



## **Rik F. van Hemmen**

### **Professional Experience:**

#### **2011 - Present**

President and Senior Partner, MARTIN, OTTAWAY, van HEMMEN & DOLAN, INC.

#### **1993 - 2011**

Vice President and Partner, MARTIN, OTTAWAY, van HEMMEN & DOLAN, INC. Areas of specialization include forensic engineering, human factors, vehicle design and operations, ship appraisals, ship salvage, structural surveys, naval architecture and project management.

#### **1987 - 1993**

Engineering and Marine Consultant, FRANCIS A. MARTIN AND OTTAWAY, INC.

#### **1984 - 1987**

Chief Engineer, JOHAN VALENTIJN, INC., a high technology design and engineering firm in Newport, R. I. Responsibilities included: Conception and implementation of various design projects ranging from maritime design to industrial design, coordination of out of office research projects, construction management, design and supervision of computer facilities. Functioned as Chief Engineer for the EAGLE 1987 America's Cup.

#### **1982 - 1984**



Ocean Engineer and Surveyor for the AMERICAN BUREAU OF SHIPPING at their headquarters in New York City. Analysis and certification of fixed offshore structures. Final technical machinery approvals of every vessel and rig approved by the Bureau during that period, and the computerization of the flow of plan approvals in the machinery department.

### **1979 - 1981**

Work-Study employment with MAR, INC., an engineering company specializing in the solution of ocean-related problems. Worked on various defense projects, including the design of high speed sonar array depressors, variety of towing tank tests, and the design of a JTIDS communications simulation computer program.

### **Notable Projects**

Testified as an expert witness on Naval Architectural and Engineering matters in arbitration, State and Federal Court on various occasions.

Analysis of numerous maritime accidents with regard to stability, human factors, loading, operational and structural issues.

Salvage Master on M.V. "HUAL INGRITA" grounding in 1990.

Consultant Naval Architect for Smit Americas in execution of salvage projects in the Western Hemisphere with responsibility for the design of salvage approach and methods in collisions, sinkings and groundings.

Analysis of the change in oil outflow in the "EXXON VALDEZ" incident if the vessel were to be fitted with a double bottom for plaintiff's counsel. Testimony on structural aspects during "EXXON VALDEZ" trial in June of 1994.

Chief Engineer for the EAGLE 1987 America's Cup Campaign; implementation, supervision and coordination of research projects involving approximately 30 scientists and engineers.

Consultant to Owners and Underwriters of some of the world's largest yachts with regard to complex damage issues.

Consultant to McDonnell Douglas Corporation on the application of their Computer Aided Design system to Naval Architecture.

Design and construction supervision of a wide variety of sailing and power yachts.



## **Education and Professional Qualifications**

Registered Professional Engineer in the State of New York (1989) License Number: 065588

Board Certified Diplomate in Forensic Engineering by NAFE, accredited by the Council of Engineering and Scientific Specialty Boards (1993)

Bachelor of Science degree in Aerospace and Ocean Engineering from the Virginia Polytechnic Institute and State University, Blacksburg, VA (1982)

CO-OP certificate for completing the University's work-study program at MAR, Inc., Rockville, MD (1982)

Harvard Business School OPM 29 (2000)

Certified Qualified Individual for the Oil Pollution Act of 1990 and proven competent at the level of OSHA 24-Hour On-Scene Commander as per 29 CFR 1910.120(q) at Massachusetts Maritime Academy's Center for Marine Environmental Protection and Safety (1994)

Summer apprenticeship at the Boele-Bolnes shipyard in The Netherlands (1975)

College preparatory training in The Netherlands, senior year in high school in the United States (1977)

## **Memberships**

Fellow, National Academy of Forensic Engineers

Fellow, Society of Naval Architects and Marine Engineers

New York Section Papers Committee Chairman 1992-1994

New York Section Executive Committee 1992-1994

1994 Ship Operations Symposium Steering Committee

Member Ad Hoc Panel #6 - Structural Response of Tankers to Collisions and Groundings  
1999 - 2004

Member PE Licensing Committee 1999 - Present



Member Technical and Research Steering Committee 2002 - Present

Chairman Ship Repair and Conversion Technical Committee 2002 - 2008

Chairman pro tem ADHOC Panel 14 - OWS 2005 - 2006

Member Small Craft Technical Committee 2005 - Present

Member Human Factors Technical Committee 2005 - Present

Chairman Environmental Management Technical Committee 2009 - Present

Member (MT) Editorial Committee 2012 - Present

Senior Member, American Institute of Aeronautics and Astronautics

Member, Society of Marine Port Engineers of New York

Member, Human Factors and Ergonomics Society

Member, National Society of Professional Engineers

Member, American Boat and Yacht Council

Associate Member of the Association of Average Adjusters of the United States

Annual Subscriber to the British Association of Average Adjusters

Life member, United States Naval Institute

### **Awards**

2014 New Jersey Council of County Vocational - Technical Schools (Monmouth County Vocational School District) Business Partner of the Year Award

1983 Society of Naval Architects and Marine Engineers Student Paper Award

1982 American Institute of Aeronautics and Astronautics/Soaring Society of America national sailplane student design award, Second Place

### **Technical Publications**



“The Monoform Ship Concept: Design Principles and Preliminary Performance Characteristics”, May 1982, for the Chesapeake Section of SNAME.

“Twelve Meter Design: State of the Art in 1986”, April 1986, for the New York Metropolitan Section of SNAME. Published in the October 1986 issue of Marine Technology.

