

FORUM FOR NATIONAL AEROSPACE NDT BOARDS

The 8th meeting of the Forum for NANDTB was held at the headquarters of ADS Group Limited, 9 Albert Embankment, London SE1 7SP, on Tuesday 15th June 2010.

CONFIRMED Minutes of a Meeting of the Forum (Rev. 2010-08-05)

1) Opening remarks

- a) The meeting was opened at 09:00 by Mr. Jon Biddulph (Chairman), who welcomed all present and invited them to introduce themselves.

2) Attendance and apologies for absence (an attendee signature list is circulated with the minutes of the meeting)

Member Board	Attending representative	Apologies noted
Australia	Colin HOCKINGS	
Austria	HÖLLER Helmuth	WOTTLE Roman
Denmark*	RASMUSSEN Henrik	
France	AUGE Patrick	BERNADI Joseph
Greece	FYTOS Minas	STAMOU Sotirakis
Italy	MERLETTI Luigi	
Netherlands	BUIJSEN Franc	
Russia	BATOV Georgy	
Sweden*	SULKUPURO Terho	
Switzerland	LINDGENS Jürgen	KLIEBER, Rene
Portugal	FERREIRA Jose COSTA Rui	
Spain	GÓMEZ FRAILE Fermín, ARROYO PERFUMO Pedro	
Turkey	SAYGIOĞLU Mehmet	SUNAĞLU İlker
UK	BIDDULPH Jon, BAKEWELL Andy	
Czech Republic		ZAVADIL Zbynek
Germany		BUSCH, HENRICH and HOLSTEIN.
Hungary		STIFTER Tamás
Poland		BRONIEK Jacek
Non-members	Attending	Apologies
Malta	MUSCAT Albert	
Luxembourg		CRAB Danny
Secretary	THOMPSON, John	
EASA		TAJES Rosa

3) [Strategic Vision](#)

- a) The Chairman reminded the Forum of the strategy that was agreed and adopted during 2009 and encapsulated in a diagram, which is re-circulated with these minutes. The strategy adopted by the Forum focused on the universal adoption of best practice through the harmonized implementation of the now global standard (EN 4179 = AIA NAS 410), as well as sharing information and experience on the implementation of the applicable regulation(s).

- b) Mr. Biddulph expressed disappointment that there was no representation from EASA at the present meeting.
- 4) The [agenda](#) was agreed with the addition of an item, 2009 Forum Report, proposed for discussion under 'Any Other Business' by Mr. Hockings (Australia).
- 5) [Minutes of the previous meeting](#) (attached)
- a) The minutes of the previous meeting were confirmed as accurate. The Secretary undertook to upload the confirmed minutes to the website. **Action 2010/01: Secretary.**
- b) Review of actions allocated at previous meetings (the record of actions completed is shown below, and those carried forward are shown at Annex A).

Reference	Action agreed	Assigned to	Remarks
2009/03	Publish Chairman's 'Vision' presentation file on Forum web-page	Secretary	Completed
2009/04	Provide to Secretary a copy of the NADCAP audit checklist for onward transmission to EASA.	Chairman	Completed
2009/11	A Swiss Board proposal for gaining experience simultaneously for certification in multiple NDT methods is to be referred by members to their national Boards, which were to be asked to respond, with or without comments or justification, on the acceptability of the proposal contained in the Swiss paper	Secretary (to chase) and members	Completed.
2009/13	A presentation by the Swiss Board related to alternative vision standards is to be updated and circulated to all members for information and comment.	Swiss Board & Secretary	Agenda item for 2010-06-15
2009/19	The minutes of the previous meeting were confirmed, and the Secretary was asked to upload them to the Forum webspace.	Secretary	Completed.
2009/20	amend the Forum's constitutional document to allow an 'observer' membership that conformed to the above This amended draft issue 3 to be circulated for approval at the next meeting.	Secretary	Completed.
2009/21	The meeting reviewed progress and updated the action plan. , which is to be circulated to members for further action	Secretary and members	Completed.
2009/22	M. Auge to consult (and report to the Secretary and Chairman on the consultation) with ASD-Stan by 8 th February 2010.	M. Auge	Agenda item for 2010-06-15
2009/23	Identify possible meeting venue in London for June 2010.	Chair and Sec	Completed

