

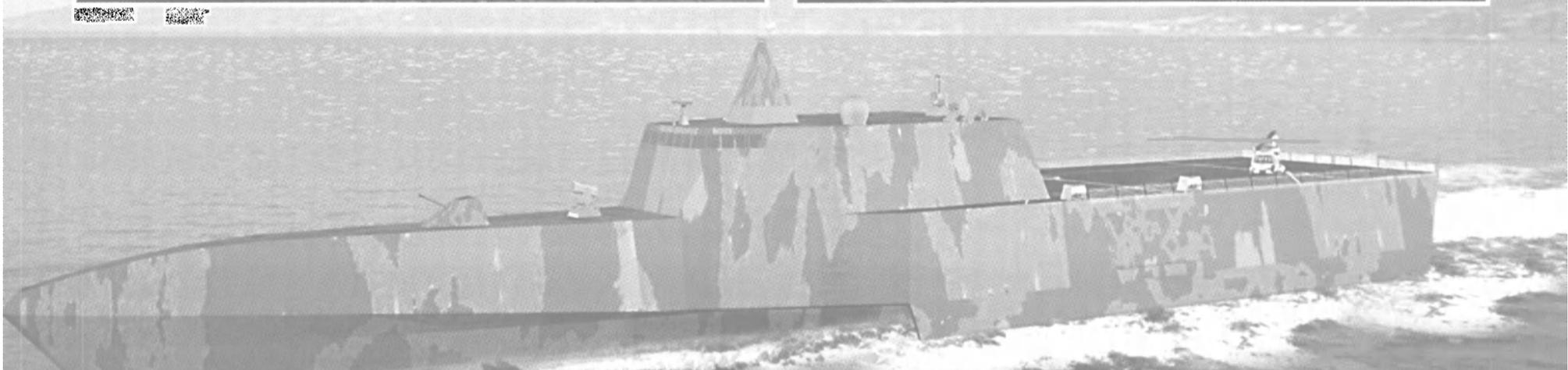
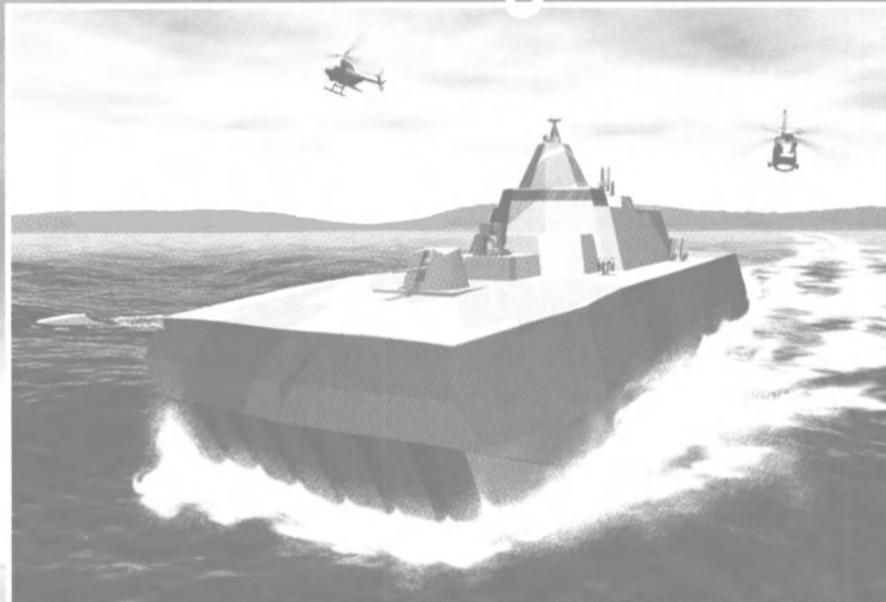
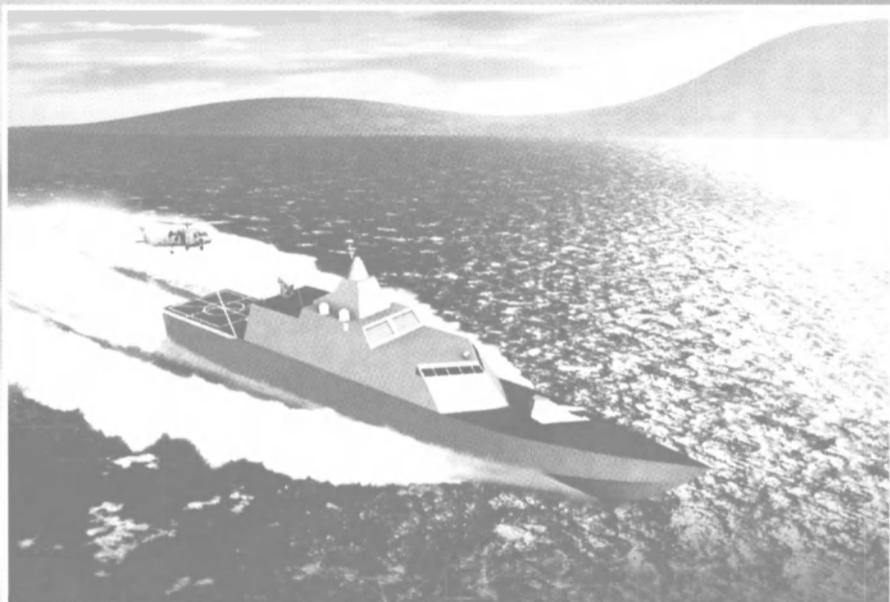
August 2003

MARITIME REPORTER AND ENGINEERING NEWS

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LCS

Which Design will Win?



Maritime Security

Confused Seas: Navigating New U.S. Rules

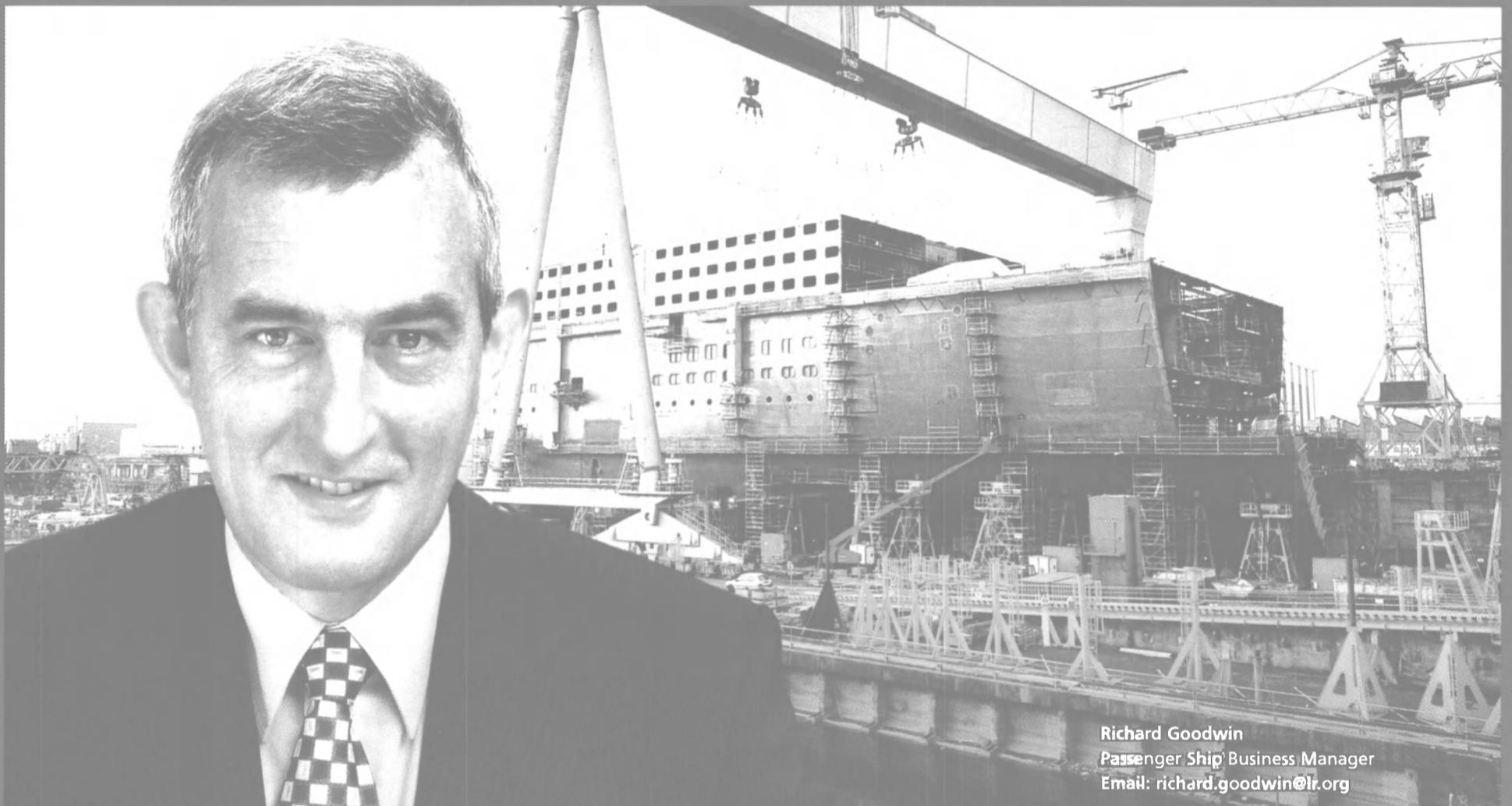
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Newport News

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Contents

14 Confused Seas

Dennis Bryant reports that the new U.S. Maritime Security requirements can be a tad confusing.

18 A Masterpiece

Changes in marine coatings rules and regulations have had paint companies busy innovating new solutions. Ned Lundquist sheds some light on recent developments.

26 LCS: Then there were Three

Last month the competition to design and build the family of up to 60 Littoral Combat Ships was whittled from 6 to 3. By next Spring the winning team will emerge. Question is, which design will win?

32 Power to the Surveyor

David Tinsley reports on some bold IT moves by GL designed to, in essence, maintain healthier ships.

34 Head of the Class

MR sought views from the six leading classification societies on their relevance, role and future in the marine industry.

37 RIB Report

With waterway security a top priority, most RIB makers are innovating at break-neck speed.

42 Save the Ship

Salvage leaders, set to convene next month in Washington, discuss challenges to their niche.



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The Index

Directory of companies given editorial coverage in this edition of *Maritime Reporter & Engineering News*.

ABS	12, 27, 34, 44	Delta T Systems	50	Assoc.	44	National Park Service	37	Ship Structure Committee	29
Achilles	39	Department of Homeland Security	42	Intrepid Shipping	10	NAVATEK	27	Sigma Coatings	18
Alexander & Baldwin	44	DNV	35, 55	IZAR	27	New York City Department of Transportation	11	Silver Ships, Inc. / AMBAR Marine	37
Almar Boats	37	Donald L. Blount & Associates	27	Jet Dock	44	New York City Fire Department	10	Simrad	12
Alstom	51	Donjon Marine	10	John J. McMullen Associates	10, 27, 44	New York City Police Department	10	Sonsub	44
American Commercial Barge Line LLC	44	DRS Technologies	27	JRC	12	Nichols Bras	23	Sound Down	12
American Salvage Association (ASA)	42	EDL Painters	31	Keppel Offshore & Marine	23	Nippon Paint Co.	50	Standard Horizon	12
American Waterways Operators (AWO)	42	Eric Green Associates	29	Klein Navigation	16	NOAA	31	Stang	12
American West Steamboat Co.	23	ExacTech	10	Kongsberg Maritime	13	Nordpartner	16	SteerProp	12
AMH Government Sales	39	FEMA	15	K-Sea Transportation	10	Norfolk Naval Station	25	Stena Group	10
Anchor Marine	44	Fincantieri	12, 27	Kvaerner Masa-Yards	33	Northrop Grumman Ship Systems	8, 11, 29, 31	Stolt Offshore S.A.	44
Angle, Inc.	27	Finning U.K. Ltd.	37	Kvaerner Philadelphia Shipyard	30	Northrop Grumman Newport News	25	Stolt-Nielsen S.A.	44
Anteon Corporation	18	Forest Lines	50	Kvichak Marine	29	Northrop Grumman Sperry Marine	13	SUNY Maritime College	45
Atlantic Marine, Inc.	27	Frigo Navigation Ltd.	13	Lady Navigation	13	Northwind Marine	38	Superior Energies	45
AR Larsen Co.	44	Furuno	12	LauritzenCool	13	NVA	51	Superior-Lidgerwood-Mundy	45
Arion Intl.	44	GAC	44	Leif Hoegh & Co. ASA	13	Oberdorfer Pumps	45	TACOM	51
Austal USA	26	Gateway Terminals	10	Lloyd's Register	35	Ocean Dynamics	37	The Evergreen Group	24
BAE Systems	27	Geislinger GmbH	51	Lockheed Martin Naval Electronics & Surveillance Systems	27	Oldendorff K.E.	16	The Lightship Group	31
BBN Technologies	27	General Dynamics - Bath Iron Works	27	Louisiana Machinery	12	Oregon Rail Corp.	23	The Manitowoc Co.	29
BIMCO	55	Germanischer Lloyd	32, 34	MA&D	27	Orkat Marine Bearings	45	Thermax Marine	45
Binsfeld Engineering	44	Gibbs & Cox	27	Maersk Contractors	23	Osaka University	11	Titan Maritime	42
Blohm + Voss	27	Globe Offshore	12	MAN B&W	51	Pearl Harbor Navy Shipyard	30	TMM	17
Bogen	12	GMDSS	12	MarAd	13	Petrocom	30	Trailer Bridge	9
Ballinger Shipyards	12, 27, 40	Goodrich Corporation	27	Marine Cad Services	44	Port Authority Board of Commissioners	11	Transas	50
Brodasplit Shipyard	10	Guido Perla & Associates	23	Marine Terminals Corporation (MTC)	44	Protector Boats	38	Transocean Sedco Forex	23
Bureau Veritas	34, 55	Hamilton Waterjets	38	Marine Travelift	10	Qinetiq of the U.K.	27	Transportation Security Administration	10
CAE of Canada	27	Headhunter, Inc.	44	Marinette Marine	27	Raytheon Co.	27	Twin Disc	37
Camarc	29	Hellenic Navy	39	Maritime Applied Physics Corp.	27	Reinauer Transportation	10	U.S. Army Corps of Engineers	11, 37, 42
Carnival Cruise Lines	12	Hempel	18	Matson Navigation	30	RIBCRAFT USA	38, 45	U.S. Coast Guard	10, 14, 37, 42, 51
Caspian Shipyard Co.	23	Holland & Knight	14	Matsen Navigation	44	RINA	35	U.S. Merchant Marine Academy	44
Caterpillar	12, 37	Honda	38	McAllister Towing	10	Royal Caribbean Cruises	44	UltraJet	51
Charters Technical Services	27	Honolulu Shipyard	30	McDonough Marine Service	44	Sandy Hook Pilots	10	UMOE Mandal	27
Circle Line Statue of Liberty	10	HSD	51	Mckee Craft	37	Scarab, Inc.	37	University of New Orleans	18
Coastal Marine	12	Hudong Heavy Machinery	51	Metropolitan Yacht Charters	10	Schat-Harding	44	VT Halmatic	39
Color Line	13	IACS	34, 55	Mitsubishi Heavy Industries	24	SeaArk Marine	38, 45	VT Halter	44
Concordia Maritime	10	Ilfemer	51	Mitsui Engineering & Shipbuilding	11	Seacor Marine, Inc.	12	Weeks Marine	42
Cospolich Inc.	44	IMO	34, 55	Moose Boats	39	Seamen's Church Institute	10	Willard Marine	37, 45
Crane Demming	12	Ingram Marine Group	44	Moran Towing	10	SENESCO	31	William E. Williams Valve Corp.	45
Cross Maritime	17	Intermarine Shipyard	17	NACKS Yard	51			Wing Inflatables	37, 38
Crowley Maritime	44, 50	International Coatings	50	NASSCO	25			Yamaha	40
Cummins	38, 51	International Salvage Union (ISU)	42	National Maritime Research Institute	11			Zodiac	40
		Intl. Lifesaving Appliance Manufacturers							

