



CEN/TC 138 "Non-destructive testing"

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**Final draft
CEN/TR 15589
Non destructive testing - Code of practice for the
approval of NDT personnel by recognised third party
organisations under the provisions of Directive 97/23/EC**

Note of the secretariat:

This document contains the final draft related to CEN TR 15589. It has been updated by the working group on 2007-04-03, that studied all the comments received during the TCA ballot (see document N 842).

It is to be sent to CMC for publication.



CEN/TC 138 "Non-destructive testing"

Participant	Accepts	Does not accept	Abstains	Comments
AUSTRIA	X			
BELGIUM		X		
CANADA	X			
CZECH REPUBLIC	X			
DENMARK			X	
FINLAND			X	
FRANCE	X			X
GERMANY	X			
GREECE	X			X
ICELAND	X			
ITALY			X	
LITHUANIA	X			
NETHERLANDS	X			
NORWAY	X			
POLAND	X			
PORTUGAL	X			
SLOVAKIA	X			
SPAIN	X			
SWEDEN		X		X
SWITZERLAND	X			
UNITED KINGDOM	X			

Template for comments and secretariat observations

1	2	(3)	4	5	(6)	(7)
MB ¹	Clause No./ Subclause No./ Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note (e.g. Table 1)	Type of comment ²	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
SE	General			This proposed concept, “Code of practice for the approval of NDT personnel by recognised third party organisations under the provisions of Directive 97/23/EC”, is not consistent with Swedish law and can consequently not be accepted, neither as a CEN/Technical Report nor as a Technical Response Group document (TRG 0034) issued under the responsibility of the Conformity Assessment Bodies Forum (CABF).		Noted
SE	General		te	The transposition of Directive 97/23/EC (PED) into Swedish law, Ordinance AFS 1999:4, issued by the Swedish Work Environment Authority (SWEA), implies that a so called Recognized Third-Party Organization (RTPO) must as well comply with the provisions of Annex IV of the PED as with the provisions, in the case of certifications of NDT-personnel, of ISO/IEC 17024 (the replacement for EN 45013) via the Ordinance STAFS 2002:6 issued by the Swedish Board for Accreditation and Conformity Assessment (SWEDAC).		Noted
SE	General		te	According to section 6.5 of the “Guide to the implementation of directives based on the New Approach and the Global Approach”, a sub-contracted body must “display independence and objectivity according to the same criteria and under the same conditions as the notified body”. This implies that any 1 st or 2 nd party arrangement between an RTPO and a sub-contractor is out of the question.	2 nd and 3 rd party arrangements shall not be included in the document.	Noted
CH	Foreword		te	"According to Pressure Equipment Directive 97/23/EC Article 13 section 1, European Union Member States shall notify the European Commission and the other Member States of the Third Party Organizations (RTPO)...". EFTA countries (incl. Switzerland) are omitted.	"According to Pressure Equipment Directive 97/23/EC Article 13 section 1, European Union Member States and EFTA countries shall notify the European Commission and the other Member States of the Third Party Organizations (RTPO)..."	OK
FR	2.2		te	Approval of personnel : As written in the Foreword, the methodology for NDT personnel approval is not specified	Replace “as described within Directive 97/23/EC...” by “see Directive 97/23/EC...”	OK

1 MB = Member body (enter the ISO 3166 two-letter country code, e.g. FR for France; comments from the CMC editing unit are identified by ***)

2 Type of comment: ge = general te = technical ed = editorial

NOTE Columns 1, 2, 4, 5 are compulsory.

