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# Hidden fire hazards lurking in ductwork



Richard Norman, managing director of duct and specialist ventilation cleaning services provider, Indepth Hygiene

It's easy to see how cleaning and maintenance of ventilation ductwork can be a case of 'out of sight, out of mind', particularly in these straightened times when facilities management budgets are under pressure.

But dirty and badly maintained ductwork (particularly ducts responsible for grease extraction in catering facilities) represent a serious fire risk. Fires within ductwork are very difficult to stop, running through the length and breadth of a building, with plenty of drafts to fan the flames, ductwork facilitates the rapid spread of fire. Fire may also break out of ductwork into neighbouring buildings. In addition, ductwork is often inaccessible making fire fighters' job harder, and increasing the potential for serious property damage. A commercial business suffering a serious fire may take six months to recover – but some organisations may never recover.

Of particular concern as far as fire risk is concerned are grease extract ventilation systems linked to catering facilities. According to a survey of fire officers these systems pose the greatest risk to safety of building occupants; in fact they state that "in 9 out of 10 fires linked to catering facilities, un-cleaned grease deposits in extract ducting have ignited to make fires more widespread and destructive." Grease extract systems are often overlooked because the ducting from the kitchen canopy often runs behind ceilings and walls. Until a fire occurs, there are seldom other danger signs.

But we ignore such risks at our peril. Since the Fire Safety Order shifted responsibility for protecting building occupants from the dangers of fire from the fire authorities to owners/managers of premises it has typically fallen to the facilities manager to take on the 'responsible person' mantle. The fire authorities have powers to ensure compliance with the Order, with fines, closure and imprisonment as the ultimate sanctions. The Fire Safety Order has real teeth, the 'responsible person' can be prosecuted for failing to fulfil his responsibilities to protect building occupants and, in the event of death or injury resulting from a fire, be subject to criminal prosecution.

There is also the question of property insurance warranties, particularly in the



case of grease extracts, where increasingly insurers now require cleaning either six monthly or annually as a minimum.

We are frequently asked to provide expert witness services in court cases dealing with disputes involving fires in grease extract systems. Worryingly we often encounter owners or operators claiming that they had had a cleaning service remove the flammable grease deposits in the extract system, only to find – following the incident – that grease had not been removed from the internal surfaces of the ducting. Consequently, the grease was ignited by a spark or flame in the kitchen. Forensic evidence showed clearly that the ducting was not being cleaned properly.

Insurers are disputing claims where there is evidence of noncompliance with the law. Furthermore, the country's leading property insurers are demanding in policy warranties that grease extract systems are cleaned in their entirety.

As we know, fire risk is a huge issue and a huge responsibility for facilities managers, so I'll offer some key points to bear in mind when considering fire risks in your building.

1. Fire risk assessments should have been prepared to identify risks and action should have been taken to eliminate or at the very least minimise them. Failure to have prepared fire risk assessments and to have taken action will constitute a breach of the Fire Safety Order and could result in substantial fines and closure of the premises.
2. The grease extract system in a catering facility comprises the hood above the cooking equipment and the associated ducting which takes fire hazardous grease to exhaust to atmosphere. If not cleaned, a spark



or flame from the cooking operation will ignite the grease deposits in the ducting. Be aware of any cleaning frequency requirements of your building insurer too.

3. Poorly completed Fire risk assessments often overlook areas such as fire compartmentation in roof spaces etc. This means that if a fire occurs it spreads rapidly because expected fire resistant structures are missing.
4. Portable fuel burning heaters and other electrical equipment (e.g. kettles) brought onto the premises by staff.
5. Electrical equipment fires – make sure all your electrical items are regularly PAT tested.
6. Retention of large quantities of paper records within a building, especially when not stored in cabinets.
7. Combustible waste in external bins needs to be secured away from the building so they can't be moved and set on fire by arsonists.
8. Heat processes/hot works – any welding acetylene or other 'hot works' create an incredibly high risk of fire.
9. Smoking – even after the smoking ban came into effect, discarded cigarettes and other smoking materials remain a major cause of fire.
10. 'Seasonal' products such as Christmas decorations, fairy lights etc.

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