ANNEX 1 to COMEAP/2001/2: Unflued Gas Fires: Request for Advice for HSE and DTI

Flueless gas fires

Background

Flueless (or unflued) appliances, as their name suggests, do not have a flue to remove their combustion products to the outside air. Their combustion products enter the room in which they are positioned. Therefore, it is important that such a room is adequately ventilated and of sufficient size to prevent the combustion products accumulating to becoming a health and safety hazard to the occupants.

Flueless gas heaters have been used for many years, and have mainly consisted of portable liquefied petroleum gas (LPG) cabinet heaters, with a limited number of fixed natural gas heaters. The latter have relatively low thermal input, ie, consume little gas. The new fixed heaters (fires and stoves) are of a much greater heat input (consume a greater amount of fuel) and are being marketed as decorative secondary heating for rooms. They are also being marketed as, not requiring a chimney, 100% efficient and having a catalyst for added safety. The catalyst converts carbon monoxide into carbon dioxide, and operates in similar way as a catalytic converter on cars. However, they still require adequate ventilation and room size to operate safely. Manufacturers of these appliances provide full instruction for the installer with regard to ventilation and room size.

There are however, National Standards, which provide guidance for the ventilation and minimum room size for gas appliances. This guidance is either specified in the installation Standard for the particular type of gas appliance or, where this is not available, BS 5440: Part 2: 2000[1]. As there is no installation standards for fixed flueless gas fires, BS 5440 may be used; there is however no legal obligation.

The fire appliance manufacturers place their fires on sale by compliance with the European Council Directive, commonly referred to as the Gas Appliance Directive[2], the Directive requires third party conformity assessment, by an independent third party Notified Body, that the appliance is safe in normal use when correctly installed. The third party conformity assessment includes consideration of the manufacturer's installation instruction, which would include the provisions for ventilation and minimum room size. It was noted that the manufacturers instruction specified lower requirements than BS 5440 for both ventilation and room size.

HSE have the responsibility for the safe installation and use of gas appliances. It held the view, and this is promulgated in the supporting AcoP and Guidance to gas safety regulations[3], that British Standards represented the minimum installation specifications and manufacturers instruction would, where necessary, provide for additional requirements. Rather than the manufacturer's instructions specifying lower requirements. However, faced with a product certificated by a Notified Body showing compliance with the European Directive, HSE sought the advice of DTI on the relative status of the gas safety regulations and the European Directive. DTI have the responsibility for product safety of gas appliances, which fall, within the scope of the Directive.

After considerable discussion, including both DTI's and HSE's solicitors, DTI and HSE arrived at an agreed common understanding as to the meaning of the legislation, however, this view has not been tested in a court. Manufacturer's instructions took precedence over British Standards; however, it was open for both DTI and/or HSE to question their adequacy, ie did the minimum ventilation and room size values quoted in the instructions lead to safe use of the appliance when correctly installed.

DTI/HSE have therefore sought information from the manufacturers to demonstrate that their installation instructions are adequate for the safe use of the fires. The response has been varied and has centred on the emission of carbon monoxide, which has traditionally been seen as the only problematic emission product. However, as medical evidence on other combustion products has advanced, or has been reassessed, and there is an increasing concern with indoor air quality issues, it became evident that other combustion products, eg nitrogen dioxide and carbon dioxide, may also have to be considered.

[1] BS 5440: 2000 Installation and maintenance of flues and ventilation for gas appliances of rated input not exceeding 70 kW net (1st, 2nd and 3rd family gases) – Part 2: Specification for installation and maintenance of ventilation for gas appliances

[2] Council Directive 90/396/EEC commonly referred to as the Gas Appliances Directive (GAD) and enacted in the United Kingdom by The Gas Appliance (Safety) Regulations 1995 S.I. 1995 no 1629

[3] The Gas Safety (Installation and Use) Regulations 1998

Approved Code of Practice and Guidance L56 Safety in the installation and use of gas systems and appliances