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COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels,
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COMMISSION REGULATION

establishing minimum requirements and the conditions for mutual recognition in respect of training programmes and certification for companies and relevant personnel as provided for in Article 5 (1) of Regulation (EC) No 842/2006 of the European Parliament and of the Council with respect to stationary refrigeration, air conditioning and heat pump equipment containing fluorinated greenhouse gases

Proposal for a

COMMISSION REGULATION

establishing minimum requirements and the conditions for mutual recognition in respect of training programmes and certification for companies and relevant personnel as provided for in Article 5 (1) of Regulation (EC) No 842/2006 of the European Parliament and of the Council with respect to stationary refrigeration, air conditioning and heat pump equipment containing fluorinated greenhouse gases

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community;

Having regard to Regulation (EC) No 842/2006 of the European Parliament and of the Council of 17 May 2006 on certain fluorinated greenhouse gases¹, and in particular Article 5 thereof;

Whereas:

- (1) The provisions of Article 5 (1) of Regulation (EC) No 842/2006 require that the Commission shall establish minimum requirements and the conditions for mutual recognition in respect of training programmes and certification for companies and relevant personnel involved in the installation, maintenance or servicing and for personnel involved in the activities provided for in Articles 3 and 4 of Regulation (EC) No 842/2006 of the European Parliament and of the Council with respect to refrigeration, air conditioning and heat pump equipment
- (2) In establishing these minimum requirements and the conditions for mutual recognition the Commission has consulted with relevant sectors and received information from the Member States
- (3) Transitional arrangements are necessary in order to ensure that existing staff in the refrigeration, air conditioning and heat pump sectors can continue their activities for the period required to meet the minimum requirements and that there is no sudden shortage of certified staff
- (4) The measures provided for in this Regulation are in accordance with the opinion of the Committee established by Article 12(1) of Regulation (EC) No 842/2006.

¹ OJ L 161, 14.6.2006, p. 1

HAS ADOPTED THIS REGULATION:

Article 1

Scope

This Regulation establishes minimum requirements and the conditions for mutual recognition in respect of training programmes and certification for companies and the relevant personnel involved in installation, maintenance or servicing of stationary refrigeration, air conditioning and heat pump equipment as well as for the personnel involved in the activities provided for in Articles 3 and 4 of Regulation (EC) No 842/2006 with respect to stationary refrigeration, air conditioning and heat pump equipment.

Article 2

Definitions

For the purposes of this Regulation the following definitions shall apply:

1. "installation" means joining two or more pieces of equipment or circuits designed to contain fluorinated greenhouse gas refrigerant, with a view to assembling a system in the location where it will be operated. It also includes the action by which refrigerant lines of a system snap together to complete a refrigerant circuit although no post assembly charging is required. It excludes the plugging in of the system as well as any manufacturing activities.
2. "maintenance or servicing" means all activities that entail breaking into the circuits designed to contain fluorinated greenhouse gases, in particular supplying the system with fluorinated greenhouse gases, removing one or more pieces of circuit or equipment, re-assembling two or more pieces of circuit or equipment, repair leaks. It excludes repairs of components carried out at manufacturing sites, all other maintenance actions (checks for leakage, routine visual checks, servicing of circuits not designed to contain fluorinated greenhouse gases etc.) and actions solely intended to make the system provide the desired output (switching on, tuning etc.) are not included.
3. "certificate" means a formal document issued by a certification body providing evidence that the holder fulfils the minimum requirements to undertake one or more of the activities referred to in Article 1 .
4. "provisional certificate" means a formal document issued by an entity identified by a national law or regulation, or designated by competent authorities of a Member State or other entities entitled to do so, as being allowed to issue provisional certificates to personnel or companies involved in one or more of the activities referred to in Article 1, which provide evidence that the holder fulfils the national provisional criteria to undertake one or more of the activities referred to in Article 1.
5. "certification body" means a body identified by a national law or regulation, or designated by competent authorities of a Member State or other entities entitled to do

so, as being allowed to issue certificates to personnel or companies involved in one or more of the activities referred to in Article 1 and meets the requirements as set out in Annex III.

