

UK National Aerospace **NDT** Board



C/o The British Institute of NDT
Midsummer House, Riverside Way
Bedford Road, Northampton, NN1 5NX,
United Kingdom
Tel: +44(0)1604-438251

E-mail: tracy.grant@bindt.org

THE 61st MEETING OF THE UK NATIONAL AEROSPACE NDT BOARD

Meeting Date: Thursday 7th December 2017
Time: 10.00am
Location: South West School, Longwood Drive, Forest Farm, Cardiff, CF14 7HY

Minutes

NANDTB/2017/M4

1. Confirmation of the agenda (and any other business)

- 1.1 The item under 12.a will be covered in the morning, but minuted as per agenda sequence.
- 1.2 Added as 12.b Terra Herz sequencing.

2. Attendance & apologies for absence (Annex A)

Refer to attached.

JB welcomed SA (MAA) as the new observer to the Board. The members introduced themselves.

3. Notes of the 60th meeting (distributed earlier)

a. Confirmation

Phil Byram is showing as representing the MOD, rather than BAE systems.

Once this correction is made, the minutes, which were sent out within two weeks of Meeting 60, and returned no comments, are now approved and confirmed.

Action 33/2017 – TG to correct and upload

b. Review of allocated actions

Ref	Actions brought forward	Remarks
10/2017	BF to email individuals requesting this information for L2/L3 personnel	Ongoing
16/2017	KP will re-amend NANDTB_17 and bring back to the following meeting	Agenda item
17/2017	GMcC and JD will look at NANDTB_18	Agenda item

22/2017	TG to finalise NANDTB_06 and upload to the website	Closed
23/2017	GMcL to provide TG with a letter from his place of business	Closed
24/2017	TG to finalise NANDTB_05 and upload to the website	Closed
25/2017	TG to upload NANDTB_28 to the website	Closed
26/2017	JB to go back to KR with the response to her query	Closed
27/2017	A WG to agree criteria to manage OA's consisting of BS, RB, JB, NC and PJB, with BS being the lead on this WG	Ongoing
28/2017	JB will circulate the last draft of the document and the Board is to reply back and confirm they are happy for the document to be adopted	Closed – agenda item
29/2017	JB to circulate the NADCAP advisory regarding this	Ongoing
30/2017	The OA/IA group will review and bring it back to the next meeting	Superseded
31/2017	DG will draft this wording and send to JB to be put in to an advisory and send to TG for finalisation	Agenda item
32/2017	JB to respond to D Dulay clarification request	Closed

4. Membership

BAE Systems, Kevin Pickup, phone number to be amended. Clarification on member status for BAE systems.

Dave Griffin's email was amended and a direct dial added.

Chris Durant's phone number was updated.

Jes Dugard, same status clarification to MRP 145 added.

JB updated the document in real time.

Action 34/2017 - TG to upload

5. UK NANDTB Document Review

- a. NANDTB_03 – NANDTB Constitution – due for review 15-03-2018
- b. NANDTB_17 – KP – This is delayed until the next meet at the request of Neal Cuddy.
- c. NANDTB_18 – GMcC/JD

This document was reviewed in real time, to rev D, and JB updated the document, expanding on

acronyms for clarity.

Action 35/2017 - TG to check formatting, including footers, then upload

- d. NANDTB_25 - Training for administration of vision acuity tests – due for review 15-03-2018

Action 36/2017 - JD, JB, DG and GMcC volunteered to review for the next meeting

- e. NANDTB_27 - Guidance on BS EN 4179:2009 - qualification equivalencies for minimum experience requirements for level 3 – due for review on 24-03-2018

Action 37/2017 - CW, JB, RB and SW volunteered to review for the next meeting

**** Item 12.a was discussed at this point. Colin Thomas joined the meeting for this item.****

6. Qualifying Agencies

- a. Auditor Oversight, review matrix

No actions required at this time.

- b. Checklist revision

Discussions were held on how to move forward with the review on the current proposed document. There are two reviews required, first the main content, then a review of question form and guidance information.

Sign off is critical on this document by end of Jan. This document will then be circulated for postal vote in Jan.

Action 38/2017 - IA/OA will conduct another review in December.

Action 39/2017 - NANDTB WG in Jan, BS (Chair) AW, PB, MC/DG.

- c. Changes to NANDTB 12

There were some changes in real time.

