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## **The MCA will be ceasing to conduct Holmes Wright B Lantern (HWB) supplementary tests for colour vision for Deck Personnel and moving to the Colour Assessment and Diagnosis (CAD) test**

**Notice to all shipowners, ship operators and ship managers; employers of seafarers; master, officers and seafarers on sea-going ships ordinarily engaged in commercial operations**

*This notice should be read in conjunction with Merchant Shipping Notice 1839 Maritime Labour Convention, 2006 Medical Certification Regulations 2010 and the Corrigendum to MSN 1839 (M)*

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### **Summary**

This MIN details the way in which the MCA will be ceasing to conduct Holmes Wright B Lantern (HWB) supplementary tests for colour vision for Deck Personnel at Marine Offices and moving to the Colour Assessment and Diagnosis (CAD) test conducted by external bodies.

### **1. Introduction**

- 1.1 The MCA will be ceasing to conduct Holmes Wright B Lantern (HWB) supplementary tests for colour vision. The lanterns are no longer manufactured, so it has not been possible to replace them.
- 1.2 The Colour Assessment and Diagnosis (CAD) test measures the severity and type of colour vision loss, and reliably detects congenital deficiency. The CAD test was developed by City University in conjunction with the UK's Civil Aviation Authority (CAA) and is being used by the aviation industry worldwide. It is also being used in other parts of the transport sector and other industries that require colour vision testing for their workforce.
- 1.3 Research was commissioned by MCA which recommended the use of and set the criteria for the CAD test for seafarers<sup>1</sup>. The CAD test is the recognised supplementary colour vision test for Deck personnel who fail the Ishihara plate test, either during an MCA ENG medical

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<sup>1</sup> <https://www.gov.uk/government/publications/colour-vision-assessment-for-maritime-navigation-lookout>



examination, or when an ML5 assessment form is completed. There is no change in the colour vision tests for Engineers, Electro Technical Officers or Radio personnel.

1.4 As this is a significant change of procedure, to allow for seafarers to undergo a colour vision test there may be a short transitional period when both HWB lantern tests and CAD tests are available.

## 2. Amendments to MSN 1839

2.1 Marine Shipping Notice (MSN) 1839 (M) Maritime Labour Convention medical certification was published in July 2014. A corrigendum to MSN 1839 will be issued to reflect the change to the supplementary colour vision test. The following corrections should now be noted.

2.2 All references to HWB lantern tests in MSN 1839 are replaced by a reference to the CAD test.

2.3 **Application:** Paragraph 5.3.2 has been extensively rewritten. See below:

“5.3.2 A deck applicant who fails the Ishihara plate test may arrange for their colour vision to be re-tested at an MCA approved CAD test centre (listed at Annex B). The CAD test centre will charge a fee for the CAD test, which is payable directly to the test centre. Failure in this test will mean that a medical certificate may only be issued with a restriction precluding lookout duties at night. Trainee Deck officers however will be made permanently unfit. Other deck candidates applying for their first MCA Certificate of Competency (CoC), Able Seafarer Deck Certificate of Proficiency or Rating Certificate who have failed the Ishihara plate test will only be considered if they have subsequently passed the MCA HWB or CAD test and hence carry no restriction on their seafarer medical certificates precluding lookout duties.

- Existing deck seafarers who have failed the Ishihara plate test but passed the MCA HWB lantern test and have evidence of this will still be considered to meet the colour vision standards and do not need to undertake a CAD test.
- Existing deck seafarers who have failed the Ishihara plate test and passed the HWB lantern test but do not have evidence of this will need to take the MCA CAD test. If they do not take the test, or fail it, they may continue working in their current roles. They will be given an ENG 1 noting that they do not meet the colour vision standards with an appropriate restriction.
- Existing deck seafarers who wish to qualify for an MCA CoC for the first time, or a higher CoC, will have to meet the colour vision standards (i.e. Ishihara plates or MCA CAD test passed, or provide evidence that they have previously passed the MCA HWB lantern test). Their seafarer medical certificate must not have any restriction on lookout duties.”

2.4 MSN 1839 Appendix 1 to Annex A has also been amended and replaced. This is included in this notice.

2.5 MSN 1839 Annex B, which gave the addresses of Marine Offices where lantern tests were conducted, has been completely replaced. **This is included in this notice and provides the contact and booking details for MCA Colour Assessment and Diagnosis (CAD) Test Centres.** CAD testing will not be undertaken at Marine Offices or conducted by MCA personnel. Only CAD tests conducted by centres approved by the MCA will be accepted.

## 3. Instructions for seafarers:

3.1 The seafarer must take the following documents to the test centre:



A referral document, which can be any one of the following;

- an ENG 3 form (MSF 4106)
- a letter from the Approved Doctor
- an ML5 form (MSF 4112)
- Application for a seafarer vision test sight test form (MSF 4100) if visual acuity and the Ishihara test were conducted by an optometrist

3.2 The seafarer will also need to take:

- Any normal glasses or contact lenses worn to correct for refractive errors (**colour correcting lenses or glasses are not permitted**)
- A statutorily issued form of photo identification document (ID) such as a passport, driving licence or seafarer discharge book. A photocopy or scanned copy is not acceptable.



## **EYESIGHT STANDARDS FOR SEAFARERS**

### **GENERAL**

Eyesight testing is carried out at every seafarer medical examination.

No person should be accepted for training or sea service if irremediable morbid condition of either eye, or the lids of either eye, is present and liable to the risk of aggravation or recurrence.

Binocular vision is normally required for all categories of seafarers. Case by case assessment may be appropriate in certain circumstances. See AD Guidance 14.

In all cases where visual aids (spectacles or contact lenses) are required for the efficient performance of duties, a spare pair must be carried when seafaring. Where different visual aids are used for distant and near vision, a spare pair of each must be carried.