- c) Discussion of **action 2009/06** (development of syllabuses).
- i) Mr. Lindgens had obtained and reviewed some training school course notes and reported that he had been in contact with a number of schools including MTU in Munich, and had participated at a meeting on this topic in Bremen during March 2010, where the German Board had expressed a view that we should all make efforts through openness to harmonize training content.
- ii) Mr. Lindgens' company has employees of many different nationalities, and the main schools used are in France, Germany and the UK. He noted that all are different in style and course content. He went on to say that it would be difficult to agree syllabuses across all technologies, but in order to make a good start we must first collect and sort the available training data.
- iii) Mr. Auge reported that he had also initiated some work in this area, and will engage in further discussions with the PRI soon, and Mr. Merletti emphasized the importance of gaining good quality experience covering specific aspects of the syllabus, stating that while great attention is paid to training, and the duration of

experience is covered, little information is given regarding *the nature of the experience* required for certification.

- iv) Mr. Augé said, taking into account the various methods which exist, and which will be created in the future, it would be judicious to not multiply methods. In order to create common training programs (syllabuses) we have the official option described in EN4179/NAS410:

Extract from EN4179/NAS410

§ 4-1-2 NDT Techniques

The written practice shall include the specific technique(s) within each method as defined by the employer or NANDTB.

Technique(s) is defined in EN4179/NAS410 to help us to add specific training and certification for a part of an existing method. (e.g.: UT Phased arrays can be considered as a "Technique" within the ultrasonic method)

- v) The Forum agreed that this action was to be given priority and was carried forward.
- d) Discussion of **action 2009/10** (extension of responsibility of national boards beyond national boundaries)
 - i) Mr. Biddulph reported an a recent UK CAA Part 145 audit in the Middle East where a Maintenance Organisation was using PCN certificated personnel, and it had been assumed by the MRO that, because the PCN examinations were under the control of the UK Board, the nation concerned had no need for a board. However, the UK Board was unaware that this assumption had been made, because it had not been approached to provide cover in the country concerned. This highlighted that fact that Boards may unknowingly be providing part of the EASA part 145 compliance for another state. It was agreed that states using the services of a national board in another state must notify the board concerned that this is happening.
 - ii) Mr. Auge said that it is important that a national board manages the system of training under its jurisdiction, but emphasized that the final arbiter of qualification remains the qualification examination.
 - iii) It was agreed to retransmit the enquiry with a reminder. **Action 2009/10 carried forward: Secretary and members.**
 - e) Discussion of **action 2009/12** (EN 4179 Process Flowchart)
 - i) Flowcharts from the Swiss and Australian Boards had been received. The UK process did not conform to the Swiss submission, and the Australian submission showed a different approach. It was agreed that these two charts be circulated to members, who would indicate whether their process conformed to either of the Swiss and Australian models and, if not, offer a flowchart to the Secretary showing their approach. Received flowcharts would then be considered at the next meeting. **Action 2009/12 carried forward: members and Secretary.**
 - f) Discussion of **action 2009/13** (Vision Testing)
 - i) The Swiss Board had provided two documents ([one](#) was an internal procedure [JBSL-NDT-001], the [second](#) showing eye test calculations), both of which had been circulated to the Forum.
 - ii) Mr. Andy Bakewell had been invited to attend in order to present some work that he had carried out for the UK Board, and which was likely to be proposed, through BSI, as a standard or Technical Specification for adoption in ISO and CEN, and

for eventual reference in all NDT personnel qualification standards. Mr. Bakewell's three presentation files ([the first](#) was a presentation for the UK Board on the problems associated with existing vision tests, the [second](#) proposing the adoption of the 'rolling E' test, the [third](#) was an actual Rolling E test chart) are circulated for information with these draft minutes.

