

ICNDT General Assembly Meeting

Report of ISO/TC 135

Non-destructive testing

10 June 2010

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ISO/TC 135 Plenary meeting, Buenos Aires, October 2007



ISO/TC 135/SC 8 Meeting, Shanghai, October 2008



ISO/TC 135/SC 7/WG 7 Meeting, Shanghai, October 2008



ISO/TC 135/SC 9 Meeting, Salvador, May 2009

1. Structure

TC 135 <i>Non-destructive testing</i>	Japan (JISC)
TC 135/WG 3 <i>Harmonization of personnel certification standards - Study of EN 473:2008 and ISO 9712:2005</i>	Japan (JISC)
SC 2 <i>Surface methods</i>	South Africa (SABS)
SC 3 <i>Ultrasonic testing</i>	Germany (DIN)
SC 4 <i>Eddy current methods</i>	France (AFNOR)
SC 5 <i>Radiation methods</i>	Germany (DIN)
SC 6 <i>Leak detection methods</i>	Japan (JISC)
SC 7 <i>Personnel qualification</i>	Canada (SCC)
SC 7/WG 7 <i>Performance based qualification and certification</i>	USA (ANSI)
SC 8 <i>Infrared thermography for non-destructive testing</i>	Korea (KATS)
SC 8/WG 1 <i>Terminology and vocabulary</i>	Korea (KATS)
SC9 <i>Acoustic emission testing</i>	Brazil (ABNT)
SC 9/WG 1 <i>Metallic materials</i>	Austria (ASI)
SC 9/WG 2 <i>Composite materials</i>	Brazil (ABNT)
SC 9/WG 3 <i>Leak detection</i>	Argentina (IRAM)
SC 9/WG 4 <i>Acoustic emission technology</i>	Japan (JISC)

2. Membership

(1) P-members (29)

Argentina (IRAM), Austria (ASI), Barbados (BNSI), Belgium (NBN), Brazil (ABNT), Bulgaria (BDS), Canada (SCC), China (SAC), Czech Republic (UNMZ), France (AFNOR), Germany (DIN), India (BIS), Indonesia (BSN), Iran, Islamic Republic of (ISIRI), Italy (UNI), Japan (JISC), Kazakhstan (KAZMEMST), Kenya (KEBS), Korea, Republic of (KATS), Malaysia (DSM)^(*), Norway (SN)^(*), Philippines (BPS), Poland (PKN), Portugal (IPQ), Romania (ASRO), Russian Federation (GOST R), South Africa (SABS), Sweden (SIS), United Kingdom (BSI)

() Participated as P-member after the plenary meeting in October 2007.*

Former P-members Denmark and Venezuela became Non-member.

Ukraine and New Zealand changed their status from P-member to O-member.

(2) O-members (37)

Australia (SA), Belarus (BELST), Bosnia and Herzegovina (BAS)^(**), Colombia (ICONTEC), Croatia (HZN), Cuba (NC), Ecuador (INEN), Egypt (EOS), Estonia (EVS), Finland (SFS), Greece (ELOT), Hong Kong, China (ITCHKSAR), Hungary (MSZT), Iraq (COSQC), Israel (SII), Jamaica (BSJ), Korea, Democratic People's Rep. (CSK), Mauritius (MSB), Mexico (DGN), Moldova, Republic of (INSM), Mongolia (MASM), Netherlands (NEN), New Zealand (SNZ)^(**), Saudi Arabia (SASO), Serbia (ISS), Singapore (SPRING SG)^(**), Slovakia (SUTN), Spain (AENOR), Sri Lanka (SLSI), Thailand (TISI), Trinidad and Tobago (TTBS), Tunisia (INNORPI), Turkey (TSE), Ukraine (DSSU)^(**), USA (ANSI), Viet Nam (STAMEQ), Zimbabwe (SAZ)

*(**) Participated as O-member after the plenary meeting in October 2007.*

Former O-member Ireland became Non-member.

