Code on Noise Levels on Board Ships

Introduction

In 1981, Resolution A.468(XII) was adopted following recommendations from the Maritime Safety Committee. The resolution set out a Code on Noise Levels on Board Ships (the “IMCO Code”), the aim of which was to provide non-mandatory guidance to flag authorities on maximum noise levels and exposure limits to seafarers.

Over 30 years later and following the introduction of the 2006 Maritime Labour Convention in 2013, the International Maritime Organisation (the “IMO”) adopted a revised version of the IMCO Code (the “Code”). This was implemented on 1 July 2014 by way of an amendment to the Convention for the Safety of Life at Sea (the “Convention”).

Purpose of the Code

There has been concern for some time over the levels of noise to which seafarers are exposed on a day to day basis whilst on-board. Some areas of a ship will inevitably be louder than others – contrast noise levels in the engine room with say, that of the bridge – and so the need for some form of ear protection for the crew in the engineering spaces is obvious. However such ear protection may not be sufficient. Life on board ship is rarely, if ever, quiet (even for those members of the crew that never set foot in engineering). Accommodation spaces are usually subject to a persistent noise level; even more so where acoustic insulation is inadequate or non-existent.

To address these (and other) concerns, the Code seeks to limit noise levels as well as reduce exposure to such noise so as to:

- provide for safe working conditions by giving consideration to the need for speech communication and for hearing audible alarms;
- provide an environment where clear-headed decisions can be made in control stations, navigation, radio and manned machinery spaces;
- protect seafarers from excessive noise levels which may give rise to noise-induced hearing loss;
- provide the seafarer with an acceptable degree of comfort in rest,
recreation and other spaces; and
> provide the seafarer with conditions for recuperation from the effects of exposure to
high noise levels.

In order to achieve this, the Code sets out a series of requirements and recommendations
in respect of the following:
> measurement of noise levels and exposure;
> protecting the seafarer from the risk of noise-induced hearing loss under conditions
where it is not presently feasible to limit the noise to a level which is not potentially
harmful;
> limits on acceptable maximum noise levels for all spaces to which seafarers normally
have access; and
> verification of acoustic insulation between accommodation spaces.

Application of the Code
With some exceptions (such as mobile offshore drilling rigs, pleasure yachts etc.), the Code
applies to all new ships with a gross tonnage of 1,600 or more.

For the purposes of the Code, a “new ship” is a ship which satisfies one of the following
criteria, where:
> the construction contract for that ship is entered into on or after 1 July 2014; or
> in the absence of a construction contract, the keel of that ship has been laid or is at a
similar stage of construction on or after 1 January 2015; or
> that ship is delivered on or after 1 July 2018.2

Where a ship is to be delivered before 1 July 2018 and:
> that ship has been contracted for construction prior to 1 July 2014 with the keel of
that ship having been laid or is at a similar stage of construction on or after the 1
January 2009 but before 1 January 2015; or
> in the absence of a construction contract for that ship, the keel has been laid or is at a
similar stage of construction on or after 1 January 2009 but before 1 January 2015,

that ship shall be required to comply with such measures as may be required by the
relevant flag authorities so as to reduce noise levels in machinery spaces (such measures
being as more particularly set out in the IMCO Code).3

Whilst the Code forms a mandatory element of the Convention itself, there are certain
parts of the Code where recommendations to be followed are made but where compliance
is not compulsory. Paragraph 1.3.2., for example, makes it clear that the application of the
provisions of the Code relating to potentially hazardous noise levels, mitigation and
personal protective gear may be applied to existing ships with a gross tonnage of 1,600 or
more but only insofar as is reasonable and practical to the satisfaction of the relevant flag
state.

Over time, should such recommendations become accepted as the industry norm,
representing best practice, then it is inevitable that such recommendations will to all
intents and purposes become compulsory; unions, seafarers, insurers and other
stakeholders may simply require such recommendations to be fully embraced.

