

FIRE IN RESIN LABORATORY, BUILDING R8 ON 16TH MAY, 1963

A small sub committee investigated the above fire and a summary of their report to the Main Fire Committee is given below:-

Details of the Fire

A small intense fire was confined to the north west corner of the Resin Laboratory on the Mezzanine floor in Building R8. It produced a considerable quantity of dense smoke which was the first indication of the fire. The fire was in or adjacent to the fume cupboard and also involved three plastic dustbins; wooden benches, approximately 150 lbs of resin in or under the fume cupboard, 2 winchesters of solvents and a quantity of hardener. The aluminium Q deck roofing had burnt and melted an area of approximately 4' x 10' above the fume cupboard, the insulation board above the decking had been charred but was intact. The metal partitions on the west wall of the laboratory behind the fume cupboard had buckled under the intense heat and the cast wired glass had crazed but the whole remained intact and formed a barrier against fire spread. Damage also occurred to the floor covering, vacuum mixer stand and tool cupboard sited alongside the fume cupboard. Smoke permeated in the adjoining area and did considerable damage to decorations because of incomplete sealing between partitions and the main wall and the roof structure.

The total estimated cost of the damage is £2000.

Investigation

Detailed statements were taken from all people concerned and examination of the building and contents carried out.

Conclusions

1. Considerable difficulty was experienced by the Sub-committee due to the fact that clearing up operations had already started when they visited the scene of the fire.
2. The prompt action by Mr. Hey limited the damage and the Committee felt that some recognition should be given.
3. The fire was prevented from spreading westwards by the cast wired glass and metal partitions.
4. The fume cupboard collapsed as it was of aluminium and asbestos construction and led to more rapid fire spread.
5. The plastic dustbins encouraged fire spread, and there was combustible material remaining in them.
6. If the fume cupboards had been closed the fire spread might have been further reduced.
7. An automatic device would have detected the fire and alerted the Fire Brigade sooner.
8. Some delay was incurred because of the difficulty experienced by Mr. Hey in dialling the telephone number in the dark.
9. The fire spread was increased because of the presence of cardboard storage boxes and bottles of solvent on benches.
10. The aluminium roof decking melted and so became an additional risk.

11. One Burco boiler was almost completely destroyed and appeared to have been on fire, the other was less severely damaged and still contained some resin. Evidence shows that the more severely damaged Burco boiler was plugged into the 15 amp socket outlet within the fume cupboard at the time of the fire, less conclusive evidence indicates that the external switch may have been on but as the energy regulator (simmerstat) on the Burco was completely destroyed it is not known whether it was in the 'ON' position. If the resin had boiled over the contacts of the thermally controlled energy regulator could have been a source of ignition as boiling resin produces flammable vapours.

12. The two plastic dustbins in front of the fume cupboard were completely destroyed; it is possible that the contents of these were the source of the fire which then spread to the fume cupboard assisted by the suction of the extract fans.

13. Chemicals which may have been in or near the fume cupboard spontaneously ignited, there is however no evidence to support this.

14. Arson was considered highly improbable.

15. If Mr. Hay or other disinterested persons had not discovered the fire a considerable period could have elapsed before the area was visited by the Patrolman.

The full report was considered by the Main Fire Committee and was submitted to the Director with the following observations and recommendations.

Observations

1. The fire probably started from one of two causes as indicated in conclusions 11 and 12 of the report, but there is insufficient evidence to prove conclusively which was the source. In this connection it is just possible that the investigation would have been more successful if it could have been carried out before the rehabilitation started.

2. It is unlikely that the Patrolman would notice anything unusual as he only visited the ground floor of RB and the extract fans were all running - as they should be - in the Resin Laboratory.

3. The plastic dustbins did not themselves burn but softened and collapsed allowing their contents to spill out and thus encouraged fire spread.

4. The Committee doubted whether it made any difference whether the fume cupboards were open or closed.

5. Any proposals on automatic fire detection will be brought out in a report to be prepared on all these buildings not at present covered.

Recommendations

1. A general instruction should be issued to the effect that after a fire has been extinguished nothing should be disturbed until an investigation has taken place.

2. The patrolling of buildings during silent hours should be more detailed and those undertaking patrols should have proper instructions on how to act in case of fire. The Committee strongly recommend that patrols should be undertaken by two men and not one as at present.

3. Partly to assist in recommendation (2), but also to have a record of persons entering a building normally unoccupied during silent hours, it is proposed that such buildings should have their outside doors locked but all internal office or laboratory doors left unlocked.

4. All emergency 'phones outside buildings should be illuminated.
5. The Committee wish you to write a letter of appreciation to Mr. Hey.

The Director accepts all the recommendations except 2 and to this he is giving further consideration.

J. C. LOUTH
Chairman of Fire Committee

20th August, 1963.