Template for comments and secretariat observations

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MB ¹	Clause No./ Subclause No./ Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note (e.g. Table 1)	Type of comment ²	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
				in Directive 97/23/EC. As a consequence, the wording « as described within Directive ... shall be replaced.		
FR	2.4		ed	The origin of these definitions shall be specified	Add [EN 473 :2000]	OK
FR	2.5		ed	The origin of these definitions shall be specified	Add [EN 473 :2000]	OK
FR	2.7		te	Add less current examples	« expanding », “gluing”...	Change i.e. to e.g
CH	2.1		te	"Recognised Third Party Organisation (RTPO) body recognised by a member state of the European Union for the purposes of the tasks...". EFTA countries (incl. Switzerland) are omitted.	"Recognised Third Party Organisation (RTPO) body recognised by a member state of the European Union or EFTA for the purposes of the tasks..."	OK
BE	2.7		te	The definition of permanent joints is not the same as in PED directive (97/23/EC)	Permanent joints Joints which cannot be disconnected except by destructive methods	OK
SE	3			In the document “Code of Practice...” paragraph 3 General, the basis for the approval of personnel can be a certificate or a qualification issued under either 2nd or 3rd party arrangement. Second party arrangements is not according to the requirements with regard to impartiality, integrity and independence given in Annex IV in the Directive 97/93/EC or the requirements given in ISO/IEC 17024 – General requirements for bodies operating certification of persons. This standard has replaced EN 45 013 referred to in the “Guide to the implementation of directives based on the New Approach and the Global Approach” chapter 6 Principles on notification.	2 nd and 3 rd party arrangements shall not be included in the document.	Noted. CEN TR 15589 is only an informative report.
GR	4.4.2		te		to replace the "one hold NDT level 3 certification" with "one hold NDT level 3 certification per EN 473 or ISO 9712"	See new text: 4.4.2 When applying approval by route C, a qualification on-site audit is required. The RTPO shall

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2 **Type of comment:** **ge** = general **te** = technical **ed** = editorial

NOTE Columns 1, 2, 4, 5 are compulsory.

Template for comments and secretariat observations

Date: 2007-01-21

Document: prCEN/TR 15589

1	2	(3)	4	5	(6)	(7)
MB ¹	Clause No./ Subclause No./ Annex (e.g. 3.1)	Paragraph/ Figure/Table/N ote (e.g. Table 1)	Type of com- ment ²	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
						appoint one or more assessors who, between them hold NDT Level 3 certification issued by a third party certification body, covering the relevant sector(s) and those NDT method(s) equivalent to those applied by the NDT personnel to be approved.
FR	4.2, 4.3 & 4.4		Te	It shall be specified that an individual holds an EN 473 certificate in a relevant sector covering permanent joint to pressure equipment in order to link with definition 2.6, in order to not be ambiguous.	Add the following text: “...in a relevant sector (covering permanent joint to pressure equipment) issued by a certification body... This shall be added in 4.2, 4.3 and 4.4.1	See new definition 2.6
FR	4.4.2		Te	It is specified that the RTPO shall appoint one or more assessors who, between them one hold NDT Level 3 certification. It is shall be specified that this level 3 is defined according to EN 473 or ISO 9712.		No. See new 4.4.2
GR	5.1		te		set the maximum validity period to five years only for approvals per route A or B and limit the maximum validity period to three years for approvals per route C	OK. See new text.
FR	5.2	b)	ed	Read « full name of the approved individual (see annex B)»	Add (see Annexe B)	No. Kept as it is.

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FR	6		te	The renewal of approval for route C is too vague. The way to verify how the criteria remain fulfilled shall be explained (The informative flow diagram seems more detailed!)	Delete "for approval" and replace by "defined in 4.4"	OK
SE	Annex A			The description of Route B if the sub-contracting is a second party certification and Route C presented in the document "Code of practice..." for approving personnel for non-destructive tests according to Directive 97/93/EC annex 3.1.3 does not fulfil the requirements given about impartiality and independence in Annex IV in the Directive. According to the implementation of the Directive given in the Swedish regulations AFS 1999:4 and STAFS 2002:6 these two alternative routes described in the document "Code of practice..." of approving personnel can not be applied. Neither Route B nor Route C is deemed to comply with the consequently transposed requirements on independence, impartiality and integrity.	Route B and route C must be deleted.	Rejected
FR	Annexe A French version		ed	The french version of this annexe is to be checked.		OK
FR	Annexe A		ed	Add Route C in the right box "Qualification in a relevant sector for which route A and B are not applicable"	Add route C	OK
Clap	Bibliography French version		ed	Replace « Guide 6/13 » by « Orientation 6/13 »		OK
Clap	New Annexe C		ed	The text from the Guideline 6/13 could be added as an annex C .	Create a new annex C.	OK

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NOTE Columns 1, 2, 4, 5 are compulsory.

