

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

Strength testing, tightness testing and purging to IGE/UP/IA

Thu CORE

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

Fri CIGAI, CORTI, CDGAI

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