

BINDT Aerospace 2026

ISO 18490: Evaluation of vision acuity of NDT personnel – Update



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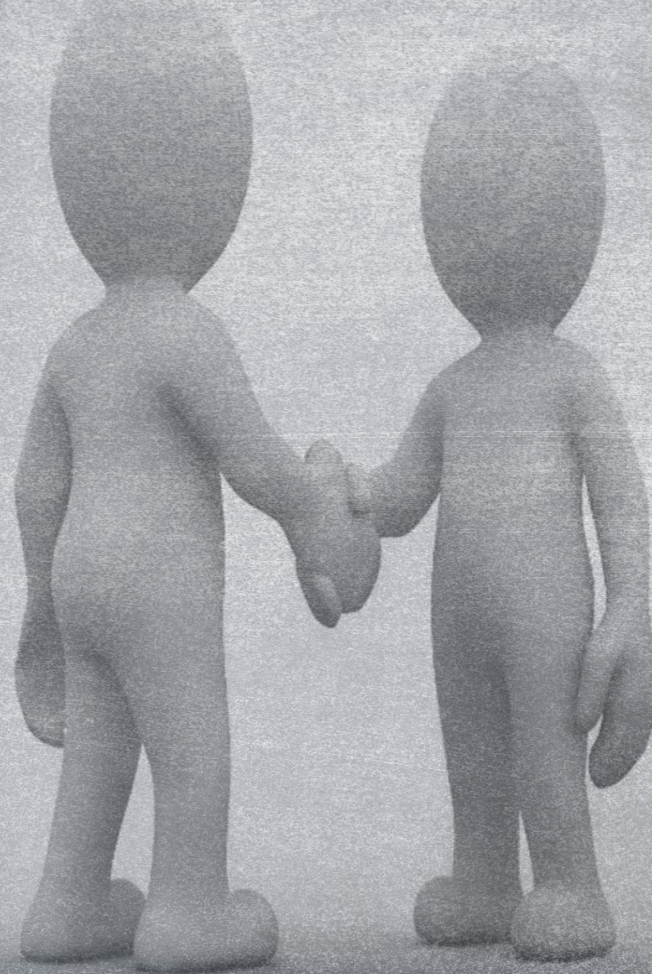
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Patrick Boulton
Senior Technical
and Certification Engineer

MIDSUMMER HOUSE
RIVERSIDE WAY, BEDFORD ROAD
NORTHAMPTON NN1 5NX UK
Tel: +44 (0)1604 438300
Direct Line: +44 (0)1604 438263
Mobile: +44 (0)7885 368694
Email: patrick.boulton@bindt.org
www.bindt.org



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Presentation aims and objectives



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ISO 18490



Practitioners / Employers

BS EN ISO 18490:2026



BSI Standards Publication

Non-destructive testing —
Evaluation of vision acuity of
NDT personnel

bsi.

...making excellence a habit™



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ISO/TC 135/SC 7

ISO/TC 135/SC 7: Subcommittee for Personnel Qualification in Non-Destructive Testing.

33 participating members and 14 observing members.



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Independent Certification Bodies



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BS EN ISO 18490 Development

ISO/TC 135/SC 7 committee

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BSI

**ISO SC
7**



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Russia



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ISO 18490:2026 - Main Changes