CEN/TC 138

Date: 2006-07

TC 138 WI 00138123

CEN/TC 138

Secretariat: AFNOR

Non destructive testing — Code of practice for the approval of NDT personnel by recognised third party organisations under the provisions of Directive 97/23/EC

ICS:

Descriptors:

Document type: Technical Report
Document subtype:
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Document language: E

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Foreword

This document (TC 138 WI 00138123) has been prepared by Technical Committee CEN/TC 138 “Non destructive testing”, the secretariat of which is held by AFNOR.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this Technical Report: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

According to Pressure Equipment Directive 97/23/EC Article 13 section 1, European Union Member States and EFTA countries shall notify the European Commission and the other Member States of the Third Party Organizations (RTPO) which they have recognised for the purposes of the tasks referred to in Annex 1, section 3.1.3, namely the ‘Approval’ of NDT personnel to test permanent joints of categories III and IV pressure Equipment and Pressure Assemblies [1].

The methodology for ‘Approval’ of NDT personnel is not specified in Directive 97/23/EC, and it was agreed by the European Conformity Assessment Bodies Forum (CABF) that guidance was required in order to ensure a consistent approach to the application of the directive and the implementation of Working Group Pressure Guideline 6/13 (17th March 2004) by Recognised Third Party Organisations (RTPO) (see annexe C).

As a result, a Code of Practice (CoP) was developed from a draft proposed by The European Federation for NDT. This CoP was published as CABF TRG 0034 on 24th November 2004, with a recommendation that this document be submitted to CEN for possible development as a Technical Report (TR) or Specification (TS).

1 Scope

This Technical Report provides a methodology for approval of NDT personnel under the provisions of Directive 97/23/EC, Annex 1, section 3.1.3.

The provisions of Guideline 6/13 are detailed herein to ensure a consistent approach and a high level of confidence in the approval of NDT personnel by RTPO's through widespread adoption of the criteria and approval processes detailed herein. A flow diagram illustrating this methodology is presented in Annex A.

2 Terms and definitions

For the purposes of this Technical Report, the following terms and definitions apply.

2.1

Recognised Third Party Organisation (RTPO)

body recognised by a member state of the European Union or EFTA countries for the purposes of the tasks referred to in Directive 97/23/EC, Article 13 section 1, and in Annex 1, section 3.1.3, namely the 'approval' of NDT personnel to test permanent joints for pressure equipment in categories III and IV, and whose recognition has been notified to the European Commission or EFTA countries and the other Member States

2.2

Approval of NDT Personnel

procedure used to demonstrate the competence of an individual to carry out specific non-destructive tests of permanent joints for pressure equipment in categories III and IV (see Directive 97/23/EC Annex 1, section 3.1.3)

2.3

Approval attestation

documented statement issued by an RTPO that a specified individual is approved (see 2.2)

2.4

Qualification

[EN 473:200]

evidence of training, professional knowledge, skill and experience as well as physical fitness to enable personnel to properly perform NDT tasks

2.5

Certification

[EN 473:200]

procedure used to demonstrate the qualification of NDT personnel in a method, level and sector, and leading to the issue of a certificate

2.6

Relevant Sector

any product or industrial sector covering permanent joints to pressure equipment as defined in European Standard EN 473 [3] that includes testing permanent joints, such as 'Welded Products', 'Metal Manufacturing' or 'Pre and In-service testing of equipment, plant and structures

2.7

permanent joints

joints which cannot be disconnected except by destructive methods e.g. made by fusion welding, brazing, braze welding expansion etc.

