

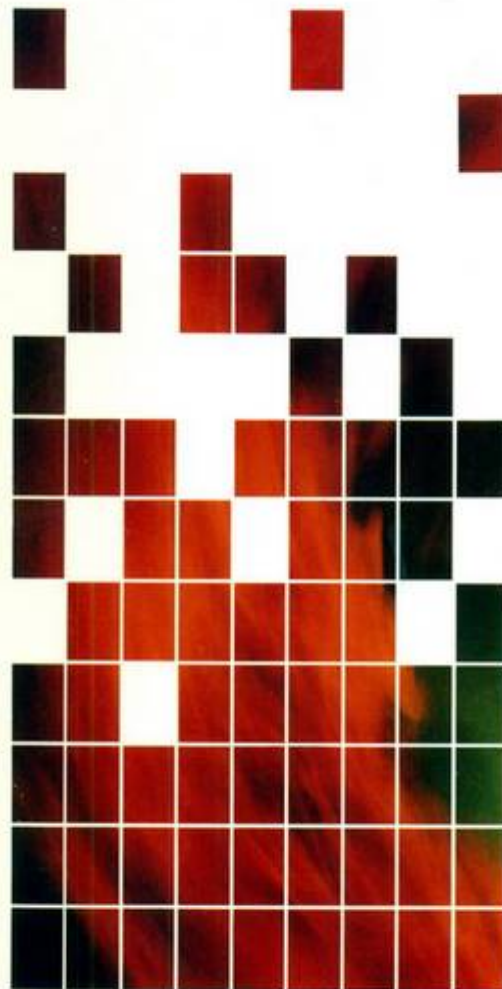
HISTORY of FIRE VENTILATION 1876-1985

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GUIDE TO
AUTOMATIC FIRE
VENTILATION

A Century of Fire Ventilation

- 1876** The Fire Fighting Handbook by Captain Massey – Shaw explains how and when to ventilate when fire fighting.
- 1878** Metropolitan Management and Building Acts Amendment Act enforced fire safety measures on theatres and music-halls in London.
- 1881** Vienna Ring Theatre fire (December 8) 449 died. Not fitted with Fire Ventilators.
- 1882** Home Secretary asked the Board of Works to report on the safety of audiences against flames, heat and smoke in London's 41 theatres. Captain Massey Shaw stressed importance of smoke ventilation.
- 1885** Austrian Society of Engineers experiment on venting theatre stages.
- 1887** Exeter Theatre Royal fire, 186 killed. Roof vent fitted but was reversed to avoid rain entry and was prevented from operating.
- 1903** Chicago Iroquois Theatre fire (December 30) 571 died. Fire ventilators fitted but were boarded up.
- 1909** Cinematograph Act. Theatre safety is the responsibility of licensing Authority. Stages of new theatres required to be fitted with roof ventilators equal to 1/6 the stage area and existing buildings 1/8.
- 1911** Edinburgh Palace Theatre fire (May). Nobody died in the audience. The stage was vented.
- 1935** Manual of Safety Requirements in Theatres published by the Home Office explains stage venting requirements under the building acts and bye – laws.
- 1953** General Motors, Livonia Fire costing 3 lives \$55 million and a 34 acre building.
- 1954** First automatic fire ventilator made by Colt for General Motors.
- 1956** Armour Research Foundation Report prepared for General Motors recommending smoke curtains and fire venting according to the risk from 1/150 – 1/30.
- 1956** Vauxhall Motors placed first fire ventilation contract with Colt for 35 CO 2046. The equipment was based on a cardboard model by H.R. Lambie.
- 1957** Jaguar Cars, Coventry fire £3.5m loss (Feb 12).
- 1957** Uxbridge Fire Test by Cape Asbestos Products with co – operation from Colt Ventilation Ltd (May 28).
- 1958** Colt approached JFRO to initiate fire ventilation research.
- 1959** Research programme started at FRS Borehamwood sponsored 50% by Colt, 25% by DSIR and 25% by FOC.
- 1959** Humber Car Company Ryton first fire (Sept 22).
- 1960** Factory Mutual Association, USA tested a Colt CO Ventilator (March 11).
- 1960** Vickers, Weybridge carried out cold tests on a Colt Ventilator (July 20).
- 1960** JFRO tested fusible links (March 19).
- 1960** Factory Mutual Engineering Division USA defined uses for fire ventilators (August).
- 1960** Humber Cars Ryton second fire but partly vented this time (September 23).
- 1961** Fire Ventilation seminar at Olympia supported by Colt film 'Fire Control in Industry' (November 21).