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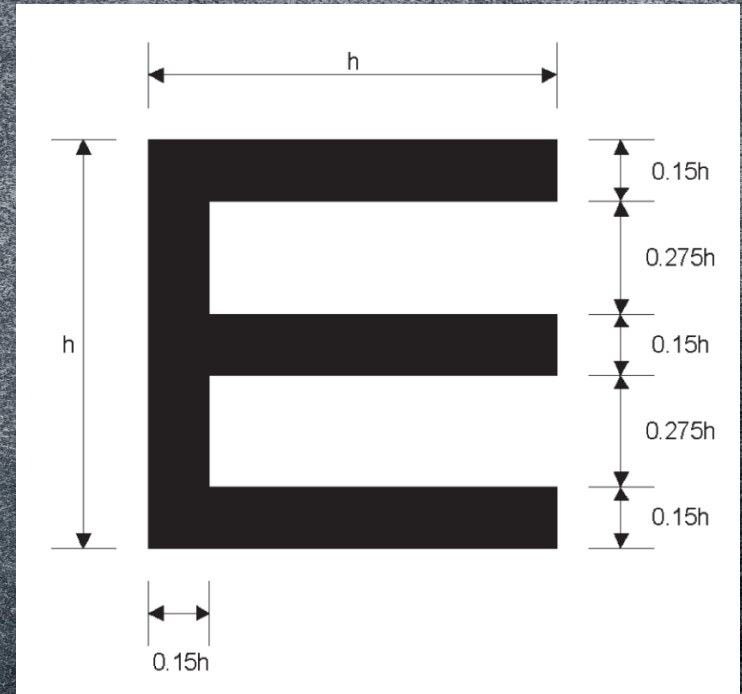
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ISO 18490 2015

Near Vision acuity only

Tumbling E



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EM Inspection Tumbling E



EM INSPECTION Co. Ltd.
SURFACE NDT SPECIALISTS

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VISION CHARTS



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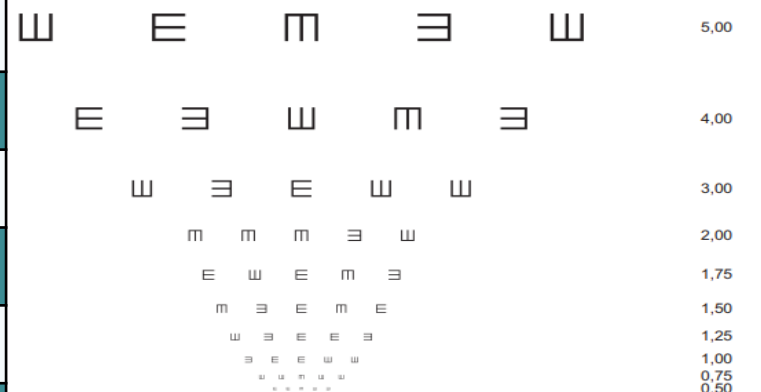
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NDT Near Vision Acuity Test

To be administered in accordance with the conditions defined in ISO 18490:2015(E).

Line Number	Optotype Height (mm)
1	5.00
2	4.00
3	3.00
4	2.00
5	1.75
6	1.50
7	1.25
8	1.00
9	0.75
10	0.50



