다.

發火地點 附近에서 屋上으로 통하는 階段이 있었으나 이 階段 또한 거의 利用되지 못했다.

防音을 위하여 內裝材로 閉鎖, 脫出手段으로 利用되지 못하였으며, 脫出하기 위하여 많은 人員이 出入口로만 몰림으로써 多數의 人命被害가 發生했다.

## 7. 鎮 火

火災는 發火後 1 時間 20 分 만인 03 時에 完全鎮火되었으며 2 層 木造 바닥과 지붕은 燒盡되어 내려 앉았다.

## 8. 問題點 및 對策

### 가. 火災發見 및 申告遲延

最初 火災目擊者는 外部人이었으며 建物內에서는 早期에 火災를 感知하지 못하였고 火災申告 또한 推定發火時間보다 4 分程度 遲延되어 消防隊가 現場에 到着했을 때에는 이미 火災가 상당히 進展되어 鎮火와 人命救助가 困難했다.

### 나. 從業員의 避難誘導 未熟

처음 火災를 目擊한 從業員이 騒音과 춤에 젖어있는 靑少年들에게 火災를 早期에 效果의으로 알리지 못하였으며 適切한 待避 案内放送을 實施하지 못했다.

### 다. 可燃性 內裝材

天井, 壁 등에 合板, 布紙, 카피트 등 多量의 可燃性 內裝材가 設置되어 급격한 延燒擴大가 일어났으며 當建物은 法規上 內裝材 不燃化 對象建物이나 是正되지 않은 狀態였다.

### 라. 避難施設의 管理狀態 不良

當建物 2 層에서는 2 方向以上の 避難路가 設置되어 있었으나,

- 1) 主階段은 多數의 人員이 一時에 待避하기에는 幅이 狹小하고 傾斜가 급하여 避難에 問題가 있었으며, 또한 階段室은 可燃材로 裝飾되어 通路가 더욱 狹小하여졌고, 계다가 階段室 燃燒가 더욱 人命被害를 加重시켰다.
- 2) 非常階段 出入口는 의자등의 障礙物로 充分한 避難通路가 確保되어 있지 않았으며 屋上으로 통하는 階段과 階段室에는 障礙物(의자)이 방치되어 있는 등 全般的으로 避難施設의 管理狀態가 不良했다.

### 마. 防火管理狀態 不良

當建物은 防火管理者 選任對象建物이나 未選任된 狀態였다.

이러한 多數人이 모이는 場所에서는 防火管理者를 中心으로 하여 警報, 避難, 消防活動 및 施設管理를 組織的이고 效率의으로 遂行하여야 하나 그러하지 못한 狀態였다.

(현장 사진은 18 페이지에)

# Summary Report on "Prarie House" Discotheque Fire

## I. INTRODUCTION

A fire at the Prarie House Disco Club in Taegu, Kyongbuk Province, Korea, the country's third largest city, on 18 April, 1983, claimed the lives of 27 young people, mostly in their teens and early 20s, and injured 67 other people. It was presumed that the fire was caused by faulty wiring.

## II. FIRE IGNITION, GROWTH, AND EXTINGUISHMENT

### 1. Outline of the Fire

- a. Address of the Damaged Property: "Prarie House" Disco Club, 51-7 Hyangchondong, Chung-ku, Taegu, Kyongbuk Province, Korea
- b. Estimated Ignition Time: 01:40 hours (a.m.), 18 April, 1983 (Monday)
- c. Time the First Notification by Telephone Received by Fire Station: 01:44 hours (a.m.)
- d. Time the First Pumper Moved Out: 01:45 hours (a.m.)
- e. Time of Complete Fire Extinguishment: 03:00 hours (a.m.)

### 2. Building Details

#### a. Structure of the Building:

It is presumed that the building was built in the 1940's. Major part, about two-thirds, of the building was wooden structure, which had roof with galvanized iron sheets, and a new extension to the old part, the remaining about one-thirds, was a reinforced concrete structure with roof with slates. The total area of this two-story building was 750.32 square metres, of which the area of the first floor was 390.91 square metres, whereas that of the second floor was 359.41 square metres.

The building had been used for a restaurant, specialized in Korean cuisine, until it was rented to be used for a discotheque on May 26, 1982. All of the two floors were used for disco clubs, however, the name of the club located on the second floor was "Prairie House" Disco Club, and the club on the first floor was "Sang-sang" (or "Two-by-Two" in English) Disco Club, which were managed by respective personnel.

Fire load of this building was relatively heavy because of a large quantity of combustible interior finishing including walls and ceilings which had been made of plywood and had been covered with wallpaper, and many other combustible materials like carpet.