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Editor's Note

The future of the U.S. Navy is pictured on this month's cover, the three designs that will battle to become the reality known as the Littoral Combat Ship (LCS) — a family of up to 60 (relatively) small, fast, flexible vessels designed to serve a major role in the "plug and play" military operations of the future.



At press time, the American Shipbuilding Association (ASA) was lamenting the fact that the Senate had effectively cut two ships from the President's 2004 Budget Request — the zeroing of two T-AKE Combat Force Logistics Ships — and was lobbying hard for their reinstatement. The action does appear particularly capricious at this time, considering the tremendous stress already placed upon a short-handed naval force and the exhibition of its dominance in recent overseas matters. While it is more than a mere numbers game, it is undeniable that the need for a renewed U.S. Navy fleet is very real, and despite a slew of christenings and commissionings carried in these pages of late, more firm contracts for the long-term are needed.

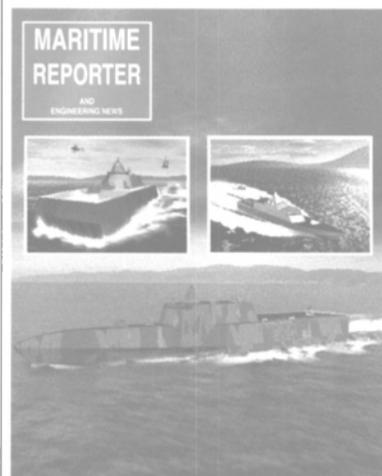
The LCS program is a step in the right direction, if nothing more it will infuse the U.S. industry with business for years to come. The LCS contract is particularly noteworthy in its dependence on technologies emanating from outside the U.S., and the international community has been roused to activity by the lure of Navy dollars. We will track the progress of the LCS competition closely in our pages as it plays out over the next seven months.

While, as the editor of *MR/ENI* live for the moments to present the next-generation technology such as LCS in these pages, as a person I'm partial to the picture in our "Leading Off" section on page 8, showing the late comedian Bob Hope in a familiar position, providing comical relief to troops at war. Mr. Hope, who died last month at the age of 100, has left an indelible mark for humor, humanity and compassion.

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On the Cover



Pictured on this month's cover are the three finalists for the Navy's Littoral Combat Ship (LCS) project. Starting clockwise (under the MR logo) are the entrants from Raytheon, Lockheed Martin and the Bath Iron Works team, respectively. Read about the three teams in the "U.S. Report," starting on page 26.

- 9 Letters
- 44 People & Company News
- 51 Propulsion Updates
- 52 Propulsion Products

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Cool It!



Engine photo courtesy Volvo Penta



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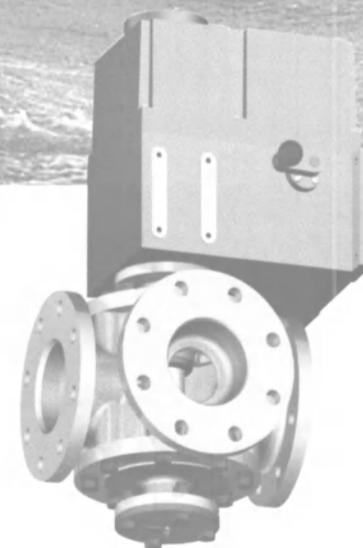
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Leading Off



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Bob Hope, world famous comedian, died last month at the age of 100. Hope, who spent more than half of his life bringing smiles and laughter to the faces of thousands of American soldiers, succumbed to pneumonia on the evening of July 27, 2003. Throughout his career Hope supported troops stationed overseas with his signature shows that transcended generations, and he was the first and only American ever to be made an honorary Veteran of America's Armed Forces. Dubbed by U.S. President **George W. Bush** as A "true American patriot," Hope began his tours of comedy in 1941 when he went to March Field in California to perform a radio show for airmen stationed there. His first trip into a combat area was in 1943 during WWII, when he and his small USO troupe visited U.S. military facilities in England, Africa, Sicily and Iceland. His vocation of laughter to American troops would continue for more than 40 years with Hope traveling to entertain for virtually every conflict that involved American G.I.'s. As a staunch supporter of our American troops, Hope was honored with his own class of Navy ships (pictured above), all of which were built at Northrop Grumman's Avondale Operations. Measuring 950 ft. (289.5-m), the USNS Bob Hope was the first of the seven-member class to have been built in the MSC's Large, Medium Speed RoRo T-AKR class. "It is an honor to serve aboard USNS Bob Hope, a vessel named for a man that has done so much for our men and women in uniform," said the ship's master Capt. **Joseph "David" Henderson, Jr.** "During times of conflict and separation from friends and family, he brought them a moment of happiness and laughter. I like to think he sails with us in spirit and approves of our small contribution. **Bob Hope, I wish you fair winds and following seas as you travel to that distant shore.**"

Cartoon



Maritime Meanings

Chunder: To Chunder is to vomit. It is widely used in Australian colloquial speech and is said to derive from the fact that a seasick passenger on an upper deck would (it was hoped) cry out "Watch Under!" as he leant over the rail while succumbing to the rigors of sea travel. Chunder is the laconic shortenings of an otherwise heartfelt cry.

Source:
An Ocean of Words: A Dictionary of Nautical Words and Phrases,
by Peter D. Jeans; Birch Lane Press, 1998.

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50 Years Ago

ATOMIC "SAUCER"



General Electric completes the huge "saucer" foundation for a spherical building which will house the first submarine reactor. Admiral Walter Dornier, father of "atomic" ships.

No, it's not a crop circle in the cornfields of Iowa or an imprint of an alien mother ship that landed in Roswell, N.M. The accompanying photo taken from the January 15, 1953 edition of *Maritime Reporter & Engineering News* depicts a large concrete saucer constructed by General Electric for a spherical building that will hold the first submarine reactor. This 42-ft. deep foundation was to house a nuclear submarine power plant that was being constructed by the Atomic Energy Commission for the U.S. Navy. Known as the Submarine Intermediate Reactor, the project was under the direction of the Knolls Atomic Power Laboratory, which was operated in Schenectady, N.Y. Will history repeat itself throughout the next few years with the ongoing construction of vessels that will encompass the "new Navy?" Don't be surprised if more atomic saucers are unearthed in the near future.

Maritime Reporter & Engineering News

Circle 234 on Reader Service Card

Dear Editor:

Clayton Cook's article on the U.S. shipbuilding market was a thoughtful review, as one would expect from such a knowledgeable source whose contribution and commitment to the marine sector is well known.

His review of the non-contiguous liner trades characterized the Puerto Rico fleet as "antique," and accurate description of the self-propelled vessels serving the trade. That section, however, did not mention the tug/barges now serving the Puerto Rico lane. Today the majority of the marine freight moving between the mainland and Puerto Rico moves on tug/barge systems. These tug/barge systems are newer than the self-propelled vessels. In our own case, the weighed average age of our fleet is some six years or one-fifth that of the self-propelled vessels in the trade. For a variety of reasons, tug/barge systems are more suited to handle the higher cube equipment that has been commonplace on the mainland for over a decade. Puerto Rico is increasingly well served by tug/barge systems and no discussion of the Puerto Rico liner trade could be complete without discussing what is now the dominant and still growing model. Indeed, one consistent change in a trade that has been quite turbulent is the increase in the collective tug/barge share, which was less than one-third a decade ago.

Reeves & Associates, a recognized independent expert in the domestic marine sector, recently completed an excellent analytical overview of the Puerto Rico liner trade, highlighting among other things the effect of tug/barge economics and higher cube equipment. As an example, the report stated: "Rather than being technologically backward, the U.S./Puerto Rico trade is in synch with the state of the art in the U.S. mainland logistics, enabling U.S. and Puerto Rican shippers to effectively integrate their U.S. mainland-Puerto Rico traffic flows into their overall North American distribution strategies. For example, Wal-Mart is able to pack a load for Puerto Rico in just the same way as it would for a destination within the 48 mainland states. With an integrated truck/marine system built around commodious 53-ft. equipment and very cost efficient tug/barges, we believe that we are the most "in synch" with mainland distribution systems of all the carriers serving Puerto Rico.

It's my view that the past and the future of the Puerto Rico lane can be best understood by recognizing the underlying cost differences in tug/barge and high-cube equipment systems compared to self-propelled vessels and typical marine equipment. We believe that tug/barge systems built around high-

cube equipment have a meaningful marine cost advantage today that expands significantly when you take into account the pro-forma cost of new self-propelled vessels. In addition, there are a number of other areas where a high-cube, integrated system like ours has cost and service advantages. These factors will continue to effect change in the Puerto Rico lane and the simple

macroeconomics of the Puerto Rico trade lane should leave few questions about what is unfolding now, what will continue to unfold and why it is unfolding. As mentioned above, tug/barge systems now carry the majority of all the marine freight that moves to Puerto Rico. The analytical facts support a continuation of this trend. The winds of change are blowing in the Puerto Rico

lane. I believe that policymakers, shipbuilders, shippers and carriers who avail themselves of solid factual data and information will be the first to see how the future will unfold and use this insight to take the appropriate steps to benefit their respective constituencies.

*Best Regards,
John D. McCown, Chairman & CEO
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Admiral Loy, Grace Allen Receive Silver Bell Honors

McMullen honored with Lifetime Achievement Award

Some of the industry's biggest players and supporters were present to honor Admiral **James Loy** and **Grace Allen** at the 26th Annual Silver Bell Awards Dinner on June 17 at Chelsea Piers in Manhattan. Also recognized, was **John J. McMullen**, renowned naval architect and marine engineer, and former CEO of United States Lines, who received a Lifetime Achievement Award.

The event, which is one of the industry's top social and philanthropic events of the season, drew a record 954 guests, and raised more than \$550,000 for the Seamen's Church Institute of New York & New Jersey.

"We are grateful for the support of the maritime industry and our friends," said the **Rev. Dr. Jean R. Smith**, SCI's Executive Director. "Mariners are a vulnerable workforce and this strong show of support for the Institute's programs keeps our worldwide safety net strong."

Richard T. du Moulin, President of Intrepid Shipping and Silver Bell Dinner Chairman since 1996, reported that 11 new companies joined SCI's loyal supporters.

"The Institute's service to mariners and port communities is unequalled among freestanding maritime agencies," said du Moulin.



Mrs. Jackie McMullen, the Rev. Dr. Jean R. Smith, and Dr. John McMullen, recipient of the Lifetime Achievement Award. (Photo credit: Susan Lerner/SCI)

The evening's festivities began with a parade of vessels representing Bouchard Transportation, Circle Line Statue of Liberty, Donjon Marine, Gateway Terminals, K-Sea Transportation Corporation, McAllister Towing, Metropolitan Yacht Charters, Millers Launch, Moran Towing, the New York City Fire Department, New York City Police Department, Reinauer Transportation, Roehrig Marine, Sandy Hook Pilots, and the United States Coast

Guard. The Rt. Rev. **Mark S. Sisk**, the Episcopal Bishop of New York and SCI's honorary Chairman, blessed each vessel as they passed the waving crowd.

Mid-way through the evening, the main event began — the presentations of the signature "Silver Bells" from SCI to **Admiral Loy**, and **Grace Allen** — both of who hold the backgrounds and contributions to merit this award. Admiral Loy, currently serves as the Administrator for the Transportation

Security Administration — a new federal agency formed by the Aviation Transportation Security Act. Since the organization was formed in November 2002, Loy ensures that his agency provides security for the traveling public and for all commercial transportation.

