



ACS.CCLP1 EP

Limited Scope SAFETY ASSESSMENT CRITERIA INITIAL & RE-ASSESSMENT DOMESTIC.LPG EXTERNAL PIPEWORK

Introduction

This stand-alone Limited Scope Assessment covers the competencies required for the installation of external service pipework for LPG supplies from storage vessel to emergency isolation valve at point of entry to premises.

Note * Must be taken in conjunction with VESLP1

Tests gas safety competence in core domestic LPG external pipework.

Comprises:

1. Gas safety legislation and Standards
2. Gas emergency actions and procedures
- 3(b). Supply pressures; operation and positioning of emergency isolation, flow controls and valves
- 3(c). Vessel location, safety and sizing
5. Installation of pipework and fittings
8. Unsafe situations, use of emergency notices and warning labels.

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

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

Range

LPG fittings used for external pipework.

Pre-requisites

Initial.

In accordance with the requirements of ACS Entry Routes & Changeover Requirements (Guidance Note 8)

Re-assessment. CCLP1 EP + VESLP1.

Exclusions

Trench Preparation, trenching, backfilling, mole ploughing or ducting, Commissioning Strength testing, Tightness Testing or Purging of Service Pipework
Service pipework from second stage regulator to dwellings in multi-occupancy buildings.
PE Pipework fusion jointing (covered by EFJLP1)

References and normative documents

MIs.

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

- HSL56
- GIUSP.
- LGUK CoP25
- LGUK CoP22

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

Abbreviations

AC. Assessment Centre
 CB. Certification Body
 DSEAR. Dangerous Substances and Explosive Atmospheres Regulations
 ECV. Emergency control valve
 I. Initial
 IP. Intermediate pressure
 LDF. Leak detection fluid
 LP. Low pressure
 MIs. Manufacturer's/manufacturers' instructions
 MP. Medium Pressure
 OP. Operating pressure
 OPSO. Over-pressure safety cut-off
 R. Re-assessment
 Ref. Reference
 UPSO. Under pressure safety cut-off.
 VP. Vapour Pressure

1. Gas safety legislation and Standards

| KNOWLEDGE AND UNDERSTANDING | REF | I | R |
|---|-----|---|---|
| 1. HSL56: | | | |
| (i) Reg.2 General interpretation and application 2(1) to 2(5) | | ✓ | |
| (ii) Reg.3 Qualification and supervision 3(1),(2),(3),& (6) | | ✓ | |
| (iii) Reg.4 Duty on employer | | ✓ | |
| (iv) Reg.5 Materials and workmanship 5(1) to (3) | | ✓ | |
| (v) Reg.6 General safety precautions 6(1) to (9) | | ✓ | |
| (vi) Reg.7 Protection against damage 7(1) to (3) | | ✓ | |
| (vii) Reg.8 Existing gas fittings 8(1) to (3) | | ✓ | |

2. Gas emergency actions and procedures

| KNOWLEDGE AND UNDERSTANDING | REF | I | R |
|---|-----|---|---|
| Priorities of actions and responsibilities: | | | |
| 1. dealing with gas leakage with fire and safety/fire precautions for vessels | | ✓ | |
| 2. dealing with gas leakage without fire: | | | |
| (i) specific gravity and its effect in relation to air e.g. search techniques | | ✓ | |
| (ii) preventing/reducing dangerous concentrations of gas in atmosphere and at low level | | ✓ | |
| 3. advice to occupants | | ✓ | |
| 4. HSL56: Reg.9 Emergency controls (5) | | ✓ | |

3(b) Supply pressures; operation and positioning of emergency isolation, flow controls and valves

| KNOWLEDGE AND UNDERSTANDING | REF | I | R |
|--|-----|---|---|
| 1. recognition of supply pressures from vessels: | | | |
| (i) VP stage | | ✓ | ✓ |
| (ii) MP stage | | ✓ | ✓ |
| (iii) LP stage | | ✓ | ✓ |
| 2. operation and positioning of vessel fittings: | | | |
| (i) pressure relief valve, | | ✓ | ✓ |
| (ii) vapour service shut-off valve | | ✓ | ✓ |
| 3. types, sizing and locations of gas regulators | | ✓ | |
| 4. operation and positioning of emergency isolation valves | | ✓ | ✓ |
| 5. operation and positioning of automatic changeover valves | | ✓ | |
| 6. operation and positioning of first and second stage regulators | | ✓ | ✓ |
| 7. causes of over pressure conditions | | ✓ | |
| 7a Automatic Shut off Controls and Safety devices | | ✓ | ✓ |
| 7b Service pipework downstream & subject to 1 ST stage pressure | | ✓ | ✓ |
| 7c Under pressure protection | | ✓ | ✓ |

