

Recommended standard of accommodation for seafarers working on board cargo vessels



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The **SIRC recommended standard of vessel accommodation** has been produced following the conduct of two large-scale pieces of research involving the completion of more than 3,000 interviewer-administered questionnaires with seafarers in 2011 and 2016. The research findings were followed up with visits to 35 ships to examine current design/furnishings and six shipyards (in China, South Korea and Japan) to consider barriers to change. They were also discussed with a specialist industry advisory group which kindly supported the development work for a period of two years.

The following problems, which were raised by seafarers in the research, are addressed in these recommendations for improved standards of shipboard accommodation:

- ▶ Inadequate storage space
- ▶ Insufficient control of light and temperature in cabins
- ▶ Inadequate provisions for recreation
- ▶ Noise and vibration disturbance in cabins

These recommendations are supplementary to Maritime Labour Convention minimum standards.

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¹ Sampson, H., Ellis, N., Acejo, I., Turgo, N., Tang, L. (2018) 'The working and living conditions of seafarers on cargo ships in the period 2011-2016', Cardiff: SIRC, October, ISBN: 1-900174-20-2 – www.sirc.cf.ac.uk
Ellis N., Sampson, H., Acejo, I., Tang, L., Turgo, N. and Zhao, Z. (2012) 'Seafarer Accommodation on Contemporary Cargo Ships', Cardiff: SIRC, December, ISBN: 1-900174-43-X – www.sirc.cf.ac.uk

² Lloyd's Register Foundation is an independent global charity engineering a safer world. It supports research, innovation, and public outreach to reduce risk and enhance the safety of the critical infrastructure that modern society relies upon.

Storage Space – What's the problem?

In 2016, 10% of seafarers shared cabins and 24% shared bathroom facilities. Just over a quarter of seafarers were dissatisfied with the size of their cabin and 30% stated they had insufficient storage space in cabins. Feeling cramped and cluttered impacts on human wellbeing and may contribute to poor mental health (Evans, 2003).

A cluttered cabin



In many cases cabin furnishings are fitted with little attention given to the optimal use of space.



In these cabins wall space is not well utilised and only very small shelf units have been installed.

Seafarers are not provided with dedicated space to store suitcases and cupboards are frequently too small to accommodate clothes and shoes.



In this cabin a seafarer has wedged a suitcase in the space above the cupboard.

When faced with the challenges of insufficient storage space seafarers occasionally find creative solutions, however, they are constrained in what they can do.



In this cabin a seafarer has made a bedside shelf out of cardboard.

There is considerable scope for greater innovation. The following **recommendations** are therefore made:

- A minimum of three standard-sized wall cabinets (or equivalent) should be mounted on cabin walls. These should contain at least two moveable/removable shelves
- Double wardrobes/cupboards should be installed in all cabins with a clothes rail in one half of the cupboard and a minimum of five removeable shelves in the other half of the cupboard.
- A separate floor to ceiling unit should be provided for the storage of one large and one small suitcase plus life jackets and survival suits as required.
- Bedside tables with a drawer and cupboard with one moveable shelf should be provided in each cabin.
- Bed bases should incorporate a minimum of two drawers.
- A minimum of three electric sockets should be placed in convenient locations to provide power to bedside tables and to desks.



A bed base with two drawers and one showing more flexible storage solutions.

- A minimum of four coat hooks should be placed in cabins.
- A rail should be placed on the back of the bathroom door.
- Cabins should be of sufficient size to accommodate these furnishings in addition to those already required by the Maritime Labour Convention.

Insufficient control of light and temperature – What's the problem?

In 2016, only 64% of seafarers reported that they could control temperature levels within their cabins and only 57% were able to adjust electric light levels. In relation to natural light, 10% of seafarers were unable to receive any natural light at all in their cabins and conversely 5% did not have any means of blocking out natural light.

