Energy Efficiency

cert-ain
certification ltd

Qualification handbook

Introduction

Cert-ain Certification Ltd. is a certification body accredited by the relevant regulatory authorities to offer a range of qualifications for operatives working in the building services engineering sector.

The Cert-ain Certification Ltd. qualifications are designed to be user-friendly for both the assessment centres delivering them and the candidates undertaking them. Our aim is to keep things as simple as possible whilst at the same time, maintaining the highest possible quality standards.

Our qualifications are designed to encourage learning and achievement, providing operatives with the appropriate knowledge and skills to help them progress in their chosen career.

Energy efficiency qualification

The aim of this handbook is to provide the necessary information for those operatives wishing to undertake the Cert-ain Certification Ltd. Energy Efficiency qualification.

The handbook also aims to provide assessment centres with details of the requirements for delivering the qualifications

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Energy efficiency

Summary

The Cert-ain Certification Ltd. Energy Efficiency qualification has been approved by Summitskills.

All succesful candidates will be issued with a Cert-ain Certification Ltd. certificate of competence.

Operatives holding the Cert-ain Certification Ltd. Energy Efficiency qualification are recognised by the Microgeneration Certification Schemes (MCS) as being competent against the assessment criteria listed on pages 4 to 7.

Eligibility

Operatives wishing to take the Energy Efficiency qualifications shall hold domestic ACS **or** OFTEC **or** one of the following qualifications (or equivalent earlier certification that provides evidence or competence):

- N/SVQ Level 2/3 in Plumbing
- N/SVQ Level 2/3 in Heating and Ventilating (Domestic Installation)
- N/SVQ Level 2/3 in Heating and Ventilating (I & C Installation)
- N/SVQ Level 2/3 in Oil-Fired Technical Services
- N/SVQ Level 2/3 in Gas Installation and Maintenance

Individuals with any disabilities that may affect their ability to successfully complete the qualifications should inform the assessment centre on application. Assessment centres shall consider any reasonable requests for any aids or equipment that are designed to alleviate any disability providing that the required assessment standard is not compromised.

Training

Assessment centres deliver a training programme focussing on the contents of a number of key documents that are freely downloadable from the internet. The training programme is designed to help operatives to prepare for the assessment process.

Reference material

The reference material used for the training and the examination:

- CE29 Domestic heating by oil
- CE30 Domestic heating by gas
- CE54 Domestic heating sizing method
- CE51 Central heating system specifications
- Condensing boiler installation procedures for dwellings
- Domestic building services compliance guide

Assessment criteria

1. Know the regulatory requirements and sources of guidance for Energy Efficiency standards for gas-fired and oil-fired heating appliances connected to 'wet' heating circuits
1.1 Know which regulations apply in:
England
Wales
1.2 Know the industry recommended sources of guidance for:
minimum regulatory compliance
best practice

2. Know the requirements of minimum boiler efficiency standards for gas-fired and oil-fired heating appliances connected to 'wet' heating circuits
2.1 Confirm the requirements for Gas-Fired heating appliances connected to 'Wet' heating circuits in relation to:
New systems - new dwellings
New systems – existing dwellings
New systems – existing dwellings where a non-condensing appliance is assessed as being acceptable (Natural Gas and LPG)
New systems – where the heating boiler is combined with a range cooker
Replacement systems – not involving a fuel or energy switch
Replacement systems – involving a fuel or energy switch
2.2 Confirm the requirements for Oil-Fired heating appliances connected to 'Wet' heating circuits in relation to:
New systems – new dwellings, conventional boilers
New systems – new dwellings, combination boilers
New systems – existing dwellings
New systems – existing dwellings where a non-condensing appliance is assessed as acceptable
New systems – where the heating boiler is combined with a range cooker
Replacement systems – not involving a fuel or energy switch
Replacement systems – involving a fuel or energy switch

3 Be able to determine if a non-condensing boiler installation would be acceptable
3.1 Use the 'Guide to condensing boiler installation assessment procedure for dwellings' to determine if a non-condensing boiler installation would be acceptable

4. Know the requirements relating to space heating primary circuit type and design for gas-fired and oil-fired 'wet' heating systems
4.1 Confirm the requirements in relation to:
New systems
Full replacement systems
Boiler replacements to systems with existing semi-gravity circulation
Provision of a bypass valve

5. Know the compliance standards requirement for hot water storage vessels
5.1 Confirm the relevant compliance standards for hot water storage vessels:
Vented copper hot water storage cylinders
Vented cylinders made from materials other than copper
Copper hot water storage combination units
Primary storage vessels (thermal stores)
Unvented hot water storage cylinders
5.2 Confirm the requirements relating to labelling of hot water vessels

6. Know the requirements relating to the preparation and water treatment of hot water systems and wet central heating systems
6.1 Confirm the requirements relating to:
Cleaning and flushing of wet central heating systems – new systems
Cleaning and flushing of wet central heating systems – boiler replacement to existing systems
Use of chemical water treatment inhibitors or other appropriate means of controlling corrosion and the formation of scale and sludge with primary circuits – new and existing systems
Treatment of feed water to water heaters and the hot water circuit of combination boilers – new and existing systems