Allen, who is the Chairman of SCI's Arts and Artifacts Committee, is an avid sailor, who has orchestrated many of the Institute's maritime art openings in the Water Street Gallery, located at SCI's headquarters in Lower Manhattan. Through her efforts, she has given the general public an opportunity to appreciate a mariner's life through art and artifacts.

Honored with SCI's Lifetime Achievement Award was **Dr. John J. McMullen**, a 1940 graduate of the Naval Academy, who served in the Pacific theater during WWII. He was awarded the Asiatic Pacific Campaign Medal and the World War II Victory Medal. His civilian career includes leading the U.S. Maritime Administration's Office of Ship Construction and Repair, and working as president and CEO of United States Lines — all before establishing the naval architecture firm that bears his name — John J. McMullen Associates.

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Carrier for a New Energy Source

High costs and dependability on imported hydrocarbon fuels, along with environmental considerations, have spurred government agencies in certain Asian countries to develop research programs focusing on the recovery of gas from marine hydrates. Natural gas hydrate (NGH) is a chemically stable, crystalline substance, and such hydrates bind immense amounts of methane in seafloor sediments. Taking a proactive line, Japan's Mitsui Engineering & Shipbuilding has unveiled a design proposal for a vessel tailored to the needs of NGH transportation. Mitsui's work on the specialized carrier forms one element of a comprehensive study into the creation of an NGH industrialization and energy supply chain. Its fellow collaborators in the development of handling and shipping solutions are the National Maritime Research Institute and Osaka University, with the support of the Corporation for Advanced Transport & Technology. The conceptual design of vessel offers about 155,000-cu. m. of NGH carried in pelletized form five independent tanks, within a hull envelope of 984 ft. (300 m) length, 151-ft. (46-m) breadth and 180-ft. (24.5-m) depth. Service speed would be around 17 knots. The NGH is pelletized for transport so as to better retain the integrity and energy value of the substance, decrease the rate of boil-off during transit, and improve cargo handling efficiency. Loading and unloading of the NGH pellets would be accomplished using discrete, mechanical conveyor systems. Hydrate is a gas concentrator, to the extent that a unit volume of methanehydrate at a pressure of one atmosphere produces about 160 unit volumes of gas. Mitsui's own endeavors towards the commercialization of NGH as a total energy supply system have also included the establishment of an experimental facility for NGH production at the company's Chiba site.

— David Tinsley

Northrop Grumman To Provide Next-Gen C4ISR

Northrop Grumman Corporation will continue supporting exploratory development of current and future advanced technologies for the U.S. Navy's command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) systems. This initial contract award for the base year of this five-year contract is valued at approximately \$3m, with an option for an four years totaled at nearly \$17m.

Circle 52 on Reader Service Card

Exhaust System Could Be Expanded to Entire Fleet

The Port Authority Board of Commissioners approved a measure to undertake a demonstration project with the New York City Department of Transportation to retrofit a Staten Island ferryboat with new exhaust emission reduction devices. If the project is suc-

cessful, a new agreement between the two agencies could be developed to retrofit the remaining six vessels in the Staten Island Ferry fleet. The demonstration project grew out of discussions with the USACE, the EPA, as well as environmental agencies in NJ, NY and NYC on air impacts associated with the upcoming project to deepen channels in

New York harbor to 50 ft. The \$1.2m project includes the purchase and installation of the new exhaust system and the development of protocols and monitoring of air emissions from the retrofitted ferryboat. The U.S. Army Corps of Engineers and the Port Authority are jointly funding the 50-ft. harbor deepening project.

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Circle 266 on Reader Service Card

Bollinger Delivers Supply Boat to Seacor



Bollinger delivers the Seacor Madison, the first of three 207-ft., supply boats to Seacor Marine, Inc. It will be followed by two others of Seacor's new President Class offshore support vessels (OSV), the Seacor Washington and Seacor Jefferson.

Bollinger Shipyards Lockport, La., has delivered the Seacor Madison, the first of three 207-ft., 4,750 bhp supply boats to Seacor Marine, Inc., Houston, Tex. It will be followed by two others of Seacor's new President Class offshore support vessels (OSV), Seacor Washington and Seacor Jefferson.

The boats are part of Bollinger's new 220 Class OSVs that are designed to provide more cargo capacities, more versatility, more options and lower operating costs than larger vessels.

Classed by ABS, Seacor Madison measures 207 x 53 x 19 ft. (63 x 16.1 x 5.7 m), has a light draft of 6.5 ft. (1.9 m), and a loaded draft of 16.2 ft. (4.9 m).

Two Caterpillar 3516B diesels developing a total of 4,750 bhp at 1,600 rpm driving two Steerprop SP25 azimuthing propulsors supplied by Karl Senner, Inc. provide propulsion. Two 370 kW generators driven by two Caterpillar 3408 diesels produce electricity. The vessel is also equipped with a 95 kW generator as part of its Safety of Life At Sea (SOLAS) classification. Two 1,000 hp SMI bow thrusters driven by two Caterpillar 3508B diesels aid maneuverability and station keeping. Bow thruster noise is reduced by a Sound Down noise damping system. All of the Caterpillar engines were supplied by Louisiana

Machinery, Inc.

The vessel's cargo deck has a clear area of 6,525 sq. ft. capable of carrying 1,380 long tons. Some other capacities are: 169,774 gallons of drill water; 106,129 gallons of ballast water; 155,313 gallons of fuel oil; 2,296 gallons of lube oil; 1,155 gallons of hydraulic oil, and 2,498 gallons of sewage. A partial list of electronics and controls includes: a Simrad DPS-2 vessel control; a Furuno GPS; SteerProp engine controls; two JRC radars; an A3 GMDSS radio system; a Bogen public address system; OFE Globe Offshore internet E-mail; a Standard Horizon VHF and loudhailer, and a JRC speed log.

Other equipment includes a Coastal Marine anchor windlass, a Stang 1,900 GPM fire monitor with a Crane Demming pump driven by a Caterpillar 3508B diesel; six 16-man inflatable life rafts; a SOLAS rigid inflatable boat (RIB) with a 50 HP motor, and a Headhunter 36-person marine sanitation device.

Air-conditioned and heated accommodations are provided for 26 people in 11 cabins, all with private heads. A double bed hospital is also included and the boat's galley can serve 12 persons at a time.



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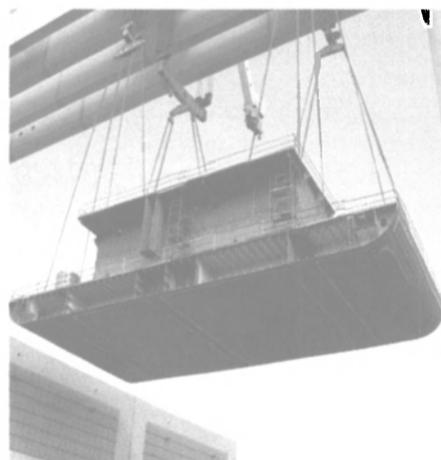
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First Building Block Laid For Carnival Valor



Just two weeks after delivering Carnival Cruise Lines' new 110,000-ton Carnival Glory, Fincantieri laid the first in a series of approximately 50 building blocks for a sister ship, Carnival Valor on July 10, 2003. The new 952-ft. (290.1-m), 2,974-passenger Carnival Valor, which is being constructed at Fincantieri's Monfalcone shipyard, is expected to enter service in December 2004.

Circle 38 on Reader Service Card

Maritime Reporter & Engineering News

Circle 252 on Reader Service Card

Leif Hoegh Concludes Exit From Reefers

Leif Hoegh & Co. ASA (LHC) has sold its 36 percent shareholding in Lady Navigation Inc. to Frigo Navigation Ltd. on private terms. Lady Navigation Inc. owns the two reefer vessels Lady Racisce and Lady Korcula.

The "Lady" vessels were built in 2000 and have a capacity of 590,000 cu. ft. Transfer of the shares in Lady Navigation Inc. to the new owner was concluded on June 30, 2003, and marks LHC's final exit from the reefer segment. LHC sold its commercial reefer operation, Cool Carriers, to J.Lauritzen in 2000. LHC had at the time owning interests in 15 reefers that continued to be commercially operated by LauritzenCool. All vessels have now been sold, with the last being delivered to new owners during the third quarter.

Sperry Marine to Install for Color Line Ferry



Color Line has selected Northrop Grumman Corporation's Sperry Marine business unit to supply navigation and communication systems for the world's largest cruise ferry, under construction at the Kvaerner-Masa-Yards in Turku, Finland. Sperry Marine will supply a complete suite of bridge electronics, including a four-station integrated navigation system with type approved electronic chart display and information system, three BridgeMaster E radars, dual fiber optic gyrocompasses, dual NaviPilot 4000 autopilots, steering controls, a SRD 500 dual-axis speed log, a central alarm manager and a communication station meeting Global Maritime Distress and Safety System standards. Sperry Marine will also provide support for installation, commissioning, interfacing, training and onboard service for the equipment. The new 74,600-gt cruise ferry is scheduled for completion in December 2004.

Circle 34 on Reader Service Card

MarAd Creates Inland Waterways Website

MarAd has created the Inland Waterways Research Project Website, www.marad.dot.gov/iwrp, a comprehensive source of the most current inland waterway information available online

August 2003

today. This repository contains published studies, reports, and ongoing research results by leading experts.

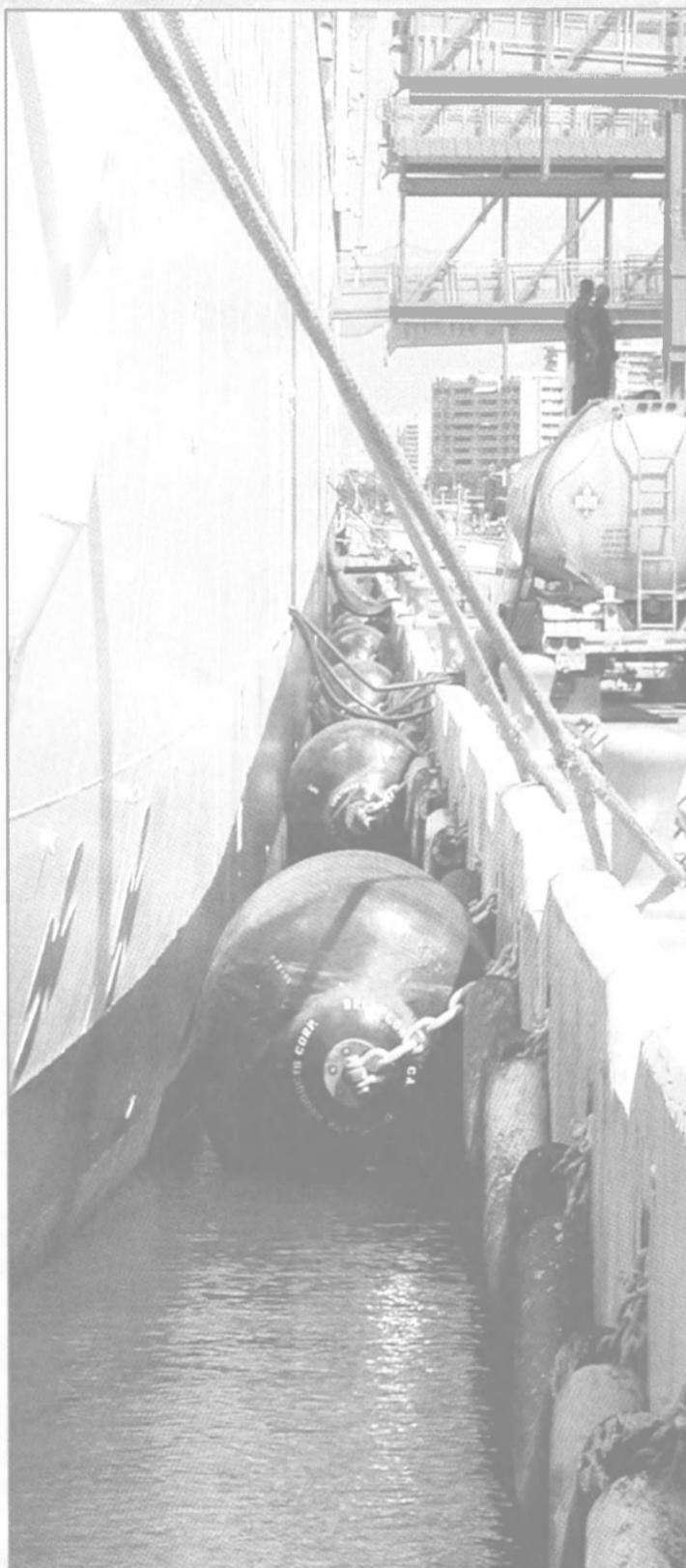
Kongsberg Maritime Restructures

The restructuring of Kongsberg Maritime officially came into force on

July 1, 2003. The subsidiaries Kongsberg Simrad, Kongsberg Maritime Ship Systems (KMSS) now come under the Kongsberg Maritime banner in a move to ensure greater knowledge and resource distribution throughout all sectors within the companies. The ultimate goal is greater synergy between divisions in order for

Kongsberg Maritime to provide the marine industry with the very best in complete electronic solutions — essentially 'The Full Picture.' The restructuring does not affect Kongsberg Seatex (AS) or Simrad (AS), both of which will continue trading purely as subsidiaries of Kongsberg Maritime.

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Confused Seas

Navigating through U.S. Maritime Security Requirements

By Dennis L. Bryant
Senior Maritime Counsel
Holland & Knight, Washington, D.C.

The U.S. Maritime Transportation Security Act (MTSA) imposes various maritime security requirements on operating in waters subject to the jurisdiction of the United States. Maritime security regulations promulgated by the U.S. Coast Guard implement some (but not all) of the MTSA requirements and impose some additional requirements. In other words, Congress has imposed various requirements on the owners and operators of ships navigating waters of the United States and the U.S. Coast Guard has not provided full guidance on how to comply with those legislative mandates.