Malaysia and Norway changed their status from O-member to P-member.

3. Chairmen, Conveners, and Secretaries

The Chairmen, Conveners, and Secretaries of TC 135 and its SCs are listed in **Annex A**. During the reported period, secretaries of SC 2, SC 4 and SC 9 were replaced. The term of office of the chair person of SC 2, Mrs. Westhuizen will expire by the end of 2010 and SC 2 chair country South Africa (SABS) nominated Mr. Agostinho as a new SC 2 chairman. This nomination will be casted for voting in the election of subcommittee chairmen in the TC 135 plenary in Moscow.

4. Liaisons

(1) Special liaison to comply with the Vienna agreement (1)

CEN/TC 138

(2) Liaisons (internal and with IEC) (17)

ISO/CASCO

ISO/TC (15) : ISO/TC 11,	ISO/TC 17,	ISO/TC 20,	ISO/TC 26,
ISO/TC 42,	ISO/TC 44,	ISO/TC 58,	ISO/TC 67,
ISO/TC 79,	ISO/TC 85,	ISO/TC 107,	ISO/TC 108/SC 5,
ISO/TC 112,	ISO/TC 119,	ISO/TC 155	

IEC/TC (1) : IEC/TC 87

(3) Liaisons with other organizations (7)

Liaison A (4): CEOC International, ICNDT, IIW, INLAC

Liaison B (3): EC, IAEA, WCO

The previous B liaison between ISO/TC and non-intergovernmental organization was terminated at the year end of 2008, in accordance with ISO/TMB resolution. The organizations of the liaison A mentioned above were requested ISO/CS to establish new liaison (A liaison) with TC 135. According to the information from ISO/CS on this matter, TC 135 secretariat started CIB on the establishment A liaison with respective organization. The balloting result was in favor of establishment of liaison with respective organization and the liaisons with above organizations were established. The organizations of the liaison B are intergovernmental organizations and they remained to be in liaison B.

5. Established Standards

International Standards, Technical Specifications and Technical Reports established by TC 135 are summarized in **Annex B**.

6. Work Programme

Work Program for TC 135 is summarized in **Annex C**.

7. Activity Report

7.1 Establishment of Joint Working Group with CEN/TC 138

Aiming at the complete harmonization of ISO 9712 and EN 473, ISO/TC 135 and CEN/TC 138 established ISO/TC 135/WG 3 and CEN/TC 138/AHG 9 to act as the Joint Working Group (JWG). The first meeting was held in September 2009 at the office of AENOR in Madrid. At the meeting harmonization plan to resolve the discrepancy between ISO 9712 and EN 473 was deliberated. The chairman and the secretary of ISO/TC 135 were installed respectively as the convener and the secretary of ISO/TC 135/WG 3 “Harmonization of personnel certification standards – Study of EN 473: 2008 and ISO 9712: 2005”

Since this is the most significant event of TC 135, the report and the discussion related to ISO/TC 135/WG 3 activity are given by the convener of WG 3, separately from TC 135 secretariat report. From the next 7.2 and after, the events are described in chronological order.

7.2 ISO Committee Chairs’ Conference in Geneva

The chairman and the secretary of ISO/TC 135 attended ISO Committee Chairs’ Conference held in June 2008 in Geneva. In the session of group discussion the chairman introduced the attendants that, in connection with the harmonization between EN 473 and ISO 9712, European countries have a sense of unfairness that ISO standards can be tailored to the circumstance of a country in accordance with ISO/IEC Guide 21, whereas the modification of CEN standards are prohibited. Mr. Ziethen (DIN); the session chairman, responded to this and asked Prof. Hatano for the detailed situation as EN is not necessarily a mandatory standard.

At the conference TC 135 chairman and secretary met Mr. Guerreiro; the secretary of TC 135/SC 9 at the time and participated in the Conference as TC 34 secretary, and consulted with him on the SC 9 meeting, which was once planned to be held in Shanghai, but cancelled.