HEIGHT



Block B

Test 143

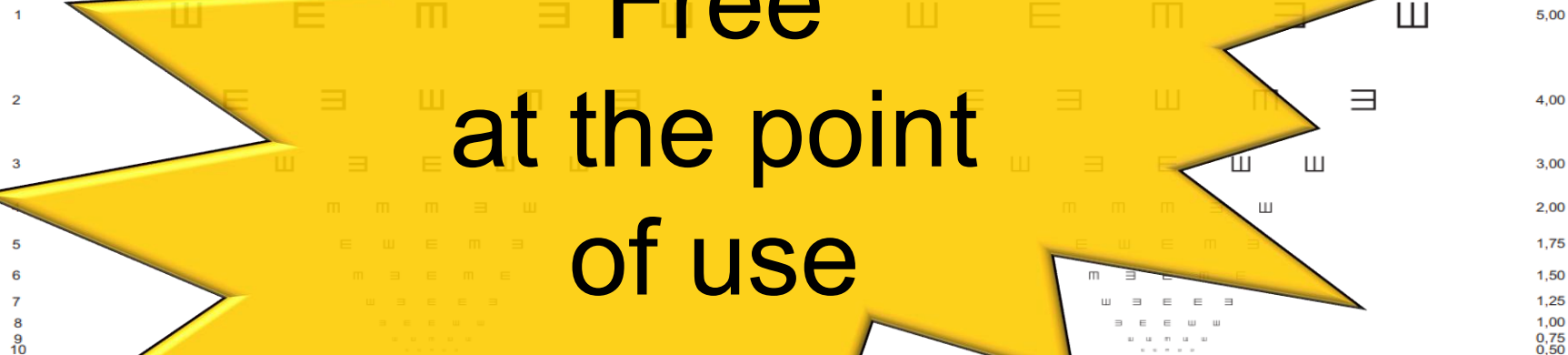




NDT Near Vision Acuity Test

To be administered in accordance with the conditions defined in ISO 18490:2015(E).

Free
at the point
of use



LINE

HEIGHT

Block A

250 mm (±5mm)

Block B

Test 143



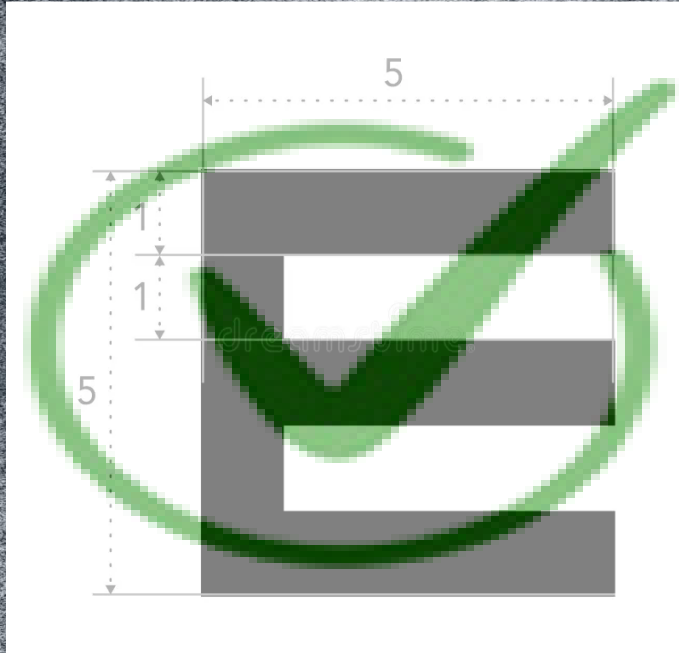
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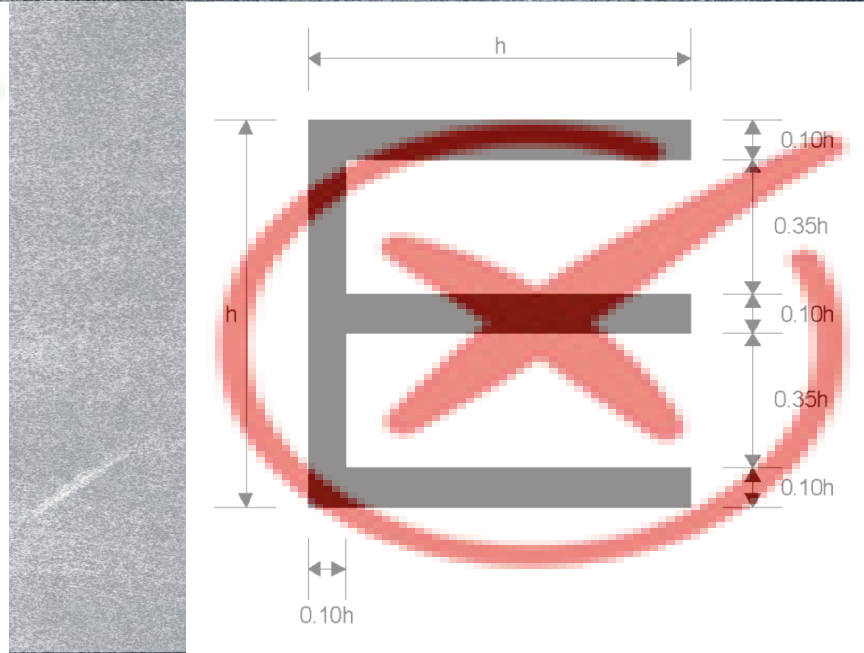
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Reason for removal



