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**UNIFIED INTERPRETATION OF CHAPTER 12 OF THE INTERNATIONAL CODE  
FOR FIRE SAFETY SYSTEMS**

1 The Maritime Safety Committee, at its eighty-eighth session (24 November to 3 December 2010), with a view to providing more specific guidance for application of the relevant requirements of the International Code for Fire Safety Systems (FSS Code), approved the unified interpretation of chapter 12 of the FSS Code, as set out in the annex, prepared by the Sub-Committee on Fire Protection, at its fifty-fourth session.

2 Member Governments are invited to use the annexed unified interpretation as guidance when applying relevant provisions of chapter 12 of the FSS Code for ships constructed on or after 1 January 2012 and to bring the unified interpretation to the attention of all parties concerned.

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**ANNEX**

**UNIFIED INTERPRETATION OF CHAPTER 12 OF THE INTERNATIONAL CODE  
FOR FIRE SAFETY SYSTEMS (FSS CODE)**

**Chapter 12, paragraph 2.2.1.3 – Emergency fire pumps in cargo ships**

1 It should be documented that chapter 12, paragraph 2.2.1.3, of the Code is satisfied and the suction inlet is fully submerged under all conditions given in this unified interpretation.

1.1 Operational seagoing condition for which roll, pitch and heave should be taken into account.

The lightest seagoing condition should be considered, which is defined as the ballast condition which gives shallowest draught at the position of the sea chest and emergency fire pump as given in the approved stability booklet (or preliminary stability calculation for new building). The following table should be applied for the calculation of roll, pitch and heave. The heave combined pitch and heave combined roll are taken into account separately.

1.1.1 Heave combined pitch<sup>1</sup> in head sea

L, m	75 and below	100	125	150	175	200	225	250	300	350 and above
$\varphi$ , deg	4.5	4	3.2	2.7	2.3	2.1	1.8	1.7	1.6	1.5
H, m	0.73	0.8	0.87	0.93	0.98	1.03	1.07	1.11	1.19	1.25

**Note:** Values at the intermediate length of ships are to be obtained by linear interpolation.

where:

L: length of the ship, in metres, as defined in the International Convention on Load Lines in force, or length between perpendiculars at the ballast draught, whichever is greater

$\varphi$ : pitch angle<sup>2</sup> as defined in figure 1

H: heave amplitude as defined in figure 1.

1.1.2 Heave combined roll in beam sea

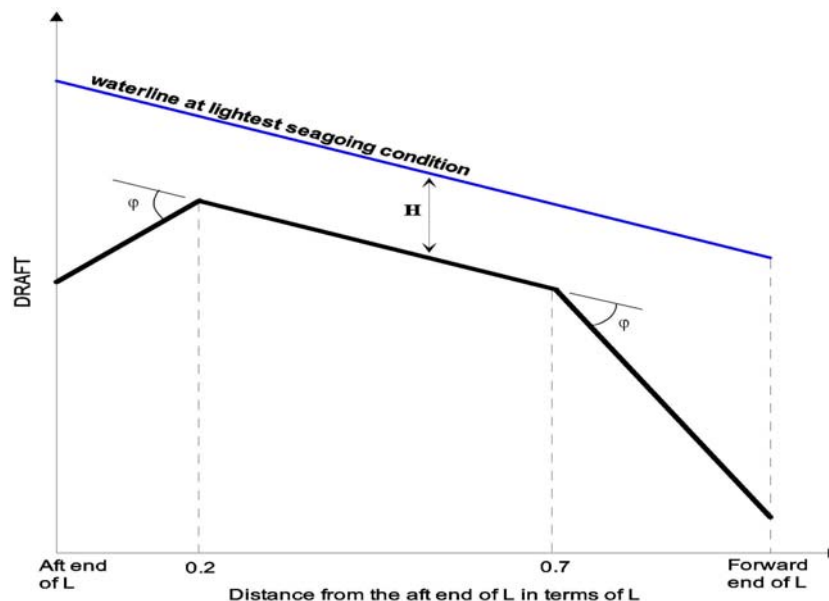
Heave combined roll angle<sup>2</sup> should be taken as:

.1 ships with bilge keels: 11°; and

.2 ships without bilge keels: 13°.

<sup>1</sup> The heave combined pitch is taken into account as in figure 1.

<sup>2</sup> Angle is to be measured from still waterline and downwards.



**Figure 1 – Waterline for which heave combined pitch is taken into account**

1.2 The emergency fire pump suction should be submerged at the waterlines corresponding to the two following conditions:

- .1 a static waterline drawn through the level of 2/3 immersion of the propeller at even keel (for pod or thruster driven ship, special consideration should be given); and
- .2 the ship in the arrival ballast condition, as per the approved trim and stability booklet, without cargo and with 10% stores and fuel remaining.

For either condition, roll, pitch and heave need not be applied.

1.3 A ship operating solely in sheltered water issued with SOLAS Certificates should be subject to compliance with the still water submergence requirements set out in paragraph 1.2.1 above.

2 In all cases the net positive suction head (NPSH) available for the pump should be greater than the NPSH required.

3 Upon completion of the emergency fire pump installation, a performance test confirming the pump's capacity required in the FSS Code, chapter 12, paragraph 2.2.1.1, should be carried out and, if the emergency fire pump is the main supply of water for any fixed fire-extinguishing system provided to protect the space where the main fire pumps are located, the pump should have the capacity for this system. As far as practicable, the test should be carried out at the draught corresponding to the lightest seagoing condition.