Impact of Seakeeping on the Transport Performance of Ships

Wednesday, March 25th

13:00 hr  Coffee, Registration

13:30 hr  Welcome words: Guilhem Gaillarde, MARIN, Head of Ships Department

Introduction from the seminar moderator: Jelle Keuning, former Director of Research and Development, The Netherlands Ministry of Defence

Motivation for the seminar & workshop: Reint Dallinga, retired MARIN Seakeeping Senior Specialist

Field observations, opinions of owners on the magnitude of and the mechanisms through which seakeeping affects transport efficiency and safety

General Cargo Ships
Royal Wagenborg Shipping, H. Kroon, Director Wagenborg Shipping North America

Heavy Lift and Project Cargo Ships
BigLift Shipping, A. Hubregtse, Spliethoff Bevrachtingskantoor B.V., Member Executive Board

Ferry Services
P&O Ferries, V. Todd, P&O Ferries, Technical Engineering Manager (New Build) | Fleet Department

15:00 hr  Coffee Break

15:30 hr  Container Ships

Opinions of ship masters working in the above trades on what makes good seakeeping and present-day experience with the information and tools to avoid and/or manage inefficient and potentially dangerous behaviour in adverse weather

General Cargo Ships
Royal Wagenborg Shipping, A. Snijders, Cargo Superintendent

Heavy Lift and Project Cargo Ships
BigLift Shipping, Capt. J. Brink, BigLift Operations-Projects Dept.

Ferry Services
P&O Ferries, Capt. S. Moore, P&O Ferries, Senior Master - New Build & Short Sea of the Future Programme | Transformation

Short discussion & summary of the presented observations

17:30 hr  Closure
Thursday, March 26th

08:30 hr Coffee and Registration

A view on the state of the art of predicting the hydrodynamic aspects of the behaviour of a ship at sea

09:00 hr Ship motions, accelerations, global and local external loads, course keeping, stability
MARIN, G. Kapsenberg, Senior Researcher
Hull girder deflections and internal loads
MARIN, Dr. I. Drummen, Senior Project Manager Performance at Sea
Some thoughts on predicting weakly and strongly non-linear behaviour and loads
MARIN, S. van Essen, Senior Project Manager Seakeeping
Character and magnitude of the added resistance of transport ships in waves
MARIN, R.P. Dallinga, retired MARIN Seakeeping Specialist
From spray to green water and icing: Some challenges
MARIN, A.B. Aalbers, retired MARIN Researcher

10:15 hr Coffee break

10:45 hr Current procedure of assessing propulsive performance of non-ventilating propellers in waves
MARIN, R. Grin, Senior Project Manager Seakeeping
Mechanisms behind propeller ventilation and its impact on propulsive efficiency
DNVGL, Dr. E. Ruth, DNV GL, Principal Specialist
Short discussion & summary of the presented observations

Human factors

11:30 hr State of the art of predicting motion induced discomfort
TNO, Prof. Dr. J.E. Bos, TNO Human Factors
Some thoughts on the effects of bandwidth and jerk on postural stability and gait
Tentative. tbd

12:00 hr Lunch

Cargo behaviour and securing

13:00 hr Mechanisms underlying Structural Fatigue Damage, Problems in a Deterministic Prediction
Delft University of Technology, Dr. Ir. J.H. den Besten, Delft University of Technology, Assistant Professor
Development of and Thoughts on the IMO Cargo Stowage and Securing Code
MARIN, J. Koning, Senior Project Manager Performance at Sea with the contribution of Capt. H. Kaps
Current practice in the design of the sea fastening of heavy lift and project cargo
BigLift, K. Hoefakker, BigLift Shipping, Engineering - Projects Dept
Some thoughts on the problem of securing container stacks
MARIN, J. Koning, Senior Project Manager Performance at Sea
Mechanisms underlying ore liquefaction
Deltares, Ir. J. Pennekamp, Deltares Expert Water-Soil Interactions
The impact of ore liquefaction on ship stability
Oldendorff Carriers, P. Jeffrey, Oldendorff Carriers, Sr. Port Operations and Project Manager
Thursday, March 26th

14:30 hr  Coffee break

Diesel engine performance

15:00 hr  Basic elements governing diesel engine performance characteristics
Delft University of Technology, Dr. Ir. A. Vrijdag, Delft University of Technology, Assistant Professor

A case study investigating the dynamic response of a diesel engine on board a bulk carrier in waves
MAN, P. Holt, Naval Architect hos MAN Energy Solutions / MARIN, R.P. Dallinga, retired MARIN Seakeeping Specialist

Short discussion & summary of the presented observations

16.00 hr  Coffee break

Current understanding of the interaction between wind and water; lessons from physical oceanography

16:30 hr  The need for and merits of improving wind-wave climate descriptions in seakeeping assessments
Prof. K. Kahma, Emeritus Professor Physical Oceanography, Finnish Maritime Research Institute

From wave statistics to safe design load cases
Bureau Veritas, Q. Derbanne, Scientific Director Bureau Veritas Marine & Offshore

Elements in and assessment of the wind resistance of ships
MARIN, J. de Wilde, Senior Project Manager Offshore

Short discussion & summary of the presented observations

17:30 hr  Closure
Friday, March 27th

08:30 hr  Coffee, Registration

Improving Ship Operations
09:00 hr  Prospects of improving weather avoidance by predicting related ship behaviour  
L. Adegeest, Entrepreneur and Independent Consultant

Improving Ship Design
09:30 hr  Seakeeping in current design practice  
Damen Shipyards, W. Kroon, Damen Cargo Vessel Group, Team Leader Design & Proposal

Improving ship design by means of a first principles analysis  
DNVGL, O. Rognebakke, DNV GL, Head of Section

Methodology for the design of a hull with low resistance in calm water and in waves  
MARIN, S. Rapuc, Researcher

Voyage simulations in design for service  
MARIN, R. Grin, Senior Project Manager Seakeeping

11:00 hr  Coffee break

11:30 hr  Plenary discussion on our knowledge of the chain of elements that relates ship design and its performance and safety  
Discussion on the prospects of a quantitative seakeeping and performance assessment and related priorities in R&D

12:30 hr  Closure and lunch