Foreign ships subject to the International Convention for the Safety of Life at Sea (SOLAS Convention) seeking to operate in waters subject to the jurisdiction of the United States will have to undertake their ship security assessments earlier than might be necessary under the ISPS Code. Likewise, they will have to prepare their ship security plan not later than December 29,

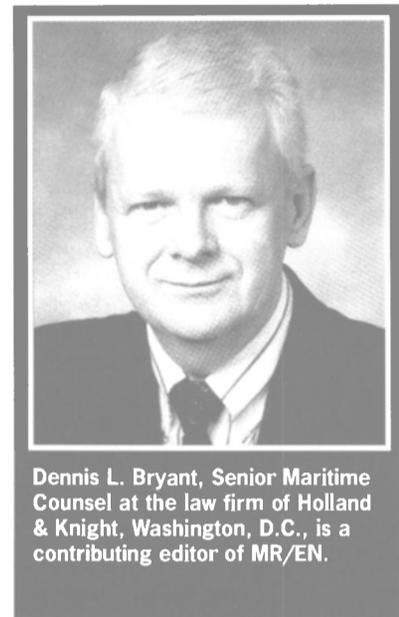
2003 (rather than July 1, 2004, as provided in the ISPS Code). All commercial ships will have to include in the vessel security plan submitted to the Coast Guard several items that were not listed by the agency in its July 1, 2003 interim rulemaking. As of July 1, 2004, all ships navigating U.S. waters must be operating in compliance with their vessel security plans. There are also differences between the implementation dates of the SOLAS Convention and the U.S. maritime security regulations for carriage of AIS equipment. Specific recommendations for navigating through these confused seas follow. Commence ship security assessment and ship security plan process immediately. Because the U.S. deadline for submittal of vessel security plans is six months sooner than the international deadline, the ship owner/operator must start the process immediately. Even if the process has been initiated, the timeline must be adjusted so that the plan is complete and ready for submittal to the U.S. Coast Guard on or before December 29, 2003.

Prepare a U.S. Appendix to plan

The owners and operators of ships

subject to SOLAS Convention can comply with these unilateral requirements, in part, by adding a U.S. Appendix to their international ship security plan. The U.S. Appendix must contain the following elements, which are in addition to the international requirements:

- Identification of the Qualified Individual with authority to implement the ship security plan.
- Explanation of how the ship security plan is consistent with the national and area maritime transportation security plans.
- Identification of security measures available under contract or other means approved by the U.S. Coast Guard, necessary to deter to the maximum extent practicable a transportation security incident or substantial threat of such a security incident.
- Provisions for a comprehensive response to a transportation security incident, including notifying and coordinating with local, state, and federal authorities (including the Director of the Federal Emergency Management Agency), securing the ship, and evacuating persons on the ship.
- A copy of the ship security assess-



Dennis L. Bryant, Senior Maritime Counsel at the law firm of Holland & Knight, Washington, D.C., is a contributing editor of MR/EN.

ment.

Recommendations on how to deal with the five elements of the U.S. Appendix follow:

Qualified Individual

The maritime security regulations promulgated by the U.S. Coast Guard on July 1, 2003, indicate that the Coast Guard considers the term 'Qualified Individual' to be equivalent to 'ship security officer'. The regulations also provide that vessel security plans should include 24-hour contact information for the company security officer and the ship security officer. It is recommended that the U.S. Appendix to the ISPS Code ship security plan include 24-hour contact information for the company security officer and the ship security officer and also contain a statement indicating that these two officials, along with the master, have authority to implement the ship security plan, including the U.S. Appendix.

Consistency with National and Area Plans

The national and area maritime transportation security plans are currently under development. It is recommended that, until those plans are promulgated, the U.S. Appendix to the ISPS Code security plan include a provision to the following effect:

A subsequent iteration of this ship security plan will be made consistent with the U.S. national and area maritime transportation security plans after those plans have been promulgated. In the meantime, this ship will be operated consistent with applicable maritime transportation security requirements promulgated by the U.S. Coast Guard at the national or area (e.g., Captain of the Port) level.

Identification of Security Measures

The U.S. Coast Guard has not identified any specific security measures

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(other than those to be implemented by the company and the ship, under the ISPS Code), which should be included in the U.S. version of the ship security plan. Rather, the Coast Guard has broad authority under the MTSA and elsewhere to mandate additional specific security measures to meet identified threats. It is therefore recommended that the U.S. Appendix to the ISPS Code ship security plan include a provision to the following effect:

The master, the vessel security officer, and the company security officer each have authority to implement additional security measures that may be directed by the U.S. Coast Guard. As necessary, these additional security measures may be implemented by means of contract or other means approved by the U.S. Coast Guard.

Transportation Security Incident Response

Maritime transportation security plans in the United States are to include provision for a comprehensive response to an emergency, including notifying and coordinating with local, state, and federal authorities (including the Director of the Federal Emergency Management Agency - FEMA - now called the Under Secretary of Homeland Security for Emergency Preparedness and Response), securing the vessel or facility, and evacuating vessel or facility personnel. It is recommended that the U.S. Appendix to the ISPS Code ship security plan include the following:

- A notification section (resembling the notification section found in vessel response plans - VRPs or shipboard oil pollution emergency plans - SOPEPs), but including names and telephone numbers of local, state, and federal government emergency response agencies and specifically including the Under Secretary of Homeland Security for Emergency Preparedness and Response. It should be noted that the main telephone number for the Under Secretary of Homeland Security for Emergency Preparedness and Response is (202) 566-1600. It is suggested that this telephone number be included in the notification section.
- A provision for securing the ship, addressing issues such as securing power and water; terminating cargo-handling operations; bunkering, and loading of stores; and doubling up of lines and other means of enhancing the ability of the ship to remain at its current location.
- A provision for evacuating all persons on the ship, including means for assembling in a safe location and accounting for all persons.

Ship Security Assessment

The ISPS Code requires owners and

(Continued bottom right of next page)

Liberty is the great parent of science and of virtue; and a nation will be great in both in proportion as it is free.

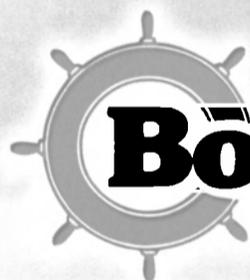
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March 24, 1789

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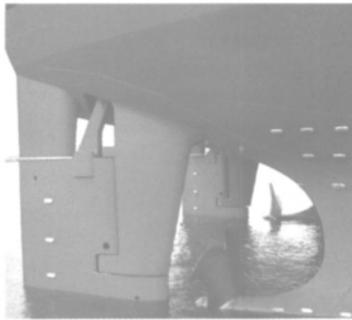


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Concordia Again Leads Tanker Innovation

Four P-MAX new building contracts confirmed

Concordia Maritime of the Stena Group has again taken the head of the industry helm with its decision to sign contracts for or an innovative new series of 49,900 dwt tankers dubbed P-MAX. The contract, which was agreed to at an undisclosed price, calls for four vessels with options for two more. Croatia's Brodosplit Shipyard was tapped for the job, with delivery of the first ship scheduled for 2005. The P-MAX is an extension of the creative Stena MAX concept, which was the development of an advanced class of tankers with features to ensure safe operation in the world's most sensitive waters. The 600-x 131-ft. (183-x 40-m) P-MAX ships are designed to have lower draft and higher speed than traditional, modern products tankers, and will offer 70,000 cu. m. of cargo capacity, almost 30 percent more than the 55,000 cu. m. of today's largest MR vessels. The P-MAX will offer the active safety component of propulsion redundancy seen on the V-MAX VLCCs delivered to Concordia in



Double Vision: Central to the Stena tanker concept is redundant propulsion systems separated by a fire safe and watertight bulkhead. (Photo Credit: Concordia Maritime AB 2003)

2001 and the C-MAX coastal products/LPG carriers introduced by Stena Bulk in 2002. The ships will have two engine rooms divided by a fire safe and watertight bulkhead: two engines with separate fuel supply and other auxiliary systems for each engine, two propeller shafts, two propellers and rudders, plus independent control and monitoring systems for each propulsion unit — in accordance with the requirements of the DNV RPS class notation (Redundant Propulsion Separate). Fuel consumption is comparable with modern MR tankers at the same cargo intake. The P-MAX double hull will be further strengthened to DNV enhanced fatigue Class Notation Plus 2, and Swedish/Finnish Ice Class IB. "The economics of scale for what is essentially a maxi medium range tanker will drive this deal in the commercial market, while there can be no doubt about the long term safety and environmental dividend" said **Lars Carlsson**, President of Concordia Maritime.

tems for each propulsion unit — in accordance with the requirements of the DNV RPS class notation (Redundant Propulsion Separate). Fuel consumption is comparable with modern MR tankers at the same cargo intake. The P-MAX double hull will be further strengthened to DNV enhanced fatigue Class Notation Plus 2, and Swedish/Finnish Ice Class IB. "The economics of scale for what is essentially a maxi medium range tanker will drive this deal in the commercial market, while there can be no doubt about the long term safety and environmental dividend" said **Lars Carlsson**, President of Concordia Maritime.

Marine Travelift is Sold

The Marine Travelift family of companies, makers marine and industrial lifting products, was purchased by **Jim Ashton** and **Stephan Pfeifer** from brothers **Gerald** and **Allan Lamer**, who had owned the business since 1975. Though the business has changed hands, the owners plan to keep Marine Travelift in Sturgeon Bay. Pfeifer plans to establish residency in Sturgeon Bay and will be the president and CEO of the business. Ashton will reside in Dallas and visit Marine Travelift on a monthly basis. He will be the chairman of the business and will monitor its strategic and long-term growth. "Marine Travelift is an important part of the Sturgeon Bay community. It has a history of treating employees as family, and that relationship extends into the community," Pfeifer said. "One of the attractions was our plan and desire to stay in the area," Ashton said. "Additionally, our similar business backgrounds were attractive to the previous owners." Ashton is a business entrepreneur from Dallas, Texas, and Pfeifer is the owner of the contract manufacturing company ExacTech in Port Washington, Wis. According to Ashton, 25 percent of Marine Travelift's sales are international. "The U.S. can compete quite well internationally as long as we bring technology and quality to the customers," Ashton said. Both domestic and international sales prospects remain strong especially for larger-size lifting equipment. A new 600-ton boat hoist is currently being tested in Sturgeon Bay and was to be demonstrated in late July to the company's dealers, along with other marine and industrial products. Marine Travelift created the largest mobile boat hoist in the world, which is located in Singapore and lifts 800 tons. In 1958, when the business was just starting up, it only produced boat hoists with a seven-ton capacity.

Circle 193 on Reader Service Card

Klein Tracks Threats

Klein Navigation completed the installation of its Intrusion Detection Radar Security System on an oil platform. The System was designed for detecting and tracking small potential threats such as swimmers, small high speed craft (inflatable boats and personal water craft) and low flying aircraft. During acceptance tests, the system consistently tracked swimmers past 1.7 n.m. out to 1.9 n.m. and RIBs to 8 n.m. On a separate occasion, the Intrusion Detection Radar picked up and tracked two inbound high-speed targets, which turned out to be helicopters.

Circle 70 on Reader Service Card

Canada Fines Vessel Owner for Dumping Oil

Canadian Transport Minister **David Collenette** said that the federal government successfully prosecuted the M/V *Cala Palamos*, a Cypriot-registered container vessel, owned by Nordpartner of Limassol, Cyprus and operated by Oldendorff K.E., based in Limassol, Cyprus, for the Canada Shipping Act (CSA) violation of unlawfully discharging an oily substance into Canadian waters. The pollution incident occurred while the vessel was berthed at Pier 36, in the Port of Halifax, on February 21, 2002. The vessel's owner, Nordpartner, was assessed a penalty of \$100,000.

(Government Update: Continued from previous page)

operators of ships subject to the SOLAS Convention to conduct a ship security assessment, in accordance with published guidelines, prior to development of the ship security plan. The ISPS Code appears to treat the ship security assessment as an internal company document, as the Code is silent regarding any use of the assessment other than preparation of the ship security plan. On the other hand, the maritime security regulations promulgated by the U.S. Coast Guard mandate that owners and operators of ships requiring U.S.-approved vessel security plans include a copy of the vessel security assessment with the vessel security plan when it is submitted for USCG review.

AIS

The SOLAS Convention, as amended, has a timeline for carriage of automatic identification system (AIS) equipment, depending on the type vessel and its size. The MTSA has a similar, but not identical, timeline. The maritime security regulations generally follow the SOLAS approach, but have special compliance dates for vessels transiting various vessel traffic service (VTS) areas. As most vessels engaged in international trade must be capable of entering all major ports, it is recommended that AIS be installed not later than July 1, 2004, unless an earlier installation date is mandated by SOLAS.

It is highly unfortunate that the U.S. Congress adopted a unilateral approach to addressing the multilateral problem of maritime security. The U.S. Coast Guard attempted to convince Congress that vigorous port state control efforts of international requirements would provide the nation (and the world) with a high level of security. Those efforts, though, fell on deaf ears, with Congress insisting on full compliance with the provisions of the MTSA. The owners and operators of ships operating in U.S. waters are stuck in the middle - with two masters issuing similar, but not identical, orders. The above recommendations are intended to address the gaps between the MTSA and the maritime security regulations promulgated by the U.S. Coast Guard.

