

CHANGEOVER TO COMMERCIAL – INFORMATION FOR CANDIDATES

Commercial ACS criteria are the same as domestic for the following topics:

- Gas Safety (Installation and Use) Regulations 1998
- Properties of natural gas
- Hazards of gas
- Gas Industry Unsafe Situations Procedure
- Operating pressures (standard appliances ^{NOTE 1})
- Gas rate and heat input
- Combustion analysis (standard appliances ^{NOTE 1})

Commercial criteria and standards are different from domestic in the following areas:

- Ventilation (e.g. mechanical ventilation)
- Flues (e.g. shared flues)
- Pipework (including pipe sizing)

Commercial gas is more extensive regarding:

- Appliance types (e.g. radiant heaters)
- Safety controls and control systems (e.g. interlocks, non-return valves, etc.)
- Strength testing, tightness testing and purging (e.g. use of purge stacks)
- Pipework materials and types of fitting (e.g. flanges, welding)
- Ambient/atmospheric testing (e.g. CO₂ testing for flueless appliances)
- Special requirements for educational establishments, hazardous areas, etc.
- Specialist process burners and appliances (non-standard appliances)
- Higher operating pressures (e.g. systems incorporating boosters)

Note 1: a “standard” appliance is one that works at a nominal inlet working pressure of 20 mbar and which produces heat by complete combustion (e.g. a central heating boiler). A “non-standard” appliance may work at elevated pressures and/or be designed to produce incomplete combustion for a specialist industrial process.

Very small commercial systems fall under standards normally used for domestic installations. For example, an office with only a 30 kW boiler connected by 22 mm copper to a G4 meter may be tightness tested and purged according to IGEM/UP/IB while the appliance’s ventilation and flue come under BS 5440. For this reason, core commercial criteria include tightness testing and purging of domestic-sized systems.

INITIAL COMMERCIAL INDUSTRIAL TRAINING – 5 DAY SCHEDULE

Mon-Tue ICPNI

Pipework design to IGEM/UP/2
Pipe sizing
Ventilation of pipework
Pipework installation to IGEM/UP/2

Tue-Wed TPCPIA

Tightness testing and purging small systems and sections to IGEM/UP/1B
Strength testing, tightness testing and purging to IGE/UP/1A

Thu CORE

Gas Industry Unsafe Situations Procedure (IGEM/G/11)
Commercial appliance ventilation to BS 6644 and IGEM/UP/10
Commercial safety controls
Combustion analysis
Commercial flues to BS 6644 and IGEM/UP/10
Fan dilution systems
Gas pressures, gas rate and heat input

Fri CIGAI, CORTI, CDGAI

Radiant tube and plaque heaters
Forced convection air heaters
Forced draught appliances
Air quality testing (ambient CO and CO₂)