

# Crew factor tops Asia meeting

Signs are that the human element factor of crew management could take off in Asia, writes **Girija Shettar**

Strong interest in the human element factor was evident at the Lloyd's Register (LR) Middle East and Asia Technical Committee meeting in Abu Dhabi earlier this month.

Jonathan Earthy, the human element co-ordinator for LR Marine, who spoke at the meeting, said: "I was surprised at how much feeling there was that right had to be done by seafarers and that 'yes, of course' they are an important part of the organisation. The questions went on for as long as we had time; there was genuine interest."

The technical design consultancy offered by LR's human element division studies how humans interact with technology to increase success in meeting quality and environmental regulatory requirements.

LR focuses on encouraging safe and effective work. "Rather than showing a crew member how to lift a heavy object, design ways that would make it unnecessary to lift the object in the first place," explained Earthy.

But design and technical systems cannot work in isolation.

"Industry tends to latch on to specific ideas such as culture. Now it's competence, but these are just silver bullets. What's needed is to step back and consider all the factors," emphasised Earthy.

Not surprisingly, communication is the key challenge for effective crewing, in Earthy's experience.



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Lloyd's Register

"The most important principle is to collect feedback from your crew – hear from the seafarers about the design systems and what they need."

But the industry's traditional hierarchical structure makes it difficult. "The management gives the instructions and the captain carries them out. To admit that things are wrong sounds a bit like asking for help," he said.

There is also what Earthy calls the "free market approach" to crew a ship, where a crew, sometimes with no more than basic training, will work on a six-month basis.

While human element factor design – also known as ergonomics – has been around for

100 years, the industry take-up has been minimal.

"Examples of good ergonomic design are so rare as to be really notable," said Earthy. The reason for this is the need to keep costs pared back; the subsequent lack of demand makes it risky for manufacturers to get involved. But Earthy observed that demand for LR's human factor consultancy is gradually increasing.

He also welcomed the European Commission's Framework 7 research programme launched last year, which is focused on human-centred design. Giving praise for the way in which the programme's tenders are worded, Earthy was convinced. "Europe is really getting behind

this topic," he said.

Three research projects are being launched under this year's initiative, Human Element Factors in Shipping Safety, which will each receive an EU contribution of up to €3M (\$3.8M).

One project, Crew-centred Design and Operation of Ships and Ship Systems (CyClaDes), was launched on 30 October by Germanischer Lloyd (GL) to study technology, operations (including company safety culture), and training to find out why human error causes the majority of accidents aboard ship.

Speaking to *Fairplay*, GL senior researcher Karsten Loer explained: "One aim is to get the human element into the production life cycle of each ship, from the planning to the design phase – right the way up to when the ship is delivered."

If this sounds familiar, Loer would agree. "A lot of research has been done, but for some reason it has not been used widely. We need to figure out why and make our proposals more accessible for stakeholders," he said.

Scientific papers produced from the research will be given to the International Maritime Organization for the consideration of the relevant working groups. ■

## > Framework 7 projects

Along with GL's CyClaDes project, two other projects replied to this year's Framework 7 call.

**Project title:** Human Factors in Risk-based Ship Design Methodology (FAROS – an acronym inspired by a Greek word meaning 'lighthouse')

**Research centre:** Brookes Bell (UK)

**Start:** 1 October 2012

**Finish:** 30 September 2015 (tentative)

**Project title:** Model-based Cooperative and Adaptive Ship-based Context-aware Design (CASCADE)

**Research centre:** Institute for Information Technology (Germany)

**Start:** 1 January 2013

**Finish:** 31 December 2015