Acronyms and Glossary

Acronyms

A, A-Index Attained subdivision index
AIS Automatic Identification System
ALARP As Low As Reasonably Practicable
ANN Artificial Neural Network
ARPA Automatic Radar Plotting Aids
ASET Available Safe Egress Time
BDDs Binary Decision Diagrams
CAF Cost of Averting a Fatality
CATS Cost to Avert one Tonne of Spilt Oil
CEN Comité Européen de Normalisation/European Committee for Standardization
CFD Computational Fluid Dynamics
COMSAR Communication and Search and Rescue (IMO sub-committee)
DALY Disability Adjusted Life Year
DE Design and Equipment (IMO sub-committee)
DNV Det Norske Veritas
DOF Degrees of freedom
ECDIS Electronic Chart Display and Information System
EU European Union
FEC Fractional Effective Concentration
FED Fractional Effective Dose
FEM Finite Element Method
FMEA Failure Mode and Effects Analysis
FORM First-Order Reliability Method
FRP Fibre Reinforced Plastics
FSA Formal Safety Assessment
FTA Fault Tree Analysis
FTS Fault Tree Synthesis
GA Genetic Algorithms
GBS  Goal Based Standards
GCAF  Gross Cost of Averting A Fatality
GL    Germanischer Lloyd
GRP   Glass fibre Reinforced Plastics
GUI   Graphical User Interface
HazId Hazard Identification
HAZOP Hazard and Operability Studies
HiP-HOPS Hierarchically Performed Hazard Origin and Propagation Studies
HLA   Helicopter Landing Area
HSC   High-Speed Craft
HSE   Health & Safety Executive (UK), http://www.hse.gov.uk/
IACS  International Association of Classification Societies, http://www.iacs.org.uk/
ICAF  Implied Costs of Averting a statistical Fatality
       (term now replaced by NCAF)
ICCL  International Council of Cruise Lines (now CLIA)
IMF   International Monetary Fund
IMO   International Maritime Organization (IMO), http://www.imo.org/
INTERCARGO International Association of Dry Cargo Shipowners, http://www.intercargo.org
ISM   International Safety Management (ISM) Code
ISO   International Organization for Standardization
ISPSC International Ship and Port Security Code
ITTC  International Towing Tank Conference
LMIS  Lloyds Maritime Information Systems
MCA   Maritime and Coastguard Agency (UK)
MCDM Multi-Criteria Decision Making
MEPC Marine Environment Protection Committee (IMO committee)
MES   Marine Evacuation System
MFZ   Main Fire Zone
MSC   Maritime Safety Committee (IMO committee)
MVZ   Main Vertical Zone
NCAF  Net Costs of Averting a Fatality
NRC   Nuclear Regulatory Commission (US)
OECD Organization for Economic Co-operation and Development
OFM   Operator Function Model
OPA   Oil Pollution Act (US)
PCL   Potential Loss of Life
PSA   Probabilistic Safety Assessment
PSC   Port State Control
PVC   Polyvinylchloride
QRA   Quantitative Risk Analysis
Acronyms and Glossary

QRD  Qualitative Design Review
R, R-Index  Required subdivision index
RBD  Risk-Based Design
RCO  Risk Control Option
RFR  Required Freight Rate
RID  Regulatory Impact Diagrams
RINA  Registro Italiano NAvale
RO  Recognized Organizations
RPN  Risk Priority Number
RSET  Required Safe Egress Time
SAVANT  Systems AVailability ANalysis Tool
SCF  Ship Construction File
SLA  Safety Level Approach
SLF  Sub-committee on Stability and Load lines and on Fishing vessels (IMO sub-committee)
SMS  Safety Management System
SRA  Structural Reliability Analysis
UN  United Nations
VOF  Volume of Fluid (CFD numerical method)
WB  World Bank
WIG  Wing-In-Ground effect craft

Glossary*

**Accident**  An unintended event involving fatality, injury, ship loss or damage, other property loss or damage, or environmental damage.

**Accident category**  A designation of accidents reported in statistical tables according to their nature, e.g. fire, collision, grounding, etc.

