



WALTER L. KUEHNLEIN, PH.D., -ING.



Dr. Kuehnlein is a Principal with Long International and has a proven record as a testifying expert in the London Court of International Arbitration. With more than 35 years of experience in offshore operations, engineering, science, construction, and environmental issues, Dr. Kuehnlein is dedicated to the advancement of global sustainability. He is Vice-Chairman of the Board of Directors of the German Association for Marine Technology (GMT). Previously, he served for 15 years as Chairman for the GMT. From 2005 to 2022, Dr. Kuehnlein was a member of the German Offshore Committee of DNV. He is an “offshore advisor” for the magazine *Ship&Offshore* and is a lecturer at the Hamburg University of Technology and Berlin University of Technology. Dr. Kuehnlein was Symposium Coordinator for Arctic Technology of the OMAE Conferences and Chairman of several Arctic conferences, including ATC 2016.

Since 1997, Dr. Kuehnlein has been involved in the first drilling project in the North Caspian Sea, where he worked as Engineering and Project Manager in the U.S., Russia, and Kazakhstan, and currently serves as an advisor. From 2008 to 2019, he was Managing Director of the consultancy company sea2ice Ltd. & Co. KG. From 2001 to 2009, Dr. Kuehnlein was Director at the Hamburg Ship Model Basin (HSVA) and was responsible for ice and offshore. Dr. Kuehnlein graduated in Civil and Ocean Engineering and received his Ph.D. in Ocean Engineering from the Berlin University of Technology, Germany. He has managed ambitious and challenging offshore installations in harsh environments that had to be designed and optimized completely from an operational point of view taking into consideration the full range of determining factors, such as environmental sensitivity, operational aspects, technical possibilities, construction and investment requirements, life cycle, and operational costs. Dr. Kuehnlein is a LinkedIn Community Top Marine Engineering Voice.

EDUCATION

Doctorate: Dr.-Ing. (Ph.D.), Institute of Naval Architecture, Marine and Ocean Engineering Faculty of Transport and Communications, and Applied Mechanics, Berlin University of Technology, 1997

- Thesis: “Seakeeping Tests with Transient Wave Packets”
- Honors: Summa cum laude, Weinblum Award, Werner von Siemens Award

Master: Dipl.-Ing., Civil and Hydraulic Engineer, Berlin University of Technology, 1989

- Thesis: “Hydrodynamic Optimization of a Circular Shaped Wave Breaker”

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS

- Certification Expert: Ice Design Basis for an Offshore Wind Park, 2023

PROFESSIONAL AFFILIATIONS

- Network Partner of the German Committee of the UN-Decade (ODK) (www.ozeandekade.de), 2021–2030
- Member of the Ocean Technology Innovation Advisory Board at the Ocean Technology Campus, Rostock, Germany (www.oceantechnologycampus.com), 2023
- Member of the German Offshore Committee of DNV (www.dnv.com), 2005–2022
- Member of Arctic Technology Conference (ATC) 2014 Committee, 2014
- Associate Editor for the *Journal of Offshore Mechanics and Arctic Engineering*, an ASME Journal (limited to 6 years), 2007 to 2013
- Member of Arctic Technology Conference (ATC) 2012 Committee, 2012