#### b. Circumference:

Although the building was located in the central area of the city, Hyangchondong, there were a lot of old wooden structure houses around it, and consequently, the area had been

declared as “vulnerable area for fire” by fire stations, and at the same time, it had been one of the regular rounds.

### **3. Fire Ignition Sequence and Evacuation**

The fire was started at approximately 01:40 hours a.m. from somewhere near to the ceiling of the second floor as the second floor was occupied by an estimated 150 people. Most of the people there were in their teens and early 20s. About 80 people were dancing to disco music while some 70 people were resting at seats.

The fire was reportedly of electrical origin. That is, spark due to short-circuit of wiring of spotlight apparatus seemed to ignite dust and combustible interior finish of the ceiling and then spreaded rapidly.

The fire was not discovered by any people who were staying inside of the building but was discovered first by a passerby at the outside. As he shouted “Fire!” upon discovering smoke coming out of the roof of the second floor, a club employee who were working at the entrance door to the stairway to the second floor rushed out, to confirm the fact. He witnessed smoke, and rushed into the second floor and announced the people about the fire. However, most of the people did not react to the announcement at first because the hall was so noisy and most people were fuddled with drink, that they could not perceive the occurrence of the fire easily.

Several club employees, however, recognized the real situation, and threw spotlight on the fire scene at the ceiling. By this time, sparkles were falling from the ceiling, and the guests were frightened at this scene, and consequently, they were rushing for the main entrance door all at once.

However, the width of the stair was very narrow, and moreover, it was steep, one person fell on the stairs in the stampede, after about half the guests had already escaped from the building. In an instance, tens of people fell down also, and the stairway was piled up with fallen people, to block up the way to the outside, thus many people were crushed to death or were suffocated to death.

Meanwhile, there were about 50 people in the disco club located on the first floor of the same building, or “Sang-sang” Disco Club. The managing director of this club, however, grasped the real situation and realized the danger, and ordered to stop the music. He announced through the radio as this: “Ladies and gentlemen, we would conduct a fire drill for a little while, so do not be restless. Please go out of this hall slowly one by one, and please return here later.” No victims were found at the first floor.

### **4. Fire Station’s Activities**

The Taegu Fire Station was notified the fire by telephone at 01:44 hours (a.m.). When nine fire pumpers arrived at the fire scene first, the fire had been involved in flames.

Because the width of the road in front of the building was only 6 metres, fire trucks could not approach to the fire scene all together easily, and consequently, the fire-fighting operation was not so easy. Moreover, because of the people in a heap, firemen could not rescue the people easily, by pulling out men from the entangled human pile.

Twenty-six fire trucks were reinforced soon, however, it was very difficult to extinguish the fire due to combustible interior finish, rapid spread of flame, steel bars of windows, and other blocked windows with combustible materials.

There was another emergency stairway to the north side of the building, however, the door to the emergency stairway from the disco club on the second floor, was blocked up with tables, chairs, and many other things. Consequently, the rescue operations was delayed to break down the door of the second floor.

Numbers of major fire-fighting equipment and personnel mobilized were as follows:

| <u>Personnel</u>   |            | <u>Equipment</u>       |         |
|--------------------|------------|------------------------|---------|
| Fire-fighters:     | 135        | Pumpers and tankers:   | 23      |
| Policemen:         | 100        | Platform with ladders: | 2       |
| Volunteer firemen: | 30         | Lighting car:          | 1       |
|                    |            | Other fire trucks:     | 9       |
| <hr/>              |            | <hr/>                  |         |
| Total:             | 265 people | Total:                 | 35 cars |

## 5. Damage

### a. Casualties:

At the time of fire, there were approximately 150 people, including the club employees, on the second floor. Of them 25 people were found to be dead, and two men died a few days after they had been hospitalized, thus a total of 27 young people died as of the 2nd day of May, 1983. It is estimated only about 10 victims died of burns. Police said 13 victims, including 10 women, were believed to have died when they were crushed in a panic escaping from the second floor club through the steep steps to the downstairs doorway. 67 other people were wounded.

Most of the victims were found at the stairway or at other places near to the entrance door to the club on the second floor.

### b. Property Loss:

Damage to the building and contents, which were destroyed, was estimated at US \$65,000.

## 6. Extinguishment of Fire

The fire was put out completely at 03:00 hours a.m.. The roof, the ceiling, the floor of the second story were pull down and collapsed.

## **7. Analysis**

Some of the main reasons for the large loss of human lives in this fire could be pointed out as follows:

### **a. Delay in Notification of Fire:**

The first witness of the fire was neither an employee of the club nor a guest who were staying in the building at the time of the fire, but an external passerby. Thus, considerable time might had been passed after the initial ignition until the time of first reporting. Delay in notification of the fire could be one of the major factors for the loss of multitude.

