

# APPENDIX J

## PART 1

### SEA ANCHORS - USE IN LIFEBOAT, RESCUE BOAT, INFLATED BOATS AND LIFERAFTS

For test requirements see Chapter 7, Part I of Volume 2.

#### 1 Purpose

1.1 The purpose of a lifeboat, rescue boat or inflated boat sea anchor is twofold i.e. to hold the boat in a position where it is heading into the wind and sea, and to reduce wind induced drift.

1.2 By keeping the boat head to wind and sea the boat will be on the most comfortable heading and the risk of the boat being swamped will be reduced.

1.3 In the case of an abandonment, a reduction in drift will make the task of search and rescue operations easier as a result of a boat remaining as close as possible to the abandon ship position.

#### 2 Construction

2.1 The sea anchor provided in an open lifeboat is of conical or pyramid shape with a small opening at its apex. This type of sea anchor is constructed of canvas with roped seams, the roping forming an eye at the apex and a bridle at the end with the larger opening. An eye is formed in the bridle for attaching the hawser which is three times the length of the lifeboat. Attached to the eye at the apex is the tripping line which can be used for recovering the sea anchor.

2.2 A further attachment is an oil bag - a canvas bag loosely filled with oakum or other oil absorbent material, for which there are 4.5 litres of vegetable, fish or animal oil in a container for charging and replenishing the bag.

2.3 The sea anchor in a totally enclosed lifeboat or a rescue boat will usually be made of a synthetic material which is porous and slightly stiff. It will be conical in shape, closed at the apex and will not be provided with a tripping line or oil bag. The hawser will be a synthetic material, of braided construction 30 metres in length and connected to a bridle at the open end of the sea anchor.

2.4 The sea anchor in an inflated boat will be either similar to that in a rescue boat or be made of a light synthetic material roughly in the shape of a parachute.

### **3 Use**

3.1 Following an abandonment and after a lifeboat or rescue boat has cleared the ship the sea anchor should be streamed except in flat calm conditions when it will be unable to perform any useful function. The sea anchor can also be used by a rescue or inflated boat in a rescue situation for example, following an engine failure or if it is necessary to heave to.

3.2 The ends of the hawser and the tripping line where fitted should be secured in the boat, the hawser passed through the fairlead in the bow and the sea anchor paid out with sufficient slack in the tripping line to ensure that the open end of the sea anchor is facing the boat. In adverse weather conditions the hawser should be slackened down under control e.g. by taking a turn round the forward thwart.

3.3 In an open lifeboat where the effects of breaking seas are a cause for concern the oil bag should be used. It can be secured to the bridle, or at or near the end of the hawser, but preferably should be rigged on an endless whip arrangement in order that it can be replenished without having to heave in the sea anchor and to permit it to be located in the most effective position. For this purpose use can be made of the buoyant heaving lines rigged to run through the eye at the end of the hawser or through a grommet made from suitable available cordage.

3.4 In an open lifeboat the rudder and tiller be unshipped when using the sea anchor and the steering oar rigged to assist in keeping the lifeboat head to wind and sea.

3.5 During prolonged use of the sea anchor the hawser should be protected from chafe by wrapping something suitable round it where it passes through the fairlead or by slacking it down periodically to expose a fresh part of the hawser to the fairlead.

3.6 In an open lifeboat in extreme sea conditions if the sea anchor is occasionally preventing the bow of the lifeboat lifting with the waves and thereby exposing the lifeboat to the risk of swamping, the tripping line should be tended and the sea anchor tripped as required.

## **PART 2**

### **Sea anchors - use in liferafts**

#### **1 Purpose**

The purpose of a liferaft sea anchor is twofold i.e. to reduce wind induced drift and to contribute to the stability of the liferaft in a seaway. Two sea anchors are provided. One is permanently rigged and the other is a spare. The former is secured to the raft in such a position that the liferaft will lie oriented to the wind in the most

stable manner and such that the canopy opening will not be facing directly towards the wind.

## **2 Construction**

Liferaft sea anchors were formerly made of a light synthetic material roughly in the shape of a parachute. This was found to be a most ineffective design and liferaft sea anchors are now conical in shape. The material is synthetic, porous and slightly stiff and there is no opening at the apex. Such sea anchors are relatively easy to recover and do not require to be fitted with a tripping line. The bridle is designed to prevent the sea anchor tumbling through the bridle and fouling. This design is a smaller scale version of the sea anchor which may be found in totally enclosed lifeboats and in rescue boats.