Correct Optotype
format



Incorrect Optotype
format



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Dr Wolfgang Radner



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[illegible]

T Z 28
100

P T O C 28
60

Z L P E D 28
50

E T O D C F 28
40

D P C Z L F T 28
30

C F D T E O P L 28
25

L D C Z O T E P 28
20

P F C D T Z L E 28
16

READING AND DISTANCE TEST SHEET FOR OLD-SIGHTED PEOPLE ONLY FROM AGE 35 AND UPWARD

INSTRUCTIONS

Hold this Sheet in a good light 13 inches from your eyes and see how far down on the test type below you can read easily without your spectacles. The number at the beginning of the smallest line of print which you can read easily is the number of the reading spectacles you need, and the number at the end of that line is the number of distance spectacles you need.

REMEMBER

Hold this sheet no further nor closer than 13 inches. Now remove your spectacles from your eyes, and commence with the word "ALL."

NO. OF
READING
SPECTACLES

NO. OF
DISTANCE
SPECTACLES

7 TO 5

ALL

16 TO 13

9 TO 7

EYES

14 TO 26

10 TO 8

NEEDING

18 TO 40

12 TO 9

HELP

20 TO 80

14 TO 10

SHOULD USE

30 TO 80

16 TO 12

DR. HAUX PERFECT VISION

40 TO 144

20 TO 16

SPECTACLES WHICH ARE MADE

144

40 TO 20

OF THE FINEST MATERIAL OBTAINABLE

144

80 TO 40

AND GUARANTEED TO GIVE ABSOLUTELY

144

144 TO 80

PERFECT SATISFACTION TO ALL WHO WEAR THEM.

144

EXPLANATION: The numbers at the beginning of the line (say 7 to 5) mean that the customer who can only read the line "ALL" needs either a No. 7 or a No. 5 spectacle for reading. The numbers at the end of the line say (16 to 10) mean that he needs either a No. 16 or a No. 10 or a No. 12 or a No. 10 spectacle for distance. All these numbers should be tried and he should be given the spectacles that suit him best. The same applies to all the numbers given at the beginning and end of each line.

Chart print quality Requirements



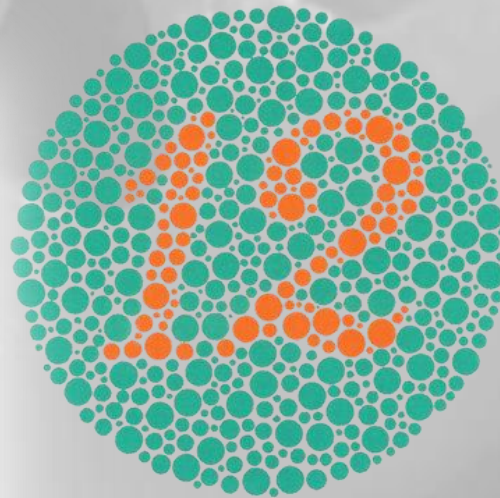
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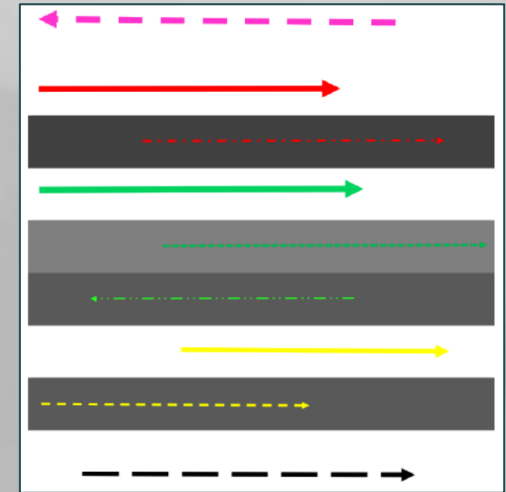
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Colour perception



