

FOUNDED 1860 INCORPORATED BY ROYAL CHARTER 1910 AND 1960

**THE ROYAL INSTITUTION OF NAVAL ARCHITECTS  
LONDON BRANCH**



Hon. Secretary.: Ms. Lourdes Elona-Lilley (Nina), CEng FRINA  
Phone: +44 7479 639770  
Email: [london.rina44@gmail.com](mailto:london.rina44@gmail.com)

**THURSDAY, 25 APRIL 2019**

**"TANKER DAMAGE STABILITY: HISTORICAL PROBLEMS,  
SOLUTIONS AND OUTSTANDING ISSUES"**

By

**KEITH W HUTCHINSON**

BEng(Hons) CEng CMarEng FRINA FIMarEST FSNAME  
CONSULTANT, SAFINAH LTD.

and

**ANDREW L SCOTT**

MBE BSc CEng MRINA  
POLICY LEAD FOR STABILITY, LOAD LINE AND TONNAGE  
MARITIME AND COASTGUARD AGENCY

*Meeting to be held at*

***Lloyds Register, 71 Fenchurch, London, EC3M 4BS***

*At 17:45 for 18:15 hours (duration approximately 1 hour)*

*This presentation will discuss an issue of some concern over recent years amongst regulators and operators as to how best to demonstrate compliance with the tanker damage stability regulations if a specific loading condition deviates significantly from those shown in the approved Stability Information Book / Trim and Stability Book. The regulations state that if a loading condition does differ significantly then it must be approved by the authorities for compliance with the damage stability regulations before the ship sails. Complications arise through having to calculate fluid loss from a damaged compartment which may be filled to any level and carry liquids with a wide potential range of specific gravity. When this is allied to an extensive variety of loading patterns and multi-compartment side or bottom / raking damages, demonstration of compliance other than by use of an on-board 'direct calculation' computer can be problematic even though the regulations permit the simplifying assumption that all the fluid in the damaged compartment is instantaneously lost and replaced by sea-water up to the outside damaged equilibrium waterline. In practice, for various reasons, advance approval of all the potential damage scenarios for 'non-standard' loading conditions is seldom sought and hence it was widely acknowledged that there was an urgent need to develop guidelines for the verification of damage stability requirements for tankers that regularly sail in conditions of loading significantly different from those in approved documentation. Such guidelines have recently been developed by the International Maritime Organisation (IMO) and by the UK's Maritime and Coastguard Agency (MCA). This presentation discusses these issues, from the aspects of the ship designer, regulators and operators, and proposes practical and effective solutions.*

**ALL ARE WELCOME**

**PLEASE CONTACT THE HONORARY SECRETARY, MS. LOURDES ELONA-LILLEY, FRINA AT [london.rina44@gmail.com](mailto:london.rina44@gmail.com) FOR BOOKINGS AND ADVISE IF A CONTINUING PROFESSIONAL DEVELOPMENT (CPD) CERTIFICATE IS ALSO REQUIRED.**

**PLEASE ALSO ADVISE YOUR COMPANY OR SOCIETY AFFILIATION. IF YOU ARE STUDENT, PLEASE INFORM YOUR UNIVERSITY/COLLEGE AFFILIATION.**

**PRE-BOOKING IS ESSENTIAL PLEASE CIRCULATE.**