### **b. Poor Inducement to Escape:**

The employees of the club could not cope with the emergency situation effectively. They made a mess in notifying the guests of the fire, and moreover, it is estimated that the noisy disco music jammed the voice alerting for fire.

### **c. Combustible Interior Finish:**

A large quantity of combustible materials, including plywood, wallpaper, and carpet of the floor, the ceiling, and the walls seemed to accelerate rapid transmission of heat and burning.

Although this building was an object of noninflammability treatment for interior finish, in comply with the Fire Protection Law, they did not comply with the provisions of the law.

### **d. Unsuitable Escaping Route:**

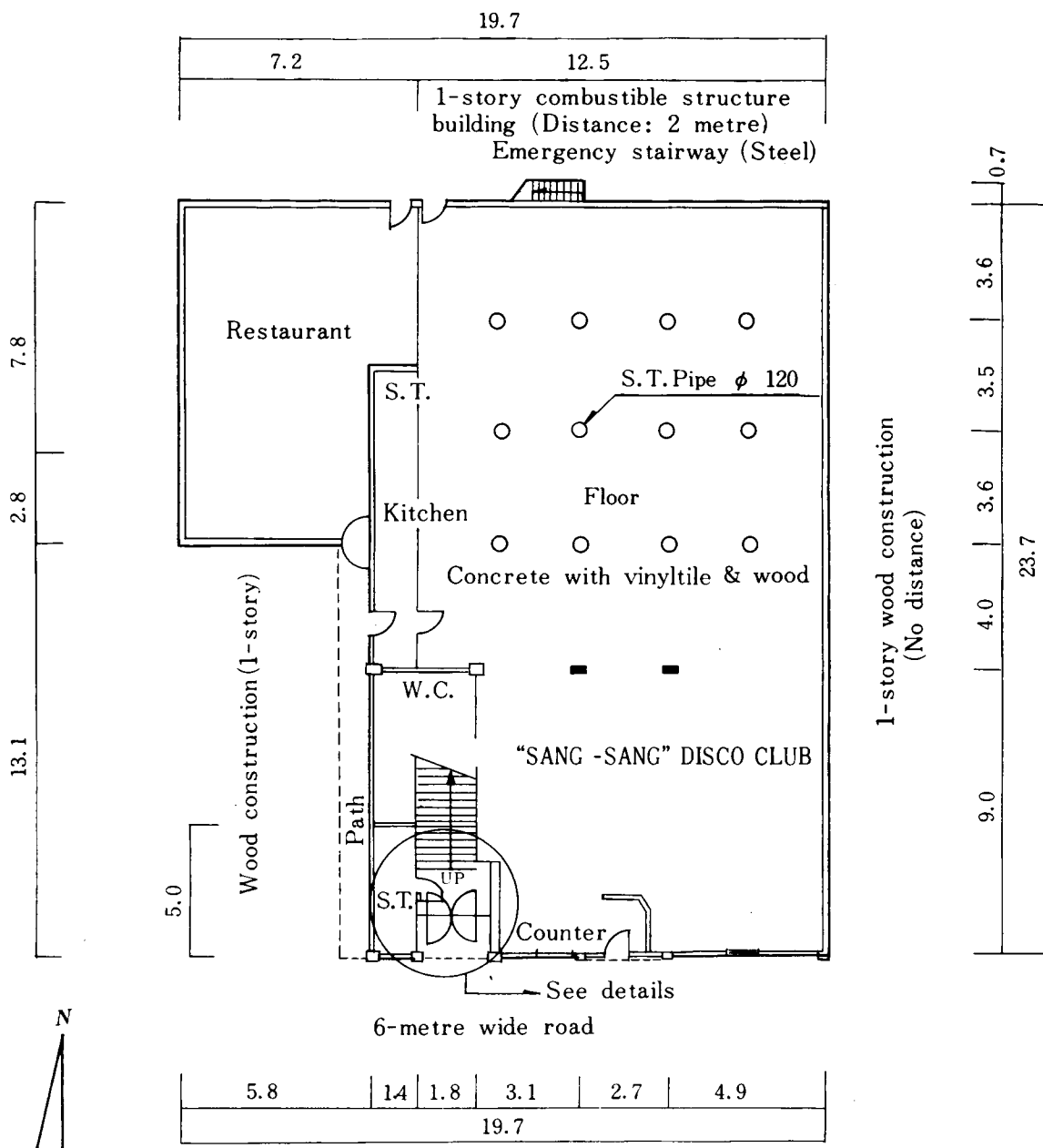
Although there were two stairways to the outside, one of them, emergency stairway, was blocked up with tables, chairs, and other materials, and the other stairway, or the main stairway, decorated with such combustible materials as plywood, was only 1 metre and 20 centimetres wide, and very steep.