7.3 Discussion on Harmonization of Certification Standards with CEN/TC 138 in Paris

ISO/TC 135 chairman and secretary visited AFNOR office in Paris in June 2008, and had a talk with Mr. Kozlowski; CEN/TC 138 chairman, and Mr. Tanguy; CEN/TC 138 secretary at the time, about the harmonization of EN 473 and ISO 9712, in general.

We also exchanged opinions about the revised contents of EN 473. In EN 473 revised in 2008, the minimum training hours were increased considerably compared with its previous edition and ISO 9712. The chairman Hatano expressed the concern that it was possible for main countries participating in CEN to deal with it, but in ISO, which was composed of various countries in different circumstances, these countries were affected greatly by the rapid and big change in training hours, and added that the members of not only ISO/TC 135 but also ICNDT were perplexed.

Mr. Kozlowski explained that the training hours defined in EN 473 was revised in accordance with common technical report “CEN ISO/TR 25107: Guidelines for NDT training syllabuses”, which was prepared by ISO in collaboration with CEN, and that the training hours in EN was a minimum requirement for the practice of the level requested by CEN. Prof. Hatano refuted the explanation pointing out that it is considered inappropriate to adopt the contents of Technical Report into CEN standards, because the Technical Report has the binding force weaker than that of ISO standards, and adoption of TR into standard will result to give TR the same binding force of ISO standards. He also introduced the case of Japan, where Japan casted an affirmative vote in the balloting of CEN ISO/TR 25107 because that the balloting was on TR with weak binding force, but not on the ISO standard with binding force, and added that not a few member bodies might agree for the same reason.

7.4 CEN/TC 138 meeting in Paris

ISO/TC 135 chairman attended the CEN/TC 138 meeting held in October 2008, as the representative of ISO/TC 135 in accordance with Vienna Agreement. He reported the activities of ISO/TC 135 and consulted with CEN participants in the meeting about the harmonization of EN 473 and ISO 9712, of which preparatory discussion was made at AFNOR in June.

Concerning the establishment of JWG, he explained that ISO/TC 135 would consult with ISO members at the opportunities of ISO/TC 135/SC 8 and SC 7/WG 7 meetings in Shanghai in October 2008 and make the decision of TC 135. Mr. Kozlowski agreed it.

Mr. Kozlowski, who has long been working as the chairman of CEN/TC 138, resigned after the meeting. Prof. Hatano appreciated him for his long contribution to NDT at the farewell party.

7.5 ISO and ICNDT meetings with 17th WCNDT in Shanghai

The following meetings were held in October 2008 in Shanghai in conjunction with 17th WCNDT and TC 135 chairman and secretary attended the meetings:

- (1) ISO/TC 135/SC 8 Infrared thermography for non-destructive testing,
- (2) ISO/TC 135/SC 7/WG 7 Performance based qualification and certification,
- (3) ICNDT Workshop on Harmonization of third-party NDT Personnel Certification to ISO9712 and aligned standards
- (4) ICNDT General Assembly Meeting

(1) At SC 8 meeting, TC 135 chairman reported the progress of JWG establishment to the attendants of the meeting. TC 135 chairman held a reception after the meeting.

(2) At SC 7/WG 7 meeting, the future procedure was discussed. After the meeting, TC 135 chairman, Mr. Turnbow; the convener of SC 7/WG 7, and some members had a talk.

(3) Prof. Hatano was invited to ICNDT Workshop as a member of the panel. He explained the necessity of harmonization between ISO 9712 and EN 473 and related issues, and reported how and why the JWG of ISO and CEN was established. After the explanation, Dr. Farley; the session chair of the workshop, asked attendants whether they were in favor of the establishment of the JWG. Most attendants supported the policy of TC 135.

Prof. Klyuev; the president of 10th ECNDT participated in this Workshop. TC 135 chairman appreciated for their invitation of TC 135 plenary and associated meetings to Moscow.

