

Assessments for Safe Handling of Refrigerants 'Just the facts'

Skills and knowledge tests for refrigerant handling (City and Guilds 2078 and CITB equivalent) have been around in their present form since January 1996. They were developed for and by industry to prove operatives' competency. And yet there is sometimes some confusion and misunderstanding about this qualification within some elements of the industry – and even people who have been awarded this qualification don't always appreciate its significance.

Firstly it is important to remember that since July 2006 candidates who are handling 'Ozone Depleting Substance' must have one of these qualifications and have until April 2007 to obtain it. The legislation that makes these qualifications a legal minimum requirements is the ODS Regulation (SI No. 1510) of 2006.

Of course these are not designed as comprehensive engineering qualifications. They are refrigerant handling competency assessments. People who can satisfy the assessment specifications are demonstrating that they can access systems, charge and recover refrigerant with due regard to the appropriate regulations without harming themselves, others or the atmosphere!

Central to the specification for City & Guilds 2078 for example is the requirement for candidates to be adequately informed about the legal requirements of:-

- The Environmental Protection Act
- The COSHH Regulations
- The Waste Regulations
- The Health and Safety at Work Act
- The Pressure Equipment Regulations
- The Pressure Systems Safety Regulations
- The Ozone Depleting Substance Regulations

Of course candidates don't have to be lawyers but they do have to be able to work with refrigerant substances without undue risk to themselves or their employers.

What does this mean?

The candidate has to be able to recover refrigerant safely into a cylinder and dispose of it in accordance with the law.

- The candidate has to recognise when a system is 'short' of refrigerant and know what actions to take to:-
- Stop the leakage – recover the refrigerant or safely contain it
- Find the leakage and fix it
- Strength test, pressure/leak test the system with nitrogen (having taken the necessary Risk Assessment and ensured that safe working procedures are in use)
- Safely release the nitrogen

- Evacuate and dehydrate the system to ensure that Non Condensable gases and moisture are removed
- Charge the system with a Zeotropic blended refrigerant
- Make sure that system is functioning and then remove service gauges without liquid refrigerant to atmosphere

The City & Guilds 2078 requires that the successful candidate has answered questions on all of the above and has sufficient knowledge of the hazards and basic properties of both flammable *and* non- flammable refrigerants. In addition the candidates has to physically 'charge and recover' Zeotropic blended refrigerant while being assessed by a qualified assessor. All assessment centres are registered and independently verified by City and Guilds.

For people who work with refrigerant all the time and who operate in the service and maintenance side of industry, the assessment is (or should be) a confirmation that the candidates simple carries out the basic refrigerant handling tasks safely and with due regard to H&SAW and environmental regulations designed to prevent emissions of polluting substances to atmosphere. Often experienced people express surprise at how basic the assessment is. This can only be a good indicator that they and their companies are carrying out their legal obligations and working professionally.

But for some people these requirements are 'new' and it is perhaps surprising how many employees and therefore their employers are not adequately informed about:

- The hazards of refrigerants
- The legal requirements
- Which refrigerants are ozone depleting and which one aren't
- How to carry out Nitrogen testing
- How to ensure that systems are dehydrated
- How to ensure systems are correctly charged etc.

Therefore these people often benefit immensely from the training that is necessary prior to assessment. Training and assessment is widely available and the ACRIB website lists registered assessment centres at www.acrib.org.uk.

The UK industry, through the Air Conditioning and Refrigeration Industry Board (ACRIB) is continuing to promote these qualifications as suitable assessments of individual competency for operatives under the European F Gas Regulation. The Regulation is designed to minimise leakage of Fluorinated Greenhouse Gases such as HFC and HFC blends. It came into force in the UK earlier this year and requires that by 4 July 2008 at the latest, the UK Government will have established mandatory training and certification for companies and personnel involved in installation, maintenance, servicing, containment, and recovery activities.

It is estimated that over 27,000 people have already taken the City and Guilds 2078 assessment, so whilst much of the industry is already on board with ensuring that they are handling refrigerants safely and minimising leakage, some may need to catch up rapidly.