6.c.1

Guy Lawton brought to the Board's attention that he has been on the Audit review team, and questioned whether this, as a representative of an IA is acceptable. There was a debate on whether this was considered to be a conflict of interest. It was considered that going forward, the Navy RL3 could act on the review team, but the Head of the Tri-Service School could not. This ensures that all parties are impartial. (Because the MOD have one vote, which alternates between the two parties, the review status will remain with GL, the voting member, until the vote transfers to JD in March.)

6.c.2

The MOD will review their requirements against paras 4.1.6/4.1.7 and advise on their compliance or seek concession, depending on their decision.

6.c.3

The document needs correction for consistency in terminology and abbreviations.

Action 40/2017 - TG

The review Doc 12 will be passed to the IA/OA for review the week of 18th Dec, once reviewed again, this will go to the NANDTB WG with Bobby Scott.

Action 41/2017 - JB to send to MC, then IA/OA and WG

7. EN4179:2017 (JB)

7.1 The Scope of Specific and Practical Examinations – AD-011

This document was reviewed and agreed, that it should be issued and uploaded to the website.

Action 42/2017 - TG

There were no specific issues relating to EN4179:2017.

8. ANDTBF (JB)

a. ANDTBF/10 – L3 Basic Requirements

This document was discussed at length. There remains some desire for a L3 Basic to cover all methods to ensure the L3 caliber remains high. However, recognising the need to remain in line with Europe, the Board were in agreement that this should be adopted, with the clarification that the 4 methods the candidate elects to sit, should be in addition to the method for which the candidate is seeking his/her first L3.

Action 43/2017 - JB to write article for NDT News.

Action 44/2017 - JB to draft an advisory covering this.

b. NANDTB Audit Checklist

JB presented the findings of the PRI audit, by Phil Ford, of the UK NANDTB at BINDT on 22nd Nov. The audit went well. The audit was attended by a Boeing representative, and all thought the audit was thorough and appropriate.

As of 31st March 18 all exams need to be available to for auditors to review on site. For Boeing this is 31st Jan 18

JB took the findings and process for discussion to the ANDTBF.

- There are some very different view from other boards.
- There are questions which surround whether accredited Boards can be opted out from the need to provide exam papers.
- Some Boards do not have the volume of Nadcap work, within their countries, to justify auditing/accreditation.
- There are issues with some countries resistance to training organizations having L3's and WPs.
- There are many different views around Europe. JB reiterated that the reason the forum was created was to try and standardize on policy.
- The forum has accepted that Boards cannot self-certify, they need to comply with the requirements and be independently audited. [Most wanted their aviation authorities to do this, EASA recognise that there may not be the knowledge base in place to do this.]
- The next meeting is June 2018
- The cost for covering an external audit was of concern. JB offered solutions to the forum on how this could be done. Including the Nadcap Primes (Subscribers,) covering the cost from their subscription fees.

- If Nadcap is controlling the exams, does the Board need to do this? And therefore what is the purpose of Boards.
- The next Nadcap meeting 19-22 Feb, Madrid, gives the option for the Prime members to raise the issue with Nadcap.

As of 31st March all OA will need to provide exam papers for Nadcap audits.

Following lengthy discussions.

Action 45/2017 - JB to write article for NDT News.

Action 46/2017 - KP to Chair a Nadcap lobby to present the case for Board accreditation.

BS/CD/JB/AW/SW to attend

Action 47/2017 - MC/DG to collate costs and implications for UK OAs to support this.

Action 48/2017 JB to send copy of presentation to all for our own use. (Not to be circulated.)

9. Part 145 Orgs and SIG's – Input (GMc)

GMc advised nothing to report.

10. Regulators Update – (BF/NC)

There were no representatives from the CAA present.

MAA, had nothing to report.

11. OA/IA Group (MC)

Covered under other items in the agenda.

12. Any other business

a. Use of Computed Topography to provide supplemental information

Dowty Propellers (DP) produces propeller blades and has approximately 136 blades in quarantine as a result of a production problem which has now been resolved. These blades routinely undergo an Ultrasonic B scan inspection to look for areas of ply wrinkling. However small areas of each blade exhibit local porosity which is not in itself a reject condition but does obscure the Ultrasonic B scan image due to sound scatter.