(4) At ICNDT General Assembly Meeting, TC 135 chairman and secretary reported TC 135 activities to the attendants and expressed gratitude to Dr. Rong Sheng Geng; the President of 17th WCNDT, and Ms. Zhu Ya Qing; the Exhibition Chair for their invitation of ISO-related meetings to Shanghai.

7.6 SC 9 Meeting with 10th Conference on Equipment Technology in Salvador

The meeting of ISO/TC 135/SC 9 Acoustic emission testing was held in May 2009 in Salvador, Brazil in conjunction with 10th Conference on Equipment Technology (10th COTEQ) and TC 135 chairman attended the meeting. In the meeting he gave advices on SC 9 meeting and the duties of chair country. He also made a complementary speech at the opening ceremony of 10th COTEQ and appreciated their invitation of TC 135/SC 9 meeting to 10th COTEQ. TC 135 chairman would like to express profound gratitude to Mr. João Antonio Conte of Brazilian Society for Non-Destructive Testing and Inspection for his cooperation.

7.7 CEN/TC 138 Meeting in Madrid

CEN/TC 135 meeting was held in September 2009 in the same place of the 1st JWG meeting on the following day.

ISO/TC 135 chairman and secretary attended the meeting as the representative of ISO/TC 135 in accordance with Vienna Agreement and reported the activities of ISO/TC 135.

7.8 ISO and ICNDT meetings with 13th Asia-Pacific Conference on NDT in Yokohama

ISO/TC 135/SC 8 was held in November 2009 in Yokohama, Japan in conjunction with the 13th Asia-Pacific Conference on Non-Destructive Testing (APCNDT 2009). TC 135 chairman and secretary attended the meeting. The chairman was also invited to the Policy and General Purposes Committee (PGPC) meeting of ICNDT and reported the background of JWG establishment of ISO/TC 135 and CEN/TC 138 and its first meeting held in September in Madrid.

7.9 Chair's Visitation to Chennai on Invitation of Indian Nuclear Society

20th Annual Conference of Indian Nuclear Society (20th INSAC) was held in January 2010 in Chennai, India. TC 135 chairman was invited to the meeting by Indian Nuclear Society, attended the meeting and reported ISO/TC 135 activities. He was also invited by Indira Gandhi Centre for Atomic Research (IGCAR) and Indian Society for Non-Destructive Testing, Chennai Chapter and made invited lecture respectively. TC 135 chairman would like to express profound gratitude to Dr. Baldev Raj and Dr. Venkatraman of IGCAR for the invitation.

7.10 Background of TC 135 Moscow meetings

The 17th ISO/TC 135 plenary and associated meetings were originally planned to be held concurrently with the 10th ECNDT. However, in the last autumn when ECNDT program and the venue of its conference were fixed, we realized that information about a series of SC meetings to be held with the TC 135 plenary has not been conveyed to ECNDT. It is unable to hold only TC 135 plenary meeting without associated SC meetings. But TC 135 could hold its plenary and its associated SC meetings one week prior to 10th ECNDT conference at the Hotel Belgrad by courtesy of the Federal Agency on Technical Regulating and Metrology. As the result, the second JWG was changed to be held on September 14, 2010 in Vienna. Concerning that TC 135 could hold the related meetings, ISO/TC 135 deeply appreciates the Federal Agency on Technical Regulating and Metrology. To avoid the recurrence of this kind of problem, TC 135 chairman decided to handle the communication with the host and adjustment the meeting since last autumn. We, the secretariat of ISO/TC 135, would like to express our sincere gratitude to Mr. Elkin; the Head of the Federal Agency, and Mr. Krutikov; the Deputy Head, and Prof. Klyuev; the President of 10th ECNDT, for their kind invitation. Our deepest thanks are extended to Ms. Morozova, Dr. Muravskaya, Dr. Pushkina, and their colleagues for every arrangement for the Moscow meetings.

