
Night-time lookout - Photochromic Lenses and Dark Adaptation

Notice to all ship operators, masters/skippers, officers and lookouts

PLEASE NOTE:-

Where this document provides guidance on the law it should not be regarded as definitive. The way the law applies to any particular case can vary according to circumstances - for example, from vessel to vessel - and you should consider seeking independent legal advice if you are unsure of your own legal position.

Summary

In response to the Marine Accident Investigation Branch report into the loss of the sailing yacht OUZO and her crew, this notice gives guidance on :

- avoiding the wearing of photochromic lenses for lookout at night; and
- allowing sufficient periods for dark adaptation for lookouts at night.

1. Background

- 1.1 As part of their investigation into the loss of the sailing yacht OUZO and her three crew, the Marine Accident Investigation Branch (MAIB) commissioned a report from University College London's Institute of Ophthalmology on photochromic lenses, as these were worn by the lookout on the Pride of Bilbao at the time of the incident. Photochromic lenses are those which darken with exposure to strong light and lighten in dark surroundings.
- 1.2 The report demonstrated that the light transmission of these lenses was significantly reduced as compared to ordinary coated and uncoated lenses, which would have decreased the likelihood of the wearer detecting navigation lights.
- 1.3 The report also asserted that an insufficient period of dark adaptation is likely to have been a significant factor in the lookout's failure to see the yacht earlier. It also identified significant white light pollution in the wheelhouse and the red filter from the chart table light had been removed, both factors which would have reduced the lookout's night vision.
- 1.4 On the basis of these findings, the MAIB recommended that photochromic lenses should not be worn for lookout duties at night. This notice advises operators, masters/skippers and seafarers on precautions to be taken by those with lookout duties at night.

2. Dark adaptation

- 2.1 With respect to taking over the Watch, STCW A/VIII Part 3-1, para 19 states:

“The relieving officer shall ensure that the members of the relieving watch are fully capable of performing their duties, particularly as regards their adjustment to night vision. Relieving officers shall not take over the watch until their vision is fully adjusted to the light conditions”.

2.2 No suitable period for dark adaptation is stated, but MAIB’s report says that research indicates that this period is typically 10 to 15 minutes. This needs to be taken into account in determining the watch-keeping regime for the vessel.

2.3 On some large vessels, crew with lookout duties alternate periods on the bridge with periods of safety checks and fire watches in other parts of the vessel, some of which will be brightly lit. On fishing vessels, the deck lights may be very bright, and crew may come off the deck to take a watch. The same period of dark adaptation will be required every time the lookout returns to the bridge. In addition it is important that dark is maintained on the bridge – making full use of blackout procedures, ensuring that radars and console lights are dimmed appropriately and avoiding contamination from residual light and surrounding uncurtained areas.

3. Photochromic lenses

3.1 Photochromic lenses, even after being in the dark for an extended period and in their most translucent state, can reduce night vision significantly. They **should not be worn** for lookout duties at night.

3.2 The MCA’s approved doctors have also been asked to issue this advice to any seafarers they examine who wear glasses with photochromic lenses.

More Information

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