6. "evaluation body" means a body which is responsible for organising examinations for personnel, the successful completion of which is recognised by a certification body as making the applicant eligible to be granted a certificate for one or more of the activities referred to in Article 1 and meets the requirements as set out in Annex IV.

Article 3

Requirements for personnel certification

1. Personnel shall not be involved in installation, maintenance or servicing, leakage checking or recovery with respect to stationary refrigeration, air conditioning and heat pump equipment containing fluorinated greenhouse gases unless they hold a certificate for the corresponding category as set out in Annex I.

2. Certification bodies shall grant a certificate to personnel for one of the categories set out in Annex I, following their successful completion of a theoretical and practical examination organised by an evaluation body that covers the skills set out in Annex II for the particular category.

3. The certificate shall:

- (a) mention the name of the certification body in a form that enables its authentication, the full name of the holder, a certificate number, and the date of expiry if any;
- (b) mention the category of activities as specified in Annex I which the holder of the certificate is entitled to perform
- (c) be dated and signed.

4. When an existing examination-based certification system covers the skills set out in Annex II for a particular category and meets the requirements in Annexes III and IV, but the associated existing certificate or diploma does not meet the requirements of paragraph 3, the certification bodies may automatically grant a new certificate to the corresponding category of Annex I.

5. When an existing examination based certification system meets the requirements set out in Annex III and IV and covers partially the skills of a particular category as set out in Annex II, certification bodies may grant a certificate for the particular category provided that the applicant completes successfully a supplementary examination of the skills not covered by the existing certification.

6. Member States may impose additional criteria for granting certification to personnel but these additional criteria shall not be taken into consideration for the mutual recognition of certificates issued in another Member State.

7. By way of derogation from paragraph 1:

(a) Personnel may undertake brazing, soldering or welding of parts of a system or piece of equipment in the context of one of the activities referred to in Article 1 without holding a certificate corresponding to the relevant category provided a person holding such a certificate supervises them.

(b) Personnel employed by companies holding a permit in pursuance to Article 6 (2) of Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment (WEEE) may undertake recovery of fluorinated greenhouse gases from systems and equipment covered by the Directive with a fluorinated greenhouse charge of less than 5kg in the premises covered by the permit, without holding a certificate corresponding to the relevant category provided that they have completed a course of training on the skills corresponding to Category III as set out in Annex II verified by an attestation of competence issued by the permit holder.

8. By 4 July 2008 Member States shall establish or adapt their own training and certification requirements on the basis of the requirements of this Article.

Article 4

Requirements for company certification

1. Companies shall not be involved in installation, maintenance or servicing, leakage checking or recovery with respect to refrigeration, air conditioning and heat pump equipment containing fluorinated greenhouse gases unless they hold a certificate to perform one or more of these activities.

2. Certification bodies shall grant a certificate to companies for one or more of the activities referred in paragraph 1 provided that they:

(a) employ certified staff for the activities for which certification is required and indicate the number of certified staff members per category as well as provide an indication of the expected volume of activity, showing that certified personnel will be employed whenever mandatory;

- (b) provide a document showing that the necessary material (tools and procedures as appropriate) is available to the personnel engaged in activities subject to certification.
- 3. The certificate shall:
 - (a) mention the name of the certification body in a form that enables its authentication, the full name of the holder, a certificate number, and the date of expiry if any;
 - (b) mention the activities which the holder of the certificate is entitled to perform
 - (c) be dated and signed.
- 4. Member States may impose additional criteria before granting certification to companies but these additional criteria shall not be taken into consideration for the mutual recognition of certificates issued in another Member State.
- 5. By way of derogation from paragraph 1, companies engaged in waste treatment operations and granted a permit in pursuance to Article 6 (2) of Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment (WEEE) may undertake recovery of fluorinated greenhouse gases from systems and equipment covered by the Directive in the premises covered by the permit, without holding a certificate to perform the relevant activity.
- 6. By 4 July 2008 Member States shall establish or adapt their own training and certification requirements on the basis of the requirements of this Article.

