Strategic Management Board

ACS.CCLP1 PD
SAFETY ASSESSMENT CRITERIA
INITIAL & RE-ASSESSMENT
DOMESTIC LPG
PERMANENT DWELLINGS

CCLP1 PD	INITIAL & RE-ASSESSMENT

Introduction

Tests gas safety competence in core domestic LPG competencies for permanent dwellings.

CCLP1 PD can only be awarded when the Candidate holds CCLP1.

Comprises:

3(b). LPG supply pressures - operation and positioning of emergency isolation, flow controls and valves for bulk gas storage vessels
3(c). LPG cylinder and vessel location and safety
4. Ventilation
5. Installation of pipework and fittings
12. Chimney Standards
13. Chimney inspection and testing
14. Installation of open, balanced and fan-assisted chimneys.

CBs and ACs may adopt Competence and Criteria numbering different to that used in this document.

CB and AC documentation may adopt wording for criteria different to that used in this document, provided the meaning is unaffected.

Range

All fittings in permanent dwellings.

Pre-requisites

Initial

CCLP1.

Re-assessment

CCLP1 + CCLP1 PD.

References and normative documents

MIs.
All relevant documents as listed in the Legislative, Normative & Informative Document List (LINDL), inc.:
- HSL56
- GIUSP.

ACS.SMB.003.ACRND identifies Normative Documents that should be held by ACs.

Abbreviations

AC. Assessment Centre
CB. Certification Body
I. Initial
IP. Intermediate pressure
LP. Low pressure
MIs. Manufacturer's/manufacturers' instructions
PD. Permanent dwelling
R. Re-assessment
Ref. Reference

UPSO. Under-pressure safety cut-off.

3. Products and characteristics of combustion

KNOWLEDGE AND UNDERSTANDING	REF	I	R
1. Awareness of regional differences in Building Regulations regarding CO detection when installing new or replacement fixed combustion appliances.	GSR ISU 037	√	√

3(b) LPG Supply pressures - operation and positioning of emergency isolation, flow controls and valves for bulk gas storage vessels

KNOWLEDGE AND UNDERSTANDING	REF	I	R
1. recognition of supply pressures from gas storage vessels: MP stage		√	√
2. operation and positioning of vapour service shut off valve		√	
3. operation and positioning of first and second stage regulators		√	√
4.			
5.			
6.			
7. identification of causes of under-pressure conditions		√	
8. operation, positioning and visible indicators of UPSOs		√	
9. re-setting UPSOs		√	
10. operation and positioning of limited relief valve		√	
11. advice to consumer on re-setting UPSO		√	
12.			
13. recognition of supply pressures to individual flats in multi-storey buildings		√	√
14. recognition of additional final stage regulator for LP supplies in multi-storey buildings		√	√
15. labelling IP and LP supplies in multi-storey buildings		√	√

3(c) Cylinder and vessel location and safety

KNOWLEDGE AND UNDERSTANDING	REF	I	R
1. **location and safety of cylinders:**			
(i) installation, location and protection		√	
(ii) construction, inc. ventilation of compartments, lockers and internal housings		√	
(iii) safety precautions for storage and use		√	
2. **location and safety for vessels:**			
(i) installation		√	√
(ii) marking of common vessels commercially available for single supply		√	√
(iii) location		√	√

4. Ventilation

PERFORMANCE CRITERIA	REF	I	R
1. calculate free area of selection of air vents		√	√
2. identify correct and incorrect types of air vents and grilles e.g. fly screens		√	√
3. identify installation of inadequate ventilation		√	√
KNOWLEDGE AND UNDERSTANDING (these criteria are PC for re-assessment)	**REF**	**I**	**R**
1. requirements for ventilation		√	√
2. installation of ventilation grilles and vents		√	
3. types of grilles and vents		√	
4. additional ventilation e.g. extractor fans, cooker hoods, dryers etc.		√	
5. labels and notices		√	√
6. siting of ventilation (wall, window, floor, ceiling and ducted) direct to outside air, or via series air vents		√	√
7. calculating ventilation for combustion of open flue appliances		√	√
8. calculating ventilation for enclosed spaces - cupboards, compartments for open, balanced and fan assisted flue appliances		√	√
9. calculating combustion ventilation for multi-appliance installations, multiple open flue and flueless appliances within the same room/space		√	√
10. ventilator location for single and multiple DFE space heaters inc. flued and flueless		√	√
11. requirements for flueless appliances inc. cooking, water heating and space heating		√	√
12. restrictions for use of screens, and louvers or grilles to prevent entry of vermin		√	
13. positioning of ducted ventilation into a space containing a gas appliance(s)		√	