Laboratory research has demonstrated that human sleep is influenced by temperature and light. If individuals are too hot or too cold or if they are sleeping in conditions which are too light, their ability to sleep and their quality of sleep will be affected. However, individuals experience different temperature and light levels as optimal for sleep and for relaxation/mood. It is, therefore, important that individuals can adjust their environment so that temperature and light levels are comfortable for them. Research has also demonstrated the impact of light on human mental health with seasonal affective disorder recognised by clinicians. For this reason, access to natural light in cabins is of great importance.

Air-conditioning and heating systems in buildings ashore have benefitted from considerable innovation resulting in the ability for the occupants of individual rooms, in the same building, to set different temperatures. Such systems are also available on cruise vessels. In contrast, cargo vessels have largely continued to rely on centrally controlled systems where temperature is set at one level for the entire vessel (although the galley, engine control room and bridge may have different systems). Seafarers may have the ability to close or open access to such centralised systems via cabin 'vents' but they have no means to control the temperature of incoming air. Thus, their options are restricted in terms of establishing suitable temperature/ventilation to compensate, for example, for local conditions (such as cabin proximity to heat sources or sunshine) and/or for personal preference.

Recommendations

- Air-conditioning/heating systems are fitted to all cargo ships which allow seafarers to independently set desired cabin temperatures.
- All cabins are provided with adjustable levels of electric light. To achieve this, cabins should be fitted with at least one wall light, one ceiling light, and one reading light, each of which can be used alone or together.
- All cabins should have a window providing access to natural light.
- All cabins should be fitted with blackout blinds which should be checked at regular intervals and replaced when they can no longer effectively block daylight.

Inadequate provision for recreation – What’s the problem?

In 2016, more than a third of seafarers worked on board for periods of 6 months or more. Whilst at sea many seafarers have little access to shore-leave and limited access to support from loved ones and friends. Research on seafarers’ mental health has illustrated the importance of recreational and interactional activities to seafarers seeking to preserve their mental wellbeing on board (Sampson and Ellis 2019). It has also indicated that seafarers experience loneliness on board more often than they do ashore. However, in recent decades access to shore-leave has declined for seafarers and, on board many vessels, cargo carrying spaces have been prioritised over accommodation spaces leaving seafarers with little access to recreational space for physical or social activity.

Recommendations

- An indoor swimming pool should be included on all vessels engaged in international (deep-sea) trades.
- A basketball court or full-size squash court should be included on all vessels engaged in international (deep-sea) trades.
- A purpose-built gymnasium with good ventilation should be included in all vessels engaged in international (deep-sea) trades.
- A lounge which can comfortably accommodate all seafarers employed on board should be included on all vessels.
- All seafarer lounges should be equipped with satellite TV.
- All cabins should have unrestricted access to the internet at speeds which permit face to face video calling (e.g. via Skype).



Noise and vibration disturbance in cabins – What's the problem?

Almost two thirds of seafarers report being disturbed by both noise and vibration in their cabins. Noisy environments have a negative impact on sleep quality and fatigue has been reported to be a significant problem on board cargo ships. Most recently, fatigue has been identified as an immediate or contributory cause in one in ten accidents at sea (Acejo et al 2018) and getting tired has been identified as contributing to seafarers' feelings of depression (Sampson and Ellis 2019). Cruise ships have taken steps to minimise noise disturbance in passenger cabins recognising the negative impact of noise and vibration on human happiness and wellbeing. Such steps have also been taken on some FPSOs and noise reduction cabins are commonly installed on oil rigs.

Recommendation

Noise reduction cabin systems should be fitted as standard to all cabins. These should incorporate:

- insulated double walls;
- fully insulated, self supporting ceiling systems;
- insulated window boxes designed to prevent the transfer of structural noise;
- floating floors incorporating a noise damping material beneath the steel surface.

Noise reduction cabin systems should have at least the same noise reduction capacity as those which are commonly in use in the construction of cruise vessels.

References

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