LANGUAGES

- Fluent in German and English

CHAIR POSITIONS

- Vice Chairman of the Board of Directors of the German Association for Marine Technology (GMT) (www.marine-technology.eu), since 2023
- Chairman of the Board of Directors of the German Association for Marine Technology (GMT) (www.marine-technology.eu), 2008–2023
- Co-Chair of the 41st International Conference on Ocean, Offshore & Arctic Engineering, OMAE 2022 in Hamburg, Germany (www.omae.org), 2022
- Chair of the Polar and Arctic Sciences and Technology Symposium of the Ocean, Offshore & Arctic Engineering Conferences, OMAE (www.omae.org), 2001–2020
- Past-Chairman of the Arctic Technology Conference (ATC) 2018, in Houston, Texas, U.S.A., 2018
- Chairman of the Arctic Technology Conference (ATC) 2016, in St. John's, Newfoundland, Canada, 2016
- Chair of Ian Jordaan Honoring Symposium on Ice Engineering, OMAE 2015
- Vice Chairman of the Arctic Technology Conference (ATC) 2015, in Copenhagen, Denmark, 2015
- Chairman at the 10th Arctic Oil & Gas Conference in Oslo, Norway, 2014
- Chairman at the 9th Arctic Oil & Gas Conference in Oslo, Norway, 2013
- Chair at the 2nd Business Offshore Conference in Hamburg, Germany, 2013
- Technical Chair of OMAE 2012 in Rio de Janeiro, Brazil, 2012
- Chair at the 1st Business Offshore Conference in Hamburg, Germany, 2011
- Chairman at the 7th Arctic Oil & Gas Conference in Oslo, Norway, 2011
- Marine Representative for Jackup Rig Move, North Sea, 2011
- Chairman of Ocean, Offshore and Arctic Engineering (OOAE) Division of ASME, 2011
- Chairman of the 2nd Arctic Oil & Gas North America Conference in Houston, Texas, U.S.A., 2011
- Chairman of the 25th Ocean, Offshore and Arctic Engineering Conference (OMAEO 2006) in Hamburg, Germany, 2016

SPEAKING AND MODERATOR ENGAGEMENTS

- Lecturer: “Ice Engineering” & “Offshore Engineering” at Hamburg University of Technology (www.tuhh.de), 2013–Present
- Lecturer: “Offshore Technology” at Berlin University of Technology (www.tu.berlin), 2019–Present
- Advisor Offshore for international magazine *Ship&Offshore*, 2009–2024
- Lecturer: “Fundamentals of Offshore Engineering” and “Scientific English,” Maritime Technology Studies Institute (MTSI), formerly National Academy of Maritime Technology (NAMT), Alexandria, Egypt, 2021–2025
- Keynote Speaker at Freelancer Social Event, Dubai, U.A.E., 2024



- Moderator: Keynote Arctic Talk at Offshore Technology Conference (OTC), Houston, Texas, U.S.A., 2023
- Moderator: Panel Discussion at MAROS Conference, Berlin, Germany, 2023
- Organizer and Moderator of the SMM GMT Offshore Dialogue, which is part of the United Nations Decade of Ocean Science for Sustainable Development, 2024
- Organizer, Moderator, and Panelist of the SMM GMT Offshore Dialogue, which is part of the United Nations Decade of Ocean Science for Sustainable Development, 2022
- Guest Lecturer: “Systems Engineering in Shipbuilding” at National Academy of Maritime Technology, Alexandria, Egypt, 2021 and 2023
- Guest Lecturer: “Shipyard Organization and Production Process” at National Academy of Maritime Technology, Alexandria, Egypt, 2021 and 2023
- Lecturer: “Ocean Engineering” at the University of Duisburg-Essen, Institute of Ship Technology, Ocean Engineering and Transport Systems, 2005–2011
- “Ice Engineering,” ASME Short Courses, 2009–2011

TEACHING/WORKSHOP FACILITATOR EXPERIENCE

- Energy Vision, 2024
- Advanced offshore rig moving, 2015–2018 and 2020
- Artificial Intelligence (AI) in marine technologies, 2019
- Think and act blue!, 2018–2019
- Ice engineering, 2017
- Design philosophies for Arctic approach, 2016–2017
- Future (of) Arctic gas projects, 2016
- Concepts and philosophies for ice-covered waters, 2014
- Arctic operational concept for an arctic offshore installation, 2014
- Design philosophies for offshore structures in ice, special tailor-made, operationally optimized concepts, 2011
- Design philosophies for offshore structures in ice, special tailor-made concepts, operationally optimized for each location – increasing safety and decreasing costs, 2009

TECHNICAL ADVISORY SERVICES

- Smart and Sustainable Energy Solutions and Philosophies: Clean and smart energy generation, storage, and transportation, Dubai, U.A.E., 2020–Present
- Smart initiatives to promote the use of renewable energy, 2024
- Sustainable energy storage and transportation concepts, 2024
- COP28 in Dubai, U.A.E., 2023
- AI Energy Series – Middle East Conference, Dubai, 2023
- Highly efficient energy storage system, 2023



