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ASSEMBLY - 4th extraordinary session  
Agenda item 9

RECOMMENDATION FOR TESTING LIFE-JACKETS

RESOLUTION A.169(ES.IV)

adopted on 28 November 1968

THE ASSEMBLY,

NOTING Article 16(i) of the IMCO Convention concerning the function of the Assembly,

BEARING IN MIND that at its present session it adopted the amendments to the International Convention for the Safety of Life at Sea, 1960, and in particular to Regulation 22 of Chapter III,

HAVING CONSIDERED the Recommendation adopted by the Maritime Safety Committee at its seventeenth session,

ADOPTS the Recommendation for testing life-jackets, the text of which is set out in the Annex to this Resolution,

INVITES all governments concerned to apply the provisions of this Recommendation when testing life-jackets for approval.

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## ANNEX

### RECOMMENDATION FOR TESTING LIFE-JACKETS

Reliability of the finished life-jacket and the component materials is essential. Items to consider include effects of stowage in a compressed condition for extended periods of disuse, weathering, ageing, exposure to petroleum or other products and exposure to heat or cold.

A prototype life-jacket should undergo donning and water performance tests.

#### 1. Donning Test

As life-jackets will be used by uninitiated persons, often in adverse conditions, it is essential that risk of incorrect donning be minimized. Ties and fastenings necessary for proper performance should be few and simple. Life-jackets should readily fit all sizes of adults, both lightly and heavily clad.

##### (a) Test Subjects

Persons unfamiliar with the use of life-jackets should be selected to perform donning tests. The individuals chosen should include large and small persons, both male and female.

##### (b) Clothing

Each subject should be tested wearing normal street clothing. The test should be repeated with the subject wearing heavy-weather clothing.

##### (c) Test

Subjects should don the life-jacket unassisted using only the instructions provided by the manufacturer.

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(d) Assessment

The observer should note:

- (i) ease and speed of donning;
- (ii) the simplicity and number of fastenings;
- (iii) proper fit and adjustment;
- (iv) ease of movement.

2. Water Performance Tests

This portion of the test is intended to determine the ability of the life-jacket to assist a helpless person or one in an exhausted or unconscious state. All tests should be carried out in fresh water under still conditions.

(a) Test Subjects

For these tests a variety of subjects, both male and female of high, medium and low weight and height ranges should be selected. Only well-qualified swimmers should be used, since the ability to relax in the water is rarely otherwise obtained.

(b) Clothing

Subjects should wear only swimming costumes.

(c) Instructions to Subjects

The subjects should be made familiar with each of the tests set out below, particularly the requirement regarding relaxing and exhaling in the face-down position.

(d) Tests

The subject should don the life-jacket, unassisted, using only the instructions provided by the manufacturer. The observer should note the same points as in (i) to (iv) of 1(d) above. The observer should then ensure that the life-jacket has been properly adjusted before continuing with the tests.



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(i) Righting Tests

The subject should swim at least three gentle strokes (breast stroke) and then with minimum headway relax, with the head down and the lungs partially filled, simulating a state of utter exhaustion. The period of time should be recorded starting from the completion of the last stroke until the mouth of the subject comes clear of the water. The above test should be repeated after the subject has exhaled. The time should again be ascertained as above. The freeboard should be recorded from the water surface to the mouth with the subject at rest.

(ii) Drop Test

Without readjusting the life-jacket, the subject should drop vertically into the water, feet-first, from a height of at least 3 metres. The freeboard to the mouth should be recorded after the subject comes to rest.

(e) Assessment

After each of the water tests described above, the subject should come to rest with the trunk floating inclined backwards at an angle of not less than  $20^{\circ}$  and preferably not more than  $50^{\circ}$  from the vertical with the mouth clear of the water by approximately 12 cms. In the righting tests, the mouth should be clear of the water in approximately five seconds. Any tendency of the life-jacket to become dislodged during testing should be noted, as should physical harm done to the subject.

As far as possible, similar criteria should be applied in the approval of life-jackets for children.

Each life-jacket should be suitably marked showing that it has been approved by the Administration.

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