14.	effects of oil or solid fuel appliances on ventilation for DFEs		√	√
15.	effects of double glazing, cavity insulation draught proofing on ventilation provision		√	
16.	identification and installation of in tumescent air vents		√	√
17.	operation of passive stack ventilation		√	√
18.	ventilation for internal kitchens		√	√
19.	Installation of appliances in cellars		√	√

5. Installation of pipework and fittings. Range of pipe sizes: 6 mm to 28 mm

PERFORMANCE CRITERIA		REF	I	R
1.	join copper pipe using appropriate capillary fittings, methods and agents		√	
2.	disconnect LPG cylinder from pipework, observing all safety precautions			√
3.	attach temporary earth bonding equipment correctly			√
4.	fabricate copper capillary fitting using appropriate methods and agents			√
5.	reconnect LPG cylinder			√
6.	check work carried out is gas tight			√
7.	purge installation of air			√
KNOWLEDGE AND UNDERSTANDING		**REF**	**I**	**R**
1.	galvanised steel pipe and fittings standards suitability and use		√	
2.	jointing and cleaning agents for stainless and galvanised steel pipework		√	
3.	restrictions on use of union, compression and capillary fittings		√	
4.	**safety requirements for pipework:**			
(i)	installed between joists in floors or roof spaces		√	√
(ii)	installed across joists in ceiling or roof spaces		√	√
(iii)	buried in concrete		√	√
(iv)	passing through cavity walls		√	√
(v)	installed behind dry lined walls		√	√
(vi)	installed within timber construction walls		√	√
5.	ventilation for pipework installed within ducts		√	√
6.	fire stopping in buildings containing flats or maisonettes		√	√
7.	pipework inside a protected shaft or other fire escape route		√	√
8.	ventilation for protected shafts		√	√
9.	minimum depth of pipework buried below ground		√	√
10.	locations where pipework is not to be installed		√	√
11.	min. spacing from electrical supplies, meters and fuse boxes		√	√
12.	min. cross sectional area of equipotential bonding conductor		√	√

12. Chimney Standards

KNOWLEDGE AND UNDERSTANDING		REF	I	R
1.	**existing solid fuel chimneys:**			
(i)	suitability – checks required		√	
(ii)	min. size of unlined chimney used for gas fire before terminal is required		√	√
(iii)	min. size of side openings for slabbed over chimneys		√	√
(iv)	min. cross sectional area of new chimney installations – gas fires		√	√
(v)	operation of dampers and restrictor plates		√	√
(vi)	effects of other fuels on chimneys and need for cleaning		√	√
(vii)	min. void dimensions below appliance connections		√	√
(viii)	catchment spaces and standard dimensions/volumes		√	
(ix)	types of flue liners – during construction (salt glazed clay etc.), poured/pumped concrete flue liners, flexible flue liners		√	√
(x)	restrictions to use of poured concrete liners		√	√
(xi)	sealing and support of flexible flue liners in chimneys		√	
(xii)	inspection of chimneys through loft spaces		√	
(xiii)	chimney heights/appliance types where liners are required		√	√
(xiv)	sealing chimney voids		√	
(xv)	fitting bird guards to chimneys		√	
(xvi)	suitable and unsuitable terminals for space heaters inc. radiant, inset and DFE		√	
2.	**pre-cast flue systems:**			
(i)	pre-cast flue design, standards, operation, routing, connection and termination		√	√
(ii)	min. cross sectional area of new gas flue block		√	√
(iii)	min. requirement of vertical flue blocks before off-sets		√	√
(iv)	jointing material for pre-cast flue blocks		√	√
(v)	min. flue size/diameter to connect pre-cast transfer blocks to termination point		√	√