8. ISOTC Server/ISO Global Directory

In the previous plenary meeting in Buenos Aires, it was recommended to use ISOTC Server and ISO Global Directory to expedite standardization activity.

Responding to the recommendation, most TC 135 member bodies registered their personnel in charge of communication with ISO server.

However, there are several countries remaining unable to view the information posted to ISO server because that none is registered to ISO GD. These countries are recommended to register the

appropriate person and notify TC 135 secretariat of the email address.
The current status of the use of ISOTC Server by the member bodies is as below.
Countries of the following b) are kindly requested to register with ISO GD.

P-Members (29)

a) The countries already registered with ISO GD

Argentina (IRAM), Austria (ASI), Belgium (NBN), Brazil (ABNT), Bulgaria (BDS),
Canada (SCC), China (SAC), Czech Republic (CNI), France (AFNOR), Germany (DIN),
India (BIS), Indonesia (BSN), Iran, Islamic Republic of (ISIRI), Italy (UNI), Japan (JISC),
Kenya (KEBS), Korea, Republic of (KATS), Malaysia (DSM), Norway (SN),
Philippines (BPS), Poland (PKN), Portugal (IPQ), Romania (ASRO),
Russian Federation (GOST R), South Africa (SABS), Sweden (SIS), United Kingdom (BSI)

b) The countries not registered with ISO GD (Countries in correspondence with TC 135 by email)
Barbados (BNSI), Kazakhstan (KAZMEMST)

O-members (37)

a) The country already registered with ISO GD

Belarus (BELST), Bosnia and Herzegovina (BAS), Croatia (HZN), Ecuador (INEN),
Egypt (EOS), Estonia (EVS), Finland (SFS), Greece (ELOT),
Hong Kong, China (ITCHKSAR), Hungary (MSZT), Iraq (COSQC), Israel (SII),
Korea, Dem. P. Rep. (CSK), Mauritius (MSB), Mexico (DGN), Netherlands (NEN),
New Zealand (SNZ), Serbia (ISS), Singapore (SPRING SG), Slovakia (SUTN),
Spain (AENOR), Sri Lanka (SLSI), Thailand (TISI), Trinidad and Tobago (TTBS),
Turkey (TSE), Ukraine (DSSU), USA (ANSI), Zimbabwe (SAZ)

b) The country not registered with ISO GD (Countries in correspondence with TC 135 by email)

Australia (SA), Colombia (ICONTEC), Cuba (NC), Jamaica (JBS),
Moldova, Rep. of (MOLDST), Mongolia (MASM), Saudi Arabia (SASO), Tunisia (INNORPI),
Viet Nam (STAMEQ)

Respectfully submitted by

Takeo Tsuchiya

Secretary, ISO/TC 135

Annex A

Contact Information of ISO/TC 135 (As of 2009-04-28)

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(*) *Appointed since the last plenary meeting in October 2007.*

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^(*) Appointed since the last plenary meeting in October 2007.

Annex B

ISO/TC 135 International Standards (51), Technical Specifications (3) and Technical Reports (2)

WG 1 General terms and definitions

Reference		Title	CEN Documents
Publication Date	Stage		
ISO/TS 18173:2005		General terms and definitions	
2005-01-15	90.60		

WG 2 Training guidelines

Reference		Title	CEN Documents
Publication Date	Stage		
ISO/TR 25107:2006		Guidelines for NDT training syllabuses	CEN ISO/TR 25107:2006
2006-07-01	60.60		
ISO/TR 25108:2006		Guidelines for NDT personnel training organizations	CEN ISO/TR 25108:2006
2006-07-01	60.60		