Ishihara
17/17 plates



Trade test
Related to method /
technique



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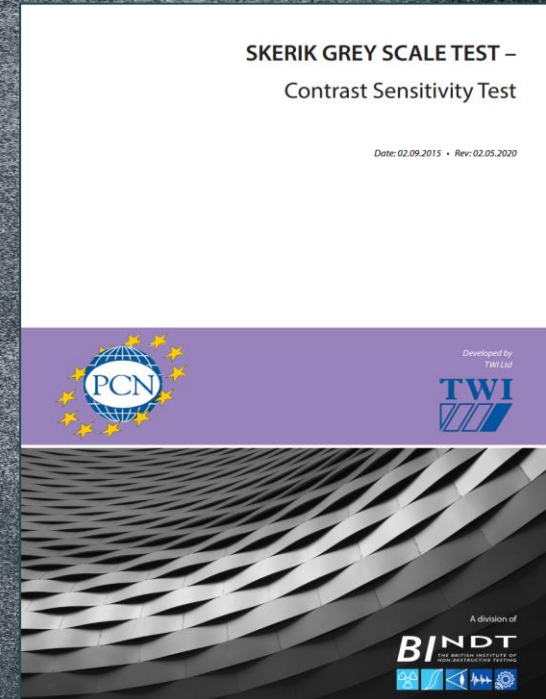
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Grey scale perception

2	7	8	2	1
23	6	4	32	5
5	4	65	65	46
1	64	32	542	64
46		35	46	63

Dr Kolbl



Skерik



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BS EN ISO 18490



Not medical
in nature



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Personnel administering the test

Near and far acuity testing, or colour vision verification(s) shall be administered by a:

- licensed physician
- nurse
- ophthalmologist or optometrist;
- or by a trained professional who is approved & documented by a Level 3 personnel acting on behalf of the employer.