3 General

The basis for a decision by an RTPO for approval of NDT personnel according to Directive 97/23/EC, Annex I, section 3.1.3 shall be a valid qualification, or a certificate of competence, issued under either 2nd or 3rd party arrangements covering Non-Destructive Testing in a Relevant Sector. There are three cases described as Approval NDT personnel routes A, B and C, as follows:

- A) Certification by RTPO; Individuals who are certified according to the European Standard EN 473 in a relevant sector by a certifying body also recognised as an RTPO.
- B) Certification by a body which is not an RTPO; Individuals who are certified according to the European Standard EN 473 [3] or the International Standard ISO 9712 [4] in a relevant sector by a certification body *which is not an RTPO*.
- C) Cases other than routes A and B; Individuals qualified in a relevant sector using qualification criteria equivalent to those of the European standard EN 473.

4 Approval of NDT personnel requirements

4.1 General

For the approval of NDT personnel by a RTPO, one of the following routes shall be applied.

4.2 Route A

An individual holds an EN 473 certificate in a relevant sector issued by a Certification Body which is also an RTPO. In this case, the individual is considered to be approved without further action.

4.3 Route B

An individual holds an EN 473 or ISO 9712 certificate in a relevant sector issued by a certification body *which is not a RTPO*, but which has a formal contractual arrangement with a RTPO to carry out assessments as a sub-contractor. In this case the individual may be approved by the above mentioned RTPO upon receipt of satisfactory documented evidence of qualification and certification provided by the certification body concerned.

4.4 Route C

4.4.1 An individual qualified in a relevant sector against criteria of an accepted standard that is equivalent to EN 473 may be approved by an RTPO, provided it is satisfied that qualification criteria equivalent to those of the standard have been met.

4.4.2 When applying approval by route C, a qualification on-site audit is required. The RTPO shall appoint one or more assessors who, between them hold NDT Level 3 certification issued by a third party certification body, covering the relevant sector(s) and those NDT method(s) equivalent to those applied by the NDT personnel to be approved.

4.4.3 In particular, the RTPO assessor(s) shall ascertain during an audit conducted on site that the individual to be approved has:

satisfactory vision and colour perception;

completed general and job-specific training prior to examination;

acquired suitable industrial experience in the applicable NDT method and relevant sector(s);

been successful in general and relevant specific written qualification examinations;

been successful in job-specific practical examinations that are relevant to the testing of permanent joints in pressure equipment;

continues to be qualified, without significant interruption, in the testing of permanent joints to pressure equipment; and

is familiar with and able to satisfactorily implement defined NDT procedures and/or NDT instructions for the testing of permanent joints to pressure equipment.

4.4.4 The RTPO assessor(s) shall assess each of the NDT personnel applying for Approval. The assessment shall involve, as a minimum, a practical examination during which the individual seeking approval shall be observed, satisfactorily applying at least one relevant NDT instruction or procedure covering each of the NDT methods for which Approval is sought.

5 Approval attestation

5.1 NDT Approval(s) issued by the RTPO shall have a maximum validity period of five years for route A and B, and three years for route C.

5.2 When required, i.e. in relation to approval under Routes B and C, the RTPO will issue an approval attestation. The attestation shall include at least:

- a) identity of the RTPO;
- b) full name of the approved individual;
- c) name of the qualifying body (in Route C this will be the employer or the pressure equipment manufacturer);
- d) NDT method(s) for which the individual is approved;
- e) scope and limitations of the approval (e.g. whether the individual is approved only to carry out the test without interpreting the results, or applying NDT to specific materials using particular NDT equipment). This could be accomplished by referring to a level as defined in EN 473;
- f) reference to Directive 97/23/EC Annex 1, section 3.1.3;
- g) conditions for maintaining and surveillance validity of the approval;
- h) expiration date of approval (this could be in phase with the expiry date of the associated qualification/certification);
- i) signature of the RTPO's representative.

