

(h.) The maker's or dealer's name and address must be clearly marked on the compass. Suitable means of illumination at night must be provided.

2. (a.) In a ship which carries passengers in the North Atlantic four of the boats must be provided with compasses in accordance with paragraph 1 of this notice, and every motor-boat carried must be so provided. The remaining boats need not be provided with compasses, but the boats fitted with compasses must be marked so as to distinguish them from other boats.

(b.) In every other passenger-ship to which General Rule 14 (2) applies (*i.e.*, foreign-going passenger-ships and sea-going home-trade passenger-ships) and carrying sixteen or more boats, eight boats must be provided with compasses in accordance with paragraph 1 of this notice. If less than sixteen boats are carried at least one-half must be provided with such compasses.

(c.) In every cargo-ship to which General Rule 14 (2) applies (*i.e.*, foreign-going and home-trade cargo-ships), at least two boats, one on each side of the ship, must be provided with compasses in accordance with paragraph 1 of this notice.

(d.) Any compasses which have previously been passed and are still in good condition may be accepted in boats which are not required to have compasses in accordance with paragraph 1 of this notice; but all new compasses, and all compasses fitted in boats for new ships, or in new boats for existing ships, must comply with paragraph 1. In the ships mentioned in clause (a) of this paragraph, the four boats with compasses must have compasses in accordance with paragraph 1.

3. The Director of the National Physical Laboratory has advised the Board of Trade that, to secure an efficient compass, the following conditions should be satisfied; and the Board, while not insisting on compliance with the whole of these conditions, recommend their adoption by makers of ship's lifeboat compasses, and invite the attention of shipowners to them.

The magnet to be of tungsten steel and to be enclosed in a liquid-tight compartment; for a 4-in. card the moment of the magnetic system to be not less than 700 C.G.S. units; the jewelled centre to be of sapphire or other equally hard stone; the pivot to be of iridium and the point slightly rounded; the liquid to be a mixture of alcohol and distilled water, having a density between 0.94 and 0.97 (a mixture of one part of spirits of wine with two parts of distilled water will, in general, be found suitable*); the effective weight of the float-card on the pivot to be not more than 4 grammes; the bowl to be of stout non-magnetic metal, and to be loaded with lead so as to swing freely in gimbals giving fore-and-aft and thwartship action; the card to have a $\frac{1}{2}$ -in. radial clearance from the bowl and to be divided into points or half-points; and, while a satisfactory luminous dial is desirable, an efficient lamp should also be provided in all cases.

4. The Board of Trade wish to draw attention to the desirability of the periodical testing of compasses. The Director of the National Physical Laboratory is prepared to test compasses and to advise on technical points. Application should be made to the Director, National Physical Laboratory, Teddington, London S.W.

5. This notice supersedes the notice on the subject issued in September, 1915 (Handbill 366), but a compass which has, before the issue of the present notice, been passed as complying with the previous notice may be accepted at any time so long as it remains in good condition.

C. HIPWOOD,
Assistant Secretary.

Board of Trade, Marine Department, July, 1916.

No. 50.

New Zealand, No. 570.

MY LORD,—

Downing Street, 27th July, 1916.

A.—1, 1917,
No. 26.

I have the honour to acknowledge the receipt of Your Excellency's despatch, No. 133, of the 2nd June, relating to the scheme for the organization and development of scientific and industrial research.

2. Copies are being transmitted to the Governments of the other self-governing dominions.

I have, &c.,

A. BONAR LAW.

Governor His Excellency the Right Hon. the Earl of Liverpool,
G.C.M.G., M.V.O., &c.

No. 51.

New Zealand, No. 611.

MY LORD,—

Downing Street, 8th August, 1916.

A.—1, 1917,
No. 50.

With reference to my despatch, No. 568, of the 26th July, I have the honour to transmit to Your Excellency, for the information of your Ministers,

* This mixture freezes at about 0° Fahrenheit. If a mixture which will remain liquid to about -10° Fahrenheit is required, two parts of alcohol to three parts of water should be used.