---

2 MSC 91/22/Add.1 Annex 2, page 2, Chapter II-1
Construction – Structure, Subdivision and Stability, Machinery and Electrical
Installations. Part A-1 Structure of Ships. New regulation 3-12 – Protection against noise”.

3 Ibid.
Overview and Considerations

The Code sets out the requirements in respect of the measuring equipment to be used, when and where the measurements are to be taken, the maximum acceptable sound pressure levels in rooms and spaces on-board ship, noise exposure limits for the crew, acoustic insulation between accommodation spaces and hearing protection and warning signs.

The Code sets out an absolute maximum noise level of 120 dB(A) to which seafarers are not to be exposed even when wearing hearing protection. Duration of exposure (as well as to the level of noise) is also dealt with; further details on noise exposure limits can be found in Chapter 5 of the Code. A summary of the limits for noise levels in the spaces is set out at the back of this note.4

Appended to the Code is a pro-forma Noise Survey Report, guidance on the inclusion of noise issues in safety management systems, suggested methods of attenuating noise and a simplified procedure for determining noise exposure. These have been included to assist with the process of ensuring compliance with the Code by the owner/operator.

Shipowners should note that the Code requires that a noise survey shall be carried out and a report made for each ship. Once such a report has been completed it is to be kept on board and made available to the crew. Of particular note is the requirement in Paragraph 3.1.1 of the Code for the measurement of noise levels and exposure to be carried out on completion of construction of the ship or as soon as practicable thereafter. It would be prudent therefore to ensure that the sea trials set out in the specifications of a construction contract clearly provide for such measurements to be carried out in accordance with the requirements of the Code. Owners may wish to consider the inclusion of a clear right to reject the ship in the event that she is found not to be in conformity with, for example, the maximum acceptable sound pressure levels in her rooms and spaces. This could be of particular importance where, for example, the maximum acceptable sound pressure levels are exceeded and the relevant flag state is not prepared to grant a dispensation from the Code for non-compliance.5 It should be noted that dispensations may only be granted by the relevant flag state where compliance with the Code is not possible, notwithstanding relevant and reasonable technical noise reduction measures having been taken. The granting of any such dispensation should not be assumed to be automatic; each flag authority is likely to have its own internal approval process that will need to be followed. Should a right to reject be included in the construction contract, then it is likely that this would be in concert with language providing for liquidated damages to the owner for going beyond specified noise tolerances in specified categories of spaces on board the ship.

A Two Way Street…

Whilst on the face of it, the Code very much places the emphasis on the owner/operator to comply with its requirements, the seafarer also has an important role to play. No matter how well the Code has been implemented by the owner/operator, if the seafarer fails to follow stipulated noise protection and mitigation procedures – such as wearing the required hearing protection – then the value of the Code viz-a-viz that non-compliant seafarer, will be severely diluted. It is important therefore that seafarers are given adequate, relevant and regular training on the Code as well as the use of machinery to ensure that they receive the maximum benefit from it.

In recognition of this, Appendix 2 of the Code contains guidance on the inclusion of noise issues in safety management systems, with Section 3 setting out the responsibilities of seafarers namely:

“...”
> to ensure that all measures adopted for noise control are utilised;
> to report any defective noise control equipment to the relevant persons under the
ship’s safety management system;
> to wear suitable hearing protection when entering (and remaining in) areas in which
the use of such protection is required by warnings notices; and
> to maintain any hearing protection provided to them in a sanitary condition and
ensure that they are not damaged or misused.

Conclusion
The Code seeks to protect the seafarer from exposure to excessive noise through the use of
a combination of mandatory and non-mandatory provisions. The effect of this will be to
improve the working and living conditions of seafarers whilst on-board most new ships
with a gross tonnage of 1,600 or more.

