NSAI Standards

Irish Standard
I.S. 327-3:1987

Domestic Installations Using Liquefied Petroleum Gases

I.S. 327-3:1987

Incorporating amendments/corrigenda/National Annexes issued since publication:
I.S. 327-3:1987/A2:1988

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I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

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Údarás um Chaighdeáin Náisiúnta na hÉireann

AMENDMENT

NO. 2 : 1988

OF

STANDARD SPECIFICATION (DOMESTIC INSTALLATIONS USING LIQUEFIED PETROLEUM GASES, PART 1, PART 2, PART 3 AND PART 4)

DECLARATION(S) 1987

IRISH STANDARD 327 : PART 1 : 1987
IRISH STANDARD 327 : PART 2 : 1987
IRISH STANDARD 327 : PART 3 : 1987
IRISH STANDARD 327 : PART 4 : 1987

EOLAS - The Irish Science and Technology Agency in exercise of the power conferred by section 20 (5) of the Industrial Research and Standards Act, 1961 (No. 20 of 1961) and the Science and Technology Act, 1987 (No. 30 of 1987), and with the consent of the Minister for Industry and Commerce, hereby declares as follows:

1. This instrument may be cited as the Standard Specification (Domestic Installations Using Liquefied Petroleum Gases, Part 1, Part 2, Part 3 and Part 4) Declaration(s), 1987 (Amendment) No. 2 : 1988.

2. Irish Standard 327 : 1987 set out in the Schedule to the Standard Specification (Domestic Installations Using Liquefied Petroleum Gases, Part 1, Part 2, Part 3 and Part 4) Declaration(s), 1987 is hereby amended as indicated in the Schedule hereto.

SCHEDULE

PART 1. Page 6. *Insert additional definitions as follows:*

" COMPARTMENT: An enclosure specially designed or adapted to house a gas appliance.

DUCT: An enclosed space provided for the distribution of services in a building.

VOID: Any other enclosed and generally inaccessible and unventilated space, other than a duct ".

PART 4. Page 10. *Insert an additional clause as follows:*

" 7. PREPAYMENT METERS

7.1 A low-pressure cut-off valve should be fitted to an installation served by a prepayment meter, where an appliance without a flame failure device is fitted."

PARTS 2 and 3. Appendix 2. *Insert an additional note as follows:*

" For under-stairs locations, see Part 3, Page 16, Section 9, subclause 2.2, second paragraph ".

PART 1. Page 18, Section 2. *Delete the text of subclause 4.9 and substitute the following:*

" Pipes in Ducts and Voids

Gas pipes should not be installed within any ventilation or air conditioning ducts. Pipes should preferably not be installed in voids. However, where there is no reasonable alternative the following should apply:

4.9.1 Pipes in Voids

In the case of voids, ventilators of area 500 sq. mm for every sq. metre of void surface should be provided. These ventilators should terminate in the open air. If it is impossible to vent a void, a vented sleeve is acceptable.

4.9.2 Pipes in Ducts

Any fire-barriers disturbed should be replaced. The duct should be ventilated in accordance with Appendix 2 with the following additional provisions;

4.9.2.1 Each section of duct should be ventilated both top and bottom.

4.9.2.2 Provision may have to be made for thermal expansion or contraction.

4.9.2.3 Gas pipes should not be laid closer than 25 mm to adjoining pipes to allow for access.

4.9.2.4 If it is impossible to vent a duct a vented sleeve as classified is acceptable.

Relationship of gas installation pipes to other services in ducts:

Hot water and steam	Ventilation and air-conditioning	Cold, drinking and chilled waters	Electricity	Telecom-munications	Drainage	Oil	Flammable liquids and gases	Compressed air
not exposed to leakage from	not in the same duct	not exposed to leakage from	space out and/or insulate	space out and/or insulate	yes	not critical unless gas leakage occurs	not in the same duct	not to be run where gas leakage could be circulated

"

PART 1. Page 20, 4.17. *Insert an additional paragraph before the last paragraph as follows:*

" Hemp should not be used. "

PART 1. Page 20. *Insert four additional subclauses after subclause 4.17 as follows:*

"4.18 Vertical Pipework. Continuously vertical sections of pipework exceeding 10m in multi-storey dwellings should be constructed of:

a) welded steel pipe, or

b) threaded steel pipe, or

c) brazed copper.

4.19 Risers should preferably be located outside a building or in purpose built ventilated ducts.

Where this is not practicable risers may be located in a stairwell subject to the following conditions,

i) adequate and permanent ventilation is provided.

ii) steel pipe with threaded or welded joints must be used.

iii) the stairwell is constructed of non-combustible materials.

iv) and that the stairwell is not contained within a protected shaft as defined in the Building Regulations.

