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FREQUENCIES AND CAUSES OF FIRES IN LAUNDRIES,
LAUNDERETTES AND SIMILAR OCCUPANCIES

by

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DEPARTMENT OF THE ENVIRONMENT AND FIRE OFFICES' COMMITTEE
JOINT FIRE RESEARCH ORGANIZATION

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SUMMARY

The numbers of fires in laundry occupancies rose from 484 in 1967 to 714 in 1968. These include fires in laundries, launderettes and laundries within other occupancies. Most of this rise occurred in launderettes - fires in the shop sections of launderettes rose from 212 in 1967 to 394 in 1969. It is probable that this rise is linked to an increase in the numbers of launderettes at risk.

During the three year period the most important source of ignition was smoking materials, but over 20 per cent of the fires were of unknown cause.

In launderettes (shop sections), over two-thirds of the fires were attributed to drying apparatus or washing machines. The number of fires attributed to drying apparatus rose from 73 in 1967 to 152 in 1969 - for washing machines the rise was from 86 in 1967 to 116 in 1969. In ancillary sections to launderettes boilers and water heating apparatus were the most common causes.

In laundries attached to other occupancies 20 per cent of the fires were attributed to drying apparatus. In 1969 there were six non-fatal and one fatal casualties in a 1-in-2 sample of fires in laundry occupancies.

KEY WORDS: Fire statistics, fire cause, laundry.

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Introduction

Several recent enquiries have been made concerning fires in laundries, launderettes and similar occupancies and this note is intended to provide basic statistics on these fires. It is not known whether these occupancies are becoming a greater fire hazard and the recent sharp increase in the frequency of launderette incidents may be related to an increase in numbers of launderettes at risk.

Occupancies involved

There are several ways in which laundry occupancy fires are recorded for the purpose of statistical analysis. These are:-

- (A) Laundry - as the major occupancy
- (B) Launderette - as the major occupancy. This category has been subdivided into the shop sections and ancillary sections for the purpose of this analysis.
- (C) Laundry - as part of another occupancy, e.g. hospital, school or prison.
- (D) Laundry, wash house - as part of or attached to a private occupancy. Communal wash houses appear to be more customary in Scotland than in England and Wales.

There is a further category, namely a launderette with living accommodation above. Except in the section on casualties these have not been considered unless the fire actually started in the launderette.

The frequencies of fires in these categories attended by fire brigades in the United Kingdom, are shown for the years 1967 - 69 in Table 1. For 1968 and 1969 the frequencies shown are estimated from 1-in-4 and 1-in-2 samples of reports respectively.

Table 1:
Fires in laundry occupancies, United Kingdom 1967-8-9

Type of laundry occupancy	1967	1968	1969
TOTAL	484	504	714
(A) Laundry	88	92	84
(B) (i) Launderette - shop sections	212	244	394
(ii) Launderette - ancillary sections*	48	56	86
(C) Laundry section within another occupancy	73	52	80
(D) Laundry, wash house, etc as part of a private occupancy	63	60	70

*e.g. boiler room at rear of launderette

The table shows that there has been a sharp increase in fires in launderettes. In 1967 they accounted for 54 per cent of the fires in laundry occupancies - by 1969 this figure had risen to 67 per cent. Fires in laundries and laundries within other occupancies do not appear to have shown any appreciable change in frequencies during the period under review.

Sources of ignition of fire

Detailed information on sources of ignition of fires are given in Table 2 for all laundry occupancies. The figures for the three years have been added together, making appropriate adjustments for 1968 and 1969 when samples of reports were used.

Table 3 gives the annual frequencies of fires related to sources of ignition for all laundry occupancies - and Table 4 gives similar information for the shop sections of launderettes, where the major increase in fire incidence has occurred.

Table 2:
Source of ignition of fires in all laundry
occupancies (summed over 1967-8-9)

Source of ignition	TOTAL	Laundry	Lauderette - shop section	Lauderette - ancillary sections	Laundry within other occupancy	Laundry, wash house attached to private occupancy
TOTAL	1702	264	850	190	205	193
Drying apparatus - electric	141	6	103	2	27	3
- gas	213	4	198	4	5	2
- other fuels	28	3	16	-	9	-
Washing machine - electric	315	-	271	-	22	22
- other fuels	13	-	7	-	2	4
Smoking materials	154	37	63	22	14	18
Children with fire	122	20	11	20	2	69
Water heating, not elsewhere specified*	64	1	8	26	13	16
Wire and cable (incl. "lead to")	52	7	24	6	7	8
Dry cleaning machine	42	1	35	-	6	-
Motor, transformer, etc.	41	4	14	18	5	-
Boiler (industrial)*	40	7	-	33	-	-
Welding and cutting equipment*	39	26	-	1	12	-
Malicious ignition	31	11	13	2	3	2
Spontaneous combustion	25	16	-	-	8	1
Central heating*	22	3	-	16	-	3
Space heating*	15	8	3	1	1	2
Other (known)	188	51	43	26	44	24
Unknown	157	59	41	13	25	19