Individuals who wish to go to sea as deck or engineer personnel or who are considering dual qualifications are strongly advised to have their eyes tested by an optometrist before embarking on their career, in view of the particular importance for them of good sight.

### **COLOUR VISION**

Deck officers and ratings - Colour vision should be tested by the Approved Doctor with Ishihara plates, using the introductory plate, and all the transformation and vanishing plates. Those used should be recorded on the medical report form (ENG 2). Candidates who fail the Ishihara colour plate test may apply to one of the MCA's nominated Colour Assessment and Diagnosis (CAD) test centres listed at Annex C to this MSN, to have their colour vision re-tested by undertaking a CAD Test. Refer to AD Guidance 14

Electro Technical Officers (ETO) - should have their colour vision tested by the Approved Doctor using Ishihara plates (as for deck department). Those who fail the Ishihara test may apply to any registered optician for confirmatory testing using the Farnsworth D15 test or City University test. Refer to AD Guidance 14

Engineer and radio department personnel should have their colour vision tested by the Approved Doctor using Ishihara plates (as for deck department). Those who fail the Ishihara test may apply to any registered optician for confirmatory testing using the Farnsworth D15 test or City University test. Refer to AD Guidance 14

In all cases where a follow-up test has been undertaken, a report showing the result must be returned to the Approved Doctor, on the basis of which he/she will decide whether it is appropriate to fail the candidate or issue a full or restricted medical certificate, reflecting the duties the seafarer will be required to undertake.

Any decision relating to subsequent colour vision testing should be officially recorded by the CAD test centre or optometrist and retained by the seafarer with the ENG 1 to avoid the necessity for repeated secondary testing.

Other personnel should be tested for colour vision, where relevant for the duties to be undertaken, using the Ishihara plates.



**Table - SUMMARY OF STANDARDS REQUIRED**

Category of Seafarer	Basic Visual Acuity Standard (unaided)		Higher Visual Acuity Standard (aided if necessary)		Near Vision (both eyes together aided or unaided)	Colour Vision	Visual Field
	Better eye	Other eye	Better eye	Other eye			
<b>Deck or dual career</b>	Better eye 6/60	Other eye 6/60	Better eye 6/6	Other eye 6/12	N8	Ishihara or CAD	No pathological field defect
<b>Engineer/ Radio</b>	6/60		6/18	6/18	N8	Ishihara or Farnsworth D15 or City University	Sufficient to undertake duties efficiently
<b>Others</b>	Sufficient to undertake duties efficiently						
<b>Those who become monocular in service with no evidence of progressive eye disease in the remaining eye</b>							
Deck	6/60	-	6/6	-	N8	Ishihara or CAD	No pathological field defect
Eng/Radio	6/60	-	6/9	-	N8	Ishihara or Farnsworth D15 or City University	Sufficient to undertake duties efficiently
<b>Others</b>	Sufficient to undertake duties efficiently						
There should be a sufficient period of adaptation after becoming monocular to enable stairs to be descended rapidly and safely.							

**Notes**

1. No diplopia, congenital night blindness, retinitis pigmentosa or any other serious or progressive eye disease is permitted.
2. If bifocal glasses are worn there should be a period of adaptation first because of the risk of falls.
3. Where glasses or contact lenses are needed to meet the vision standard, a spare pair (distance and near vision if necessary) should be carried.
4. Aids to colour vision e.g. red-tinted x-chroma, chromas lenses and chromagen lenses are not permitted.
5. Seafarers who suffer pathological field defects should have a field of vision at least 120° in the horizontal measured by the Goldman perimeter using the iii/4 setting (or equivalent perimetry). In addition there should be no significant defect in the binocular field which encroaches within 20° of fixation above or below the meridian. Homonymous or bitemporal defects which come close to fixation whether hemianopic or quadrantopic are not accepted.



**MCA Colour Assessment and Diagnosis (CAD) Test Centres**

The seafarer should contact the test centre directly to make a booking for a test. There will be a charge for the test which the seafarer will need to pay directly to the test centre.

City, University of London  
Colour Research Laboratory  
Northampton Square

**London**

EC1V 0HB

[colourvision@city.ac.uk](mailto:colourvision@city.ac.uk)

Direct booking and payment via website: <http://www.city.ac.uk/avot>

The AMS (London)  
Aeromedical Centre  
22 Upper Wimpole Street

**London**

W1G 6NB

Tel: 01293 775336

Email for bookings: [reception@msgatwick.com](mailto:reception@msgatwick.com)

University of Bradford  
School of Optometry & Vision Science  
Phoenix South West  
Shearbridge Road

**Bradford**

BD7 1DP

Tel : 01274 234648 or 01274 234649 (eye clinic reception)

Email for bookings: [d.mckee@bradford.ac.uk](mailto:d.mckee@bradford.ac.uk)

School of Psychology  
William Guild Building  
Room G35  
Kings College University of Aberdeen

**Aberdeen**

AB24 3FX

Tel: 01224 272387

Email for bookings: [vision@abdn.ac.uk](mailto:vision@abdn.ac.uk)



## More Information

Seafarer Safety and Health Branch  
Maritime and Coastguard Agency  
Bay 2/17  
Spring Place  
105 Commercial Road  
Southampton  
SO15 1EG

Tel : +44 (0) 203 8172835  
e-mail: [seafarer.sh@mca.gov.uk](mailto:seafarer.sh@mca.gov.uk)

Website Address: [www.gov.uk/government/organisations/maritime-and-coastguard-agency](http://www.gov.uk/government/organisations/maritime-and-coastguard-agency)

General Enquiries: [infoline@mca.gov.uk](mailto:infoline@mca.gov.uk)

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