

## Hatch covers

→ Our second event in November was timed to coincide with a visit from the President, Captain Robert McCabe FNI, who was in town briefly and had expressed a desire to meet as many members as possible. More than 40 people were on hand to greet him, and we were once again hosted by Smyth & Co in association with RPC.

The first speaker was another NI stalwart, Walter Vervloesem FNI, who had a distinguished sea career before becoming a surveyor and consultant. He is now Chairman of the IMCS Group of Companies, Managing Director of their training academy, and a founder member of the Belgian branch of the NI. He is also well known as an author and editor of a number of NI publications.

Mr Vervloesem has run a hatch cover training course since 2001, and has been involved in the development of ultrasound applications since 2003. He started his talk with a brief history of hatch covers, from small openings sealed with wooden boards and tarpaulins (which he described as very good) to large modern steel covers with rubber gaskets. The various modern specialist types of hatch cover were also described, and the talk was superbly illustrated throughout.

The speaker went on to discuss the perils which hatch covers must withstand, including waves, spray and icing and the effects of impacts, loads and acceleration forces. He made the point that modern hatch covers can weigh up to 100 tonnes, but their tolerances are in millimetres. When not properly maintained, they are a route to disaster and cargo damage and can cause accidents and pollution from hydraulic leaks. In a survey of almost 400 cargo claims, 35% were due to leaking hatch covers.

There is a need for greater training and crew awareness of the dangers – points Walter aptly illustrated with a series of slides. Many defects can be fixed by the crew if they know what to do.

Walter asked why it is that we can put a man on the moon but cannot eradicate hatch cover problems. He went on to discuss the complexity of hatch cover design. A particular problem is that the covers are rigid while the coamings are designed to flex with the hull.

Rubber packing alone cannot overcome the problem, so there must be additional barriers, and he discussed steel-to-steel contact, drainage channels, bearing pads and compression bars. Among the things we learned was that if rubber packing deforms to 50% of its design compression range, there is a severe reduction in its ability to remain weathertight.

Comparing the traditional hose test to ultrasonic testing showed that ultrasonic testing is easy, non-invasive, cheap and accurate, and



Capt. McCabe FNI and Vikrant Malhotra FNI

accepted by IACS members. However, it is not infallible and cannot detect bearing pad problems or permanently impacted rubber. A careful visual inspection is also required – and the surveyor needs eyes in the back of his head to ensure the crew do not place a bucket over the ultrasonic transmitter! He also informed us that 14% of cargo claims can be traced back to faulty drain valves, and illustrated a simple way of testing them.

As we understood it, Mr Vervloesem advocates some simple improvements:

- Instil a no-blame culture;
- Do repairs properly;
- Maintain rubber gaskets and steel-to-steel contact areas;
- Use proper spares;
- Know hatch cover basics;
- Carry proper maintenance instructions;
- Keep maintenance records.

This was a fascinating talk, and even some highly experienced surveyors and ship managers admitted they had learned something new. A lively question and answer session finally had to be interrupted to allow Captain McCabe to speak.

The President gave a brief and interesting talk about the recent work of the NI, stressing the importance of the branches and maintaining links to HQ. He described this year's navigational competence Command Seminars and mentioned some of the Institute's successes during its five years as a non-governmental organisation (NGO) participating at IMO. The ongoing battle to reduce fatigue, particularly on two-watch feeder ships, was described with passion.

Captain McCabe went on to talk about revisions to the command diploma scheme and the need for more people to distribute *The Navigator*. He outlined his concerns about the risks of eNavigation, and the need for reliable fallback methods when systems fail.

Finally, he underlined the point that the core value of The Nautical Institute remains that of raising standards in the industry. There is much to do, and he urged non-members to join the NI without delay.

Food and drink was provided after the talks, and discussions continued in a more relaxed environment.

**Captain Alan Loynd FNI**