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Intermarine Launches G5 Oltramonti



Known as G5 Oltramonti, the Bigliani Class V Series patrol boat was launched on July 16, 2003 at Intermarine shipyard in Sarzana, Italy. The launching ceremony, which featured the boat's Godmother, **Annamaria Oltramonti**, was also attended by representatives from Guardia di Finanza, and General **Castore Palmerini**, chief of the Ligurian Area Comman. Mrs. Oltramonti is a direct descendant of Commander **Aldo Oltramonti**, for whom the vessel is named. Commander Oltramonti was recognized for his military valor during WWII with a Medal of Honor. The vessel's launching occurred exactly one month earlier than its previously scheduled time. It is the third patrol boat launched this year by the shipyard and proceeds G3 Di Bartolo, which was launched in February and G4 Avallone, which debuted in May. Designated at the Bigliani V Series Class, each vessel measures 115 ft. (35 m) and is built in composite materials. The vessel trio is capable of running at speeds of 35 knots with operational flexibility. The most recent vessel, G5 Oltramonti, which will be delivered in eight months, is part of a larger contract the shipyard has signed with Guardia di Finanza for the construction of an additional 10, 27-m patrol boats that will clock in at 40 knots. The first ship is scheduled for delivery at the end of this year.

Circle 77 on Reader Service Card

The Cross Group Expands Its Rental Horizons

Cross Maritime, A Cross Group Company has made available its Multi-Purpose Barge. The Cross Mar-14. The ABS-classed barge is 250 x 72 x 16-ft. (76.2 x 21.9 x 4.8 m) with accommodations for 60 persons, a 4/6 point mooring system, 300-ton crawler crane, and helicopter deck. The Versatility of this barge allows it to be utilized by our clients in many applications including dive support, construction and salvage projects. The barge will also be used to transport sub-sea packages and perform wet hand offs to installation vessels in the field.

The Cross Group's objective is to offer, on a turn-key rental basis, a cost

effective work platform to the offshore industry, complimenting The Cross Group's existing fleet of rental equipment. Construction is being completed at The Cross Group Facility in Houma, La. The Cross Mar-14 will be available for long and short-term rental contracts August 15, 2003.

Six New Ships on TMM's Transpacific Service

The deployment of the 4,050-teu TMM Aguascalientes on the Mexico-Asia Premier service completes the company's newbuild program on the transpacific.

The ship, on long-term charter, joins the TMM Monterrey and four other sister ships on the weekly Mexico-Asia Premier service. It is the last of the series of newbuilds, both owned and chartered, which the company has accepted in the last 18 months.

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Circle 264 on Reader Service Card

New coatings safer, last longer

Bottom Line: It's Not Just A Paint Job

By Edward Lundquist,
Anteon Corporation

On the surface, the subject of paint seems simple. After all, it's just a paint job, right? For maritime applications, however, beauty is much more than skin deep. The coating of surfaces on ships is a complex combination of materials, chemicals and preparation to combat corrosion and maintain a sharp appearance. The coatings must wear well in the worst of weather and withstand the most extreme environments. They must last with little maintenance, must be earth friendly and safe for people and other living things, and last but certainly not least, they must be affordable.

The paint job found on a contemporary ship may look the same as that of a ship of several decades ago, when in fact very little is the same.

Combating Corrosion

Progress in coatings has been driven as much by environmental concerns as any other factor. Many traditional coatings are no longer acceptable for safety, health and environmental reasons, whether in manufacture, application or the resulting finished surface. Paints and coatings have traditionally been made with solid materials suspended in a solvent (which aids in the application), and leave the solid to bond with the surface when the solvent evaporates. Many chemicals used previously as solvents in paints, such as ketones, xylene, or toluene, are hazardous and no longer used. Lead based paints are also prohibited.

Chromium, a formerly prevalent ingredient in paints such as zinc chromate, is a cancer-causing agent. Coatings with zinc pollute the water. Lead, as stated, is poison and leads to serious permanent health problems. Heavy metals used in coatings are highly toxic. Materials have been used as coatings, such as copper sheathing on ship bottoms. Until recently, copper was thought to be safe, but when many copper clad bottoms are in a harbor, the copper kills the marine life and a sterile marine environment results.

Some new paints are "100 percent solids," which means there is a part A and a part B that must be mixed as a resin and catalyst are mixed to make

epoxy. These epoxies are non-volatile, do not cause air pollution and are non-carcinogenic. Their drawback is that the mixed epoxy is very thick, difficult to apply, and must be used right away.

Another approach is the use of water-soluble paints, similar to latex paints used in homes. The obvious drawback is that these coatings are susceptible to being worn away by water, and the maritime application provides ample opportunity for attack by water. Like the epoxies, the water-soluble paints are not

a toxicity problem or an environmental hazard. They are safe to store and use.

Teflon has proven to be an effective non-sticking surface for cooking, and it turns out that barnacles and other marine life don't like to stick to it as much as they do on other surfaces. Teflon coated hulls became an effective way to keep bottoms from fouling, keeping speeds and operating efficacies and economies up and maintenance costs down. But Teflon by itself is not the best anti-fouling coating. Teflon in combination with

silicone has proven to be even better, actually repelling water to reduce drag.

"This is an expensive combination," says Al Daech, a research engineer at the Gulf Coast Region Maritime Technology Center, affiliated with the University of New Orleans. "It costs \$35 per sq. ft., and there's a lot of square feet to cover on the hull of a ship. Cost becomes a limitation."

Daech sees great promise for lithium as a key ingredient in ship coatings. "It's one of the most common elements. It's the lightest metal, almost a gas," he says. "Lithium can replace chromium and lead. It's plentiful, and it's environmentally acceptable."

Another new method, Daech says, is electrostatic spraying of paint, involving the spraying of charged particles of plastic onto a negatively charged surface. The metal surface is then heated to fuse the paint. "The materials are reasonable. There's a capital investment, but once you've invested in this equipment you can use it for a number of years and amortize it."

Daech says electrostatic coating is being used now on components. It creates a tough coating, not unlike baked enamel on cookware.

Teflon, which is being used in some applications on bottoms, repels water. The water actually beads up. But Daech says that an even better way to reduce friction is to introduce a stream of air between the Teflon and the water. The ship is actually riding on a stream of compressed air, which has less resistance than water.

He also points to alloys that have been upgraded. Stainless steel, and now corrosion resistant steel (CRES), doesn't need to be painted. "You pay an extra capital expense. But it's care free for a long time once it is in place."

Ballast Tanks Pose a Challenge

All large ships have voids and tanks that are difficult to access and may not be visually inspected for many years, if at all. These closed spaces require coatings that can last for decades without repair.

Ballast tanks can account for up to 45 percent of total painted area on a vessel and are subjected to an "aggressive cargo, namely seawater, as well as

Hempel Extends Range



Hempel's range of IMO 2003 compliant antifouling products consist of three products: GLOBIC, OCEANIC and OLYMPIC, each designed to fulfill different needs in terms of price and quality.

Globic: Designed as a highly efficient, TBT-free, self-polishing and self-smoothening antifouling with very high volume solids, which can be specified for up to 60 months. Globic is available in four different polishing rates ensuring optimum specification.

Oceanic: Designed to be a cost-effective, TBT-free, self-polishing antifouling with high volume solids, which can be specified for up to 36 months on vertical bottoms and 60 months on flat bottoms. Oceanic is available in two different polishing rates.

Olympic: Designed as an economical, TBT-free, self-polishing antifouling, which can be specified for up to 36 months.

Development of the new products began with Globic in 1990 and was already then based on more than a decade of research into TBT-free antifouling. The Globic brand was launched as a commercial product line in the beginning of 2000, and the portfolio incorporates a unique use of fibers in the paint. According to the manufacturer, it is the first time micro fibers have been incorporated successfully in self-polishing paints. In combination with the binder system, the fibers form a three-dimensional structure that provides an extremely strong and flexible paint film while maintaining the polishing and smoothening properties of a self-polishing, antifouling paint. Based on the expertise obtained during the development of Globic, Hempel has successfully formulated Oceanic and Olympic with ingredients that are relatively inexpensive. Together, with Globic, these products cover all requirements in terms of price and performance.

Our share of the bulk carrier market is increasing as we see more and owners realize the value of having an effective antifouling. Paints for the future is expected to be silicone Fouling Release products i.e. like Hempasil. These coatings are biocide-free and release the fouling organisms due to an extreme smooth surface. It is at this stage hard to see if this type of paint will be suited for the majority of the bulk carrier market since a certain speed (normally min. 15 knots) and activity (normally min. 75 percent) is required.

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The July issue of the Marine Security Source Book will be distributed at all seminars.

Coatings & Corrosion Control

wet/dry and warm/cold cycles," says **Kent Holm** of Sigma Coatings in Denmark.

Pure epoxies are superior to epoxy coatings with cheaper modifying resins (such as coal tar), and they last longer and corrode less. "Pure epoxies perform more consistently throughout the coating's lifetime than modified or coal tar epoxies. Even though pure epoxies can be 20-50 percent more expensive than modified epoxies, cost savings on productivity at new-build, as well as a reduced need for maintenance, will more than make up for the price difference," says **Joey Keasberry** of Sigma Coatings.

The SigmaPrime multipurpose anti-corrosive epoxy coating is used for both new construction and maintenance and can be used virtually anywhere, on both

internals and external areas.

In water ballast tank surfaces, these pure epoxy coatings are as good as when new a decade later. "Pure epoxies have an expected lifetime of 20-25 years as opposed to modified epoxies, which have a life expectancy of 8-15 years. Obviously, this very much depends on the application itself. Poor application will reduce the coating's lifetime," says Keasberry.

Ballast tanks, especially those located in the double bottom, generally speaking have limited access during the ship's service life. Repairs required because these tanks have rusted or corroded are usually expensive. However, using the right coating can mean that the tank may never need repair or repainting.

Even with uniformly standard products, some coatings may perform better

than others on various ships under certain unique conditions. To be certain that a customer can get exactly the coating that has been proven to work best, the coatings have been "fingerprinted" by a laboratory.

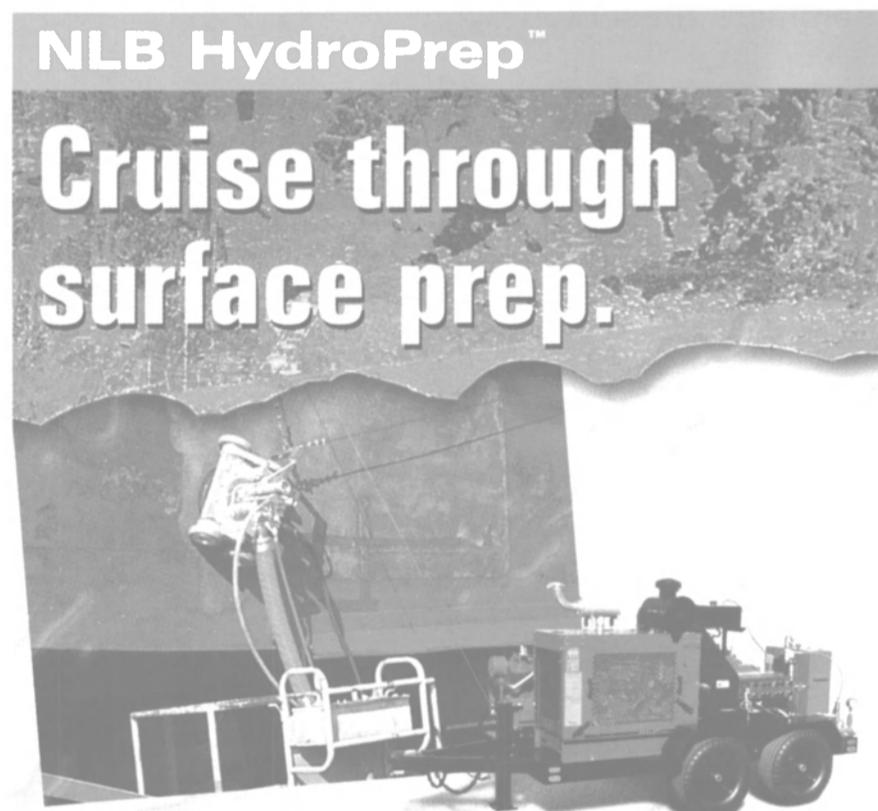
Sigma's general marketing manager **Paul Cain** explains: "Of course we were happy to agree to this fingerprinting. When an owner has invested time, effort and money in a project it is understandable that he wants to be sure he is getting exactly the coating he has carefully chosen."

Too much paint is as bad as too little. A thin coat won't properly bond with the base surface, nor will it protect it. Conversely, a thick coat will crack and expose the surface to corrosion.

In new construction, the total purchase cost of the coating is a small percentage

of the total vessel cost, typically in the region of one-and-a-half to two percent but this increases to 8-10 percent when the costs of surface preparation and coating application are included. Furthermore, says Cain, painting a new ship is time intensive, typically be in the region of 15-20 percent of the total time required to complete the vessel, which includes the entire coating process of application, surface preparation and inspection. "Using quick drying paints such as SigmaPrime can significantly boost production speed at newbuilding yards." The fewer types of primers and paints, the faster and cheaper it is to complete a vessel.

