INTERNATIONAL MARITIME ORGANIZATION

E

4 ALBERT EMBANKMENT
LONDON SE1 7SR
Telephone: +44 (0)20 7735 7611 Fax: +44 (0)20 7587 3210

MSC.1/Circ.1509
5 June 2015

UNIFIED INTERPRETATIONS OF THE CODE ON NOISE LEVELS ON BOARD SHIPS (RESOLUTION MSC.337(91))

1 The Maritime Safety Committee, at its ninety-fifth session (3 to 12 June 2015), in order to facilitate its global and consistent implementation of the *Code on noise levels on board ships*, as adopted by resolution MSC.337(91), approved unified interpretations of *Code on noise levels on board ships* (resolution MSC.337(91)), as prepared by the Sub-Committee on Ship Design and Construction, at its second session (16 to 20 February 2015), as set out in the annex.

2 Member Governments are invited to use the annexed unified interpretations as guidance when applying Code on noise levels on board ships and to bring the unified interpretations to the attention of all parties concerned.

***

WORLD MARITIME DAY 2015
MARITIME EDUCATION & TRAINING

ANNEX

UNIFIED INTERPRETATIONS OF THE CODE ON NOISE LEVELS ON BOARD SHIPS (RESOLUTION MSC.337(91))

CHAPTER 1 – GENERAL

Paragraph 1.3.8

Passenger spaces where they are also occupied by crew such as recreation rooms and open recreation areas should be considered as "other passenger spaces", and therefore are not subject to the Code. However, bulkhead and decks of crew cabins and hospitals adjacent to such rooms/areas should have the weighted sound reduction index (Rw) in compliance with paragraph 6.2 of chapter 6.

Paragraph 1.4.21

Navigating bridge wings include enclosed navigating bridge spaces.

CHAPTER 3 – MEASUREMENT

Paragraph 3.3.5

Air conditioning vents should be kept open during the taking of noise measurements on board, unless they are designed to be kept closed in the normal operating condition.

Paragraph 3.3.6

Closing devices of ventilation grilles/louvres of cabin doors should be kept open during the taking of noise measurements on board, unless they are designed to be kept closed in the normal operating condition.

Paragraph 3.3.9

The wording "40% of maximum thruster power" means exactly "40% of maximum" and does not mean "40% of 80% as required by paragraph 3.3.2 of the Code".

Paragraph 3.9

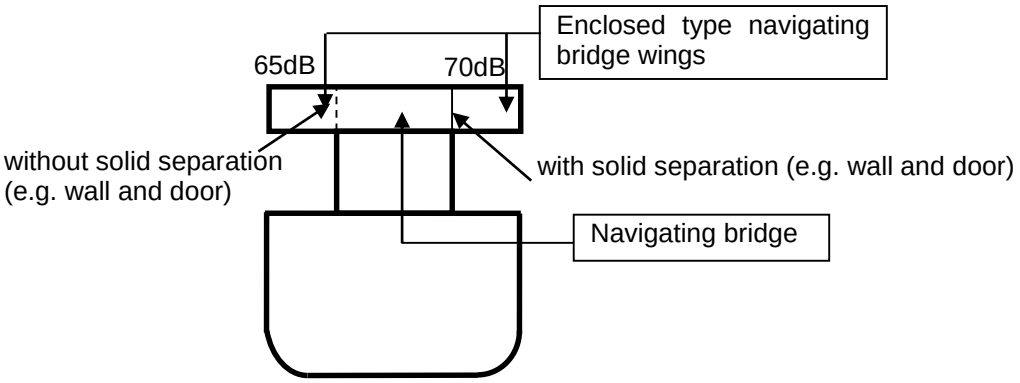
This provision only "acknowledges" the uncertainty; it does not represent any "allowance".

CHAPTER 4 – MAXIMUM ACCEPTABLE SOUND PRESSURE LEVELS

Paragraph 4.2

1 A navigating bridge provided with radio equipment should be regarded as a "navigating bridge" (65dB(A))."Radio rooms" mean separate rooms dedicated for sending/receiving radio messages.

2



3 If a cabin is completely separated by more than one bulkhead from the airborne sound source, those bulkheads are not required to have the airborne sound insulation properties as required in chapter 6. For this purpose, bathroom/toilet/lavatory is not regarded as a cabin but regarded as the origin of airborne sound to another cabin.

4 A room consisting of day-room and bedroom should be regarded as a single "cabin" (60dB(A)/55dB(A)) in cases where the room is for single occupancy. For this purpose, partitions (panel and door) between day-room and bedroom need not have the airborne sound insulation properties as required in chapter 6.

CHAPTER 6 – ACOUSTIC INSULATION BETWEEN ACCOMMODATION SPACES

Paragraph 6.2.1

1 The requirements regarding airborne sound insulation properties for bulkheads also apply to components installed in bulkheads (e.g. corridors to cabin doors).

2 In applying this requirement to bulkheads including components as mentioned in the above, the following may apply:

.1 In cases of bulkheads consisting of acoustic insulation panels and doors, this requirement is considered satisfactory where each component forming the surface of bulkheads (acoustic insulation panels and doors, etc.) has at least the required Rw.

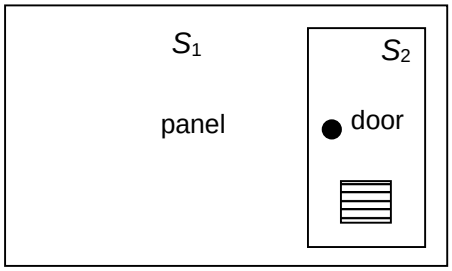
.2 In cases where either acoustic insulation panels or doors forming part of bulkheads have weighted sound reduction index inferior to that required by section 6.2.1 of the Code, this requirement is considered satisfactory provided that the Rw of bulkheads is not inferior to the required value, i.e. the Rw of bulkhead calculated using both the airborne sound insulation properties of the doors and those of the panels is not inferior to the required value. As guidance on evaluation of the Rw of bulkheads, the following formulae can be used:

$$\overline{R} = 10\log_{10}\left[S / \sum_{i=1}^{n} \left(S_i \cdot 10^{-R_i/10} \right) \right]$$

where S: the area of the concerned bulkhead
n: the number of components forming the concerned bulkhead
R_i: the sound reduction index of the component number i
S_i: the area of single component

Note: R_i has frequency elements in frequency range from 100 to 5000 [Hz]

Example: bulkhead consisting of acoustic insulation panels and doors:



$n = 2$
S_1: the area of the panel
S_2: the area of the door
S: the area of concerned bulkhead ($S = S_1 + S_2$)
R_1: the sound reduction index of the panel
R_2: the sound reduction index of the door

3 The requirements regarding airborne sound insulation properties for decks should also apply to decks together with coverings and should, therefore, be tested in laboratory as in the onboard arrangement. However, they need not apply to ceiling panels.

Paragraph 6.2.2

1 Closing devices of ventilation grilles/louvres of cabin doors should be kept open during laboratory tests.

2 Doors should be tested together with the associated door frame. In cases where there is no sill being part of the door frame, the doors should be tested with the gap specified by manufacturers and with sealing materials, if fitted.