MARINE GUIDANCE NOTE

MGN 105 (M+F)

Maritime and Coastguard Agency

Use and Fitting of Retro-Reflective Material on Life-Saving Appliances

Notice to Owners of Merchant Ships and Fishing Vessels, Shipbuilders and Repairers, Manufacturers of Life-Saving Appliances, Masters, Skippers, Officers and Ratings

This Note supersedes Merchant Shipping Notice No. M.1444

Summary

This Note advises of the requirements for fitting of retro-reflective material on certain life-saving appliances.

This Note forms an integral part of the Merchant Shipping (Life-Saving Appliances for Passenger Ships of Classes III to VI(A)) Regulations 1999 and the Merchant Shipping (Life-Saving Appliances for Ships other than Ships of Classes III to VI(A)) Regulations 1999.

1. The Merchant Shipping (Life-Saving Appliances for Passenger Ships of Classes III to VI(A)) Regulations 1999 and the Merchant Shipping (Life-Saving Appliances for Ships other than Ships of Classes III to VI(A)) Regulations 1999 require that life-saving appliances carried on ships to which the Regulations apply be fitted with retro-reflective material where this will assist in detection.

2. The International Maritime Organisation (IMO) has issued Resolution A.658(16) which contains guidelines on the use and fitting of retro-reflective material on life-saving appliances and these guidelines are incorporated in the Annex to this Notice.

3. Where the legislation referred to in paragraph 1 requires that the dimensions and location of the material be to the satisfaction of the Secretary of State, the dimensions and location described in the guidelines, or the nearest equivalent arrangement, will be acceptable for this purpose.

4. When retro-reflective material is being fitted on new or existing life-saving appliances, or being replaced on existing life-saving appliances, it should be fitted in accordance with the guidelines. Material to be used must be of a type which has been approved by, or on behalf of, the Agency as complying with IMO Resolution A.658(16) Annex 2 and overprinted with an approved reference code. All retro-reflective material that is cracked, delaminated or otherwise mechanically damaged must be replaced. A simplified visual performance test is outlined in paragraph 5 and incorporates advice given by a leading manufacturer of approved retro-reflective material.

5. The performance of the retro-reflective material fitted to life-saving appliances should be checked by the following method at regular intervals and when life-saving appliances are being serviced:

.1 Place a new piece of the same retro-reflective material adjacent to, and on the

same plane as, a representative piece of material fitted to the appliance.

.2 Pour water over both pieces of material.

.3 Using a powerful torch or Aldis lamp held at eye level, compare the performance of the two pieces of material from a distance of 10 metres.

.4 If a noticeable deterioration in performance is observed then the retro-reflective material on the appliance should be replaced.

.5 Dry off the appliance before re-stowing.

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An executive agency of the Department of the Environment, Transport and the Regions

ANNEX

GUIDELINES ON THE USE AND FITTING OF RETRO-REFLECTIVE MATERIALS ON LIFE-SAVING APPLIANCES

1. Lifeboats and Rescue Boats

Retro-reflective materials should be fitted on top of the gunwale as well as on the outside of the boat as near the gunwale as possible. The materials should be sufficiently wide and long to give a minimum area of 150cm^2 and should be spaced at suitable intervals (approximately 80cm from centre to centre). If a canopy is fitted, it should not be allowed to obscure the materials fitted on the outside of the boat, and the top of the canopy should be fitted with retro-reflective materials similar to those mentioned above and spaced at suitable intervals (approximately 80cm centre to centre). In the case of partly enclosed or totally enclosed lifeboats, such materials should be placed as follows:

.1 for detection by horizontal light beams - at suitable intervals at half the height between the gunwale and the top of the fixed cover; and

.2 for detection by vertical light beams (eg from helicopters) - at suitable intervals around the outer portion of the horizontal (or comparable) part of the top of the fixed cover;

.3 retro-reflective materials should also be fitted on the bottom of lifeboats and rescue boats which are not self-righting.

2. Liferafts

Retro-reflective materials should be fitted around the canopy of the liferaft. The material should be sufficiently wide and long to give a minimum area of 150cm^2 and should be spaced at suitable intervals (approximately 80cm from centre to centre) at a suitable height above the waterline, doorways included, if suitable. On inflatable liferafts, retro-reflective materials should also be fitted to the underside of the floor, cross-shaped in the centre. The dimension of the cross to be half the diameter of the liferaft, and a similar cross should be applied to the top of the canopy.

On liferafts which are not equipped with canopies, materials which should be sufficiently wide and long to give a minimum area of 150cm^2 should be attached to each buoyancy chamber at suitable intervals (approximately 80cm centre to centre) in such a manner that they are visible both from the air and from a ship.

3. Lifebuoys

Retro-reflective materials of a sufficient width (approximately 5cm) should be applied around or on both sides of the body of the lifebuoy at four evenly-spaced points.

4. Buoyant Apparatus

Buoyant apparatus should be fitted with retro-reflective materials in the same manner as liferafts without canopies, always depending on the size and shape of the object. Such materials should be visible both from the air and from a ship.

5. Lifejackets

Lifejackets should be fitted with patches of retro-reflective materials with a total area of at least 400cm^2 distributed so as to be useful for search from air and surface craft from all directions. In the case of a reversible lifejacket, the arrangement should be complied with no matter which way the lifejacket is put on. Such material should be placed as high up on the lifejacket as possible.

6. Immersion suits

Immersion suits should be fitted with patches of retro-reflective material with a total area of at least 400cm^2 distributed so as to be useful for search from air and surface craft from all directions.

For an immersion suit that does not automatically turn the wearer face up, the back of the suit should be fitted with retro-reflective material with a total area of at least 100cm^2.

7. General remarks

.1 Retro-reflective materials should meet the minimum technical specification given in the Technical Specification for Retro-Reflective Material for use on Life-Saving Appliances (Annex 2 to resolution A.658(16)).

.2 The illustrations reproduced in this annex are intended to provide Administrations with examples from which guidance may be taken when fitting retro-reflective materials in accordance with these guidelines.