



SAN NEWS

Work environment news & regulations within the Shipping Community

1/05

A HEALTHY WORKING LIFE

A whole range of factors affect how we feel at work. The psychosocial environment is important. The quality of everyday life is improved when we like our colleagues and are active during our spare time. Our lifestyle – factors such as what we eat, how we exercise and our drinking and smoking habits – also has an effect. Naturally, our health is also affected by the work environment. Noise pollution, dangerous chemicals and heavy lifting are only a few of the factors that may have a negative effect on our well-being.

How we feel is first and foremost something we can affect ourselves, but a mariner's health is not entirely a personal matter. It can also affect the mariner's working capacity and in certain cases even jeopardise safety onboard. A sound work environment and healthy lifestyle is therefore in everybody's best interest, and shipowners and crew have joint responsibility for the well-being of the personnel. In 2005, we will be paying these issues special attention with a series of articles under the heading "A healthy working life".



Eddy Holmgren, consultant at the corporate health services Feelgood Hamn & Rederi in Gothenburg.

Mariners' health – a safety issue

The fact that many mariners are overweight and out of shape has become a safety issue. Too many surplus kilos affect the agility and make it difficult to react quickly and lithely in a crisis situation.

The sum of our vices is not constant – on the contrary. This is the opinion of a doctor I interviewed once. According to him, someone who overindulges on fatty foods and sweets is more seldom seen working out than persons with healthier eating

habits, smokers drink more alcohol than non-smokers and heavy drinkers are more likely to have unprotected sex than those who drink in moderation. And it is the sum of our vices that is of interest when our health is weighed up.

"To someone with high cholesterol who is a smoker, I'd normally say that the most important step is to quit smoking," says Eddy Holmgren, consultant at the corporate health services Feelgood Hamn & Rederi in Gothenburg. "Various factors act together and, when combined, increase the risk

of poor health. A slightly elevated blood pressure in itself may not be any cause for alarm, but combined with smoking the risk of falling ill increases markedly."

Obesity is a lifestyle factor that has been in the spotlight a lot in recent years. It is a known fact the surplus kilos are a risk factor in heart and vascular disease. In the shipping industry, however, the focus is increasingly placed on the decrease in physical functions caused by obesity. Impeded agility and lack of fitness is some of the worrying symptoms.

"Someone who is large and heavy may not be able to squeeze through smaller openings or he may run out of steam quickly when under physical exertion. In a crisis situation, this may have serious consequences," says Eddy Holmgren.

Two of our neighbouring countries, Norway and Denmark, have set a limit for how overweight a mariner is allowed to be. A Norwegian crewmember with a BMI (Body Mass Index, see fact box) of over 35, which corresponds to 180 centimetres and 112 kilos, is suspended from his job. For his Danish colleague the limit is a BMI of 40, or 180 centimetres and 129 kilos. In Sweden, no corresponding limits are used, but Stena Line has assigned Eddy Holmgren the task of developing a physical fitness test programme. The test is based on the skills requirements for members of the safety crew in national and international legislation. If a crewmember fails the test, a transfer or even suspension can be necessary until the values have improved.

"One should be able to run up a flight of stairs, launch a raft and drag another per- →



Regulars at Kåknäs Seamen's Center. The Baltic Kristina crew came second both in the international series and in the Nordic Summer Cup last year.

Danish cookbook stirs up mixed feelings

A piping hot new cookbook is intended to get Danish mariners to eat more healthily. Many are thrilled with the scheme, whereas others feel angry and offended.

Prawn soup with chilli and lemon, a colourful barbecue buffet with Caribbean marinade or maybe an authentic Spanish paella. These recipes are taken from *Food at Sea*, a cookbook for mariners released in December last year. It is crammed full of mouth-watering recipes with colourful pictures and various serving suggestions for each dish.

"We have put a lot of effort into layout and pictures," says Morten Vinter at Danish Søfartens Arbejdsmiljøråd (pictured), who is in charge of production. "It has cost us a great deal but we thought it was important to make a beautiful cookbook that is nice to use."