(vi)	effects of temperature on installation of pre-cast flues		√	√
3.	**open gas flue systems: Natural draught:**			
(i)	termination positions for chimney outlets		√	√
(ii)	ridge terminal positions		√	√
(iii)	effects of adjacent structures, basement areas, light wells and retaining walls on terminal positions		√	√
(iv)	methods of dealing with downdraught on steeply pitched roofs		√	√
(v)	restrictions to siting and lengths of chimney run to avoid condensation		√	√
(vi)	min. up-stand for chimneys passing through tiled or slated roofs		√	√
(vii)	special requirements for chimneys passing adjacent to combustible material or through other dwellings		√	√
(viii)	pre-fabricated metal starter box for space heaters		√	
(xiv)	passive stack ventilation systems in houses, where open flue natural draught appliances are fitted		√	√
4.	**fan draught chimneys for open flue appliances:**			
(i)	requirements prior to installing fans in secondary flues		√	√
(ii)	additional safety requirements when fans are installed in secondary flues		√	√
(iii)	fan dilution and shared open flue fanned draught systems in domestic dwellings		√	√
5.	**shared open flue chimneys for natural draught appliances:**			
(i)	when two or more appliances are connected to same flue		√	√
(ii)	appliances with a common flue in same room		√	√
(iii)	appliances on shared flues installed on different floors – labelling		√	√
6.	**room sealed natural draught chimney configurations for appliances:**			
(i)	balanced flue construction		√	√
(ii)	restrictions for outlet positions horizontal to an opening relating to appliance net input		√	√
(iii)	restrictions for outlet positions below an opening relating to appliance net input		√	√
(iv)	restrictions for outlet positions above an opening relating to appliance net input		√	√
(v)	restrictions for outlet positions below gutters, soil pipes, drain pipes and eaves		√	√
(vi)	restrictions for outlet positions in car ports		√	√
(vii)	balanced flue terminal guards		√	
7.	**room sealed fanned draught chimney configurations:**			
(i)	restrictions on lengths, bends etc. for fanned draught room sealed flues		√	√
(ii)	restrictions for outlet positions inc. horizontal and vertical configurations		√	√
(iii)	enclosing chimneys		√	√
(iv)	proximity of flue duct outlets to boundaries		√	√
(v)	identifying unsafe situation of a room sealed flue system installed within an enclosure without sufficient means of inspection		√	√
8.	**balanced compartments for open flue appliances:**			
(i)	ducted air positioning		√	
(ii)	cross sectional areas of air inlet ducts		√	
(iii)	compartment construction		√	
9.	**condensing flues:**			
(i)	condensate disposal position and termination for appliances of less than 4 kW		√	√
(ii)	plume management kits		√	√
(iii)	where air inlet duct and terminal positions differ		√	√
(iv)	terminal guard for pluming kit air inlets		√	√
10.	**chimneys for vertex appliances:**			
(i)	construction and operation of vertex chimneys		√	
(ii)	min. height of appliance draught break above roof insulation		√	
11.	**exchange of information and planning for flues:**			
(i)	requirements of designer, builder, provider or installer when installing gas flues		√	√
(ii)	chimney certificates		√	√

13. Chimney testing

PERFORMANCE CRITERIA		REF	I	R
1.	**visually inspect flue and check:**		√	
(i)	starter block is correctly sized and positioned		√	
(ii)	catchment space is correct		√	
(iii)	flexible flue/liner is correctly sealed at base and terminal position		√	
KNOWLEDGE AND UNDERSTANDING		**REF**	**I**	**R**
1.	chimney testing with passive stack ventilation systems, extract fans, radon extract fans, circulating fans, ceiling paddle fans etc.		√	

14. Chimney/flue assemblies for appliances

PERFORMANCE CRITERIA	REF	I	R
open flue chimney installation - identify correct and incorrect installations:			
1. **cement based and/or metallic rigid:**			
(i) flueing into a pre-lined chimney (clay lined)		√	
(ii) flue pipe adaptors (ridge tile adaptor boot)		√	
2. **flexible liners:**			
(i) joining at base and at terminal position using appropriate adapters		√	√
(ii) clamping at terminal position		√	√
(iii) sealing of annular space with chimney		√	√
3. **flexible metallic flues inc. room sealed or closed flue alternatives:**			
(i) flue pipe jointing		√	
4. **fan draught chimneys:**			
(i) number of bends within flue length is to MIs		√	√
(ii) calculate ventilation for a vertex flue		√	√
KNOWLEDGE AND UNDERSTANDING	**REF**	**I**	**R**
1. condensing appliance flues		√	
2. effects and hazards of inadequately sealed flue liners		√	
3. incorrect applications of flue liners		√	
4. identify difference between vertex flues and vertical balanced flues		√	