Tugs in waves. Courtesy Wijsmuller.

Tugs and towing focus of industry projects

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During the International Tug Convention held in Bilbao 2002, an initial meeting was held to discuss a possible Joint Industry Project (JIP) on tugs that operate in exposed conditions. In the last year there has been further research into what needs to be addressed in the project and the participants have been assessing interest and raising the profile of the project. There has already been significant interest from a number of leading terminal operators. The first, more detailed, project proposal is due to be discussed in the coming months and interested parties will be informed in due course.

This JIP was initially proposed because terminals and harbour operations in general, are more commonly placed in exposed areas nowadays.

Higher demands on tugs

Breakwater length is being minimised to make terminal investments economically viable. At the same time, higher demands are being placed on tugs as they have to assist tankers in more exposed areas, in addition to normal berth assistance operations. Furthermore, terminal operators, in particular those dealing with LNG, require very low downtimes. This can be achieved either by an expensive, lengthy, breakwater for a safe approach or by proper tugs.

The most suitable tug is defined as the choice of tug giving the lowest downtime at the terminal, as well as it being able to provide the required contribution to overall safety levels, both in the approach and during berthing. Focusing on this application of tugs, will lead to better, optimum use of tugs in the overall safety operations and efficiency levels of the terminal.

The best tug for the job requires a tug adapted to the type of vessel and the circumstances (mentioned above). Important aspects are its performance (assist force), speed, agility and safety in different sea states and of course, a competitive price helps.

Importantly, the project will address the fundamental hull and propulsion design aspects of the tug, directly related to its tow performance. This will be set in a wider context of its seagoing capabilities, as well as the consequences for the engineering interfaces such as the winches, lines and tow points. MARIN

Tow force programme

There are proposals to develop a software tool to estimate the bollard pull necessary to tow special objects as a function of the actual environmental conditions. It is intended to do this by redesigning the MARIN programme WINDOS for the calculation of windloads on offshore structures. For more information on this proposal please contact: D.t.Hove@marin.nl