"Coatings have traditionally been a major bottleneck in the new construction of vessels. It's been calculated that when this process of using one primer

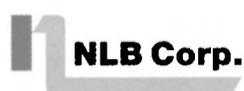


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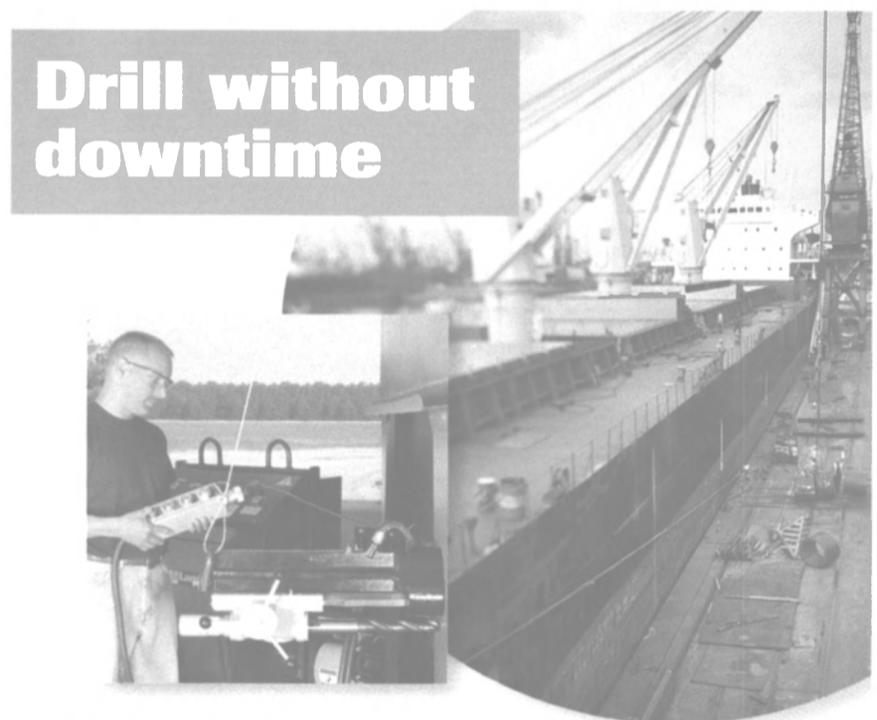
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Coatings & Corrosion Control

for the entire vessel has been fully (and optimally) adopted, savings of up to two percent of total vessel value can be made," says Keasberry.

Giving the Slip to Marine Life

In the last century, the maritime industry discovered that anti-fouling coatings could prevent the buildup of marine life on ship hulls. Such marine life like barnacles and algae, slowed the ship and clogged suction intakes and overboard discharges, and required periodic dry-docking for hull cleaning. For similar reasons, power plants and other industri-

al applications used anti-fouling paints to keep intakes and discharges clear from marine life buildup. In the North American Great lakes, for example, the introduction of the invasive zebra mussels has caused extensive damage to shipping and industry due to the clogging of pipes and the resulting reduced efficiencies. A hull covered by marine life may consume up to 30 percent more fuel to cover the same distance in the same time.

Most of these anti-fouling paints contained biocides, or compounds that leached out of the paint to deter the growth of marine life. One of the main ingredients in such coatings has been tin in the form of Tributyl Tin Salts (TBT). While TBT worked well, it was found to cause deformities in oysters and other shellfish. Further investigation showed that TBT was toxic, and subsequent regulations and legislation have virtually and universally banned TBT. The shipping industry understood and accepted the ban, but still had a need for an antifouling paint.

Marine plants and organisms need a surface to adhere to, so it stands to reason that it would be more difficult for marine life to bond to a very smooth surface.

The advantages to a hull that is free of marine life, and ultra-smooth and slippery, are obvious. Ships can get more speed for the horsepower, and use less fuel and horsepower to achieve speeds. The disadvantages are a relatively high initial cost, and the fact that as a system, one or more sub coats of anti-corrosive coatings must be applied first. Brown says the elastomer coating is environmentally friendly, efficient and economical.

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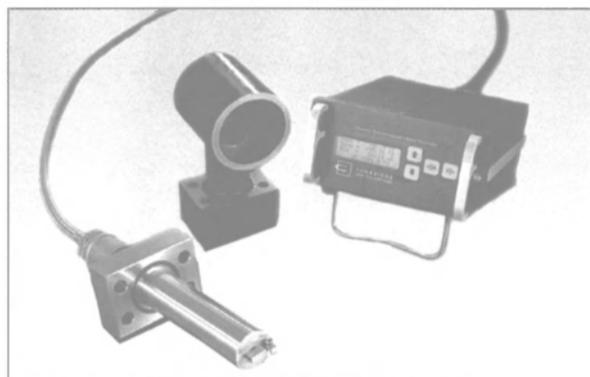
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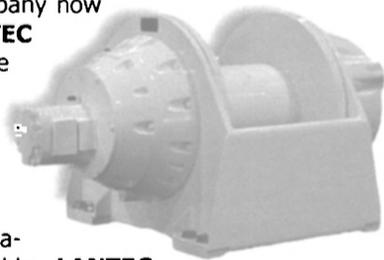
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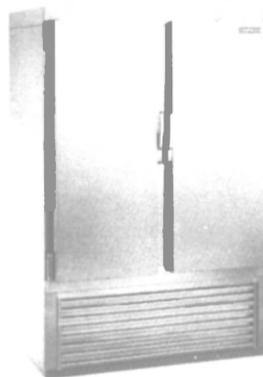
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Capt. Edward Lundquist, U. S. Navy (Ret.), is communications director for the Center for Security Strategies and Operations for the Anteon Corporation in Arlington, Va.

Maritime Reporter & Engineering News

Keppel to Deliver Maersk Rig Early

Keppel Offshore & Marine Limited (Keppel O&M) will deliver a new generation semi-submersible rig to Maersk Contractors in mid August 2003 - two weeks ahead of schedule. The rig was named Lider in a ceremony that was held at Caspian Shipyard Company (CSC) in Baku, Azerbaijan. Lider will be contracted to Exxon Azerbaijan



Operating Company LLC and Chevron Overseas Petroleum Azerbaijan Limited for a three-year drilling program.

Co-designed by Keppel FELS of Singapore and Marine Structure Consultants of Netherlands, this cost-effective multi-function rig is the first of the DSS-20-CAS-M semi-submersible

design to be built. Keppel FELS and CSC clinched the contract for the construction of Lider in February 2001, following their successful delivery of the MOD V jack-up rig, Gurtulush to Transocean SedcoForex. Capable of operating in water depths of up to 1,000 m and drill depths of up to 9,140 m, Lider has a variable deck load of 4,000 tons and is able to accommodate 130 people. It is specifically designed to handle large water depths and high formation pressures, which are anticipated at the first well in the Zafar Mashal structure.

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Nichols Bros. Launch Sternwheeler Cruise Ship

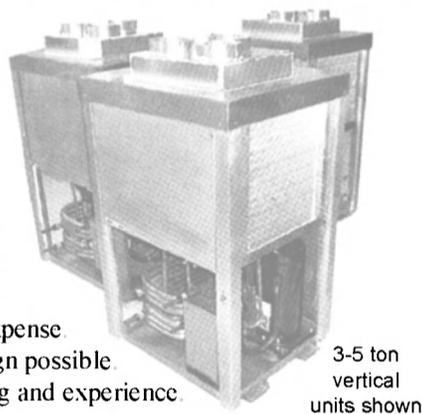
Nichols Brothers Boat Builders of Whidbey Island and Seattle-based American West Steamboat Company, owned by **Henry Hillman, Jr.**, CEO of Oregon Rail Corp., have launched the newly constructed overnight sternwheeler cruise ship Empress of the North. On June 16, 2003, the 360-ft. (110-m) sternwheeler was transferred on a specially designed rail system into Holmes Harbor, where it was launched at high tide. Designed by

Seattle naval architects, Guido Perla & Associates, construction of the Empress of the North began at Nichols Brothers' shipyard in April 2002. The largest ship built by Nichols Brothers, with more than 350 employees on the job, the project encompassed approximately 300,000 man-hours. Four decks high, the ship accommodates 235 passengers and 84 crew and features 117 all-outside suites and staterooms, of which 105 have private verandahs. Over 60 miles of electrical wire, eight miles of piping, and 3,500 short tons (7,000,000 lbs.) of fabri-

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cated steel went into the ship's construction. Its most prominent feature, a bright red paddlewheel located on the stern, which fully propels the boat, measures 42-ft. in diameter, or the equivalent of a four-story building.

Following its launch, Empress of the North was repositioned to Everett, where it is undergoing final outfitting and sea trials before her first scheduled passenger cruise from Seattle to Juneau on August 10, 2003.

Evergreen Orders 10 Post-Panamax Containerships

The Evergreen Group has placed orders with Mitsubishi Heavy Industries Ltd. in Japan for 10 post-Panamax vessels, each with a capacity of 6,724-TEU. The first vessel is due for delivery in September 2005 and subsequent vessels will be delivered at the rate of approximately four per year.

To be known as S-class vessels, the new ships will be built under the Greenship design concept proposed by Evergreen Group Chairman Dr. **Chang Yung-Fa**. The process, which involves taking a double-hull approach to the fuel oil tanks to take environmental protection into consideration can be implemented, according to Dr. Chang to reduce the level of tank damage and oil leakage. "We don't want fuel oil tanks to be located at the sides and at the bottom of the ships. If fuel oil tanks are located inside the hulls along the transverse bulkhead, damage to tanks and oil leakage incidents caused by grounding and collisions can be dramatically reduced."

With an overall length of 984 ft. (300 m) and a beam of 140 ft. (42.8 m), the new S-type vessels will be the largest ships in the Evergreen Group-owned fleet. They are able to carry containers 17 rows athwartships on deck and 15 rows athwartships below deck and have 839 reefer plugs. With a dwt of 78,200 tons on a service draft of (14.2 m). Each vessel has a single 10-cylinder Mitsubishi Sulzer 10RTA96C main engine developing 74,700bhp (54,900KW) to provide for a service speed of 25.3 knots.

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USS Ronald Reagan Commissioned

The Navy's newest and most sophisticated nuclear-powered aircraft carrier, USS Ronald Reagan (CVN 76), was commissioned July 12, 2003 at the Norfolk Naval Station in Norfolk, Va. Named after America's 40th president, Reagan is the ninth Nimitz-class aircraft carrier built by Northrop Grumman Newport News and the first carrier named for a living president.

The keynote speaker for the commissioning ceremony was Vice President of the United States, Dick Cheney. **Nancy Reagan** also attended the ceremony and served as the ship's sponsor.

The USS Ronald Reagan incorporates myriad of new technologies and innovations developed since the first Nimitz-class carrier, USS Nimitz (CVN 68), was delivered to the Navy in 1975. Among the changes are a completely redesigned island, a bulbous bow for improved hull efficiency, highly and integrated ship systems with increased capacity to support future upgrades and more facilities for women than on previous ships of the class.

The mammoth vessel towers 20 stories above the waterline, and at 1,092 ft. (332.8 m), is nearly as long as the Empire State Building is tall. The ship

displaces approximately 95,000 tons. Reagan has a 4.5-acre flight deck, more than seven million ft. of cable, and when operational will house approximately 6,000 personnel and 80 aircraft onboard.

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USS Ronald Reagan (CVN 76) ship's sponsor and Former First Lady, **Nancy Reagan** as she orders the men and women of the USS Ronald Reagan to "bring the ship to life."



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Navy Exercises Option for Fourth TAKE Ship



The U.S. Navy has exercised an option with National Steel and Shipbuilding Company (NASSCO), announced to build a fourth ship for the TAKE program, a new class of combat logistics force ships, at a contract value of \$288 million. The company was awarded a \$709 million contract in October 2001 for the design and construction of the first two ships in the TAKE program. The Navy exercised its option for the third ship, to be built at a value of \$290 million, in July 2002. The exercise of the fourth ship option brings the total value of the program to \$1.3 billion. The TAKEs will be 689 ft. (210 m) in length and 106 ft. (32.2 m) in beam, with a design draft of 30 ft. (9.1 m). The ships will carry almost 7,000 MT of dry cargo and ammunition and 23,500 barrels of marine diesel fuel. The TAKEs will be the first modern Navy ships with an integrated electric-drive propulsion system, and have been designed to maximize cargo-handling efficiency and minimize the costs of operation and maintenance over their expected 40-year life.

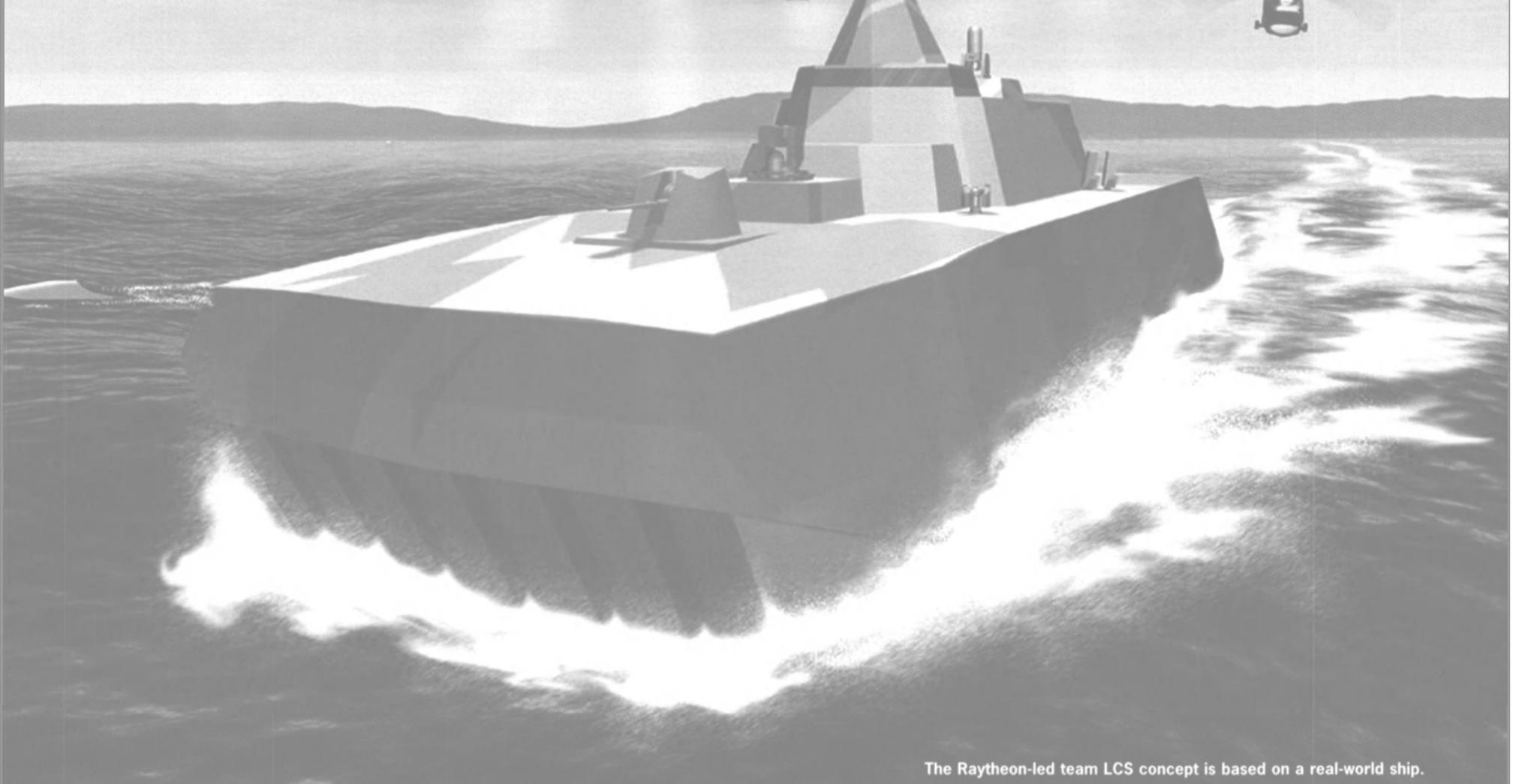
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Littoral Combat Ship: It's Down to 3



The Raytheon-led team LCS concept is based on a real-world ship.