Article 5

Transitional arrangements

- 1. By way of derogation from Article 3 the following personnel may be involved in installation, maintenance or servicing, leakage checking or recovery with respect to refrigeration, air conditioning and heat pump equipment containing fluorinated greenhouse gases provided that they have been granted a provisional certificate:
 - (a) Personnel involved in one or more of the activities provided for in Article 1 before the day on which Member States satisfy the requirements of Article 3 (8).
 - (b) Personnel certified to undertake one or more of the activities provided for in Article 1, under existing national requirements, before the day on which Member States satisfy the requirements of Article 3 (8).

2. By way of derogation from Article 4 companies involved in one or more of the activities provided for in Article 1 before the day on which Member States satisfy the requirements of Article 4 (6) may continue being involved in those activities provided that they have been granted a provisional certificate.

3. Member States shall define the national provisional criteria based on which a person or a company shall be granted or deemed as a holder of a provisional certificate.

(a) For personnel, such criteria shall at least include a specific level of knowledge and/or professional experience.

(b) For companies, such criteria shall at least include the obligation to employ personnel holding a certificate or a provisional certificate for the activities for which personnel certification is required under this Regulation.

4. Provisional certificates shall expire on 4 July 2011 at the latest for personnel covered under paragraph 1 (a) and companies covered under paragraph 2 and on 4 July 2009 at the latest for personnel covered under paragraph 1 (b).

5. By 4 July 2008, Member States shall notify the Commission of their intention to use provisional certificates, of the criteria defined under paragraph 3 and of the entitled issuing entities of provisional certificates.

Article 6

Conditions of mutual recognition

1. By 4 October 2008, Member States shall notify the Commission of the names and contact details of certification bodies for personnel and companies covered by Article 2 and of the titles of certificates for both personnel and companies which comply with the requirements Articles 3 and 4 respectively, using the format established by the Commission Regulation

2. The Commission shall communicate all completed notification forms to all Member States within three months of receipt.

3. Member States shall immediately give recognition to the certificates included in the notifications of all Member States, submitted under paragraph 1.

4. Member States may require holders of certificates issued in another Member State to provide a certified translation of the certificate in another language.

Article 7

Entry into force

This Regulation shall enter into force on the 20th day following its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, [...]

For the Commission

[...]

Member of the Commission

ANNEX I

Categories of personnel certification

					SCOPE OF ACTIVITIES						
		Leakage checking of refrigeration, air conditioning and heat pump equipment without breaking into the system ²		Recovery from refrigeration, air conditioning and heat pump equipment		Maintenance or servicing of refrigeration, air conditioning and heat pump equipment		Installation of refrigeration equipment		Installation of air conditioning and heat pump equipment	
I		All applications									
II		All applications		Applications with less than 3kg (6kg if hermetically sealed) fluorinated greenhouse gas charge						Applications with less than 5kg (6kg if hermetically sealed) fluorinated greenhouse gas charge	
III		Not entitled		Applications with less than 3kg (6kg if hermetically sealed) fluorinated greenhouse gas charge		Not entitled					
IV		All applications		Not entitled							

² Leakage checking is only required for applications containing 3kg or more (6kg or more if hermetically sealed)