- 1963 Ad hoc tests on Colt MF ventilator (August).
- 1963 Fire Research Technical Paper No. 7 was published for the DSIR by the HMSO (August 20) followed shortly by Papers 10 (1964) Fire Note 5 (1965) and Paper 15 (1966) on the temperatures attained by steel in building fires.
- 1965 The Council of Fire and Accident Underwriters Association in New Zealand declared insurance premiums rebates where fire ventilators and screens complemented sprinklers and alarms.
- 1966 Portsmouth Fire Test of Colt ventilators in a full size building.
- 1966 Japanese experiment on smoke spread in buildings, notably underground car parks.
- 1966 Fire Technical Paper No. 14 on use of PVC published by HMSO.
- 1967 Sprinklers in a palletised warehouse tested by Walter and Cie, Germany and encountered smoke logging to floor level within 11 minutes.
- 1967 Dutch insurers introduced premium reduction for fire vent installations (November 14).
- 1967 Fire Research Technical Paper No. 17 on the performance of sprinklers published by HMSO.
- 1967 New South Wales, Australia published Codes of Practise.
- 1968 Basingstoke Fire Test by Colt to measure fire spread in high stacks on a full scale (April 19).
- 1968 National Fire Protection Association of USA published codes.
- 1969 Citroen tested the merits of plastic and aluminium roof vents at Champs sur Marne, France and found aluminium far superior (May 5).
- 1969 Factory Mutual Insurance Company (USA) published 'Approved Standards for Heat and Smoke Vents' (August).
- 1969 Forschungszentrum Brandschutz, Germany with Minimax conducted fire tests on storage racks (May 19) Waxpolish (July 14) and Rubber (September 4).
- 1969 Report on Pressurisation of Escape Routes published.
- 1970 Factory Mutual USA published results of tests on palletised and racked storage (July 31).
- 1970 Michelin tested fusible links using rubber tyres at Sealand in co-operation with Mather and Platt and Minerva.
- 1970 JFRO tested sprinklers within high piled stock at Cardington (September).
- 1970 Cornhill Insurance Company offer premium reduction on a fire ventilation installation.
- 1971 Fire Research Note 875 published on control of smoke in enclosed Shopping Centres (F.R.S.)
- 1972 German Insurers agreed rules (September 23).
- 1972 John Lewis new warehouse Bracknell, subject a Fire Ventilation System to smoke tests (June 6).
- 1972 Australian Commonwealth Experimental Building Station publish report on venting fire through roofs (October).
- 1973 Austrian Magistrat der Staat, Vienna test and approve Colt MF Ventilators.
- 1975 Swedish Fire Venting regulations published.
- 1976 Messerschmitt Laboratories Hamburg test Colt ventilators for the RWA (April 7).
- 1976 CEA issue guidelines for heat and smoke venting systems (February 26).

- 1977** Ford Motor AG Cologne warehouse fire. Fitted with sprinklers but not ventilators. Two thirds totally destroyed at a cost of 150m DM (October 20).
- 1979** Belgium Insurers Association, ANPI, erect fire test building at Louvain le Neuve.
- 1980** APSAIRD – the French Association of Insurance Companies published regulations (R17) for fire ventilation and screening single storey buildings based on earlier German regulations and drawing heavily on FRTP's 7 and 10.
- 1981** Australian fire ventilation standards issued.
- 1982** NFPA, USA published guide for smoke and heat ventilation.
- 1982** German DIN 18.232 Standard for smoke and heat control units published.
- 1983** Colt/Fire Research Station joint programmes of research on the interaction of sprinklers and roof ventilators and smoke control in atria, hotels and offices, begin.
- 1984** EEC International Fire Conference Luxembourg (September).
- 1984** BSI Certificate FM 354 received by Colt as the first firm of assessed capability under BS 5750 Part 1 in respect of, inter alia, the design and manufacture of fire ventilation equipment.
- 1985** Colt carry out full scale fire test at Lyon Industrial Fairground (May).
- 1985** First papers on smoke control in atria related to hotels and offices published.
- 1985** Paper on the effect of vents on the operation of the first sprinkler published.