In no case shall risers be located in lift shafts.

4.20 Threaded pipework should not be embedded.

4.21 Where possible the passage of pipework through another house unit should be avoided. "

PART 1. Page 24, subclause 1.2. *Delete the following:*

" Mineral Fibre Cement Pipes conforming to I.S. 120, BS 567 or BS 835."

PART 1. Page 24. Clause 1. *Insert an additional subclause as follows:*

" 1.3 The design of flue terminals should conform to a recognised Standard."

PART 1. Page 26, subclause 4.2. *Delete the text of the existing subclause and substitute the following:*

" In order to obtain a satisfactory draught no part of a flue should slope downwards. The total length of that part of a flue which slopes upwards at less than 45° or which is horizontal should not exceed 0.7 m.

The minimum height of vertical flue pipe above the draught diverter should be 0.6 m to the base of the flue terminal. For each 135° bend in the system the total height should be increased by a further 0.3 m, for each right angle bend the height should be increased by 0.5 m, and for any section up to 0.7 m long and which is horizontal or is sloping upwards at less than 45° a further 0.3 m of vertical pipe must be included.

In all cases the total height should be taken from the top of the draught diverter to the base of the flue terminal.

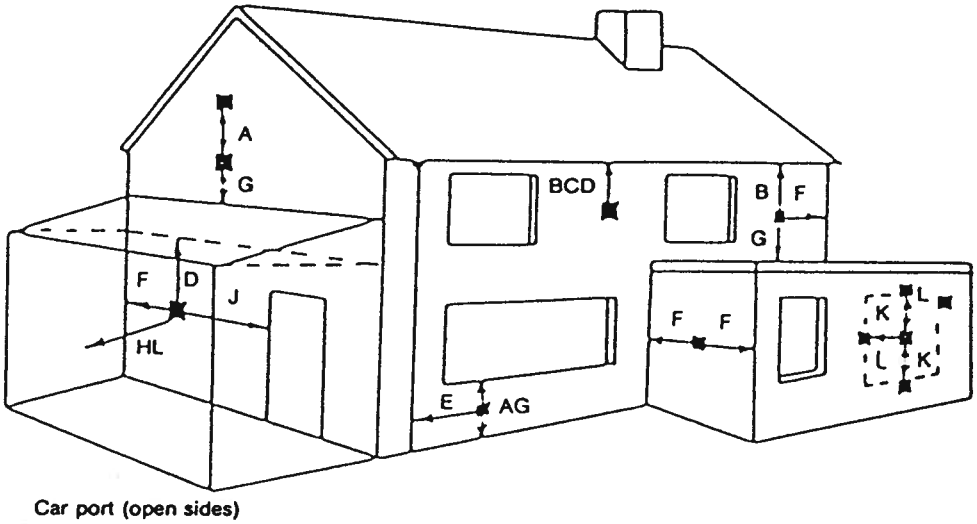
If necessary to achieve the above minimum heights, the flue may have to be terminated above the typical satisfactory positions shown in Figure 4.

The flue from an incinerator must not be fitted with a draught diverter, therefore, the minimum height of vertical flue must be 1.5 m, plus any allowance for bends and horizontal or sloping sections as given above. "

PART 1. Page 26. *Insert an additional subclause after subclause 3.4 as follows:*

" 3.5 The openings of conventional flue terminals should provide a total effective area of at least twice the cross sectional area of the flue being served. In addition, the smaller dimension of the openings should be not greater than 16mm and not less than 6mm except in the case of a terminal serving an incinerator."

PART 1. Page 27. *Delete the existing Figure 11 and substitute Figure 5 as follows:*



Terminal position

A – Directly below an openable window or other opening (e.g. air brick.).
B – Below gutters, soil pipes or drain pipes.
C – Below eaves.
D – Below balconies or car port roof.
E – From vertical drain pipes and soil pipes.
F – From internal or external corners.

G – Above ground or balcony level.
H – From a surface facing a terminal.
I – From a terminal facing a terminal.
J – From an opening in the car port (e.g. door, window) into dwelling.
K – Vertically from a terminal on the same wall.
L – Horizontally from a terminal on the same wall.

Natural draught	Fanned draught	Minimum distance (mm)					
		75	200	300	600	1200	1500
E	BE						
---	CD						
ABCGL	AFGL						
DFHI	H						
J	IJ						
K	K						

Note: Use chart unless manufacturer's specific instructions differ.

Figure 5. Position of balanced flue terminal.