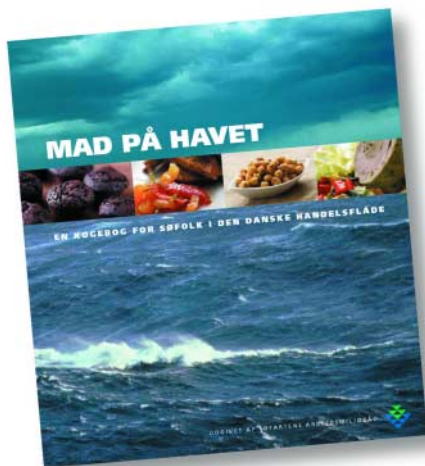
Just over a year ago, one of the larger shipping companies in Denmark turned to Søfartens Arbejdsmiljøråd to ask for help. They wanted to get away from the greasy and heavy food served at sea and make the employees more aware of what they eat. The shipping companies had tried to inform the crew about healthier eating habits, but without much success.

"The crew thought that the shipowners were out to save money and the resistance was fairly strong," says Morten Vinter.

Søfartens Arbejdsmiljøråd has mainly worked to improve the physical work environment onboard, including factors such as chemicals, noise pollution, safety equipment and reduction of accidents. Tackling the eating habits of the crew was something completely new.

"Formerly, it was considered each person's private business what they ate and drank. The modern approach is that the place of work strives to ensure the well-being of the whole individual, which includes lifestyle issues," explains Morten Vinter.

The result was the newly released cookbook, which is based on Nordic food recommendations. The layout is in the form of a folder to make it easy to complement with new recipes. Once a year new recipes will be sent out to update the folder. The shipping companies will pay DKK 200 per book and the annual update is free of charge. The fact that a cook-



The recipes are international with, among other things, Asian elements. The cookbook is available in English with the title Food at Sea.

book was chosen to encourage healthier eating habits is no coincidence.

"In Denmark, it has become modern to cook 'fancy' food and the chefs are modern celebrities who cook on television and are featured in magazines. We made the cookbook because it was needed, but also to spark a debate."

"Real men don't eat salad, they smoke and drink booze ..."

Indeed, there has been a lot of feedback. A lot of it has been positive. Particularly female crewmembers and mariners' wives have been thrilled with the scheme. There has also been a lot of criticism from those who think the cookbook intrudes upon private life.

"We have had quite a few angry reactions," says Morten Vinter. "I think mariners are a bit more conservative than others when it comes to making changes. And we also have the Tarzan syndrome to beat. Real men don't eat salad, they smoke and drink booze ..."

Still, there are no plans to retreat from the chosen path.

"We have conducted a study which shows that mariners carry more excess weight than other comparable occupational groups, so a change is definitely needed," says Morten Vinter. "Now we plan to continue with our work and change other lifestyle factors, such as exercise habits."

Linda Sundgren

Mariners' health, continued

son 20–30 metres with the help of a colleague," explains Eddy Holmgren. "But we are still working on the test and don't know exactly what will be included."

He also points out that it is essential that the employers help their employees who are out of shape. It is a question of advice on diet and exercise, inspirational discussions and follow-up. The preventive work is every bit as important.

"That a person is unhealthy today is caused by ten, twenty or even thirty years of bad habits. The total effect of efforts to improve the health may be visible only in the long run, but I can assure you that those who work patiently towards improving their health will see the benefits."

For employers who wish to get an overall picture of the health of his employees, Eddy Holmgren recommends mini health check-ups. He was himself involved in carrying out such check-ups onboard Stena Line's vessels. The check-ups included BMI calculations and measurement of cholesterol, blood sugar and blood pressure. The smoking and exercise habits of the employees were also recorded.

"When carrying out a health check-up, it is important to have individual conversations with each employee in order to let everyone know their own test results and point out what they need to focus on. After that, seminars and lectures on various subjects can be arranged."

According to Eddy Holmgren, there is plenty to be done to improve the prerequisites for a healthier lifestyle onboard. Such measures could be to provide non-smoking premises and well-equipped exercise facilities, to arrange athletics tournaments and offer low-fat foods, etc. He also observes that life at sea traditionally includes many factors that lead to ill health, such as heavy drinking, an unhealthy diet and smoking. The drinking has definitely decreased and the food has improved. Smoking is still a considerable problem, but even in this area improvements can be observed.