- Wave generation and advanced model testing techniques, 2021–2023
- Sustainable boat concept, 2022
- Ice Breaking Research Vessel, 2021
- Artificial Intelligence (AI) in marine technologies, 2021
- Future Sustainable Energy Concepts and Philosophies: Clean and smart energy generation, storage, and transportation, 2020
- Offshore wind park in part-time ice-covered waters, 2020

PROJECT EXPERIENCE

Dr. Kuehnlein has worked on numerous U.S. and international projects. He is experienced in offering his worldwide clients a comprehensive range of integrated services that provide energy and offshore and arctic solutions. He provides solutions by identifying and managing operational, engineering, construction, and environmental risks and liabilities while maximizing efficiency, reducing costs, and achieving compliance with international standards.

PROFESSIONAL EXPERIENCE

Long International, Inc.

Dubai, U.A.E. (2024–Present)

Dr. Kuehnlein provides a variety of dispute resolution services, including expert report preparation and expert testimony regarding marine operations, energy, offshore, and arctic operational engineering, construction, and environmental risks and liabilities. Dr. Kuehnlein formulates solutions to maximize efficiency, reduce costs, and achieve compliance with international standards.

nrg.vision

Dubai, U.A.E./Tallinn, Estonia (2023–Present)

As an advisor, Dr. Kuehnlein provides expert guidance on sustainable energy strategies to help organizations reduce their carbon footprint. With a deep understanding of energy efficiency, renewable energy, and emerging technologies, he creates tailored plans to achieve energy goals while minimizing environmental impact and maximizing savings.

terra.blue

Dubai, U.A.E./Tallinn, Estonia (2019–Present)

Dr. Kuehnlein serves as Managing Partner for NRG & Tech in partnership with Dynamic Employment Services LLC, Dubai, U.A.E., and Xolo Go OÜ – Walter Leonhard Kuehnlein, Tallinn, Estonia. The goal of the partnership is global sustainability. This involves dealing with fair and sustainable use of the oceans, smart and sustainable energy solutions, blue and smart offshore and arctic concepts, and artificial intelligence and digitization in marine and energy technologies while considering operational and design-related aspects of offshore structures and systems in harsh environments, including ice.

Sea2ice Ltd. & Co. KG

Hamburg, Germany (2008–2019)

As Managing Director, Dr. Kuehnlein provided consultancy, installation management, and rig-move-related services. He successfully performed design reviews of offshore wind park concepts. In addition,



Dr. Kuehnlein provided consulting services related to arctic drilling rigs, loading terminals, offshore operation concepts, blue growth, a concept for operating in the arctic, and a conceptual study for an operationally optimized offshore structure for ice-covered waters. Moreover, he formulated a design philosophy for arctic approach, performed drilling concept development for the North Caspian Sea, and evaluated ice conditions and consequences for offshore wind energy converters.

Dr. Kuehnlein created a comprehensive strategy for Arctic waters, integrating a holistic technological approach. He also analyzed the design of an ice-breaking research vessel, formulated ice management philosophies and strategies, and developed a jack-up drilling rig specifically for the North Caspian Sea. He carried out a mooring analysis for a drilling rig and the mooring layout of floating marina jetties. He worked on an ocean renewable energy converter, an offshore installation concept, and offshore structures for the North Caspian Sea, including operational optimized concepts, an offshore wind energy converter in (part-time) ice-covered seas, and a project approach for arctic regions.

His services also included generating rig move procedures. He performed scientific research activities, including co-writing a guide for non-native English speakers, specifying a structure in ice covered waters. Dr. Kuehnlein supervised ice model tests and was the co-organizer of the third Business Offshore Conference in Hamburg, Germany. Dr. Kuehnlein also performed design reviews, including for an offshore concept for ice-covered waters, an offshore wind installation vessel, and an offshore wind park. He subsequently developed an installation concept for an offshore wind park. Furthermore, he was Installation Coordinator for the relocation of an offshore gas production platform in the North Sea as well as Installation Manager for a jacket installation. He further served as an Installation Manager for an offshore wind (MOAB) transformer substation in the North Sea and was a Marine Representative for jack-up rig moves in the North Sea. He reviewed an arctic operations concept and an evacuation/rescue concept in arctic conditions. He was also involved in the rig moves with Parker Rig 257 (Sunkar) in the North Caspian Sea and was responsible for all de-grounding and grounding operations and carried out a study exploration concept for arctic waters.