To gain further information about these areas, trials have been carried out using CT which indicates that it is possible with the visual image produced to assess for ply wrinkling in these obscured areas..

However, CT is a non-film RT method within BS EN 4179 (para 3.20) and at present it would be difficult, and extremely time consuming to draw up and implement a certification scheme in accordance with EN 4179 for this method.

Colin Thomas (acting on behalf of DP) suggested to the board that as Ultrasonic testing is the designated NDT method to detect ply wrinkling in the blades and will continue to be the case, the CT images are only providing supplementary information for these local areas and could be used to assess the condition of the blades without NDT technicians requiring formal training and

certification in accordance with EN 4179. He used the analogy of instances where advanced visual inspection is used to categorise and evaluate Penetrant indications without the necessity of formal certification being required in the visual NDT method. DP are EASA Part 21 approved and act as their own design authority. They have asked the board to support the line of reasoning being presented to avoid any potential conflict with the regulator in the future.

The images will be produced by a CT equipment supplier and certificated RT technicians within DAP will receive limited training/ experience and be assessed for competency against an internal documented requirement rather than the company written practice.

JB confirmed that in his opinion this supplemental information is simply to supply additional information, and is acceptable in support of the primary inspection to move to the release of parts held under quarantine. This allows information for Engineering to make a more informed evaluation

The Board unanimously agreed with approach presented.

b. Terahertz sequencing

KP has a component, being made by Meggit Polymers & Composites, which does not conform to standard methods of inspection. Because of specialist material, BAE have been talking to Fraunhofer in Germany to establish an inspection using Terahertz Sequencing which has proven successful. As this component will need to release to service, the question of training and qualification requirements is being raised.

Terahertz Sequencing is an EM radiation based method, closer to RT than UT, but not a technique within either method.

JB suggested that there may be an expert who could be co-opted on to explain the technology and options to the Board.

The Board stated their commitment to bringing new technologies into NDT and in seeking a way forward thought a paper with a detailed approach on it, combined with a greater understanding, would allow a firm decision on how best to move forward to support the introduction of Terahertz Sequencing.

Action 49/2017 - KP will make a proposal on how to proceed, which will be reviewed by correspondence.

c. Bobby Scott will be retiring in March, and the Board will need a new Vice Chair.

Jon Biddulph advised that he is seeking to step down, volunteers for Chair and Vice Chair are called for.

KP suggested that the Chair/Vice Chair are for fixed terms eg, 2 years, to enable rotation and employer buy in.

13. Date and location of the next meeting

6th March - Northampton

26th June - Bombardier

18th September - Flybe

11th December - SWS

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Annex A – attendance and apologies for absence at the 7 December 2017 NANDTB meeting no. 61

Name (member unless stated otherwise)	Representing	In attendance	Apologies for absence
Alun Williams	Airbus UK	1	
Ben Forshaw (Observer)	CAA replacing TB		1
Bobby Scott	Bombardier	1	
Carl Sheppard	British Airways		1
Chris Durrant	Safran Landing Systems Ltd	1	
Clive Worrall	British Airways	1	
Dave Griffin (Co-opted)	Vice Chair representing BINDT OA/IA Group	1	
Guy Lawton	MoD	1	
Jes Dugard	MoD	1	
Graham Mcleod	Honeywell		1
Graham McCully (Co-opted)	Pt. 145 Orgs and SIG members	1	
Jon Biddulph (Chair)	Rolls Royce	1	
Kevin Pickup	BAE Systems	1	
Luke Talbot	Safran Landing Systems Ltd		1
Steven Arrowsmith (Observer)	MAA	1	
Michelle Clapham (Co-opted)	Chair representing BINDT OA/IA Group	1	
(Robert) Neal Cuddy (Observer)	CAA replacing TB		1
Nicole Banks (Observer)	BINDT		1
Patrick Boulton (Voting member)	BINDT		1
Phil Byram	BAE Systems	1	
Ralph Duff	Bombardier		1
Rob Bright	Flybe	1	
Stuart Wroot	Leonardo Helicopters	1	
Tracy Grant (Secretary)	BINDT		1
	Totals		

Actions allocated and carried over from meeting 61st Meeting

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41/2017	JB to send to MC, then IA/OA and WG	
42/2017	TG	
43/2017	JB to write article for NDT News	
44/2017	JB to draft an advisory covering this	
45/2017	JB to write article for NDT News	

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