ANNEX II

Minimum set of skills examined by the evaluation bodies

- (1) For each of the skills referred to in the following table, for which there is an indication in the categories columns that it should be tested through a theoretical test (T), it means that the examination should comprise a theoretical test with one or more questions testing that skill.
- (2) For each of the skills for which there is an indication in the categories columns that it should be tested through a practical test (P), it means that the examination should comprise a practical test where the applicant should perform the corresponding task with the relevant material.
- (3) If there is one single box in the categories columns that corresponds to several boxes (several skills) in the skills column it means that only one or more of these skills should be tested during the examination.
- (4) For skill groups 6-8, the examination does not necessarily cover all skill groups 6, 7, 8, but at least one of them. The candidate shall not know which of these three skill groups will be examined in advance of the examination.
- (5) The examination can comprise one theoretical test and one practical test, each of them comprising all the items that are mandatory according to the following table, or several theoretical and/or practical tests.
- (6) The examination shall aim at testing the ability of the candidate to carry out properly the actions aimed at identifying leaks, those which can directly cause leakage, as well as those that can indirectly cause leakage

SKILLS		CATEGORIES			
		I	II	III	IV
1	Basic thermodynamics				
1.01	Know the basic ISO standard units as for temperature, pressure, mass, density, energy	T	T	-	T
1.02	Understand basic theory of refrigeration systems: basic thermodynamics (key terms, parameters and processes such as Superheat, High Side, Heat of Compression, Enthalpy, Refrigeration Effect, Low Side, Sub-cooling), properties and thermodynamic transformations of refrigerants including identification of zeotropic blends and fluid states.	T	T	-	-
1.03	Use relevant tables and diagrams and interpret them in the context of indirect leakage checking (including checking of the good operation of the system): log P/h diagram, saturation tables of a refrigerant, diagram of a single compression refrigeration cycle.	T	T	-	-
1.04	Describe the function of the main components in the system (compressor, evaporator, condenser, thermostatic expansion valves) and the thermodynamic transformations of the refrigerant.		T	-	-
1.05	Know the basic operation of the following components used in a refrigeration system and their role and importance for refrigerant leakage prevention and identification: (a) valves (ball valves, diaphragms, globe valves, relief valves), (b) temperature and pressure controls, (c) sight glasses and moisture indicators, (d) defrost controls, (e) system protectors, (f) measuring devices as manifold thermometer, (g) oil control systems, (h) receivers, (i) liquid and oil separators	T	-	-	-
2	Environmental impact of refrigerants and corresponding environmental regulations				
2.01	Have a basic knowledge of climate change and the Kyoto Protocol	T	T	T	T
2.02	Have a basic knowledge of the concept of Global Warming Potential (GWP), the use of fluorinated greenhouse gases and other substances as refrigerants, the impact of the emissions of fluorinated greenhouse gases on the climate (order of magnitude of their GWP) and relevant provisions of Regulation (EC) No 842/2006	T	T	T	T
3	Checks before putting in operation, after a long period of non-use, after maintenance or repair intervention, or during operation				
3.01	Carry out a pressure test to check the strength of the system				
3.02	Carry out a pressure test to check the tightness of the system				
3.03	Use a vacuum pump	P	P	-	-
3.04	Evacuate the system to remove air and moisture according to standard practice				

SKILLS		CATEGORIES			
		I	II	III	IV
3.05	Fill in the data in the logbook and fill in a report about one or more tests and checks carried out during the examination.	T	T	-	-
4	Checks for leakage				
4.01	Know potential leakage points of refrigeration, air-conditioning and heat pump equipment	T	T	-	T
4.02	Check a system logbook prior to a check for leakage and identify the relevant information on any repeating issues or problem areas to pay special attention to	T	T	-	T
4.03	Make a visual and manual inspection of the whole system in accordance with the EU standard leakage checking requirements	P	P	-	P
4.04	Carry out a check for leakage of the system using an indirect method in accordance with the EU Standard Leakage Checking Requirements and the instruction manual of the system	P	P	-	P
4.05	Use portable measuring devices such as manometer sets, thermometers and multi-meters for measuring Volt/Amp/Ohm in the context of indirect methods for leakage checking, and interpret the measured parameters.	P	P	-	P
4.06	Carry out a check for leakage of the system using one of the direct methods referred to in the EU Standard Leakage Checking Requirements	P	P	-	P
4.07	Use an electronic leak detection device	P	P	-	P
4.08	Fill in the data in the logbook	T	T	-	T
5	Environment-friendly handling of the system during installation, maintenance, servicing or recovery.				
5.01	Connect and disconnect gauges and lines with minimal emissions	P	P	-	-
5.02	Empty and fill a refrigerant cylinder in both liquid and vapour state	P	P	P	-
5.03	Use a recovery set to recover refrigerant and connect and disconnect recovery set with minimal emissions	P	P	P	-
5.04	Drain F-gas contaminated oil out of a system	P	P	P	-
5.05	Identify refrigerant state (liquid, vapour) and condition (subcooled, saturated or superheated) prior to charging, to ensure correct method and volume of charge. Fill the system with refrigerant (both in the liquid and vapour phase) without loss of refrigerant	P	P	-	-
5.06	Use scales to weight refrigerant	P	P	-	-
5.07	Fill in the logbook with all relevant information concerning the refrigerant recovered or added	T	T	-	-