From 2001 to 2009, Dr. Kuehnlein was Director and Head of the Ice and Offshore Department at the Hamburg Ship Model Basin (www.hsva.de). His scope of work and duties included ice model tests, ice and sea trials, *i.e.*, ice barriers for shallow waters, model tests under special sea conditions, such as freak waves, etc., offshore and seakeeping tests, and maneuvering tests. Dr. Kuehnlein was the leader for innumerable industrial projects (offshore structures, vessels, and operations in ice and open waters). He led the EU research project STRICE and was the lead for research projects ROLL-S and SinSee, which involved capsizing model tests with totally freely running models including optical registration of all degrees of freedom.

Dr. Kuehnlein was also involved in the Parker Drilling Company, North Caspian Special Project that involved all rig moves with Parker Rig 257 (Sunkar) in the North Caspian Sea. He was responsible for de-grounding and grounding operation during rig moves and consulted on generation of rig move procedures.

IMPac Offshore Engineering GmbH

Hamburg, Germany (1997–2001)

As Project Manager for the Parker Drilling Company, Dr. Kuehnlein worked on the following projects:

- North Caspian Project: Performed a stability analysis of Rig 257, Statistic: environmental loads. Responsible for de-ballasting and ballasting operation during rig moves, weight and ballast calculations, generation of rig move procedures, and modification of rescue systems.



- Offshore Kazakhstan International Operating Company (OKIOC), Drilling Operations in the North Caspian Sea: Performed alternative drilling concepts and hybrid drilling concepts.
- OKIOC, Drilling Operations in the North Caspian Sea: Performed conceptual studies for drilling rigs to be used in the North Caspian and performed an ice force analysis for winter operations.
- North Caspian Project: Verified and evaluated original design philosophies. Adjusted a full-scale measurement system and developed tow-out and installation procedures and operation manuals. Performed floating stability and ballast and weight calculations to include dead weight survey and motion analysis of Parker Rig 257.
- North Caspian Project, Astrakhan, Russia, Rig Upgrade Manager: Had complete responsibility for upgrade construction of Parker Rig 257 (Sunkar).
- North Caspian Project, New Iberia, U.S.A.: Engineering Manager responsible for engineering of the ice-classed drilling barge rig: Parker Rig 257. Oversaw design philosophy, safety philosophy, environmental protection philosophy, detail engineering of drilling rig, connecting procedure (connecting in floating mode), safety analyses, reliability, availability, and maintenance (RAM) analyses, and negotiations with the client.
- OKIOC, Drilling Operations in the North Caspian: Developed a global drilling concept, basic engineering of drilling barge, and an overall stability concept for a drilling rig under special consideration of the environmental loads: waves, wind, current, and ice forces. Moreover, developed a full-scale measurement system for the determination of ice, wave, wind, and current forces. Designed steel pads to be used as a foundation for drilling rigs. Performed ice force studies for drilling rigs in the North Caspian.

Berlin University of Technology

Berlin, Germany (1986–1997)

As Senior Research Engineer at the university, Dr. Kuehnlein investigated optimization of vertical wave absorbers, and generation of extreme (nonlinear) transient wave packets (freak waves). He also performed seakeeping tests with (nonlinear) transient wave trains, and numerical modeling of vertical wave absorbers. His special projects included the following:

- Hydrodynamic investigations of submerged bodies and hydrodynamic investigations of oil recovery vessels.
- Optimization of vertical wave absorbers – generation of extreme (nonlinear) transient wave packets (freak waves), seakeeping tests with (nonlinear) transient wave trains, and numerical modeling of vertical wave absorbers. Special projects included hydrodynamic investigations of submerged bodies and hydrodynamic investigations of oil recovery vessels.
- Optimization of seakeeping tests – generation of problem-oriented transient wave packets, seakeeping tests with self-propelled models (oblique waves), seakeeping tests with semi-submersibles, hydrodynamic optimization of coupled systems, and conception of sidewall wave absorbers for the wave tank at the University of New Orleans. Analysis of ship wave systems (fast catamarans), Berlin, Germany, and Trondheim, Norway.
- Dr. Kuehnlein was a Supervisor of the full-scale tests in Norway and hydrodynamic investigations of oil recovery vessels. Special project included the inauguration of the wave maker system at the Technical University of Istanbul.