A model approval attestation is given in Annex B.

6 Renewal of approvals

Upon expiry, an NDT personnel approval may be renewed by the RTPO provided the criteria for initial approval remain fulfilled.

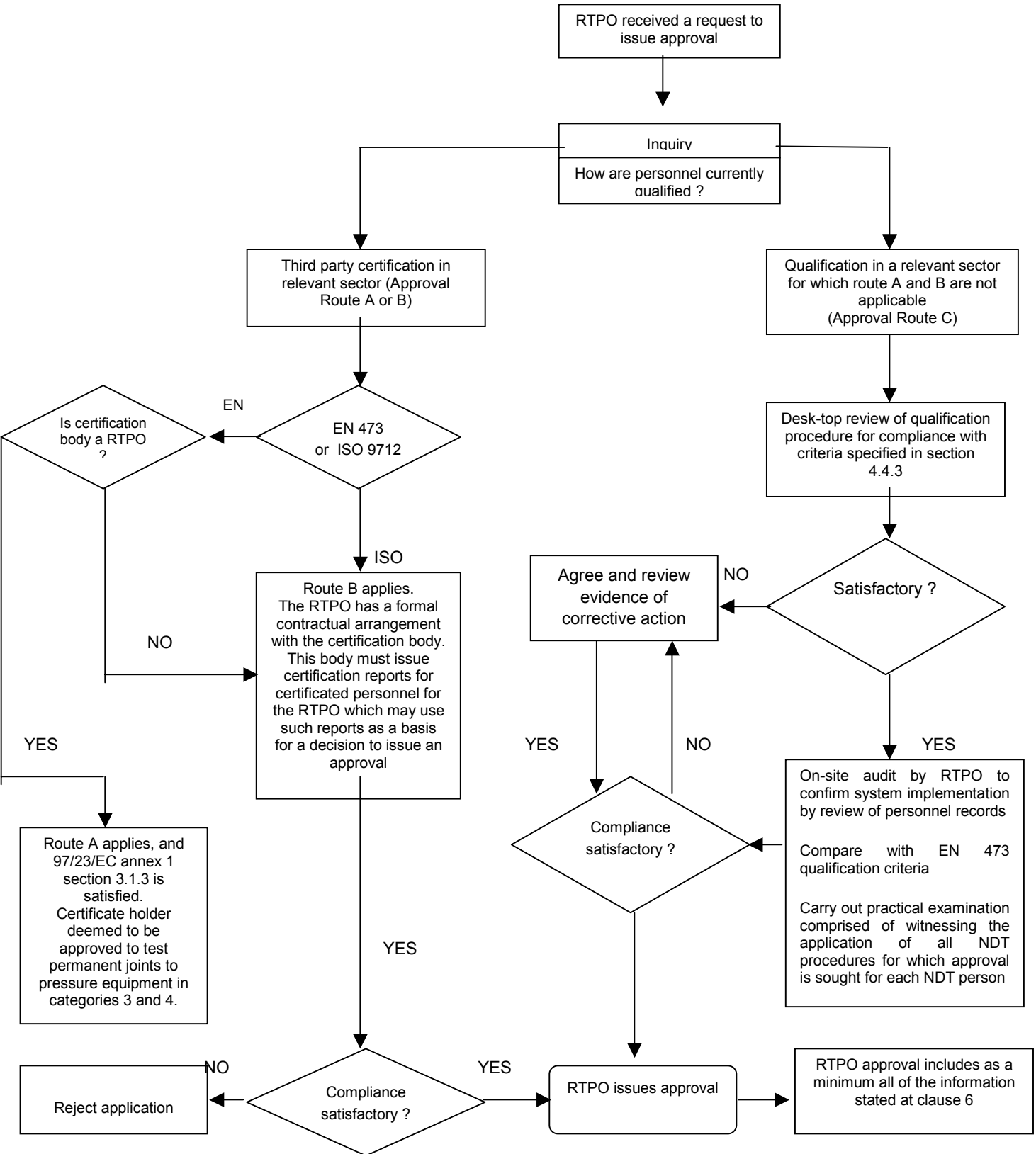
Route A: Approval will be renewed automatically upon EN 473 renewal or recertification.