- iii) Mr. Biddulph agreed to provide the instructions for the conduct of the Rolling E Test for circulation to the Forum. **Action 2010/02: Chairman.**

6) Forum Constitution

- a) The Forum approved [draft issue 3](#), which had been circulated with the minutes of the last meeting. There was a brief discussion concerning the need for a further amendment but, since this was not notified in advance, it was agreed to approve the draft that had been circulated, and any further proposals for amendment should be notified to the Secretary in order that the amendment can be circulated in advance for approval at the next meeting. **Action 2010/03: Secretary to formally issue and upload the revised ANDTBF/01 to the website.**
- b) The Forum constitution states that applications for membership shall be in the form of a letter, supported by a documented procedure for the assessment and approval of Qualifying Agencies. Representatives of not less than three members of the Forum shall be appointed to review each membership application and supporting procedure(s) and submit comments and recommendations regarding acceptance to the next formal meeting of the Forum, which will consider and accept or reject the request for membership.
 - i) An application had been received from [Bulgaria](#). The Forum assigned responsibility for review of this particular application to Italy, Australia and Turkey. **Action 2010/04: Secretary to forward Bulgarian application to Messrs. Merletti, Hockings and Saygıođlu for review and comment.**

7) [Action plan](#) (circulated with this agenda)

- a) The Forum reviewed and updated the existing actions.
 - i) Mr Thompson reported on the presentations and NDT forum discussions at the 10th ECNDT in Moscow during early June 2010.
 - ii) Regarding development of training and examination syllabuses, it was agreed that a syllabus should be developed to cover testing of composite materials, which it was said is now the most widely used aircraft structure material. **Action 2010/05: Members to forward proposals and/or drafts for circulation and for discussion at the next meeting.**
- b) Forum guidance
 - i) It was agreed that the Forum should agree and publish guidance on a whole range of topics, most of which would be proposed by member boards that had already noted a need for guidance on a subject at the national level, and wished to share this with the Forum (the example of the Vision Standard proposal presented by the UK Board was cited).
 - ii) It was further agreed to adopt a new standing agenda item entitled "National Guidance Considered or Introduced since the last meeting", and members were tasked with submission of proposals for information sharing purposes. **Action 2010/06: Secretary and members.**

8) Status/Revision of applicable regulations and standards

- a) EASA AMC 145.A.30(f) Personnel requirements (summary report from Rosa Tages)

Decision [ED 2010/02/R](#) was adopted by the Executive Director, this decision amends AMC 145.A.30 (f), as follows:

2. Appropriately qualified means to Level 1, 2 or 3 as defined by the European Standard EN 4179 dependant upon the non destructive testing function to be carried out.

The year reference is removed and thus clarifying the issue of which the acceptable version is (page 64 paragraph 44 refers).

b) NAS 410:2008 / EN 4179:2009 interpretation process

- i) The Chairman provided a [flowchart](#) and an update on situation with regard to establishing an EN 4179 interpretation mechanism through the Forum. This had been discussed and agreed with ASD, but an element of confusion was added when Mr. Auge reported his latterly held meeting with Gunter Lessmann of ASD.
- ii) Implementation of arrangements. Messrs. Auge and Biddulph agreed a flowchart showing how the Forum would manage requests for interpretation of the standard, and it was agreed that the flowchart needed to be incorporated within a procedure embodying Interpretation WG terms of reference for approval and implementation by the Forum, whereby the Forum would act as the European standard EN 4179 Interpretation Working Group, establishing direct liaison with ASD Stan and AIA. **Action 2010/07: Chairman to develop interpretation procedure and appropriate terms of reference.**
- iii) The Secretary proposed to investigate the creation of a new email address, e.g. andtbf.en4179.interpretation@efndt.org through which requests for interpretation would be redirected to the Chairman, Secretary and one other who would be the primary contact for managing interpretations (other e-mail addresses to be considered: andtbf.secretary@efndt.org and andtbf.chairman@efndt.org). **Action 2010/08: Secretary to investigate the creation of ANDTBF e-mail addresses for office holders.**

9) Liaisons

- a) **Action 2010/09: Secretary & Chairman to establish AIA and ASD formal liaison**

10) Review status of [ANDTBF documents](#)

- a) The Forum agreed the draft revision of [ANDTBF/04](#), subject to a brief review by the Secretary following today's meeting. **Action 2010/10: Secretary to finalize ANDTBF/04 and upload to website.**

11) Relevant conferences and seminars

- a) **Action 2010/11: members to send details of national and international events to the Secretary.**

12) Any other business

- a) **Action 2010/12: Secretary to circulate 2009 [Annual Report](#) of the Forum for postal ballot.**
- b) The Forum recorded its gratitude to ADS and Rolls Royce for facilities and catering respectively.