- As Research Engineer, Dr. Kuehnlein researched a project related to wave damping for oil/chemical spill recovery vessels. (Patent: Wave attenuation systems. Research Project: Laser-Doppler-Anemometer (LDA) measurements in waves.)

PUBLICATIONS

Author:

“Marine technology is crucial for the offshore wind industry!” *Ship&Offshore* magazine, Energy at Sea 2024, p. 80, DVV Media Group GmbH, Hamburg, Germany, www.shipandoffshore.net.

“The sea will provide new opportunities!” *Ship&Offshore* magazine, The German Offshore Wind Compendium 2022, p. 6, DVV Media Group GmbH, Hamburg, Germany, www.shipandoffshore.net.

“Design and Development Philosophies for Arctic Projects,” proceedings of Arctic Technology Conference (ATC) 2016, held in St. John’s, Newfoundland, Paper OTC 27328.

18th International Ship and Offshore Structures Congress (ISSC) 2012, September 9–13, 2012, Rostock, Germany, Official Discussor of the report of Committee V.6 (Arctic Technology). “First offshore test rig for realistic conditions unveiled,” *Ship&Offshore*, the international publication for Offshore & Marine Technology 2011, No. 5, p. 54. www.shipandoffshore.net.

Projekt zur Ölgewinnung im nördlichen Kaspischen Meer Schiff & Hafen 2010, No. 12 (December 2010), pp. 64–66, Fachzeitschrift für Schifffahrt, Schiffbau & Offshore – Technologie, www.dvvmmedia.com.

“Ice Engineering,” ASME Certified Course, ASME 28th International Conference on Ocean, Offshore and Arctic Engineering – OMAE 2009, May 31–June 5, 2009, Honolulu, Hawaii, U.S.A.

“Philosophies for dynamic positioning in ice-covered waters,” Paper OTC-20019, 2009 Offshore Technology Conference, held in Houston, Texas, U.S.A., May 4–7, 2009.

“Underwater Defense Technology meets Oil and Gas” (invited Speaker, Keynote Speech in Opening Session), UDT 2006, December 6–8, 2006, in San Diego, U.S.A.

“The North Caspian Project” (invited Speaker, Keynote Speech in Opening Session), proceedings of the 12th International Society of Offshore and Polar Engineering Conference (ISOPE), Kitakyushu, Japan, May 26–31, 2002, ISBN 1-880653-58-3, ISSN 1098-6189.

“Explorationsplattform für Flachwasser im nördlichen Kaspischen Meer,” 3. Schiffbautag in Mecklenburg-Vorpommern, Rostock-Warnemünde, November 11, 1999, Schriftenreihe für Ingenieurwissenschaften, Herausgegeben von der Universität Rostock, Fakultät für Ingenieurwissenschaften, 38. Jahrgang (1999) Heft Nr. 4, 120 S., ISSN 0036-6056, Rostock, Germany.

“Seegangversuchstechnik mit transients Systemanregung,” Technische Universität Berlin, Fachbereich Verkehrswesen und Angewandte Mechanik Dissertation D83, August 15, 1997, Berlin, Germany.

“Forschung im Bereich der Meerestechnik,” TU-International, Nr. 18/19, Technische Universität Berlin, February 1993, ISSN: 0935-2740, Berlin, Germany.

Co-Author:

“Towards mission-based structural design for arctic regions,” *Ship Technology Research (Schiffstechnik)* 2017, Vol. 64, Issue 3, 2017.



19th International Ship and Offshore Structures Congress (ISSC) 2015, September 7–10, 2015, Cascais, Portugal, Report of Committee V.6 (Arctic Technology).

“Drilling in Ice,” *Ship&Port* 2009, No. 1, pp. 60–61, now *Ship&Offshore*, the international publication for Offshore & Marine Technology, www.shipandoffshore.net.