SKILLS		CATEGORIES			
		I	II	III	IV
5.08	Know requirements and procedures for handling, storage and transportation of contaminated refrigerant and oils	T	T	T	-
6	Component: installation, putting into operation and maintenance of reciprocating, screw and scroll compressors, single and two-stage				
6.01	Explain the basic functioning of a compressor (including capacity control and lubricating system) and risks of refrigerant leakage or release associated to it.	T	T	-	-
6.02	Install a compressor properly, including control and safety equipment, so that no leak or major release occur once the system is put into operation	P	-	-	-
6.03	Adjust the safety and control switches	P	-	-	-
6.04	Adjust the suction and discharge valves				
6.05	Check the oil return system				
6.06	Start up and shut down a compressor and check the good working conditions of the compressor, including by making measurements during operation of compressor	P	-	-	-
6.07	Write a report about the condition of the compressor which identifies any problems in the functioning of the compressor that could damage the system and eventually lead to refrigerant leakage or release should no action be taken	T	-	-	-
7	Component: installation, putting into operation and maintenance of air cooled and water cooled condensers				
7.01	Explain the basic functioning of a condenser and risks of leakage associated to it	T	T	-	-
7.02	Adjust a discharge pressure control of the condenser	P	-	-	-
7.03	Install a condenser, properly, including control and safety equipment, so that no leak or major release occur when the system has been put into operation	P	-	-	-
7.04	Adjust the safety and control switches	P	-	-	-
7.05	Check the discharge and liquid lines				
7.06	Purge non condensable gases out of the condenser using a refrigeration purging device	P	-	-	-
7.07	Start up and shut down a condenser and check the good working condition of the condenser including by making measurements during operation	P	-	-	-
7.08	Check the surface of the condenser	P	-	-	-
7.09	Write a report about the condition of the condenser which identifies any problems in the functioning that could damage the system and eventually lead to refrigerant leakage or release should no action be taken	T	-	-	-

		CATEGORIES			
SKILLS		I	II	III	IV
8	Component: installation, putting into operation and maintenance of air cooled and water cooled evaporators				
8.01	Explain the basic functioning of an evaporator (including defrosting system) and risks of leakage associated to it	T	T	-	-
8.02	Adjust an evaporating pressure control of the evaporator	P	-	-	-
8.03	Install an evaporator including control and safety equipment, so that no leak or major release occur when the system has been put into operation	P	-	-	-
8.04	Adjust the safety and control switches	P	-	-	-
8.05	Check the liquid and suction pipelines in the correct position				
8.06	Check the hot gas defrost pipeline				
8.07	Adjust evaporation pressure regulation valve				
8.08	Start up and shut down an evaporator and check the good working condition of the evaporator, including by making measurement during operation	P	-	-	-
8.09	Check the surface of the evaporator	P	-	-	-
8.10	Write a report about the condition of the evaporator which identifies any problems in the functioning that could damage the system and eventually lead to refrigerant leakage or release should no action be taken	T	-	-	-
9	Component: installation, putting into operation and servicing of Thermostatic Expansion Valves (TEV) and other components				
9.01	Explain the basic functioning of different kinds of expansion regulators (thermostatic expansion valves, capillary tubes) and risks of leakage associated to it	T	T	-	-
9.02	Install valves in the correct position	P	-	-	-
9.03	Adjust a mechanical/ electronic TEV	P	-	-	-
9.04	Adjust mechanical and electronic thermostats				
9.05	Adjust a pressure regulated valve				
9.06	Adjust mechanical and electronic pressure limiters				
9.07	Check the functioning of an oil separator	P	-	-	-
9.08	Check the condition of a filter dryer		-	-	-
9.09	Write a report about the condition of these components which identifies any problems in the functioning that could damage the system and eventually lead to refrigerant leakage or release should no action be taken	T	-	-	-