13) Date and location for 9th meeting

- a) Proposal: 22, **23 or 24** November 2010 during the 2nd International Symposium on Non-Destructive Testing in Aerospace (Hamburg, Germany, at the invitation of DGZfP). **Action 2010/13: Secretary to confirm meeting date and location details.**

b) Dunkerque, 23 to 27 May 2011 for the 10th meeting (to be confirmed at 9th meeting)

Annex A (Record of actions assigned at the 8th Forum)

Reference	Action agreed	Assigned to	Remarks
2009/02	Establish that each of the Forum members is implementing ANDTBF/05 (Harmonization of the Operations of the Members of the Forum). Members to positively inform the Secretary (using the record form at Annex A to ANDTBF/05).	All members	carried forward 2010-06-15.
2009/05	Gather information concerning the nature of operations of each of the Boards (continuation of the survey initiated by the Portuguese Board).	Portuguese Board	carried forward 2010-06-15.
2009/06	New action plan item: Develop training syllabus for aerospace ultrasonic NDT, including product technology, using CEN TC 25107 as basis for work. A Task Group comprising France, Germany (lead), Switzerland and the UK	Task Group	Following verbal report from Swiss Board, this item carried forward 2010-06-15. Chased 2010-09-29. See also 2010-05
2009/09	Discuss within EASA the fact that possession of EN 4179 was not sufficient for authority to certify a Form 1, the NDT operator also has to possess a national license. Mr Colin Langley agreed to take this up with the EASA person responsible and to communicate with Ms. Tajes who would provide an answer for circulation to members.	Colin Langley and Rosa Tajes	carried forward 2010-06-15.
2009/10	Interpretation of clause 4 of EASA AMC 145.A30(f) Personnel requirements “..... <i>In the absence of a national aerospace NDT board, the NDT board of another Member State should be used, as defined by the competent authority.</i> ” Secretary to chase members for further information.	Secretary	a new survey form has been devised reflecting discussion at the 7 th Forum. As at 2010-05-04, responses received from Australia, Poland and UK only . Carried forward 2010-06-15.
2009/12	The Swiss flowchart on qualification was noted for information, and was to be reviewed by members, who would confirm that it showed their method of working, otherwise to provide an alternative proposal for the flowchart.	Members	carried forward 2010-06-15, with the addition of a flowchart from the Australian Board.
2009/16	2009 report to be circulated for postal approval to upload to the website.	Secretary	distributed 2010-08-03. Uploaded 2010-09-29.
2010/01	upload the confirmed minutes of the 7 th Forum meeting to the website	Secretary	Action completed.
2010/02	provide the instructions for the conduct of the Rolling E Test for circulation to the Forum.	Chairman	Action completed
2010/03	formally issue and upload the revised ANDTBF/01 to the website.	Secretary	Action completed
2010/04	forward Bulgarian application to Messrs. Merletti, Hockings and Saygioğlu for review and comment.	Secretary & Review WG	Application sent 2010-08-03, resent 2010-08-19
2010/05	forward proposals and/or drafts of composite materials testing syllabuses for circulation and for discussion at the next meeting.	Members	None received as at 2010-09-29
2010/06	adopt a new standing agenda item entitled “National Guidance Considered or Introduced since the last meeting”. Members to submit proposals for information sharing purposes	Secretary & Members	2010-08-03 incorporated into draft agenda. Action completed.
2010/07	develop interpretation procedure (for EN 4179) and appropriate terms of reference	Chairman	Carried forward
2010/08	investigate the creation of ANDTBF e-mail addresses for office holders.	Secretary	2010-08-03 email to Stefan C and David G. Action completed.

Reference	Action agreed	Assigned to	Remarks
2010/09	establish formal liaison with AIA and ASD under the interpretation procedure	Chairman & Secretary	2010-08-03 email to JB
2010/10	finalize ANDTBF/04 and upload to website	Secretary	Action completed
2010/11	send details of national and international conferences, seminars and workshops on relevant topics to the Secretary	Members	Action completed
2010/12	circulate 2009 Annual Report of the Forum for postal ballot	Secretary	2010-08-03 email ANDTBF 2009 Report with attachment
2010/13	Confirm date and location of the 9 th meeting of the Forum	Secretary	2010-08-03 email to Steffi. Action completed