SC 2 Surface methods

Reference		Title	CEN Documents
Publication Date	Stage		
ISO 3057:1998		Metallographic replica techniques of surface examination	
1998-03-15	90.93		
ISO 3058:1998		Aids to visual inspection - Selection of low-power magnifiers	
1998-03-15	90.93		
ISO 3452:1984*		Penetrant inspection - General principles	
Withdrawn	95.99		
ISO 3452-2:2006		Penetrant testing - Part 2: Testing of penetrant materials	EN ISO 3452-2
2006-08-15	90.60		
ISO 3452-3:1998		Penetrant testing - Part 3: Reference test blocks	EN ISO 3452-3
1998-12-15	90.60		
ISO 3452-3:1998/Cor 1:2001		Penetrant testing - Part 3: Reference test blocks - Technical Corrigendum 1	
2001-02-01	60.60		
ISO 3452-4:1998		Penetrant testing - Part 4: Equipment	EN ISO 3452-4
1998-12-15	90.93		
ISO 3452-5:2008		Penetrant testing - Part 5: Penetrant testing at temperatures higher than 50 °C	EN ISO 3452-5
2008-12-01	60.60		
ISO 3452-6:2008		Penetrant testing - Part 6: Penetrant testing at temperatures lower than 10 °C	EN ISO 3452-6
2008-12-01	60.60		
ISO 9934-1:2001		Magnetic particle testing - Part 1: General principles	EN ISO 9934-1
2001-12-01	90.60		
ISO 9934-2:2002		Magnetic particle testing - Part 2: Detection media	EN ISO 9934-2
2002-12-01	90.60		
ISO 9934-3:2002		Magnetic particle testing - Part 3: Equipment	EN ISO 9934-3
2002-07-15	90.60		
ISO 12706:2000**		Terminology - Terms used in penetrant testing	
Withdrawn	95.99		
ISO 12706:2009		Penetrant testing — Vocabulary [Revision of ISO 12706:2000]	EN ISO 12706
2009-10-01	60.60		

* Withdrawn August 2008, ** Withdrawn October 2009

SC 3 Ultrasonic testing

Reference		Title	CEN Documents
Publication Date	Stage		
ISO 2400:1972		Welds in steel -- Reference block for the calibration of equipment for ultrasonic examination	
1972-06-15	90.93		
ISO 5577:2000		Ultrasonic inspection - Vocabulary	EN 1330-4
2000-05-01	90.20		
ISO 7963:2006		Ultrasonic testing - Specification for calibration block No. 2	
2006-09-15	90.60		
ISO 10375:1997		Ultrasonic inspection - Characterization of search unit and sound field	EN 12268-2
1997-04-15	90.93		

SC 3 Ultrasonic testing

Reference		Title	CEN Documents
Publication Date	Stage		
ISO 12710:2002		Ultrasonic inspection - Evaluating electronic characteristics of ultrasonic test instruments	
2002-09-15	90.93		
ISO 12715:1999		Reference blocks and test procedures for the characterization of contact search unit beam profiles	EN 12223
1999-08-15	90.60		
ISO 18175:2004		Non-destructive testing - Evaluating performance characteristics of ultrasonic pulse-echo testing systems without the use of electronic	
2004-03-15	90.93		

SC 4 Eddy current methods

Reference		Title	CEN Documents
Publication Date	Stage		
ISO 12718:2008		Eddy current testing - Terminology	EN ISO 12718
2008-08-15	60.60		
ISO 15548-1:2008		Equipment for eddy current examination - Part 1: Instrument characteristics and verification	EN ISO 15548-1
2008-09-15	60.60		
ISO 15548-1:2008 /Cor 1:2010		Equipment for eddy current examination - Part 1: Instrument characteristics and verification - Technical Corrigendum 1	EN ISO 15548-1:2008/AC:2010
2010-03-01	60.60		
ISO 15548-2:2008		Equipment for eddy current examination - Part 2: Probe characteristics and verification	EN ISO 15548-2
2008-09-15	60.60		
ISO 15548-3:2008		Equipment for eddy current examination - Part 3: System characteristics and verification	EN ISO 15548-3
2008-09-15	60.60		
ISO 15549:2008		Eddy current examination - General principles	
2008-08-01	60.60		