| | | | | |
|------|---|--|---|---|
| 7d | Identify reasons for nuisance shut off of OPSO | | ✓ | ✓ |
| 8. | operation, positioning and visible indicators (where applicable) of OPSOs | | ✓ | ✓ |
| 9. | procedures when OPSO has operated | | ✓ | ✓ |
| 10. | causes of under pressure conditions | | ✓ | |
| 11. | operation, positioning and visible indicators of UPSOs | | ✓ | ✓ |
| 12. | re-setting UPSOs | | ✓ | ✓ |
| 13. | operation and positioning of limited relief valve | | ✓ | ✓ |
| 14. | advice to consumer on re-setting UPSO | | ✓ | |
| 15. | HSL56: Reg.14 Regulators 14(2) to (7) | | ✓ | |
| 16. | over pressure protection | | ✓ | ✓ |
| 16a. | min. and max. acceptable working pressures for new installations | | ✓ | ✓ |
| 16b | lock-up pressure parameters for regulators | | ✓ | ✓ |
| 17. | max. and preferred pressures for LPG Networks and service pipework | | ✓ | ✓ |
| 18. | design of pressure regulating installations | | ✓ | ✓ |
| 19. | over-pressure and under-pressure protection on LPG networks | | ✓ | ✓ |

3(c) Vessel location, safety and sizing

| KNOWLEDGE AND UNDERSTANDING | | REF | I | R |
|-----------------------------|---|-----|---|---|
| 1. | types | | ✓ | ✓ |
| 2. | sizes | | ✓ | ✓ |
| 3. | marking of common vessels commercially available for single supply | | ✓ | ✓ |
| 4. | recommended off-take to match appliance demand | | ✓ | ✓ |
| 5. | safety and security for single/multiple supplies, vessels and controls | | ✓ | ✓ |
| 6. | installation | | ✓ | ✓ |
| 7. | location | | ✓ | ✓ |
| 8. | areas where vessels are not to be located | | ✓ | ✓ |
| 9. | protection | | ✓ | ✓ |
| 10. | general construction | | ✓ | ✓ |
| 11. | general requirements of DSEAR | | ✓ | ✓ |
| 12. | accessibility and layout | | ✓ | ✓ |
| 13. | record keeping | | ✓ | ✓ |
| 14. | Examples of LPG specific Unsafe Situations related to Vessels i.e. Table 1 clauses 12 & 13 | | ✓ | ✓ |

5. Installation of service pipework and fittings.

Range of pipe sizes: copper/steel 6 mm to 35 mm

| PERFORMANCE CRITERIA | | REF | I | R |
|-----------------------------|--|-----|---|---|
| 1. | join threaded pipe joints using appropriate fittings, methods and agents | | ✓ | |
| 2. | join copper or stainless steel pipe using appropriate compression fittings, methods and agents | | ✓ | |
| 3. | use temporary continuity bond correctly | | ✓ | |
| 4. | check work carried out is gas tight | | ✓ | |
| 5. | purge pipework of air (K&U for re-assessment) | | ✓ | ✓ |
| 6. | identify external gas installation pipework safety defects (K&U for re-assessment) | | ✓ | ✓ |
| KNOWLEDGE AND UNDERSTANDING | | REF | I | R |
| 0. | General System requirements, materials, locations, temperature and pressure conditions. | | | |
| 1. | copper pipe and fittings standards. Suitability and use | | ✓ | |
| 2. | galvanised steel pipe and fittings standards. Suitability and use | | ✓ | |
| 3. | pipe sizing to appliance requirements – inc. theoretical exercise | | ✓ | ✓ |
| 3a | service pipework design / pressure drop allowances across service pipework | | ✓ | ✓ |
| 4. | jointing agents for copper, stainless and galvanised steel pipework | | ✓ | |
| 5. | pipe supports; clips, and fixing copper, stainless and mild steel pipework | | ✓ | |
| 6. | sleeving pipework through walls/floors | | ✓ | |
| 7. | external surface mounted-pipework | | ✓ | |
| 8. | restrictions on use of union, compression and capillary fittings | | ✓ | |
| 9. | main equipotential bonding | | ✓ | |
| 10. | siting and installation of types of gas controls, isolation valves, ECV & AECV | | ✓ | ✓ |
| 10a | entry and exits of service pipework into buildings | | ✓ | ✓ |