The multi-billion contract to build a new family of Navy ships took one giant step last month with the awarding of development contracts to three industry teams. The fight to win the contract to

design and build the family of Littoral Combat Ships (LCS) is sure to be fierce, as the deal to build up to 60 of the vessels will help feed the corporate coffers of the successful team for decades to

come.

LCS is indicative of the Navy's transformation from a deepwater fleet left-over from the Cold War threat of only one other credible super power, to the reality of today's multi-faceted threat environment: small, hard to find and diverse groups around the globe. The LCS is designed to be a multi-functional, multi-dimensional vessel, able to accomplish a diversity of missions equally well while operating in more dangerous shallow coastal waters.

While derided in some circles as "disposable," the LCS will represent some of the highest technology on the water, fully leveraging the modern military's move toward the network centric approach to battle. Simply put, rather than operating as an island or the cog in a small battle group, the LCS vessels will "plug into" the network of air, land, space and sea assets, helping to collect, process, analyze and disseminate information that will help to, ultimately, protect lives and military assets.

The battle to build the LCS family has attracted true international attention, as a quick scan of the three remaining teams

surely bears out.

"The LCS teams selected represent the best available domestic and international expertise, and reflect strong efforts on the part of industry to provide innovative technologies and operational flexibility for the fleet customer," said **John Young**, assistant secretary of the Navy for Research, Development and Acquisition. "Our LCS acquisition strategy supports delivery of the first ship as early as fiscal 2007, within five years of program start."

Each of the teams features a broad international mix of companies that have imported advanced technologies to the shores of the U.S., technologies which in the long-run which will surely impact the productivity and stature of U.S. builders and suppliers in military, government and commercial marine markets, both domestically and abroad.

"This award is a major accomplishment in Austal USA's plans to become a major competitor in high speed applications for the US defense program," said Austal USA's CEO, **Greg Metcalf**.

Over the next seven months, the three teams will put the finishing touches on

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their designs, working toward a summer 2004 decision deadline to proceed to the next step: the awarding of final design and construction contracts. Following completion of the seven-month LCS preliminary design stage, the Navy will select two builders, one or both of whom will build the first two ships. The first vessel will commence construction in early 2005 and the other in early 2006. Plans also call for the additional construction of three ships in 2008 and four in 2009.

The Players

General Dynamics - Bath Iron Works; Lockheed Martin Naval Electronics & Surveillance Systems Surface Systems; and Raytheon Co., Integrated Defense Systems, were each awarded a contract for the performance of flight LCS preliminary design. Each contractor and their teams received a contract to perform a seven-month preliminary design effort to refine its proposed LCS concept. LCS will be a high-speed ship designed for fighting in littoral or coastal areas.

The eventual real LCS will feature an advanced hull form and a shallow draft and will be capable of quickly moving through the littoral at speeds of up to 40 to 50 knots. Obviously, much design work has already been invested in the project from all three teams, perhaps none more so than Raytheon's entrant,

which is based in a currently operating Royal Norwegian navy ship.

"We're leveraging about \$500 million that has already been invested in this ship technology (via the development of Norway's Skjold)," said **Tim Spotts**, Project Manager, LCS, Raytheon. "we feel this is a major advantage to our side.

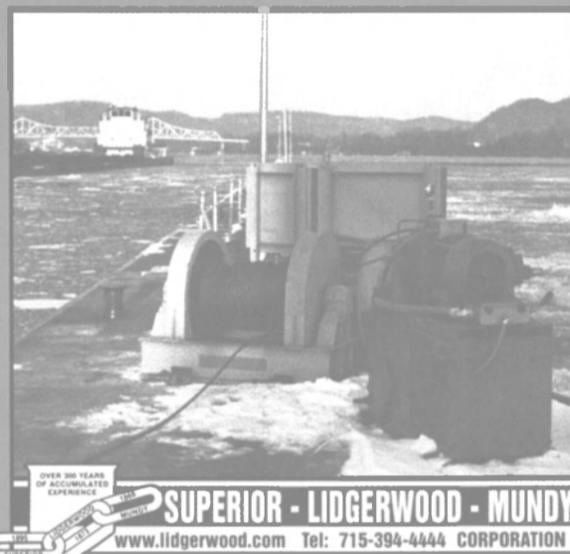
It is a slick ship design ... a definite step outside the box."

"We are privileged to offer our expertise within this impressive consortium that incorporates critical talents from a diversity of companies," said Tom Diamant, president of JJMA.

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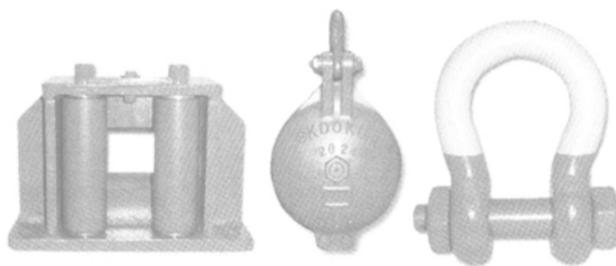


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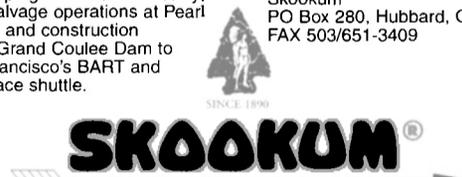


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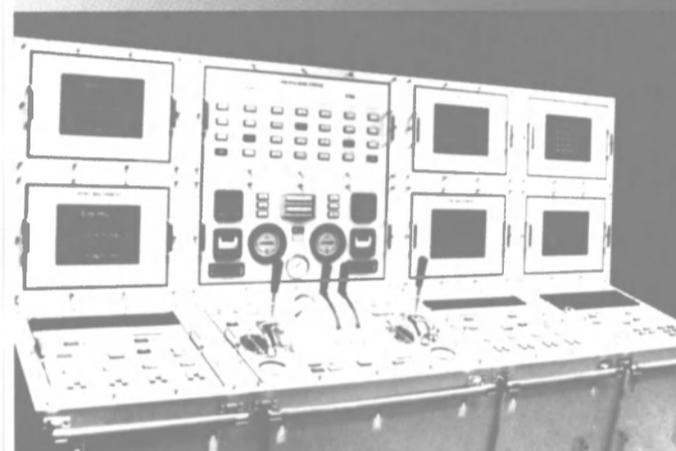
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- Maritime Applied Physics Corporation
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Lockheed Martin Naval Electronics & Surveillance Systems Surface Systems

Team Members

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- Bollinger Shipyards
- Marinette Marine
- Donald L. Blount and Associates
- Fincantieri
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Team Members

- John J. McMullen & Associates
- UMOE Mandal
- Atlantic Marine, Inc.
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Bath Iron Works team's concept is based on a unique trimaran hull from proven big, fast aluminum craft designer and builder Austal.

General Dynamics-Bath Iron Works' team concept is based on Austal's 126-m high-speed aluminum trimaran hull-form, a vessel that is yet to be built, but relies on Austal's expertise in the construction of large, high-speed aluminum vessels.

The Lockheed Martin Littoral Combat Ship (LCS) entrant is named Sea Blade, designed to be a fast, affordable, low-risk approach designed to dominate the shallow waters surrounding an enemy's shores.

"The Lockheed Martin LCS team combines leadership in all aspects of ship construction, design and program management," said **Carol Hulgus**, vice president of programs for Lockheed Martin's Naval Electronics & Surveillance Systems.

Principal members on the Lockheed Martin team include naval architect Gibbs & Cox and mid-market ship builders Bollinger Shipyards and Marinette Marine.

Gibbs & Cox, Inc. is responsible for the overall seaframe design, including integration of the hull, mechanical and electrical systems Bollinger Shipyards and Marinette Marine will employ proven materials and construction techniques that have successfully delivered more than 190 ships on time and on budget in the last 10 years. These mid-size shipyards are ideally suited and optimally sized for building LCS class ships. Combined, Bollinger Shipyards and Marinette Marine have built more than 135 ships for the Navy and Coast Guard.

Operating close to land, LCS is designed to enhance the capabilities of the Navy's larger multi-mission surface ships such as the planned next-generation destroyer and cruiser and today's fleet of Aegis warships. In addition to being smaller and faster than most vessels in today's fleet, the LCS will feature a mission module package, allowing commanders to tailor the ship to combat threats most often found in the littoral: naval mines, diesel submarines, and small fast surface craft.

Inherent operations, which each LCS will have, regardless of mission, include:

- Each ship will be able to defend itself from attack;
- Each ship will be able to conduct intelligence, surveillance and reconnaissance missions;
- Each ship will be able to support joint special operations forces;
- Each ship will be able to provide joint mobility in the littoral;
- Each ship will be able to interdict other ships, and defend the homeland.

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Manitowoc, Kvichak Team for USCG Boats

The Manitowoc Company, Inc. and its subsidiary, Marinette Marine Corporation, will partner with Kvichak Marine Industries, Inc. to develop and construct a prototype Response Boat Medium (RB-M) for the U.S. Coast Guard. Kvichak, located in Seattle with full-service waterfront facilities, will build the prototype RB-M. Using a design developed by Camarc, Ltd., Marinette Marine will serve as the prime contractor and program manager for the project - a \$2.5-million test boat expected in late 2003.

The Marinette/Kvichak team, along with two other contractors, will each build a RB-M test boat as part of the competitive process. After evaluating each prototype vessel, conducting extensive sea trials, and reviewing competitive proposals from the shipyards, the Coast Guard intends to award a contract for a fleet of approximately 180 RB-M vessels to replace its aging fleet of 41-ft. Utility Boats. The six-year contract is expected to be awarded in 2004. Marinette and Kvichak will share vessel construction if awarded the production contract.

The new vessel fleet, which will perform missions such as homeland security and search-and-rescue operations, will exceed speeds up to 40 knots. The upgraded fleet will be safer, more efficient, and more cost-effective for the Coast Guard to operate and maintain due to standardized systems, improved maintenance, and logistics support capabilities.

Circle 9 for Marinette Marine
Circle 10 for Kvichak

Northrop Grumman Commissions USS Mustin



The U.S. Navy commissioned the Aegis guided missile destroyer USS Mustin (DDG 89) in a twilight ceremony on July 26, 2003, at Naval Air Station North Island.

Known as the 18th Arleigh Burke-class Aegis guided missile destroyer built by Northrop Grumman Corporation's Ship Systems sector in Pascagoula, Miss., the new destroyer is named for the Mustin family, whose

naval tradition spans four generations and nearly a century of service.

Sponsors for USS Mustin are **Lucy Holcomb Mustin**, wife of ship's co-namesake retired Navy Vice Adm. **Henry C. Mustin, II**; **Jean Phillips Mustin**, wife of ship's co-namesake retired Navy Lt. Cmdr. **Thomas M.**

Mustin; **Douglas Mustin St. Denis**, sister of **Henry C. Mustin, II** and **Thomas M. Mustin**.

Cmdr. **Ann Phillips** of Annapolis, Md., commands USS Mustin, which now is officially a member of Destroyer Squadron One in the U.S. Pacific Fleet.

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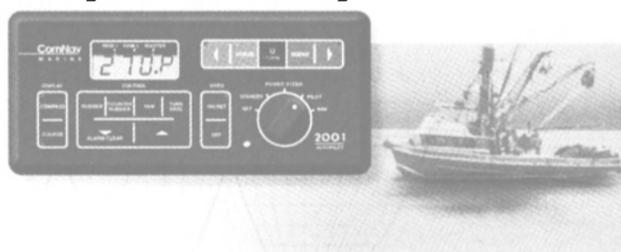
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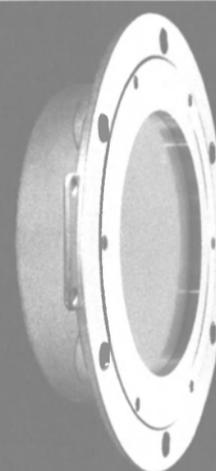
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MV Manukai Christened at Philly Shipyard

Matson Navigation's new containership MV Manukai was christened on July 12, 2003 by **Margaret Inouye**, wife of Sen. **Daniel K. Inouye**, (D-Hawaii), at a ceremony held at Kvaerner Philadelphia Shipyard, Inc. (KPSI). Not only is the vessel the first of a two-ship, \$220 million contract with KPSI, it also holds the distinction as the first new Matson vessel built since MV R.J. Pfeiffer in 1992. The ship is also the first to be constructed by KPSI and the first new ship built in Philadelphia in 34 years.