SC 5 Radiation methods

Reference		Title	CEN Documents
Publication Date	Stage		
ISO 5576:1997		Industrial X-ray and gamma-ray radiology - Vocabulary	EN 1330-3
1997-08-01	90.93		
ISO 5579:1998		Radiographic examination of metallic materials by X- and gamma rays - Basic rules	EN 444
1998-07-01	90.60		
ISO 5580:1985		Industrial radiographic illuminators -- Minimum requirements	
1985-03-15	90.93		
ISO 11537:1998		Thermal neutron radiographic testing - General principles and basic rules	
1998-07-15	90.60		
ISO 11699-1:1998***		Industrial radiographic films -- Part 1: Classification of film systems for industrial radiography	
Withdrawn	95.99		
ISO 11699-1:2008		Industrial radiographic film — Part 1: Classification of film systems for industrial radiography (Revision of ISO 11699-1:1998)	EN 584-1
2008-09-15	60.60		
ISO 11699-2:1998		Industrial radiographic films - Part 2: Control of film processing by means of reference values	EN 584-2
1998-07-01	90.60		
ISO 12721:2000		Thermal neutron radiographic testing - Determination of beam L/D ratio	
2000-04-15	90.93		
ISO 14096-1:2005		Qualification of radiographic film digitisation systems - Part 1: Definitions, quantitative measurements of image quality parameters, standard reference film and qualitative control	EN 14096-1
2005-06-15	90.93		
ISO 14096-2:2005		Qualification of radiographic film digitisation systems - Part 2: Minimum requirements	EN 14096-2
2005-06-15	90.93		
ISO 15708-1:2002		Radiation methods - Computed tomography - Part 1: Principles	
2002-06-01	90.93		
ISO 15708-2:2002		Radiation methods - Computed tomography - Part 2: Examination practices	
2002-07-01	90.93		
ISO 19232-1:2004		Image quality of radiographs - Part 1: Image quality indicators (wire type) - Determination of image quality value	EN 462-1
2004-07-01	90.93		
ISO 19232-1:2004 /Cor 1:2007		Image quality of radiographs - Part 1: Image quality indicators (wire type) - Determination of image quality value - Technical Corrigendum 1	
2007-07-15	60.60		

*** Withdrawn September 2008

SC 5 Radiation methods

Reference		Title	CEN Documents
Publication Date	Stage		
ISO 19232-2:2004		Image quality of radiographs - Part 2: Image quality indicators (step/hole type) - Determination of image quality value	EN 462-2
2004-07-01	90.93		
ISO 19232-2:2004 /Cor 1:2007		Image quality of radiographs - Part 2: Image quality indicators (step/hole type) - Determination of image quality value - Technical Corrigendum 1	
2007-07-15	60.60		
ISO 19232-3:2004		Image quality of radiographs - Part 3: Image quality classes for ferrous metals	EN 462-3
2004-07-01	90.93		
ISO 19232-4:2004		Image quality of radiographs - Part 4: Experimental evaluation of image quality values and image quality tables	EN 462-4
2004-07-01	90.93		
ISO 19232-5:2004		Image quality of radiographs - Part 5: Image quality indicators (duplex wire type) - Determination of image unsharpness value	EN 462-5
2004-07-01	90.93		
ISO/TS 21432:2005		Test methods for determining residual stresses by neutron diffraction	CEN ISO TS 21432
2005-07-15	90.60		
ISO/TS 21432:2005 /Cor 1:2008		Test methods for determining residual stresses by neutron diffraction - Technical Corrigendum 1	CEN ISO TS 21432:2005/AC:2009
2008-01-15	60.60		

SC 6 Leak detection methods

Reference		Title	CEN Documents
Publication Date	Stage		
ISO 3530:1979		Vacuum technology - Mass-spectrometer-type leak-detector calibration	
1979-09-01	90.93		