| | | | | |
|----------------------------------|---|--|---|---|
| 11. | ducts purposely designed to contain gas pipes | | ✓ | |
| 12. | min. depth pipework to be buried below ground | | ✓ | |
| 12a. | dealing with existing buried pipework | | ✓ | ✓ |
| 12b. | precautions for pipework crossing water courses. | | ✓ | ✓ |
| 12c. | precautions for pipework crossing above ground. | | ✓ | ✓ |
| 12 e Corrosion Protection | | | | |
| 12f. | proprietary pipework systems and assemblies | | ✓ | ✓ |
| 12g. | Hoses and Flexible connections requirements | | ✓ | ✓ |
| 12h. | pipework indication | | ✓ | ✓ |
| 13. | HSL56: | | ✓ | |
| (i) | Reg.10 Equipotential bonding | | ✓ | |
| (ii) | Reg.18 Safe use of pipes 18 (1) and (2) | | ✓ | |
| (iii) | Reg.19 Enclosed pipes 19 (1) to (3) & (5) and (6) | | ✓ | |
| (iv) | Reg.22 Testing and purging of pipes 22 (1) to (3) | | ✓ | |
| 14. | proximity of network pipework to dwellings | | ✓ | ✓ |
| 15. | line diagram for network pipework | | ✓ | ✓ |
| 16. | labelling external LPG pipework outlets | | ✓ | ✓ |
| 16 a | Polyethylene Pipework general requirement | | ✓ | ✓ |
| 17. | PE pipe and fittings are complete, fit and suitable for use OO to the use of PE pipe for working pressures above 2 bar | | ✓ | ✓ |
| 17 a | Pipework isolation using squeeze technique | | ✓ | ✓ |
| 18. | dismantling and inspecting compression joint | | ✓ | ✓ |
| 19. | cutting PE squarely and de-burring | | ✓ | ✓ |
| 20. | fitting tube liner | | ✓ | ✓ |
| 21. | re-assembling compression joint using appropriate thread sealant | | ✓ | ✓ |
| 22. | selecting correct material is selected for protecting PE pipe above ground | | ✓ | ✓ |
| 23. | re-connecting gas supply | | ✓ | ✓ |
| 24. | existing installation of service pipework to be installed to current LGUK Codes of Practice, and HSL56 | | ✓ | ✓ |
| (i) | ensuring work carried out is gas tight and any protective coating applied (supplementary OO on pipework protection) | | ✓ | ✓ |
| (ii) | checking gas safety controls for correct and safe operation | | ✓ | ✓ |
| 25. | The protection of stainless-steel semi rigid pipe from corrosive products i.e. meter connections from flux | | ✓ | ✓ |
| 26. | Restrictions for making and sealing holes into meter boxes | | ✓ | ✓ |

8. Unsafe situations, use of emergency notices and warning labels

| PERFORMANCE CRITERIA | | REF | I | R |
|-----------------------------|--|-----|---|---|
| 1. | identify unsafe situations as ID & AR | | ✓ | ✓ |
| 2. | identify and label defective installation(s) | | ✓ | ✓ |
| 3. | | | | |
| KNOWLEDGE AND UNDERSTANDING | | REF | I | R |
| 1. | explain dealing with ID | | ✓ | ✓ |
| 2. | explain dealing with AR | | ✓ | ✓ |
| 2a | explain dealing with AR installations/appliances when turning off does not remove the risk | | ✓ | ✓ |
| 3 | explain dealing with situations that do not meet current standards but are not unsafe | | ✓ | ✓ |
| 3. | | | | |
| (i) | | | | |
| (ii) | | | | |
| 4. | clearly identify correct notices and labels to be used: | | | |
| (i) | | | | |
| (ii) | warning notice forms | | ✓ | ✓ |
| (iii) | advisory notices | | ✓ | ✓ |
| 5. | situations reportable under RIDDOR. Explain reporting to HSE | | ✓ | ✓ |
| 6. | GIUSP: | | | |
| (i) | | | | |
| (ii) | overall scope | | ✓ | ✓ |