

# HMC Newsletter

February 2016



## HMC is capable to do extensive risk studies for all kind of offshore related subjects

With over 30 years of transport engineering experience HMC is able to increase the safety and efficiency of transportation, installation and exploitation of windmills and offshore structures. HMC was already involved in wind energy projects since early 2006 and our experience and expertise grows.

One of the first times HMC performed calculations was for logistic center IJmuiden. We were asked to determine trafficking flows, holdup as result of weather conditions, estimation for suitable harbour facility and trans-shipment capacity. Following this project HMC did many more risk analysis and engineering and statistical questions. HMC took account of several aspects of the short sea shipping

transportation of wind turbine parts for the Kugelbake, and delivered contra expertise regarding the risks of windmill parks at Den Haag, Katwijk, IJmuiden, Scheveningen and the North Sea. Besides these contra expertise projects HMC delivers operational manuals for self lifting rigs and measures or simulates strength and stability. If you want to know what we can do for your company, please [contact](#) our office.



*"HMC performs risk analysis"*

## Verify the weight of your containers with SafePlan combined with CPC

A ships, accurate weight is required so that containers are placed and stowed evenly to maintain the stability of the ship during the whole voyage. Additionally, for loading and unloading ships and workers safety, the adequacy of securing devices used to attach containers to vessels and the selection of suitable lifting/ loading equipment is reliant on knowing the correct weight of containers.

When a container is loaded on a ship, it is secured to the ship's structure by means of lashing rods, turnbuckles, twist-locks, etc. In general terms, whenever a vessel is sailing it will be subjected to the six degrees of freedom. The container lashings need to withstand these accelerations and forces. If you want to sail in a safe manner we advise testing with a combination of HMC's SafePlan with our [loading instrument CPC 2.0](#). This combination is an ideal on

board decision support system. SafePlan starts with some stability analysis to check if all relevant criteria are fulfilled for all specific loading conditions. The stability data from the analysis is used to calculate motions and accelerations and is used in combination with HMC's CPC. We believe that the concept of how resource data and information can be shared using current technologies is an asset for the industry. For more information, please [contact](#) our office.



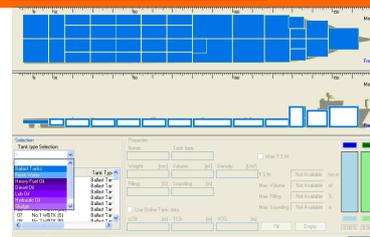
*"Requirements will come into effect from 1 July 2016"*

## New requirements for onboard stability instruments for tankers effective from 1st January 2016

The maritime transport industry has relied heavily on the fact that no unambiguous rules and regulations existed for fatigue assessment and monitoring in ocean transportation. Different rules were applied and in many cases fatigue was not addressed at all.

With the [new rules and requirements for tankers](#) the industry is making a huge step forwards. With computer and analysis technology we developed increasingly sophisticated software to improve the transportation of all types of cargo. The hull stress is one of the major factors which cause irretraceable damage to merchant marines. Fatigue accumulated in vessels leads to local cracks in the vessels hull. These new rules for fatigue assessment will increase the safety of maritime transport engineering and

provide offshore construction organisations with a realistic and workable set of rules and regulations for fatigue assessment and monitoring in ocean transport. Due to concerns about safety at sea, IMO has already issued a recommendation on bulk carriers, of more than 20,000 [dwt], to be fitted with stress measuring system. The main target of stress monitoring is especially to minimise risks for structural failures due to heavy sea or improper loading manners. And HMC is ready for it!



*"New rules for on-board stability, HMC is ready for it!"*

## HMC presented paper at RINA in London: economic benefits show cost saving of 10% to 20%

Achieving clean, safe and integrated transport requires the integration of a set of tools, each targeting different aspects of sea transport. Management Science techniques have been developed and processed in tools to improve the safety and economy of maritime transport.

Since 1986 HMC is involved in the development and implementation of planning and optimisation systems, i.e. management science applications, for the maritime industry. HMC offers systems for cargo stowage, voyage preparation, crew planning and fleet planning. Optimisation of any of these operations requires careful consideration of the effects on the other operations. Route optimisation can for example result in untimely arrival of the cargo and would therefore require integration with a tool optimising the

time-scheduling of fleet and cargo. Validation studies of the independent tools result in considerable cost savings. Minimum of 10% to 20% on variable cost can be saved. The integration of these systems are a complex process but is currently in progress. But given the possible improvement of operations this integration is an important goal. HMC presented a set of tools which when combined can be used to achieve safe, clean and integrated transport. For more info, or to receive the RINA paper, please [contact](#) our office.



*"Our tools improve safety and economy of maritime transport"*



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