SC 7 Personnel qualification

Reference		Title	CEN Documents
Publication Date	Stage		
ISO 9712:2005		Qualification and certification of personnel	EN 473:2000
2005-02-15	90.93		
ISO 9712:2005 /Cor 1:2006		Qualification and certification of personnel - Technical Corrigendum 1	
2006-11-01	60.60		
ISO 20807:2004		Qualification of personnel for limited application of non-destructive testing	
2004-03-01	90.93		

SC 7/WG 8 Personnel qualification / Specimens

Reference		Title	CEN Documents
Publication Date	Stage		
ISO/TS 22809:2007		Discontinuities in specimens for use in qualification examinations	CEN/TS 15053
2007-11-15	60.60		

SC 9 Acoustic emission testing

Reference		Title	CEN Documents
Publication Date	Stage		
ISO 12713:1998		Acoustic emission inspection - Primary calibration of transducers	
1998-07-15	90.93		
ISO 12714:1999		Acoustic emission inspection - Secondary calibration of acoustic emission sensors	
1999-07-15	90.60		
ISO 12716:2001		Acoustic emission inspection - Vocabulary	
2001-06-15	90.93		

Annex C

Project Stages and Associated Documents

Code	Stage
00. * *	Preliminary stage
10. * *	Proposal stage
20. * *	Preparatory stage (WD)
30. * *	Committee stage (CD)
40. * *	Enquiry stage (DIS)
50. * *	Approval stage (FDIS)
60. * *	Publication stage (ISO)
90. * *	Review stage
95. * *	Withdrawal stage

Annex D

Work Program (9)

SC 2 Surface methods

Reference		Title	GEN Documents
Stage Date	Stage		
NP		Calibration and assessment of optical strain measurement systems Part 1 – Reference material for optical methods of strain measurement	
2009-02-06	10.60		
NP		Calibration and assessment of optical strain measurement systems Part 2 – Standardised Test Materials for Optical Methods of Strain	
2009-02-06	10.60		
NP 3452-1		Penetrant testing – Part 1: General principles (Revision of ISO 3452:1984)	EN 571-1
2010-02-16	10.20		
NP 3059		Penetrant testing and magnetic particle testing – Viewing conditions (Revision of ISO 3059:2001)	EN ISO 3059
2010-02-19	10.20		

SC 5 Radiation methods

Reference		Title	GEN Documents
Stage Date	Stage		
NP		Industrial computed radiography with storage phosphor imaging plates – Part 1: Classification of systems	EN 14784-1
2010-03-27	10.20		

SC 6 Leak detection methods

Reference		Title	GEN Documents
Stage Date	Stage		
Reinstate of AWI 20521		Terminology on leak testing	
	00.00		

SC 7/WG 7 Personnel qualification / Performance based qualification and certification

Reference		Title	GEN Documents
Stage Date	Stage		
DIS 11774		Non-destructive testing personnel – Performance based qualification	
2010-02-26	40.60		

SC 8 Infrared thermography for non-destructive testing

Reference		Title	GEN Documents
Stage Date	Stage		
DIS 10878		Infrared thermography – Vocabulary and terminology	
2009-11-04	40.60		
NP 14381		General Requirements for standard specimen in infrared thermography – Metallic reference block	
2009-09-09	10.60		

SC 9 Acoustic emission testing

Reference		Title	GEN Documents
Stage Date	Stage		
NP 13112		Acoustic Emission Inspection on Metallic Pressure Vessels During Pressure Test	
2009-05-12	10.98		
NP 13113		Acoustic Emission Continuous Monitoring	
2008-12-04	10.98		
NP 13114		Acoustic Emission Test on Fiber Reinforced Plastic Tanks	
2008-12-04	10.98		
WD TR 13115		Methods for absolute calibration of acoustic emission transducers by reciprocity technique	
2010-01-29	20.20		