

## Improving pilot safety

► **As noted in the October issue of SAS**, on 1 July this year, new requirements for pilot transfer arrangements came into force for newbuildings in accordance with amendments to SOLAS Chapter V, Regulation 23, and IMO Resolution A.1045(27). An annex to this resolution sets out the standards for pilot ladders and their arrangements, use and maintenance.

A poster developed by the International Maritime Pilots' Association (IMPA) in conjunction with the IMO shows the main requirements in a series of diagrams.

IMPA's secretary general, Nick Cutmore, outlined to SAS the key changes that should improve pilot safety. "Mechanical pilot hoists have been outlawed; accommodation ladders that are used in conjunction with pilot ladders must be tied in to the ship's hull; and any cutaway in the rubbing strake must be at least 6m wide to allow the pilot boat unob-

structed access to the ship's side," he said.

Pilot ladders must be certified by the manufacturer as compliant with the standards. Also, "for the first time, a pilot ladder is considered part of the ship's safety equipment and therefore subject to the ISM Code. It has to be tagged for survey, inspection and record-keeping." Cutmore noted that previously the ladder was considered to be a consumable that some PSCs declined to inspect.

The new requirements also include dimensional changes to ladders and their positioning, and arrangements and rules for pilot ladder winch reels.

The poster can be downloaded from IMPA's website. An A3 laminated version is available from specialist stockists, including marine signage and safety poster company Maritime Progress. The company's marine technical manager, Captain Andy Goldsmith, told SAS that this was the only poster it stocks

that was not of its own design and copyright. "Posters serve an important purpose on board, providing crew with essential information in a practical way at the point of delivery," he commented. "This poster sits well within our range of safety awareness and training posters."

Shipowners have been involved at every stage of the development of the new requirements through the International Chamber of Shipping, Cutmore confirmed. They are retrospective only if significant alterations are being made to pilot boarding arrangements and IACS has issued guidelines for this. He stressed that pilot safety is not purely a ship issue, however. "Pilots must take responsibility for their own safety," he underlined. "This may include waving away a ladder that is offered if it is not suitable and reporting problems to PSC." ◀

For more information, go to [www.impahq.org](http://www.impahq.org) and [www.maritimeprogress.com](http://www.maritimeprogress.com)



## Measuring wave response in transit

► **SAS has previously described how** OMC International's Dynamic Under Keel Clearance (DUKC) web-based management system can improve the safety and efficiency of navigation for large vessels transiting a shallow, tidally restricted waterway by accurately predicting under-keel clearance (SAS October 2010, page 37). The company has now introduced a complementary product, OMC iHeave, for measuring ship motions.

The numerical ship motion model within DUKC enables calculation and forecasting of the interaction of waves, tides, currents and vessel dynamics in real time so that maximum safe draught and earliest and latest sailing times can be planned and refined.

OMC iHeave was initially developed during a study undertaken for the Columbia River Bar Pilots (CRBP) as a safety tool for measurement of wave response in extreme conditions. It can also be used to validate the wave response modelling performed by DUKC in situations where the dynamic response is critical for under-keel clearance.

Peter O'Brien, OMC's chief executive,



explained to SAS: "Traditionally, we would install DGPS [differential global positioning system] equipment outside on a ship's bow and bridge wings to accurately measure what is actually happening against the DUKC's predictions. This can be difficult to do in extreme conditions, meaning that data for such conditions is unlikely to be captured." Conditions at the Columbia River Bar, which is known as the 'graveyard of the Pacific', made it impossible. Having developed OMC iHeave, however, "we were able to collect measurements of the wave responses of different ves-

sels under moderate to high swell conditions over a three-month period," he added.

OMC iHeave is a lightweight self-contained unit, about the size of a shoebox, that can continuously monitor ship movements during a transit and directly measure all six degrees of motion in waves, in all weather conditions. It is normally carried on board by marine pilots and can be set up on the bridge within minutes. Results are of similar accuracy to a full DGPS set-up and it is said to be easy to build up a database of measured wave responses and to repeat measurements.

O'Brien pointed out that wave response is the most important factor in under-keel clearance and also the most problematic to measure. "OMC iHeave means we can confidently predict what will happen in a 5m, rather than a 1m, swell," he said. He confirmed that it might be possible to marry OMC iHeave data of vessel motions with other available data, which could be used to create applications to optimise other aspects of vessel performance. ◀

For more information, go to [www.omc-international.com](http://www.omc-international.com)

