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THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS
PHILADELPHIA SECTION AND
THE SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS
PHILADELPHIA SECTION
PRESENT A JOINT MEETING
TUESDAY, JANUARY 24, 2017

**THE DELIGHTFUL FRUSTRATION OF CRUISE
SHIP POWER PLANT DESIGN**



BY:
Hendrik “Rik” van Hemmen
Martin, Ottaway, van Hemmen & Dolan, Inc.

SUMMARY

Cruise ships are self-sustained communities. Like space ships, they cannot grow their own food and need to carry power, but beyond that they provide every need for passengers and crew for an extended period of time. The powering of cruise ships is a complex issue that is driven by the complete ship design spiral, which itself has become much more complex due to the inclusion of the environmental and the human factors component.

This presentation discusses the wide variety of design options and constraints that have been available historically and new technologies and regulations that are coming on-line. These issues will be put in the context of the cruise ship power plant, which is a necessary evil that eats fuel, requires maintenance and robs space and weight carrying capacity from money earning passenger capacity. Today, the power plant design options are much larger than they were at the inception of the cruise ship as a commercial concept, and the advantages and disadvantages of the various prime movers, power distribution concepts and propulsion technologies will be discussed. These options will also be compared to famous and less famous cruise ship system failures.

BIOGRAPHY

Rik van Hemmen is the President of Martin & Ottaway, a marine consulting firm that provides engineering, operational and financial consulting services to a wide variety of maritime stake holders. Mr. van Hemmen is an Aerospace and Ocean engineer, but has worked mostly in the ship design, construction and operation field since he was 14. He is a Professional Engineer, a Fellow in the Society of Naval Architects and Marine Engineers and a Fellow in the National Academy of Forensic Engineers. He has consulted for dozens of cruise ship operators ranging from very small cruise vessels to the largest cruise vessels on a variety of projects ranging from concept design, to construction supervision, to failure analysis to environmental crimes. His special interest is complex system design and since, by nature, ships are some of the most frustratingly complex systems created by man, he is particularly fond of ships and the things that make them move.

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TUESDAY ~ JANUARY 24, 2017

Clarion Hotel Conference Center in Essington

76 Industrial Highway

Essington, PA 19029

Phone: 610-521-9600 / Fax: 610-521-9388

(This hotel was formerly called Ramada Inn - Philadelphia Airport South.)

Dinner Cost: \$30 for SNAME and ASME members, \$40 for non-members, \$10 for students

Cocktail Hour (hotel bar): 5:30 pm ~ Dinner (banquet room) 6:30 pm

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by Thursday, January 19th, 2017

If you would like to pay at the door, please respond by email to both

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