Linda Sundgren

Calculate your Body Mass Index

BMI is defined as your weight in kilograms divided by the square of your height in metres. If a person is 170 cm tall and weighs 70 kilos, his BMI is calculated using the formula:
 $70/(1.70 \times 1.70) = 24.2$

BMI value	Weight class
Under 18	Underweight
18-25	Normal weight
25-30	Overweight
30-40	Obese
Over 40	Severely obese

On a fairly regular basis, the Maritime Safety Inspectorate publishes information on incidents and messages that the shipping industry may find interesting. Below is a selection of items from the latest report. The texts are also available in unabbreviated form on the Swedish Maritime Administration website www.sjofartsverket.se under the heading Maritime Safety Inspection.

Large vessel failed to notice collision

A large ro-pax ferry was in the shipping lane shortly after departure. Two officers were on the bridge, but there was no look-out. After a while the ferry was overtaken by a smaller cargo vessel heading in the same direction. The bridge on the cargo vessel was manned by the master and a look-out. They were aware of the ferry, but did not keep very careful watch once it was astern of the cargo vessel. In connection with making way for oncoming traffic, the cargo vessel yawed slightly towards port, closer to the ferry.

The ferry continued as before without noticing the manoeuvre. The collision that followed also went unnoticed on the ferry and it was only after having been called that the crew on the ferry realised what had happened. The cargo vessel sustained some damage but the ferry was completely undamaged.

The investigation unit could identify the following factors that affected the course of events:

- The ferry had no look-out, despite regulations. The look-out should have no other tasks than keeping watch.
- The look-out on both ferry and cargo vessel was insufficient.
- Neither of the parties reported the incident to the VTS centre, which should have been done. Reports were, however, sent to the Maritime Safety Inspectorate.
- The ferry broke the speed limit, most likely due to a tight timetable.

Iu, no. 080202-04-16921, 080201-04-16922

Dangerous cargo leak

Upon arrival at port a light mist was discovered in the ferry's cargo hold. There had been no alarm or other signs of a fire. After a while, a liquid similar to hydraulic oil was discovered on deck. The crew started cleaning it up using an absorbent. The liquid, which turned out to be classified as

dangerous (corrosive), came from a leaking container. When the crew realised that the liquid came from the container, cleaning work was left off until help arrived from land. The crew tried to report the incident to the shipping company, but did not succeed due to technical problems.

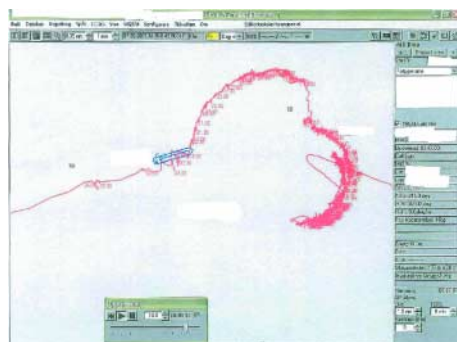
The incident was not reported to the authorities, despite the legal obligation to do so (SJÖFS 1991:5 8§). However, the shipping company has made an effort to trace the container and investigate the reason for the leak. *Iu, no. 080201-04-17513*

New technology reveals details

New technology within the shipping industry has become indispensable in the investigation of accidents or other incidents. One new invention is the VDR (Voyage Data Recorder), which contains detailed information on the vessel's actions. Another is the AIS (Automatic Identification System), which sends out information on the vessel's identity and activities to other vessels in the area. This new technology means that there is no point in making up stories about the course of events after an incident.

One example is a vessel that rode at anchor due to lightering (transfer of cargo from another vessel) outside a port. The weather conditions worsened and the loading was interrupted. The vessel started to drag and this continued for almost two hours. The onboard crew was not fully aware of the position and only later realised that the vessel was dragging her anchor towards the shore. When they tried to start the engines and save the situation it was already too late. The vessel drifted aground and was badly damaged. Some oil also leaked from the vessel.

The master explained that there had been no time to intervene earlier, but excerpts from the AIS showed that several hours had



AIS trace from the anchored vessel that ran aground. The vessel drifted further and ran aground in the area left of the picture.

passed between when the vessel started to drag and the actual running aground.

Iu, no. 080202-04-17548

Few accidents per operating hour

An accident usually attracts a certain interest from the media. Particularly local media has a tendency to magnify accidents in their own region and give them excessive proportions. The interest from the media is unpredictable in that sometimes a quite significant accident is bypassed without any reaction, while a more trivial incident may get a lot of undue attention.

Most of the time the media expresses surprise at the number of accidents. However, the manager of one of the large classification societies explains that the number of major shipwrecks per operating hour in the shipping industry is only half of the number of incidents among the airlines. In the interest of comparison, we present some information from the Stockholm archipelago. These figures only concern one vessel, but it can be seen as representing the entire Stockholm archipelago fleet.