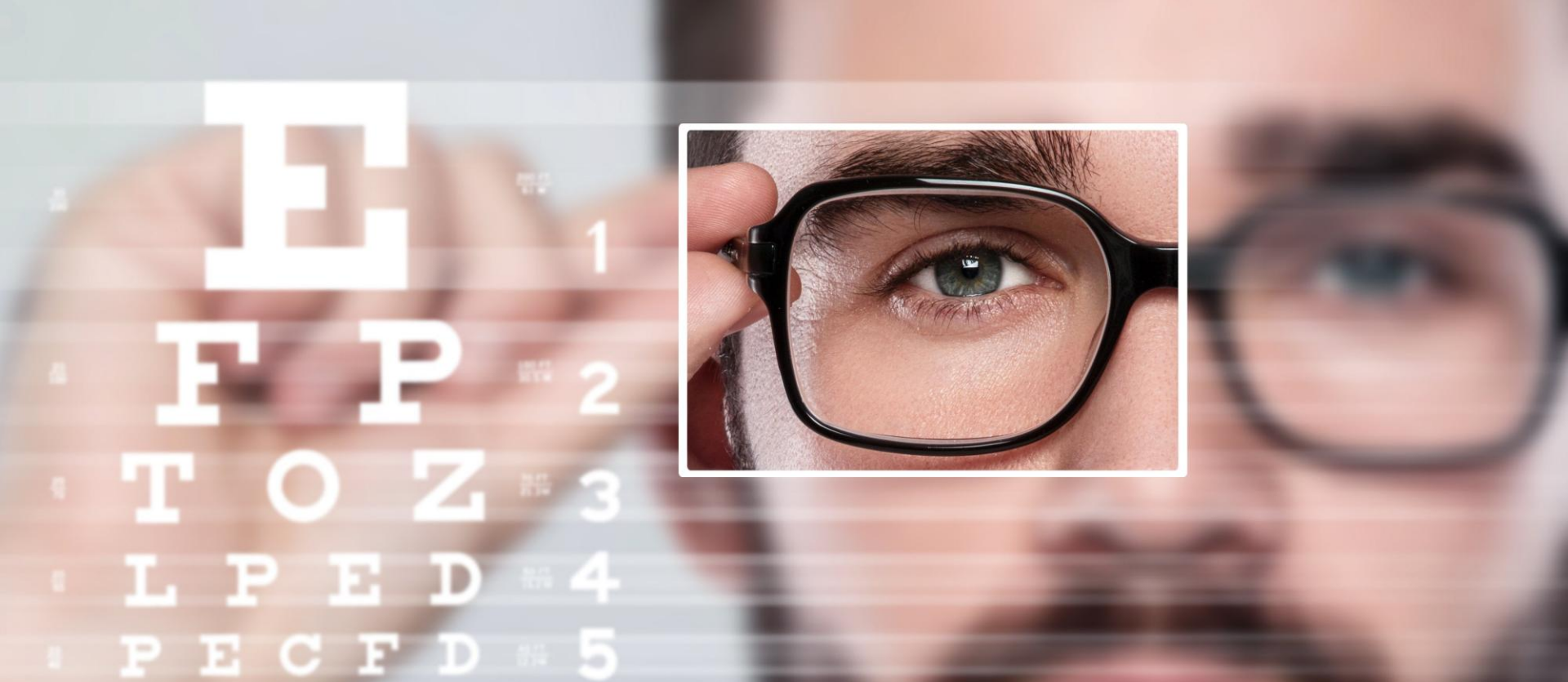


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Annex 1: Personnel Administering the test



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Trained professional

Individual authorised to
administer

18490 VT Requirements



Qualification Requirements

Demonstrable familiarity NDT /
VT standards

Demonstrate competence



Have a thorough understanding

Pass

Fail



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BS EN 4179 :2026



Tumbling E Dated Version ISO 18490:2015

- 20/25 (Snellen)
- Jaeger No1
- Colour perception:
 - to distinguish and differentiate colours used within the NDT process



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PCN Aerospace complies with



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PCN24/PSL44

PCN 24/GEN & PCN24/AERO

PCN24/PSL44

Visual acuity and colour perception
guidance document

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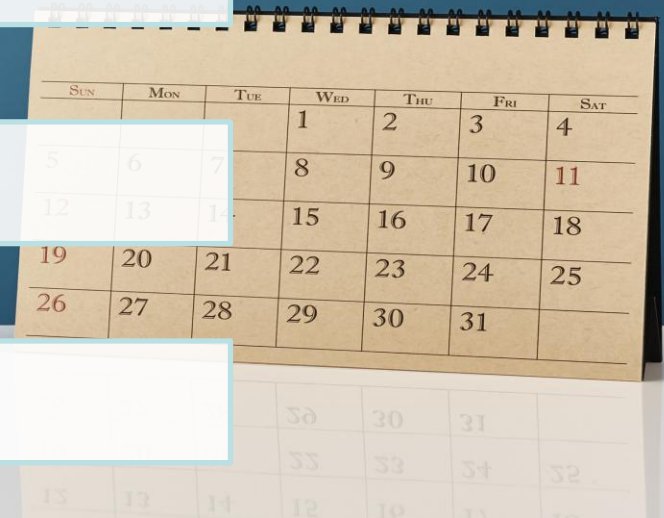
Time periodicity within the preceding

Vision acuity – 12 months

Colour perception – 60 months

Greyscale – 60 months

Trade test – 60 months



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Thank you for your time, any questions?



BINDT PCN Scheme contact:

Patrick.boulton@bindt.org

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