*All fuels

Table 3:

Source of ignition of fires in all laundry occupancies;
1967-8-9 (Sample frequencies multiplied where appropriate)

Source of ignition	For three year period		Year		
	Total	Per cent	1967	1968	1969
TOTAL	1702	100.0	484	504	714
Drying apparatus - electric	141	8.3	41	20	80
- gas	213	12.5	41	84	88
- other fuels	28	1.6	14	4	10
Washing machine - electric	315	18.5	97	92	126
- other	13	0.8	9	-	4
Smoking materials	154	9.0	34	48	72
Children with fire	122	7.2	36	28	58
Water heating, not elsewhere specified*	64	3.8	16	36	12
Wire and cable (including "lead to")	52	3.1	18	4	30
Dry cleaning machine	42	2.5	10	20	12
Motor, transformer, etc	41	2.4	7	12	22
Boiler (industrial)*	40	2.4	10	4	26
Welding and cutting equipment*	39	2.3	15	12	12
Malicious ignition	31	1.8	9	4	18
Spontaneous combustion	25	1.5	7	12	6
Central heating*	22	1.3	8	-	14
Space heating*	15	0.9	5	8	2
Other (known)	188	11.0	48	68	72
Unknown	157	9.2	59	48	50

*All fuels

Table 4:

Source of ignition of fires in laundrettes (shop sections)
1967-8-9 (Sample frequencies multiplied where appropriate)

Source of ignition	For three year period		Year		
	Total	Per cent	1967	1968	1969
TOTAL	850	100.0	212	244	394
Drying apparatus - electric	103	12.1	27	20	56
- gas	198	23.3	40	72	86
- other fuels	16	1.9	6	-	10
Washing machine - electric	271	31.9	83	76	112
- other fuels	7	0.8	3	-	4
Smoking materials	63	7.4	9	20	34
Dry cleaning machine	35	4.1	7	16	12
Wire and cable (including "lead to")	24	2.8	4	-	20
Motor, transformer	14	1.6	4	-	10
Malicious ignition	13	1.5	1	4	8
Children with fire	11	1.3	3	4	4
Water heating, not elsewhere specified (all fuels)	8	0.9	4	4	-
Space heating (all fuels)	3	0.4	1	-	2
Other (known)	43	5.1	7	20	16
Unknown	41	4.8	13	8	20

From Table 2 it can be seen that, in laundries, smoking materials, welding and cutting equipment and children with fire were the most important sources of ignition - but fires reported as of unknown cause amount to over 20 per cent of fires in laundries.

In the shop sections of launderettes (see Table 4), 317 (37 per cent) of fires were attributed to drying apparatus, e.g. tumble dryers and 278 (33 per cent) to washing machines. Smoking materials accounted for 63 of the estimated 850 incidents in the survey. Incidents attributed to drying apparatus rose from 73 in 1967 to an estimated 152 in 1969, and the frequencies for fires attributed to washing machines rose from 86 to 116 in the same period.

In ancillary sections to launderettes (Table 2) boilers and water heating apparatus accounted for 59 fires (31 per cent) and were the most frequently recorded sources of ignition.

In laundries within other occupancies, e.g. schools, hospitals, prisons (see Table 2) drying apparatus accounted for 41 fires (20 per cent) and washing machines 24 fires.

In laundries and wash houses attached to private occupancies the preponderance of fires attributed to children was greater than in other laundry occupancies. These buildings seem to be more frequent in Scotland than elsewhere in the U.K., with 69 fires (36 per cent) out of an estimated 193 recorded during the period 1967-8 attributed to this cause.

Casualties, Rescues and Escapes

During the year 1969 fire incidents involving casualties in laundry occupancies occurred in the one-in-two sample of reports - these involved six non-fatal casualties and one fatal casualty. Three of these fires, including the fatal fire were of unknown source of ignition. The other two casualty fires were attributed to a tar boiler in one instance and to electric wire and cable in the other.

There was also an incident in living accommodation above a launderette which involved one non-fatal and two fatal casualties. This was similar to an incident in 1964 which led to five deaths.

Discussion and Conclusions

The numbers of fires in laundry occupancies, including launderettes and laundries within other occupancies increased from 484 in 1967 to 714 in 1969. Most of this increase occurred in launderettes, in which occupancy the frequency rose from 212 in 1967 to an estimated 394 in 1969. It is highly likely that this rise can be attributed, at least in part, to an increase in numbers of launderettes and may not therefore be taken as indicative of an increasing fire hazard in these establishments.

Over 20 per cent of the fires in laundries (i.e. as a major occupancy) are recorded as of unknown cause. Smoking materials constitute the most frequent single known cause.

In launderettes, 37 per cent of the fires are attributed to drying apparatus and 33 per cent to washing machines. However in ancillary sections to launderettes, boilers and water heating appliances are the most important sources of ignition.

Reference

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