- One of the vessels in archipelago traffic made 9,750 arrivals to port in the previous year.

- Over 15 years that amounts to 146,000 arrivals to port.

- The manoeuvre controls make 2.5 million movements per annum.

- In these 15 years, the vessel has hit the quay twice.

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Small problem with major consequences

In a fairly short period of time, a couple of situations have come about which could have had major consequences, had the conditions been worse. Both times a relatively simple fault – a leak in the cooling water system – rendered the vessels completely disabled. The problem is that there is only one common cooling system, although there are several main engines onboard. When there is a leak in the cooling system, all engines are affected. In both cases the problem occurred on ferries. All ended well because the vessels were not in any dangerous situations at the time.

There is every reason for the shipping companies to inspect the cooling systems and investigate the possibilities to modernise or complement the systems to ensure safer operation.

Iu, no. 080201-04-16783



Safer vessels make evacuation obsolete

Stability and fire protection. These issues are the focus of the safety project Desso initiated in December 2003. The aim is to construct a passenger vessel that never will have to be abandoned.

To evacuate thousands of passengers from a sinking ferry in rough seas is next to impossible with the equipment available today. This is something most people in the know agree on. Experts on safety at sea are therefore increasingly interested in how a vessel could be made safe enough so that it would never have to be abandoned. The research project Desso (Design for Survival Onboard) has been set the task of constructing a ro-pax ferry with capacity for 1,500 passengers, with good stability, excellent fire safety and safe evacuation alternatives.

"There are two main prerequisites in order for passengers to be able to stay on a vessel that is letting in water or on fire: better stability and improved fire protection. Vessels should not start to list when they are damaged," says Olle RutgerSSon, professor at the Maritime Academy in Gothenburg, who is in charge of the stability issues related to the project.

The difficulty in improving the stability of ro-pax ferries lie in the large open areas on cargo deck.

"If the vessel is letting in water, large masses of water can start to roll back and forth and relatively quickly cause a list," says Olle RutgerSSon. "Ro-pax ferries today are constructed to handle half a metre of water on cargo deck, which is not a whole lot."

One main task in the project is to create cargo holds divided into smaller units to counteract the spread of water. Olle RutgerSSon believes that wider passages

along the sides of the cargo decks may be an appropriate solution.

"Today the passages are half a metre wide. If we make them up to three metres wide, the open area becomes smaller. The problem with that is that the cargo area is decreased, which reduces the vessel's profitability."

Two main solutions to improve fire protection have been discussed. One solution is to create so-called safe havens onboard, where the passengers could gather in the event of a major fire. The other solution is to improve general fire protection onboard and confine the fire to the area where it started. Björn Allenström at SSPA Sweden, who is in charge of the Desso project, prefers the latter.

"To move over 1,000 persons onboard a vessel on fire to safe havens is a tricky task," he states.

The project has previously attracted attention due to the spectacular idea of constructing a fireproof superstructure on vessels. In an emergency it would be possible to release this superstructure into a separate floating unit. However, the people involved are not very keen on this solution. It is considered difficult to implement as a construction and in practice. As an alternative evacuation method, the researchers increasingly believe in some form of free-fall lifeboats.

Linda Sundgren

Design for Survival Onboard

The Desso project is carried out in co-operation between SSPA Sweden, Chalmers Lindholmen, SP/Fire Technology in Borås, consultancy company Globtech and Cocum Sonics. The project has a budget of SEK 9 million.

~ IN SHORT ~

Freedom to choose unmanned launching of davit launched lifeboats

Nowadays the master onboard decides whether the vessel's davit launched lifeboats should be manned when launched during a rescue drill. This was decided by IMO in December last year. The amended regulation in Solas will be effective 1 July 2006, but port states are encouraged to overlook vessels that already choose to launch the lifeboats unmanned. Other drill items should still be carried out as before.

Free-fall lifeboats have serious deficiencies

A study of free-fall lifeboats reveals serious deficiencies, even when all design requirements have been fulfilled. The main problem is that they are too snug and larger persons have difficulties sitting correctly in the seats. Free-fall lifeboats are designed for passengers weighing 75 kilos, a limit which, according to the experts, should be raised. Further details regarding the design of the lifeboats have also been requested.



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