Various magazine articles and presentations regarding Computer Aided Design and yacht design, 1984-1988.

Contributor “Industrial Fire Hazards Handbook”, chapter on shipyards. Publisher - National Fire Protection Association, 1989.

The Bulletin of the Association of Average Adjusters of the United States, Spring 1996, No. 10, “Remarks on Unrepaired Damage- Cause and Effect in Today’s Market”.

Author of chapter six “Commercial Vessel Issues” of Boat Accident Reconstruction and Litigation. Publisher - Lawyers & Judges Publishing Company, Inc., Tucson, AZ, 1996.

Guest speaker at the College of Insurance of New York City, Massachusetts Maritime and Virginia Tech on ship and yacht surveying, salvage and naval architecture and human factors.

“The Joint Field Survey Process” for the National Academy of Forensic Engineers. Published in the June 2000 Vol. XVII No. 1 issue of the Journal of the National Academy of Forensic Engineers.

“OWS Weirdness”, October 2004, presented at SNAME annual meeting T&R session, Washington, D.C.

“A Proposal for a Joint Industry Effort at Improving Bilge Oily Water Separator Operation and Design”, March 2005, for the New York Metropolitan section of SNAME.

“Oily Water Separators: 30 Years Experience and No Consensus”. Published in the Summer 2005 issue of Cleaner Seas.

“Initial Recommendations For Bilge Oily Water Separator System Design And Operation”, February 2006, presented at ASNE MEETS Symposium, Crystal City, VA and published in the Indian Journal of Marine Engineering in March 2006.

“Tales from the Cutting Edge”, October 2007, presented at the Annual Meeting of The



Association of Average Adjusters of the United States, New York, NY.

“The Need for Additional Human Factors Considerations in Ship Operations”, September 2008, presented at the Second International Symposium on Ship Operations, Management & Economics in Athens, Greece, republished in October 2009 issue of Marine Technology.

“Filtration Challenges in the Marine Industry”, September 2008, presented at the American Filtration Society Conference in Charlotte, NC.

“A Chronology of Boating on the Navesink River” ISBN 978-1-4507-5192-6-53500, 2010.

“Systems Design for Meeting New and Existing International Regulations”, October 2012, presented at the Society of Naval Architects and Marine Engineers Annual meeting in Providence, RI and published in the 2012 Proceedings and Transactions

“The Anti Antifouling Clause Argument,” October 2014, presented at the New York City Marine Insurance Day seminar

“Game Theory for the Maritime Professional,” October 2014, co-authored with Hannah van Hemmen, presented at 2014 SNAME Maritime Convention in Houston, TX

“Salvage and Doing Da OODA Loop,” October 2014, co-authored with Hannah van Hemmen, published in Soundings Fall 2014 issue

“Micro or Macro Design?” (The challenge of environmentally sound and sustainable ferry design), published in the July 2015 issue of Marine Technology

“Ferry Revival” (Lessons learned from the creation and development of a New Jersey/New York service), co-authored with Gary R. Dunzelman, published in the July 2015 issue of Marine Technology

“How is your Salvage Data Doing?” published in the Summer 2015 issue of Soundings

“General Salvage Project Safety Considerations” published in the Summer 2015 issue of Soundings

“A Chronology of Boating on the Navesink River,” 2nd Edition, ISBN 978-1-4951-8054-5, 2015.

“The Search for Oil Spill Data” published in the Spring 2016 issue of Soundings



“Containerization V2.0” presented at SNAME Annual Meeting in Seattle, WA on November 4, 2016

“The Delightful Frustration of Cruise Ship Power Plant Design,” presented to joint meeting of SNAME, ASME, and SAME, in Philadelphia, January 24, 2017, co-authored with Kyle Antonini

“Engineering Ethics Clashes and Crashes” presented to SNAME NY Metropolitan Chapter, May 9, 2018

“Is This the Right Time for Large Scale Wave Energy Conversion?” presented at SMPE/SNAME/IMarEST joint meeting, in Newark, New Jersey, December 18, 2018, co-authored with Mike Raftery

“The Mechanics of Ship Explosions” published in Summer 2019 issue of Soundings

“High Speed Container Transport... Will it Ever Work?” published in the Maritime Reporter and Engineering News, July 2019

“STEM is so Yesterday” published in the Maritime Reporter and Engineering News, August 2019

“AIS: Skidmarks on the Ocean” published in the Maritime Reporter and Engineering News, September 2019

“An Update on Large Scale Wave Energy Conversion” published and presented at SNAME Maritime Convention, in Tacoma, WA, October 30, 2019, co-authored with Mike Raftery

“The Use of Wave Focusing Technologies for Wave Energy Conversion Applications” published and presented at SNAME Maritime Convention, in Tacoma, WA, October 30, 2019, co-authored with Mike Raftery

“The Inevitability of Change” published in the Maritime Reporter and Engineering News, October 2019

“Taming Ferry Wakes & Reducing CO2 to Boot” published in the Maritime Reporter and Engineering News, November 2019

“Alcohol is NOT the Probable Cause” published in the Maritime Reporter and Engineering News, January 2020



“Truly Sustainable Energy” SNAME’s MT - April 2020

“Insights: Contracts are Overrated in Maritime” published on MarineLink | Maritime Reporter, April 23, 2020

**Languages**

Fluent in English and Dutch; working knowledge of French and German

**Nationality**

Netherlands and United States Citizen

**Clearance**

Secret, while working for MAR, Inc.

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