

Study to look at stress of simulator training

Dutch research institute MARIN, the Technical University of Berlin and k+s projects are to co-operate on a new project. The first step is a pilot study of the stress/workload during training in a ship-handling simulator. Further studies, both in the simulator and onboard ship, will follow.

Most overseas transport is carried out by vessels, and every single crew member has to take a high level of responsibility for the ship, goods, human life and the environment. The project team shares the same idea: working at sea has unique demands, made more challenging by fatigue and a high workload, and influenced by demands such as noise, the intense mix of private and work life, and what often prove to be extreme environmental challenges.

Stress in general, and stress due to a high workload, manifests itself in different ways for different people. Shipping, either at sea or on inland waterways, always involves a high level of responsibility. Sailors always have to deal successfully with critical situations – it is part of their ‘job description’.

The pilot study concentrates on the ‘human element’ and is aimed at finding the actual workload situations which challenge individual sailors. Training scenarios are selected strictly according to real life on the bridge. Measurements include heartbeats and skin conductivity, plus an EEG, which together will pinpoint what is most challenging for the person being tested.

Wendie Uitterhoeve, project manager at

► MARIN project manager Wendie Uitterhoeve, left, and Kerstin Klinkenberg, project manager, k+s projects



MARIN, summarised: “We want to increase safety in the maritime business. The sailor is our focus. How can we contribute to finding efficient and appropriate procedures at sea? It is our conviction that we must put the human factor at the centre of our research. The job at sea covers the complete spectrum – fatigue on the one side, stress and a high workload on the other. We want to have a look at decision making and cognitive processes.”

The findings will be evaluated to assess the influence and impact of job procedures, modern bridge design and time/work shift systems, and to establish which variations have, in practice, offered the chance for real improvement.

Prof Benjamin Blankertz and Daniel Miklody, from the Technical University,

Berlin, Neurotechnology department, are experts on research and analysis of stress and workload in an industrial ‘hands-on’ context. This project is a step towards strengthening the market segment of the ‘human element’ at MARIN.

The pilot study, initiated and organised by k+s projects and their project partners, is the follow up to the demonstration of *Training meets Science* which took place during ITS 2014 in Hamburg.

Kerstin Klinkenberg, project manager, k+s projects, said: “We are very happy that we can continue our project with such an innovative, creative and highly motivated team. The first contact with MARIN was made during ITS 2014, and has now led to some fruitful co-operation. We are extremely appreciative of the first, innovative steps taken by the initial project group, and thank our contributors – and the very courageous test persons, who literally put their heads in our hands!”

It is hoped that the pilot study marks the beginning of a long-term co-operative venture. The team will release details about further steps and developments as they happen. An informative open day is planned for September 2015.

Global DP coverage

Kongsberg Maritime has become the first global maritime training provider to offer a new DNV GL approved dynamic positioning operator (DPO) training scheme at its training centres worldwide. The brand new scheme for DP operators is based on a combination of new and established DNV GL training standards, with the learning process designed by Kongsberg Maritime.

The scheme is a step-change in the critical area of DPO training, with teaching and assessor competence, and the use of advanced simulators, forming the platform for training high quality DPOs in a significantly reduced time frame. It focuses on competence training and competence assessment, developed using the latest methods in the science of education.

Acquisition anticipates new rules

Fire safety equipment and servicing provider Viking Life Saving Equipment has acquired Nadiro, a company owned by maritime and energy conglomerate Maersk Group and SH Group.

Established in 2009 in Svendborg, Denmark, Nadiro manufactures high-quality lifeboat and rescue craft systems, developing and promoting its Drop-in-Ball technology to help ensure crew safety.

Viking has had the status of preferred distributor and service provider, supplying the company’s lifeboat release and retrieval systems (LRRSs) to enable the world’s shipowners to comply with new SOLAS regulations by or before 2019.



◀ Viking CEO Henrik Uhd Christensen

Hook retrofitting is necessary to prevent serious accidents resulting from unsafe lifeboat deployment systems. Nadiro enables Viking to provide high-quality, reliable solutions that ensure safety levels beyond basic compliance.

Viking CEO Henrik Uhd Christensen explains the acquisition of Nadiro as a strategic move that enables his company to better address this key safety issue for its customers, and as part of the continued expansion of its product portfolio.

He said: “For more than a decade, on-load release hooks installed to enable lifeboats to be lowered into and retrieved from the water have themselves been the cause of numerous accidents. Some have involved fatalities. With our stated mission to protect and save human lives all over the world, and our global leadership within maritime safety equipment, doing everything we can to rectify the problem has been a natural focal point for Viking over the past few years. Nadiro has performed well, and its products have been instrumental in ensuring the safety of crew on board many vessels.”