7. Know the requirements relating to the commissioning of hot water systems and wet central heating systems
7.1 Confirm the requirements of the commissioning process and commissioning checks relating to:
Compliance with manufacturer's instructions
Compliance with current building regulations
Provision of system controls
System flushing, cleaning and protection
Heat generating appliance checks
Temperature checks – heating
Temperature checks – domestic hot water
Provision of condensate drainage
Demonstration of the operation of the system/appliance/controls to the customer/user
Provision of system/appliance/control literature to the customer/user

7.2 Identify the options relating to the use of industry approved commissioning checklists:
Gas-Fired systems
Oil-Fired systems

8. Know the requirements of the minimum standards for the control of gas-fired and oil-fired wet central heating systems
8.1 Confirm the meaning of the term 'boiler interlock'
8.2 Identify the control and wiring arrangements required to provide a 'boiler interlock'
8.3 Confirm the requirements for the provision of a boiler interlock in relation to -
New systems
Replacement systems (including boiler replacements to existing systems)
8.4 Confirm the requirements relating to space heating zone control for:
New systems in dwellings with a total useable floor area up to 150m²
Replacement systems (including boiler replacements to existing systems) in dwelling with a total useable floor area up to 150m²
New systems in dwellings with a total useable floor area greater than 150m²
Replacement systems (including boiler replacements to existing systems) in dwellings with a total useable floor area greater than 150m²
Single storey open plan dwellings in which the living area is greater than 70% of the total floor area
8.5 Confirm the requirements relating to hot water zone control for:
Systems with stored domestic hot water
8.6 Confirm the requirements relating to time control for:
New and replacement heating and hot water systems (including boiler replacements to existing systems) in dwellings with a total useable floor area up to 150m²
New and replacement heating and hot water systems (including boiler replacements to existing systems) in dwellings with a total useable floor area greater than 150m²
New and replacement heating and hot water systems (including boiler replacements to existing systems) where hot water is produced instantaneously
Replacement systems where only the hot water cylinder is being replaced and a separate control for the heating circuit is not present
8.7 Confirm the requirement relating to temperature control for:
New and replacement space heating systems (including boiler replacements to existing systems) in dwellings with a total useable floor area up to 150m² and in dwellings with a total useable floor area greater than 150m²
8.8 Confirm the requirements relating to temperature control for:
New and replacement domestic hot water systems (including boiler replacements to existing systems) in dwellings with a total useable floor area up to 150m²
New and replacement domestic hot water systems (including boiler replacements to existing systems) in dwellings with a total useable floor area greater than 150m²

8.9 Identify the permitted use of non-electrical (thermo-mechanical) hot water controllers in:
New systems
Replacement systems

9. Know the requirements of the minimum standards for the control of insulation of pipework for gas-fired and oil-fired wet central heating and hot water storage systems
9.1 Specify the maximum permitted heat loss (W/m) for pipework insulation for the pipe sizes in the range of 8-54mm
9.2 Confirm the requirements for the insulation of:
Primary circulation pipework for heating and domestic hot water circuits
Pipework connected to hot water storage vessels
Domestic hot water secondary circulation pipework

10. Know the requirements relating to standalone glandless heating system circulators
10.1 Confirm the requirements for circulators fitted to new and replacement systems in relation to:
Energy Efficiency labelling
Energy Efficiency rating

Assessment

Candidates will be required to successfully complete a multi-choice examination that takes approximately 1 hour to complete.

- The pass rate for the examination is 100%
- If the candidate does not achieve 100% on the first attempt, they will be allowed a second attempt at the questions that they got wrong on the first attempt, using an alternative question paper
- If the candidate does not achieve 100% on the second attempt, providing they have achieved over 80%, they will be orally questioned by the assessor to establish their competence
- Candidates not achieving 80% after the second attempt or 100% after oral questioning will be deemed to be unsuccessful
- Unsuccessful candidates will be required to retake the assessment in its entirety

Assessors

Assessors shall be approved by Cert-ain Certification Ltd. They must be occupationally competent and hold a current Energy Efficiency qualification. Assessors must also hold one of the following assessor qualifications:

- D32 or A1
- Level 3 certificate 'assessing vocationally related achievement' or suitable equivalent

Internal verifiers

Internal verifiers shall be approved by Cert-ain Certification Ltd. They must be occupationally competent and hold or be working towards one of the following internal verifier qualifications:

- D34 or V1
- Level 4 award 'internal quality assurance of assessment processes and practice' or suitable equivalent

Centre approval

All centres delivering the Energy Efficiency qualifications are subject to approval and monitoring to ensure that they have the appropriate personnel and facilities in place to deliver a fair and impartial training and assessment process.

The Cert-ain Certification Ltd. external verifier shall carry out quality assurance of the training, assessment and internal verification process. This includes sampling of:

- training and assessment facilities,
- candidate records, and
- assessment decisions

External Verifiers

External verifiers shall hold or be working towards one of the following qualifications:

- D35 or V2
- Level 4 certificate 'external quality assurance of assessment processes and practices' or suitable equivalent

Contact details

If you would like any further information relating to the Cert-ain Certification Ltd. qualifications, please contact:

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