**Accident scenario**  A sequence of events from the initiating event to one of the final stages.

**Consequence**  The outcome of an accident.

**Frequency**  The number of occurrences per unit time (e.g. per year).

**Generic model**  A set of functions common to all ships or areas under consideration.

**Hazard**  A potential to threaten human life, health, property or the environment.

**Initiating event**  The first of a sequence of events leading to a hazardous situation or accident.

**Risk**  The combination of the frequency and the severity of the consequence.

*(Reference: International Maritime Organization, MSC 83/INF.2)*
**Risk contribution tree (RCT)** The combination of all fault trees and event trees that constitute the (RCT)

**Risk control measure** A means of controlling a single element of risk

**Risk control option (RCO)** A combination of risk control measures

**Risk evaluation criteria** Criteria used to evaluate the acceptability/tolerability of risk.

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**Main Maritime International Conventions – IMO**

**MARPOL Convention**

The MARPOL Convention (International Convention for the Prevention of Pollution from Ships) is the main international convention covering the prevention of pollution of the marine environment by ships from operational or accidental causes. It is a combination of two treaties adopted at IMO in 1973 and 1978 respectively. MARPOL was continuously updated by amendments through the years (http://www.imo.org/Conventions/).

**SOLAS Convention**

The SOLAS Convention (International Convention for the Safety of Life at Sea) in its successive forms is generally regarded as the most important of all international treaties concerning the safety of merchant ships. The first version was internationally adopted in 1914, in response to the Titanic disaster, the second in 1929, the third in 1948, and the fourth in 1960. The 1960 Convention was the first major task for IMO after the Organization’s creation. SOLAS was continually updated by amendments through the years (http://www.imo.org/Conventions/).

**ICLL Convention**

The first ICLL Convention (International Convention on Load Lines), adopted in 1930, was based on the principle of reserve buoyancy, although it was recognized then that the freeboard should also ensure adequate stability and avoid excessive stress on the ship’s hull as a result of overloading. Thus, limitations on the draught to which a ship may be loaded make a significant contribution to her safety. These limits are given in the form of freeboards, which constitute, besides external watertight and watertight integrity, the main objective of this Convention. As other conventions, it was continually updated at IMO by amendments through the years (http://www.imo.org/Conventions/).
**STCW Convention**

Authors Biography

Carlos Guedes Soares is Professor and Head of the Naval Architecture and Marine Engineering Department and the Centre for Marine Technology and Engineering of Instituto Superior Técnico, Lisbon. He has post-graduate degrees from the MIT, the NTNU and the TU Lisbon and about 30 years experience in teaching and research work in the fields of structural analysis and design, of dynamics and hydrodynamics and on probabilistic modelling for application in risk and reliability analysis. He has been involved in about 50 European projects, co-ordinating 9 of them, and also co-ordinated about 10 national projects. He has published about 650 papers in international journals, books and conferences, is co-editor of scientific journals and member of several international organisations.

Andrzej Jasionowski graduated from the Technical University of Gdansk (MEng, 1997), and University of Strathclyde (PhD, 2002). He is engaged as Technical Manager of the Ship Stability Research Centre, Universities of Glasgow and Strathclyde, and Director of Safety At Sea Ltd, Glasgow, Scotland. His main interests comprise ship hydrodynamics, damaged ship dynamics, stability, risk assessment, inductive inference, plausible reasoning, modelling uncertainty, numerical algorithms development, philosophy of safety. He is author/co-author of 35 journal and conference papers, 50 other contract reports.

Jørgen Juncher Jensen is Professor of Marine Engineering at the Department of Mechanical Engineering, Section of Coastal Maritime and Structural Engineering, DTU, where he is leading a research group dealing with wave induced stochastic load and response processes for marine structures. He has been at DTU since 1973 and has received various awards (e.g. Bronze Medal from Royal Society of Naval Architects, London, Gold Medal from the
Alexander Foss Foundation and the Statoil Prize). He has been involved in several EU sponsored project as well as national projects and has authorized about 150 papers.

**Jeppe Skovbakke Juhl**, Special advisor, holds a position of naval architect at the Danish Maritime Authority with responsibility for implementation of international rules and regulations into Danish maritime legislation. For the last couples of years, he has represented the Danish Maritime Authority in several national and international forums, such as IMO and EU, and has furthermore been appointed as technical representative to projects under the auspices of the Nordic Council of Ministers. His key competencies are ship stability and maritime risk assessments. Moreover he has participated in several EU-projects and other international work.