### **e. Lack of Fire Protection Manager:**

In accordance with the provisions of the Fire Protection Law, this building should had a fire protection manager, however, they did not employ any fire protection manager.

### **f. Faulty Wiring & Etc.**

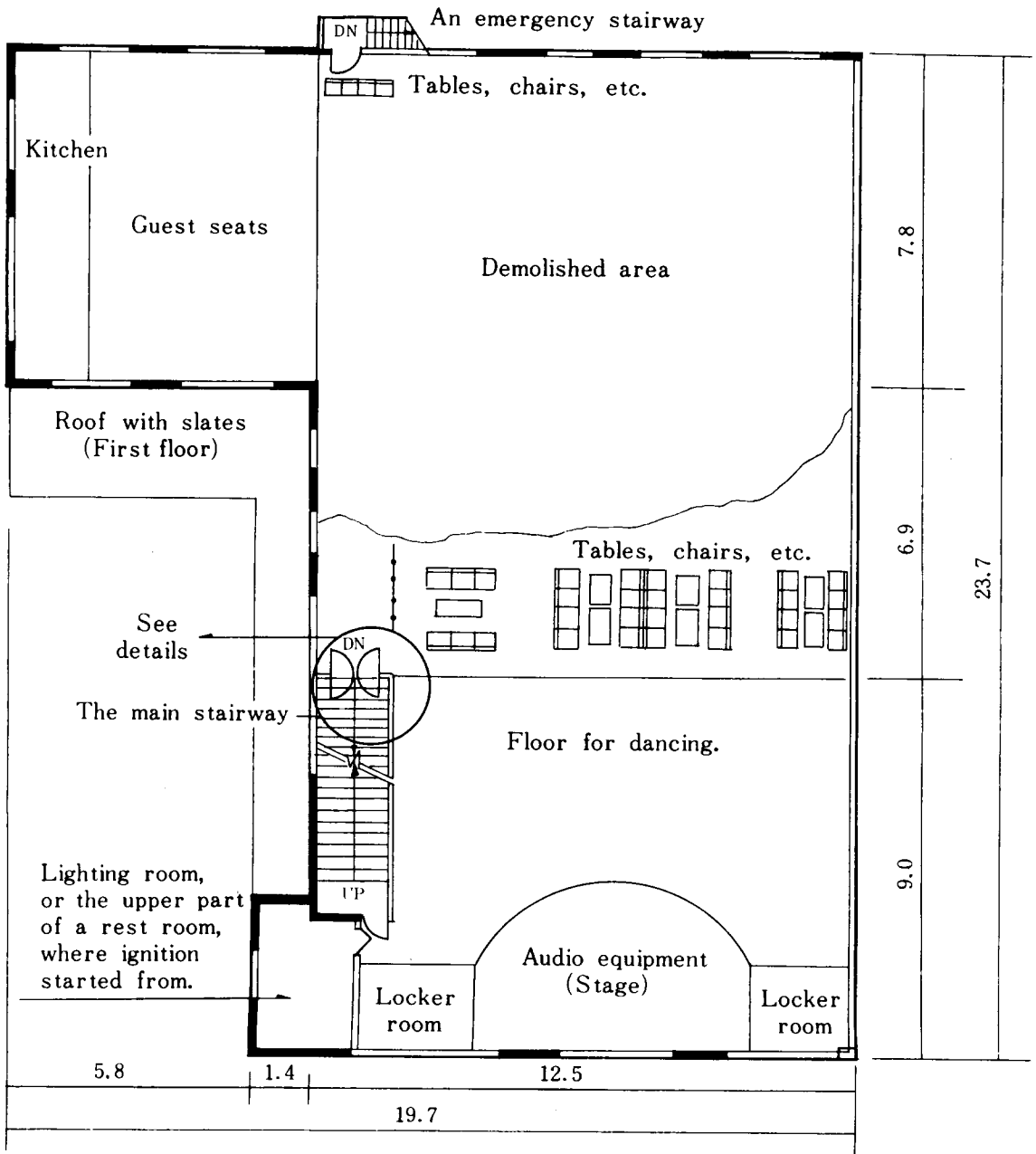
The Fire Station's inspectors have determined the direct cause of the fire attributed to electrical spark, due to faulty wiring, dust, and combustible materials. And when an employee of the "Prairie House" Disco Club tried to warn the people of the fire by throwing spotlight on the fire scene, this action, despite his good intention, seemed to accelerate the panic of the guests there.



Plan of the First Floor

Unit: m





Plan of the Second Floor

Unit: m