“Numerical Simulation of Ice Action to a Lighthouse,” proceedings of 28th International Conference on Offshore Mechanics and Arctic Engineering (OMAE) 2009, May 31–June 5, 2009, Honolulu, Hawaii, U.S.A., OMAE2009-80164. “A spectral model for forces due to ice crushing,” *Journal of Offshore Mechanics and Arctic Engineering*, Transactions of the ASME, Vol. 129, May 2007.

“Rupp Model Tests – LNG Carriers in Ice,” proceedings of 25th International Conference on Offshore Mechanics and Arctic Engineering (OMAE) 2006, June 4–9, 2006, Hamburg, Germany, OMAE2006-92604.

“Qualitative and quantitative validation of a numerical code for the realistic simulation of various ship motion scenarios,” proceedings of 25th International Conference on Offshore Mechanics and Arctic Engineering (OMAE) 2006, June 4–9, 2006, Hamburg, Germany, OMAE2006-92245. “Rupp Model tests in brash ice channels,” proceedings of 24th International Conference on Offshore Mechanics and Arctic Engineering (OMAE) 2005, June 12–17, 2005, Halkidiki, Greece, OMAE2005-67327.

“A new spectral method for modelling dynamic ice actions,” proceedings of 23rd International Conference on Offshore Mechanics and Arctic Engineering (OMAE) 2004, June 20–25, 2004, Vancouver, Canada, OMAE2004-51360.

“Nonlinear calculations of tailored wave trains for experimental investigations of extreme structure behaviour,” proceedings of 23rd International Conference on Offshore Mechanics and Arctic Engineering (OMAE) 2004, June 20–25, 2004, Vancouver, Canada, OMAE2004-51195.

“Innovative deterministic seakeeping test procedures,” proceedings of 8th International Conference on the Stability of Ships and Ocean Vehicles, STAB 2003, September 15–19, 2003, Escuela Técnica Superior de Ingenieros Navales, Madrid, Spain, Paper No. 49.

“Model testing of ice barriers used for reduction of design ice loads,” proceedings of 22nd International Conference on Offshore Mechanics and Arctic Engineering (OMAE) 2003, June 8–13, 2003, Cancun, Mexico, OMAE2003-37385.

“Model tests for the validation of extreme roll motion predictions,” proceedings of 21st International Conference on Offshore Mechanics and Arctic Engineering (OMAE) 2002, Oslo, Norway, June 23–28, 2002.

“Tailor-made freak waves within irregular seas,” proceedings of 21st International Conference on Offshore Mechanics and Arctic Engineering (OMAE) 2002, Oslo, Norway, June 23–28, 2002.

“Ice model testing of an exploration platform for shallow waters in the North Caspian Sea,” proceedings of POAC 2001, Ottawa, Canada, Aug. 12–17, 2001.

“Ice model tests with an oil exploration barge in the North Caspian Sea,” proceedings of 15th International Symposium on Ice, Gdansk, Poland, Aug. 28–Sept. 1, 2000.

“Hydrodynamic evaluation of multi-layer wave filters and absorbers,” International Conference on Offshore Mechanics and Arctic Engineering (OMAE) 1998 – 367, 1998, Lisbon, Portugal.

“Synthesis of innovative model testing and numerical optimization for advanced offshore design,” proceedings of the simulation of design storm wave condition with tailored wave groups, proceedings of International Society of Offshore and Polar Engineering (ISOPE) Conference, Honolulu, Hawaii, May 25–30, 1997.