**Mr. Dag McGeorge** qualified as a naval architect from NTNU in Norway in 1989 and now holds the position of Principal Engineer at Det Norske Veritas. He has 15 years of working experience in project management, research and development, innovation and consultancy mainly related to maritime, naval and offshore activities with focus on the use of advanced and lightweight materials in load-bearing structural applications. He was project manager and technical coordinator of a large collaborative European R&D project on composites in superstructures of naval ships (EUCLID RTP3.21) and is now leading SAFE-DOR’s subproject on risk based design of composite superstructures.

**Apostolos D. Papanikolaou** studied Naval Architecture & Marine Engineering at the Technical University of Berlin, where he also received his Dr.-Ing. and Habilitation degrees. He is Professor of Ship Design in the School of Naval Architecture and Marine Engineering of the National Technical University of Athens and Director of the Ship Design Laboratory. His educational, research and professional activities cover a broad area of Naval Architecture and Ocean Engineering and are documented in about 400 technical publications. He was and is Principal Investigator of a long series of EU or nationally funded research projects regarding the design and optimization of conventional and unconventional ships, the hydrodynamic analysis and assessment of the calm water performance and the seakeeping behavior of ships, the stability and safety of ships and regulatory developments.
Esa Pöyliö is Project Engineer in the Concept Design department of Deltamarin Contracting Ltd. He graduated as Naval Architect (B.Sc) from the Technical Institute of Turku in 1980. During the period 1980–1984 he worked in the steel design department and 1984–1990 in the Project Design Department of Elomatic Oy. From 1990 he has been working in the Concept Design department of Deltamarin as Project Engineer and Project Manager of design of various ship types. In his 28 years in engineering, Mr Pöyliö has gained a vast experience in ship design and design project management and has become familiar with safety related international rules and regulations.

Pierre C Sames holds the current position of Senior Vice President Strategic Research and Development at Germanischer Lloyd. He is responsible for coordinating all technical research and development projects of GL. He is chairman of the SAFEDOR Steering Committee. His previous experience includes research into hydrodynamic extreme loads and risk analysis. He joined GL in 1995 after studying naval architecture in Hamburg.

Rolf Skjong (PhD) is currently chief scientist in Det Norske Veritas Research and Innovation. He is Chairman of the International Association of Classification Societies (IACS) Expert Group on Formal Safety Assessment and Chairman of the European Safety and Reliability Association (ESRA) group on Safety in Marine Transportation. He has 25+ years of experience in risk assessment and reliability analysis, project planning, optimisation, rules and regulations, design and approval. He is a Specialist in Structural Reliability Analysis and Formal Safety Assessment, and is representing Norway in the International Maritime Organisation on risk issues. He has been member of various national and international scientific/steering committees. As project manager he is/has been responsible of a large number of Strategic Research Projects and international joint industry projects e.g. EU projects for maritime, off-shore, process and aerospace industries. He has published 100+ journal and conference papers.

Dracos Vassalos is Professor of Maritime Safety in the Department of Naval Architecture and Marine Engineering, a joint Department of the Universities of Glasgow and Strathclyde, and the Director of the Ship Stability Research Centre (SSRC), a world-leading centre of excellence on ship stability and safety. His motto is “safety enhancement through innovation”, an idea he has pursued single-mindedly in a career that spans over 30 years in industry and academia, promoting the use of scientific approaches in dealing with maritime safety. He has been instrumental in helping to create a critical mass in
the research community on safety, through a series of initiatives that made SSRC the focus of active international collaboration. He travels the world over promoting maritime safety, lectures and publishes widely, with some 400 technical publications to his credit and a string of prizes and awards, including some 100+ major research contracts. He served as Chair of the STAB Conferences and Workshops (1996–2006), Chair of the ITTC Stability Committee in Waves (1996–2002), Chair of WEGEMT (the European Association of Universities in Marine Technology 1999–2001). Currently, Professor Vassalos is Chairman of the International Standing Committee of the “Design for Safety” Conference, a theme instigated and promulgated by SSRC. He is also a long-standing member of the UK delegation to IMO for ship stability.
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