Route B: Approval may be renewed by the RTPO upon receipt of documentary evidence from the sub-contractor that EN 473 or ISO 9712 renewal or recertification has been completed.

Route C: Approval can be renewed by the RTPO provided the criteria defined in 4.4 remain fulfilled.

Annex A (informative)

Flow diagram



Annex B (informative)

Model approval attestation

RTPO Logo and/or registration number

Issue date:
Issue number:
Expiry date:

TO WHOM IT MAY CONCERN

[Insert Name of RTPO], which is a Recognised Third Party Organisation as described within the European Pressure Equipment Directive 97/23/EC, at Article 13, has approved the following NDT personnel to carry out the specified non destructive tests on permanent joints to pressure equipment in category III and IV (PED 97/23/EC, Annex I, section 3.1.3 refers).

Full name of Approved NDT Person	NDT method(s) covered by approval	Scope of Approval including level of certification and any applicable limitations	Qualification body

The RTPO has approved the named NDT personnel to carry out the specified non-destructive tests on the basis of:

Specify the route or process leading to Approval, and state the conditions of validity of the approval:

Routes B conditions of validity: The validity of the approval is conditional upon the associated third party certificate remaining valid.

Route C conditions of validity: The validity of the approval is conditional upon the second party certification of the named NDT personnel being maintained up to date in accordance with internal procedure(s) or a written practice satisfying the criteria of an accepted standard.

Annex C (informative)

Guideline 6/13 Adopted by Working Group Pressure

Guideline	6/13	CLAP	Form N° 255 i
			Version 2
	Keywords	non destructive test	qualification
		NDT	
	Directive refers	Annex I § 3.1.3	
	Adopted by WGP	18/03/2004	Adopted by CLAP 18/03/2004
Subject	ESR on manufacturing - Approbation of NDT personnel		
Question	For pressure equipment in categories III and IV, can Non-Destructive Testing personnel holding qualifications other than those satisfying criteria of the harmonised standards (e.g. EN 473:2000 General principles for qualification and certification of NDT personnel) be approved by Recognised Third Party Organisations (RTPO) notified by a member state under Article 13 paragraph 1?		
Answer:	<p>Yes.</p> <p>NDT personnel certified under standards, other than the harmonised standards, may be approved by a RTPO provided it is satisfied that certification criteria equivalent to the harmonised standards have been met, and that the scope of certification is relevant to the testing of permanent joints in pressure equipment.</p> <p>A RTPO may sub-contract part of its work, within the provisions of the New Approach guide, but shall keep the full responsibility and issue the approval. The approval of the personnel shall be done by a RTPO on an individual basis.</p> <p>Note: Approval of an individual solely on the basis of a certificate issued by another body where no contractual arrangement exists with the RTPO does not fulfil the requirement of the Pressure Equipment Directive.</p>		
	Modifications compared to the previous adopted version : Editorial correction on 2004-09-16.		

29/10/2004

AFNOR Normalisation and UNM

Bibliography

- [1] Pressure Equipment Directive - 97/23/EC (PED), Adopted by European Parliament and European Council, May 1997,
http://europa.eu.int/comm/enterprise/pressure_equipment/ped/index_en.html
- [2] Guideline6/13 Adopted by Working Group Pressure,
http://europa.eu.int/comm/enterprise/pressure_equipment/ped/guidelines/guideline6_en.html
- [3] EN 473, Non-destructive testing - Qualification and certification of NDT personnel - General Principles
- [4] ISO 9712, Non-destructive testing - Qualification and certification of personnel