



Minimum safe manning – time to re-assess?

Minimum safe manning at sea is just that – minimum, not necessarily optimal. In this article, we explore how reduced crew levels can impact seafarers and the operational safety onboard.

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Safe manning refers to the minimum number of qualified and capable crew members required to operate a vessel safely and efficiently. Effective manning strategies consider the vessel's size, type, and operational requirements to maintain high safety standards and minimize risks to both crew and ship. [IMO Resolution A. 1047\(29\)](#) sets out the principles of minimum safe manning with the aim of ensuring that ships are adequately staffed for safety, security, safe navigation, port operations, and environmental protection. It also aims to prevent injuries, fatalities, and fatigue among seafarers. But even though these rules exist and are followed, seafarers report high job demands and fatigue.

Fatigue can be defined in many ways. However, it is generally described as a state of feeling tired, weary, or sleepy that results from prolonged mental or physical work, extended periods of anxiety, exposure to harsh environments, or loss of sleep. Recognizing the [dangers of fatigue](#) and managing it through proper rest hours and a supportive safety culture is crucial to minimizing accidents and the loss of lives.

Impacts on crew behaviour

In view of these circumstances, we recently led a roundtable discussion at the Marine Insurance Nordics Conference, in Oslo, focusing on the following question: *How does minimum safe manning impact crew behaviour and their ability to care for themselves and others?*

One of the roundtable participants (we'll call him Manolo) shared that in 2015 he was working on a tanker when the oil crisis hit. Suddenly, crew above the minimum safe manning rule were taken off the ship. He explained how this led to a lot of overtime work for the crew that was left, lack of sleep and no time or energy to exercise or pursue other recreational activities. The other participants could also relate to the state of stress from time to time and bad habits that usually arise in such periods like increased substance abuse (alcohol and nicotine), more "junk" food and social withdrawal. Manolo also shared how this altered the crew's temper and how the friendly tone was replaced by more irritable moods. This was equally recognizable for the non-seafarer participants at the table. We also discussed potential impacts on the ability to recognize others struggling, like mental health problems and reduced feelings of empathy as a direct consequence of high stress levels.

After a while Manolo felt that the tension and workload hampered the security of the operations, and he felt generally unsafe onboard. He is no longer working at sea.

Key take-aways

Our lessons learned from the roundtable was as follows:

The concept of Minimum Safe Manning is not necessarily widely understood across all relevant stakeholders. However, a failure in safe manning could have wide-reaching consequences. Clearly, there is a need to increase industry awareness.

The linkage between crew personal wellbeing and minimum safe manning cannot be under-estimated. High pressure can impact an individual's performance and mental health, and reduced availability of reserve crew cover in the case of physical or mental illness adds pressure on existing crew to continue in their role when objectively they may be unable to do so. This endangers the safety of the vessel, crew and of business delivery.

Patterns of crew behaviour should be closely monitored to identify any observable changes that may impact crew working conditions, inter-crew relationships and performance. Monitoring enables rapid identification of an increased risk of preventable accidents.

The impact of technology and near constant connectivity is both a known enhancer and inhibitor to crew performance. The lack of comradery because of crew being more online while off-watch highlights the irony of the current digital lifestyle. Technology is here to stay but the impact on crew behaviour and performance remains a potential risk factor.

Why crew numbers matter

In 2022, the Seafarers' Hospital Society and Yale undertook an extensive literature review and then held roundtables with industry representatives to discuss the results. The [study](#) shows a myriad of recommendations for seafarers and management to mitigate the high risks of working at sea but identifies costs as the main barrier. Importantly, they consider that increasing the number of crew would solve many of the risks by itself.

If there were more crew than the strict minimum on board, crew members would likely be in a better position to care for their health and safety and follow the recommendations for healthy nutrition and exercise. They would also find it easier to get enough rest and sleep irrespective of necessary night shifts and irregular working hours. Furthermore, there would be more time to foster a positive social environment onboard, creating a safe environment and supporting the interpersonal relationships between the crewmembers, fulfilling the human need to belong in a group. It would also allow time to learn about individual and cognitive coping mechanisms to handle internal stress better, enabling them to handle stressful events in a better way, avoiding fatigue, illnesses, bullying and harassment.

Conclusion

Crew unity and inter-crew relationships are more important than ever in the increasingly demanding shipboard environment. The question to be considered is whether minimum crew manning degrades this unity and increases the risk of safe operations.

Our roundtable discussions would suggest that minimum safe manning may not be the same as optimal safe manning. Increased crew workload, personal stress, unhealthy lifestyles, and performance inhibitors can significantly elevate the risk of illnesses, injuries, and casualties among crew and incidents with vessels. However, with structured and immediately available management support and aligned support networks, individuals can thrive in demanding work environments. Preventive measures such as exercise, nutrition, and a healthy, mutually supportive social environment are proven coping mechanisms in demanding work environments.

At Gard, we will continue to engage with our peers, seafarers and our members to progress the safe and healthy working conditions for seafarers, empowering them to excel and perform at their peak even in the “challenging environment” that is life at sea.

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