SKILLS		CATEGORIES			
		I	II	III	IV
10	Piping: building a leak tight piping system in a refrigeration installation				
10.01	Weld, braze and/or solder leak free joints on metallic tubes and pipes that can be used in refrigeration, air-conditioning or heat pump systems	P	P	-	-
10.02	Make / check pipe and component supports	P	P	-	-

ANNEX III

Requirements for certification bodies

For the purposes of this Regulation, certification bodies shall:

1. establish and apply procedures for granting, expanding, reducing the scope, suspending and withdrawing certification, that should be fair and equitable among all applicants;
2. check that examinations the successful completion of which by an applicant is recognised as making that applicant eligible for a certificate, cover the relevant skills set out in Annex II and that the corresponding evaluation bodies meet the requirements set out in Annex IV, for instance by way of regular audits or inspections;
3. be independent and impartial in relation to their applicants, including their employers and customers, and shall take all possible steps to assure ethical operations;
4. have a documented structure, which safeguards impartiality;
5. have the necessary policies and procedures that distinguish between the certification of persons or companies and any other activities, and ensure that the activities of bodies related to them do not compromise the confidentiality and impartiality of their certification;
6. do not offer or provide training, or aid others in the preparation of such services, unless they demonstrate how training is independent of certification , to ensure that confidentiality and impartiality are not compromised;
7. maintain a record system that allows to confirm the status of a certified person or company. The records shall demonstrate that the certification process has been effectively fulfilled. Records should be kept for an appropriate period of time.

Point 2 does not apply to certification bodies that grant certificates to companies only.

ANNEX IV

Requirements for evaluation bodies

For the purposes of this Regulation, evaluation bodies shall:

1. plan and structure examinations in a manner which ensures that the skills set out in Annex II are covered, and that candidates are equitably and objectively informed, examined and evaluated;
2. be independent and impartial in relation to their candidates, including their employers and customers, and shall take all possible steps to assure ethical operations;
3. have a documented structure, which safeguards impartiality;
4. have the necessary policies and procedures that distinguish between the organization of examinations and evaluation of persons on the one hand, and any other activities on the other hand, and ensure that the activities of bodies related to them do not compromise the confidentiality and impartiality of their evaluation;
5. not offer or provide training, or aid others in the preparation of such services, unless they demonstrate how training is independent of the evaluation of persons, to ensure that confidentiality and impartiality are not compromised;
6. adopt reporting and records keeping procedures that ensure that the performance and results of the evaluation are documented in an appropriate and comprehensible manner, including the performance and results of the examinations;
7. ensure that during the tests, the surveillance of the candidates prevent any communication among them;
8. ensure that the examiners assigned to a test have a thorough knowledge of the relevant examination methods and examination documents, have appropriate competence in the field to be examined, have the necessary linguistic skills and should be free from any interest so that they can make impartial and non-discriminatory evaluation;
9. ensure that the necessary equipment is available for the practical tests, so that the conditions of the tests are as close as possible to real conditions of operation.