

# CLUB NEWS

## PROJECT HORIZON



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For some time, the club has been concerned about the number of collisions, groundings and dock damages that are caused by errors on the bridge, rather than equipment failure. Anecdotal evidence has indicated that poor judgement and a failure to correctly evaluate the situation are primary issues. The causes and prevention of nautical errors is an important subject; some academics suspect that crew fatigue may be involved, especially in those collision incidents where avoiding action was taken at the last minute or not at all, or when the ship made a course alteration and ran aground.

The cognitive performance of marine watch keepers working a variety of watch patterns has never been studied. However, research into aviation, rail and motor transport has shown that fatigue reduces alertness and overall reaction time during an emergency, and that falling asleep at the wheel is a major cause of road accidents. Funded by the European Commission, a group of academic institutions – Warsash Maritime Academy, Chalmers University, Stockholm University and The Stress Research Institute – assisted by shipping organisations such as Bureau Veritas and the club, used the latest simulation equipment to measure watch-keeping performance and fatigue. Chalmers University and Warsash Maritime Academy carried out bridge, engine room and cargo simulations over a seven-day period during which they measured performance, tiredness, reaction time, brain activity and sleep when working four hours on and eight hours off, or six hours on and six hours off watch. They also studied the effect of working a rest period before going back on watch.

Sixty candidates were selected from a local manning agent covering various nationalities, age and experience at sea. To avoid distorted results which could arise because of sickness or for other reasons, candidates were screened to avoid the selection of someone with a sleep disorder or any condition that could affect the data. During the trials, conditions were carefully controlled, for example, candidates were not allowed off campus, and food, drink and exercise were controlled as well as sleep conditions.

The results will be available soon and Horizon has issued preliminary findings, which have shown increased risk of a watch keeper falling asleep in the following circumstances:

- Night watches, especially the first night watch and towards the end of a watch. The midnight to 04:00 or midnight to 06:00 watch recorded the highest incidence of sleepiness; however, sleepiness is reduced when a work/sleep pattern is established when working four hours on and eight hours off.
- Any watch after working through a rest period.
- Most night watches when working the six on six off system, which gives an elevated level of sleepiness when compared to the four on and eight off system. Falling asleep on watch was common during periods of inactivity, often after an hour into the watch.

Although the project found a high level of watch keeper fatigue, it also found that, on most occasions, watch keepers managed to fulfil their watch duties. Falling asleep was recorded on every watch except for the 20:00 to 24:00 watch. Some watch patterns found that one in four candidates fell asleep, particularly during the six on and six off system.

We will let members know when the results are finally published, which we hope will be by autumn 2012.

Further information can be found on [www.project-horizon.eu](http://www.project-horizon.eu)



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Research Report 2011

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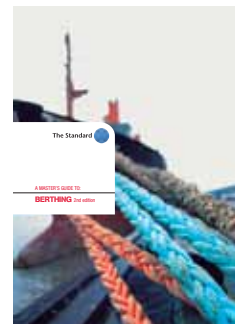
Part EU funded Project No. FP7/234000

## MASTER'S GUIDES

The Standard P&I Club's loss prevention programme focuses on best practice to avert those claims that are avoidable and that often result from crew error or equipment failure. In its continuing commitment to safety at sea and the prevention of accidents, casualties and pollution, the club issues a variety of publications on safety-related subjects. The club has recently revised some of its existing Master's Guides and developed new ones. Below is a summary of what is covered in each Master's Guide and a link to where they are stored on [www.standard-club.com](http://www.standard-club.com). The club will not print copies of these Master's Guides, however, you are welcome to print them in your office and or email them to your ships.

### MASTER'S GUIDE TO BERTHING

- Golden rules of berthing
- Dock damage and P&I claims
- Ship factors that affect manoeuvring
- Berthing in wind
- Effect of current
- Hydrodynamic effects
- Berthing without tugs, with tugs and with anchors
- Tugs and pilots – legal issues
- Master/pilot relationship



### MASTER'S GUIDE TO CONTAINER SECURING

- Lashing systems
- Safe working
- Ships design
- Container design
- Container construction
- Lashing components
- Principles of stowage
- Ships behaviour
- Consequences of failure

