

Gas Appliances Directive (90/396/EEC)	
GUIDANCE B 8	Approved by WG -GA 06- 2003

Guideline related to:

ANNEX	I	Essential requirements
Section	3	Design and construction
Paragraph	3.3. & 3.4.1.	
Subject	Ignition and combustion	

<p>3.3. Ignition Appliances must be so constructed that, when used normally:</p> <ul style="list-style-type: none"> - ignition and re-ignition is smooth, - cross-lighting is assured. <p>3.4. Combustion 3.4.1. Appliances must be so constructed that, when used normally, flame stability is assured and combustion products do not contain unacceptable concentrations of substances harmful to health.</p>

Question

When testing gas appliances what consideration shall be given to external influences which may affect ignition and combustion?

Discussion

In these Essential Requirements reference is made to the term “normally used”. Article 1.4. of the Directive defines what is intended by this term. For the application of these Essential Requirements the last two indents are particularly important:

- *used with a normal variation in the gas quality and a normal fluctuation in the supply pressure, and*
- *used in accordance with its intended purpose or in any way which can be reasonably foreseen.*

This guidance is for information only; it has no formal status
Reference: 90/396/EEC “Gas appliances directive” O.J. L 196, 26.07.90, p. 15
Source of guidance document: GADAC

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This means that in response to the first indent above only the tests for ignition and combustion should be carried out with variations in the gas quality and pressure of the distribution gas. For many years in the gas industry these variations have been simulated by the application of a system using limit gases and limit pressures.

The implication of the second indent above is that for those tests with the limit gases and pressure has to be added also tests in situations that can be reasonably foreseen. Such specific situations include:

- a) Variations in the auxiliary energy, or
- b) Variation in the chimney conditions, or
- c) With room draughts.

Conclusion

Testing should be carried out under the following conditions:

A) Reference conditions

- Ignition, cross-lighting and re-ignition (ER 3.3.) with the relevant limits of gas quality(ies) and pressure(s) in accordance with the category(ies) chosen by the manufacturer, and
- Combustion characteristics (ER 3.4.1.) with the relevant limits of gas quality(ies) and pressure(s) in accordance with the category(ies) chosen by the manufacturer.

B) External influences

Under variation of draught conditions (chimney, room or wind) or with variations of auxiliary energy or other external influences on the appliance

- for the ignition, cross-lighting and re-ignition (ER 3.3.) and
- for the combustion characteristics (ER 3.4.1.)

with, for these conditions, the relevant gas quality(ies) and pressure(s) in accordance with the category(ies) chosen by the manufacturer.

The above interprets the meaning of “normally used” as applied in the Essential Requirements following the definition given in Article 1.4. of the Directive.

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