Relevant owners/operators should review their existing noise policies (and their
respective shipbuilding contracts) to ensure that they are at least compliant with the
mandatory provisions of the Code. Consideration should also be given to existing training
programmes to ensure that seafarers are familiar with the provisions of the Code, the
noise policies of the owner/operator for whom they work and their responsibilities for
compliance with such policies.

“The Code seeks
to protect the
seafarer from
exposure to
excessive noise
to excessive noise through the use of
through the use of
mandatory and
mandatory and non-mandatory
provisions.”

Paragraph 5.3.1 of the Code.
Extracted from Section 4.2 of
the Code.
Appendix 1 of the Code.
Appendix 2 of the Code.
Appendix 3 of the Code.
Paragraph 4.3.1 of the Code.
Paragraph 4.3.3 of the Code.
See further Paragraph 1.3.6
and Chapter 4 (Maximum
Acceptable Sound Pressure
Levels) of the Code.
Paragraph 1.3.6 of the Code.
Should you like to discuss any of the matters raised in this Briefing, please speak with the author, Toby Royal, a representative of our maritime team, or your regular contact at Watson, Farley & Williams.
Appendix – Limits on Noise Levels

<table>
<thead>
<tr>
<th>Designation of Rooms and Spaces</th>
<th>Ship Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1600 up to 10,000 GT</td>
</tr>
<tr>
<td>Work spaces (see Section 5.1 of the Code)</td>
<td></td>
</tr>
<tr>
<td>Machinery spaces</td>
<td></td>
</tr>
<tr>
<td>If the maximum noise levels are exceeded when machinery is operating (only permitted if dispensation is granted in accordance with Paragraph 1.3.6. of the Code), stay should be limited to very short periods or not allowed at all. The area should be marked according to Section 7.4 of the Code.</td>
<td>110 dB(A)</td>
</tr>
<tr>
<td>Machinery control rooms</td>
<td>75 dB(A)</td>
</tr>
<tr>
<td>Workshops other than those forming part of machinery spaces</td>
<td>85 dB(A)</td>
</tr>
<tr>
<td>Non-specified work spaces (other work areas) Examples are open desk workspaces that are not machinery spaces and open deck workspaces where communication is relevant.</td>
<td>85 dB(A)</td>
</tr>
<tr>
<td>Navigation Spaces</td>
<td></td>
</tr>
<tr>
<td>Navigating bridge and chartrooms</td>
<td>65 dB(A)</td>
</tr>
<tr>
<td>Look-out posts, including navigating bridge wings and windows Reference is made to the Recommendation on methods of measuring noise levels at listening posts (Resolution A.343(IX)), which also applies.</td>
<td>70 dB(A)</td>
</tr>
<tr>
<td>Radio rooms (with radio equipment operating but not producing audio signals)</td>
<td>60 dB(A)</td>
</tr>
<tr>
<td>Radar rooms</td>
<td>65 dB(A)</td>
</tr>
<tr>
<td>Accommodation spaces</td>
<td></td>
</tr>
<tr>
<td>Cabin and hospitals Hospitals: treatment rooms with beds.</td>
<td>60 dB(A)</td>
</tr>
<tr>
<td>Mess rooms</td>
<td>65 dB(A)</td>
</tr>
<tr>
<td>Recreation rooms</td>
<td>65 dB(A)</td>
</tr>
<tr>
<td>Open recreation areas (external recreation areas)</td>
<td>75 dB(A)</td>
</tr>
<tr>
<td>Offices</td>
<td>65 dB(A)</td>
</tr>
<tr>
<td>Special spaces</td>
<td></td>
</tr>
<tr>
<td>Galleys, without food processing equipment operating</td>
<td>75 dB(A)</td>
</tr>
<tr>
<td>Serveries and Pantries</td>
<td>75 dB(A)</td>
</tr>
<tr>
<td>Normally unoccupied spaces</td>
<td></td>
</tr>
<tr>
<td>Spaces referred to in Section 3.14. of the Code.</td>
<td>90 dB(A)</td>
</tr>
</tbody>
</table>