- “Design by numerical optimization and innovative model testing,” International Conference in Ocean Engineering (ICOE) 1996, Madras, India, December 1996.
- “Simulation of design storm wave conditions with tailored wave groups,” Discussion on the Report of Seakeeping Committee – 21st International Towing International Maritime Conference Indonesia, Jakarta, Indonesia, September 9–11, 1997.
- “A new tool for seakeeping tests – nonlinear transient wave packets,” proceedings of the 8th International Conference on the Behavior of Offshore Structures (BOSS) 1997, Vol. 2, 1997, Delft, The Netherlands. Tank Conference, Vol. 2, pages 203–205, September 15–21, 1996, Trondheim, Norway.
- “Nonlinear transient wave excitation as a new tool in model testing,” proceedings of International Conference on Offshore Mechanics and Arctic Engineering (OMAЕ) 1996 – 552, June 1996, Florence, Italy.
- “Seegangversuchstechnik mit transientser Strukturanregung,” STG 1995 – Jahrbuch Schiffbautechnische Gesellschaft, Fachvortrag auf der 90. Hauptversammlung, 1995.
- “Transient wave packets – an efficient technique for seakeeping tests of self-propelled models in oblique waves,” Third International Conference on Fast Sea Transportation, pp. 1193–1204, Vol. 2, September 1995, Luebeck, Travemuende, Germany.
- “Innovative vessels on the German oil spill recovery fleet,” International Conference on Technologies for Marine Environment Preservation, September 1995, Tokyo, Japan. MARI-ENV 1995 – Ab. No. 007.
- “Seakeeping tests in transient wave packets,” State of the Art: Report to Seakeeping Committee, International Towing Tank Conference, 1995.
- “A new approach to seakeeping tests of self-propelled models in oblique waves with transient wave packets,” proceedings of International Conference on Offshore Mechanics and Arctic Engineering (OMAЕ) 1995 – 350, June 1995, Copenhagen, Denmark.
- “Hydrodynamic optimization of selected oil-skimming systems,” NAV 1994, International Conference on Ship and Marine Research, October 1–9, 1994, Rome, Italy.
- “Seakeeping tests of marine structures with deterministic wave groups and tank wall sidewall wave absorbers,” proceedings of BOSS 1994 Conference, July 12–15, 1994, Massachusetts Institute of Technology, Cambridge, Massachusetts, U.S.A.
- “Seakeeping tests with deterministic wave groups and tank wall sidewall wave absorbers,” Discussion on the Report of Seakeeping Committee – 20th International Towing Tank Conference, September 19–25, 1993, San Francisco, California, U.S.A.
- “Hydrodynamische Optimierung ausgewählter Ölräumfahrzeuge,” 13. Workshop, Umweltschonender Seeverkehr, Rundbrief Nr. 15, Transferstelle Meerestechnik, Universität Bremen, Klagenfurter Straße, September 1993, Bremen, Germany.
- “Oil skimming vessels: structure-seaway interaction problems and provisions for wave attenuation systems,” proceedings of Offshore Technology Conference (OTC) 1992 – 6989, pp. 68–76, Vol. 4, 1992, Houston, Texas, U.S.A.
- “Improvement of oil skimming vessel by wave attenuation systems,” Offshore Engineering – VIII International Symposium on Offshore Engineering, COPPE, Federal University of Rio de Janeiro, September 1991, Pentech Press, London, U.K.
- “Efficiency of selected oil-skimming systems in irregular seas,” 1991 International Oil Spill Conference, March 1991, San Diego, California, U.S.A.



“Entwicklung von Ölabschöpfsystem,” Beiträge zum 11. Aufbauseminar Meerestechnik, TU Clausthal/TU Berlin, June 1990, Clausthal, Germany.

TESTIMONY EXPERIENCE

2009 *Association of Hanseatic Marine Underwriters e.V., Damage to Seismic Array caused by a Container Vessel, London Court of International Arbitration. Arbitration, Testimony.*

The relative influence of the streamer’s diving depth at different speeds was analyzed theoretically. The relative influence was calculated and evaluated for eight different diving depths in combination with five different container vessel speeds. The simulations clearly indicated that the damage would have been significantly reduced if the streamers had been submerged to a greater depth when the danger was recognized. This report, along with Dr. Kuehnlein’s explanations, resulted in a significant reduction in the amount of damages the client was required to pay.

2006 *AXA Corporate Solutions, Cargo Damages on Board of a Cargo Vessel, London Court of International Arbitration. Arbitration, Testimony.*

Numerical seakeeping investigations had been conducted for the cargo vessel, which lost its maneuverability due to the loss of its rudders in the southern waters of Australia. After drifting for several days, a salvage tug arrived to provide towing assistance. A realistic seaway was generated based on the available data, and ship motion behaviors, as well as several accelerations at the positions of the transformers, were estimated for different relative courses. The results indicated that the ship’s behavior was quite moderate, with no significant events to report. The accelerations at the positions of the transformers also appeared to be moderate, with even the maximum amplitudes slightly exceeding 0.5*g. Consequently, the arbitration resulted in a significant reduction of the requested claim in favor of the client.