Mrs. Inouye's participation in the ceremony had a special significance in that she christened Matson's S.S. Hawaiian Enterprise in 1969, which was later renamed Manukai. At the time, the ship was the largest and most powerful containership under the

U.S. flag. While in service, it completed more than 700 voyages and carried more than one million containers of cargo - a record for the Hawaii trade.

The new Manukai is diesel powered, making it more fuel efficient, and is designed to carry a greater number of large container sizes.

For KPSI, the christening of the Manukai is a milestone for the newly revitalized shipyard, which had formerly been a naval shipyard. The vessel will have commenced its sea trials in late July and is expected to enter Matson's Hawaii service in the fall. As a replacement vessel, the ship will be one of eight containerships deployed in the company's service between the West Coast and Hawaii.

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Gathered for the christening ceremony at Kvaerner Philadelphia Shipyard: (from l to r) **Brad Mulholland**, vice chairman, Matson Navigation Company; **Allen Doane**, president and CEO, Alexander & Baldwin, Inc. and chairman of Matson; **Margaret Inouye**, Sen. **Daniel K. Inouye** (D-Hawaii), **Charles M. Stockholm**, chairman of A&B, **Jim Andrasick**, president and CEO, Matson, and his wife, **Ginger**.

Main Particulars - MV Manukai	
Length (b.p.)	657 ft. (200.2 m)
Beam	106 ft. (32.2 m)
Depth	64 ft. (19.4 m)
Draft, design	36 ft. (11 m)
Draft, scantling	41 ft. (12.5 m)
GT	30,000
DWT	29,400 tons
Speed	22.5 knots
Range less than 10,000 n.m.	
Main engine	8K80 28,880 kW @ 104 rpm
Bow thruster	1,300 kW

Emergency Sends S.S. Matsonia to Pearl Harbor Yard

A propulsion casualty aboard the 760-ft. (231.6-m) SS Matsonia in June created a unique opportunity for the private sector and the Navy to work together and maintain a vital supply line to Hawaii — a cooperative effort between Pearl Harbor Navy Shipyard and Honolulu Shipyard, Inc.

The Matson flagship vessel, which experienced an intermediate shaft failure 700 miles off Oahu, was brought to the Navy's 1,100-ft. (335.2-m) dry dock — the largest of four - for emergency repairs on June 23, 2003. It is the largest ship to be dry-docked at Pearl Harbor Naval Shipyard since the USS Yorktown in May 1942.

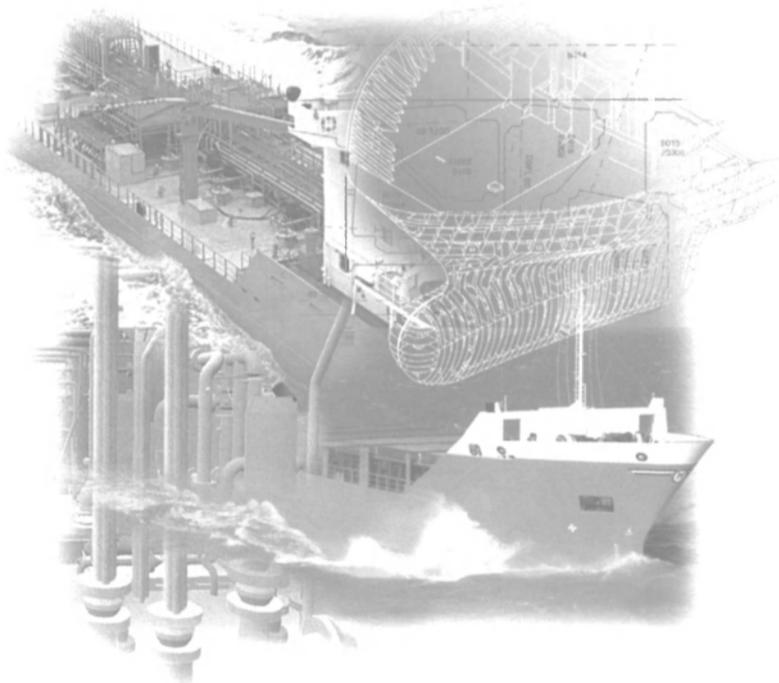
Bill Clifford, president and CEO of Honolulu Shipyard also noted that the cooperation and teamwork demonstrated between agencies (government, military and private) is unprecedented for this type of emergency repair effort.

U.S. Rep. **Neil Abercrombie**, (D-Hawaii), is working on a pilot program at Pearl Harbor that would bring one of the 11 maritime pre-position ships that act as forward-based stocks of U.S. military equipment in the Pacific. The ships bypass Hawaii, pass through the Panama Canal, offload equipment in Florida, and head up the East Coast for repairs that keep them out of operation for four months — twice as long as they would be if they dry docked in Hawaii.

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Congressman **Abercrombie** departs the drydock after surveying the work onboard SS Matsonia.



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SENESCO Provides Major Facelift for NOAA

The Southeastern New England Shipbuilding Corporation (SENESCO) began its a major overhaul on the Albatross IV at the company's Quonset Point headquarters in December 2002. Launched in 1962, the Albatross IV is the second oldest in a fleet of 15 research vessels used by the National Oceanic and Atmospheric Administration (NOAA). The ship, based in Woods Hole, Mass., normally conducts fisheries and oceanographic studies in the Gulf of Maine, Georges Bank, and the continental shelf/slope from Southern New England to Cape Hatteras, N.C. It also serves in NOAA's "Teacher At Sea" program, allowing schoolteachers on board to see science come to life and then to bring that knowledge back to their classrooms. The ship's first and only other repair project of this magnitude occurred in 1988. In 2001, NOAA decided that it was time for another significant repair period, and, as is required of most government agencies, they put the job out to bid in the form of a Request For Proposal (RFP). SENESCO completely refitted and cleaned nearly every pipe in the Albatross' HVAC system (heating, ventilation, and air conditioning). SENESCO installed brand new refrigerators for ship stores and scientific samples, a new boiler, fuel tanks, converted fuel tanks to ballast tanks, installed a new sewage treatment system and replaced navigational equipment on the bridge. The ship was also stripped to bare metal and repainted - its hull painting completed by EDL Painters of Exeter, R.I. Also involved was The Lightship Group, a Marine and Industrial support organization located in close proximity to SENESCO, which completed a large portion of the mechanical and outfit overhaul.

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Commander Michael Abbott stands in front of the newly-refurbished Albatross IV at SENESCO's Quonset Point, R.I. facility.

Northrop Grumman Christens San Antonio



Inset: Ship's sponsor U.S. Sen. **Kay Bailey Hutchison**, (R-Texas), (inset), christens the U. S. Navy's newest amphibious transport dock ship, San Antonio, on July 19, 2003, at Northrop Grumman Ship Systems in New Orleans, La. Avondale operations Vice President **George Yount** (r) and more than a thousand guests celebrated the new ship's milestone.

Northrop Grumman Corporation's Ship Systems sector christened LPD 17 San Antonio on July 19, 2003, at the company's Avondale operations near New Orleans, La. The 684-ft. (208.4-m), 25,000-ton San Antonio is first of 12 in a new class of amphibious transport dock ships being built for the U.S. Navy by Northrop Grumman. Named in honor of the city of San Antonio, the ship's sponsor was U.S. Sen. **Kay Bailey Hutchison** (R-Texas), who christened the vessel.

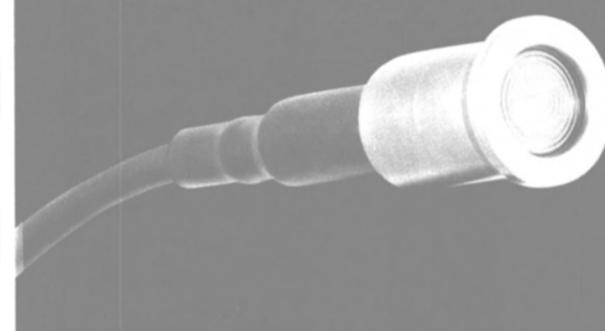
Currently, the ship is more than 75 percent complete. Crews will now begin to outfit the bridge,

fire-control room, living spaces, and start powering up the ship's systems. San Antonio will be commissioned for U.S. Atlantic Fleet duty in 2005, will be home ported in Norfolk, Va., will have a crew of 361 and can transport up to 800 Marines. As the first ship designed for the 21st century "Mobility Triad," the mission of LPD 17 class ships is to embark, transport and land elements of a Marine force in an assault by helicopters, landing craft or advanced amphibious vehicles in order to conduct any type of mission.

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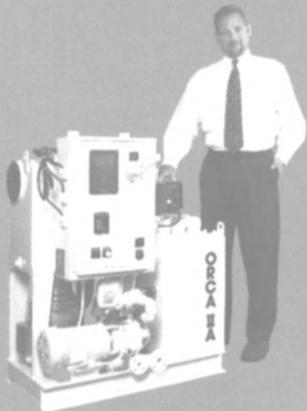
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In a bold move to simplify and expedite the entire ship surveying process, Germanischer Lloyd (GL) has implemented a new, information technology (IT) tool for use by its stations around the world. Heralded as a revolutionary step forward in surveying, the customer-driven initiative is known as TRON, and is intended to replace complicated, time-consuming correspondence with a largely electronically-based surveying process linked to the GL intranet.

The value of TRON should be best realized when used in conjunction with 'fleet online', GL's Internet portal.

The powerful new instrument of service and operations enables the necessary survey information, such as status and timing, to be published on 'fleet

online' within 24 hours, placing data at the client's disposal significantly earlier than was previously possible. The IT-based arrangements promise a more transparent and easier-to-follow survey process, as well as speedier execution at the requisite high standards.

Developments such as this cut both ways, offering an improved survey service contributing to the operational safety and efficient running of the ship, while potentially enhancing the society's own efficiency, routines and reliability. Moreover, while TRON looks set to greatly facilitate and safeguard customers' planning processes, it also means that each surveyor will shoulder a greater share of responsibility in keeping with more decentralized arrangements.



By David Tinsley, technical editor

The various technical reports in use up to now have been brought together in a single survey statement that focuses on the demands of the vessel type involved. The surveyor on the spot works his way through a catalog tailored to the specific scope of the survey in question, and which takes all the relevant survey parameters into account. From this, the technical report is automatically drawn up. At the same time, there is no longer any distinction between classification and statutory reports.

Benefits conferred by TRON through linking with the GL intranet include the capability for quickly communicating the latest GL and IMO rules and other edicts to surveyors in every location, and the means it provides for each surveyor to have continual access via his or her PC to the society's knowledge and information resources at the Hamburg head office. "In this way, we can offer the best possible decentralized survey process," observes the society.

GL claims that it was the first classification society to offer customers the chance to plan surveys on-line and order a survey on a specific date via the Internet. Launched at the beginning of 1999, 'fleet online' has been providing a survey order service since February 2001. More than 1,000 companies controlling over 3,800 vessels are now registered to use this free service.



Maritime Reporter & Engineering News

Investment in Design

Wärtsilä: A Fountain of Ideas

A new concept for powering large passenger vessels, the combined diesel-electric and diesel-mechanical (CODED) system, is the latest outcome of a broader co-operation between leading lights in the Finnish maritime industries. CODED has been developed by Wärtsilä Corporation to address the needs of cruise ships of the future, and is an outcome of its joint endeavors with the technology arm of Kvaerner Masa-Yards to find new design and machinery solutions for the next generation of vessels. Formulated for a 25-knot breed of Panamax cruise ship of 90,000-gt, arranged to accommodate 2,500-passengers, the CODED propulsion configuration is of a hybrid nature, using two electric motor-installed pods and one mechanically-driven, feathering controllable pitch propeller. The CODED machinery layout is claimed to offer the benefits normally associated with a 'conventional' diesel-electric power and propulsion plant, but at a lower cost. Compared with an all diesel-electric, twin pod solution, the new concept is said to promise better hydrodynamic performance, equally good

maneuvering and significantly improved economics, with a seven-percent reduced power need at the propellers. A key benefit attributed to the CODED system is the factor of flexibility, whereby installed prime mover capacity can be better matched to different needs in different situations. In addition, it permits the diesel engines to be run at constant speed and at more efficient loads, to the good of overall fuel consumption, while it affords the ship designer greater freedom in main engine location. At low and medium vessel speeds, the ship is propelled by the twin, steerable pods alone. At high speeds, the centerline, mechanically-driven propeller is also actuated. When not in use, the centerline propeller is feathered, whereby the pitch is changed to align the blades with the waterflow, allowing for significantly less resistance than that encountered with a windmilling propeller. For operations in the higher speed range, it is proposed that steering is achieved by way of a Lips High Efficiency Rudder fitted behind the centerline propeller, with the pods then locked

into position. After investigating various CODED machinery options for the envisioned Panamax cruise ship, Wärtsilä settled on a layout using a total of five 9L46 diesels in the gensets for the diesel-electric side to the system, feeding power to the electrical pods, plus two 12V46 models to drive the centerline mechanical propeller. Total plant output would be approximately 72.5-MW.

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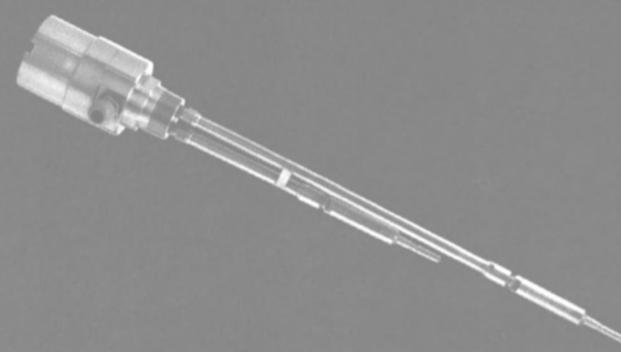
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What Should be the Role of Class?

The role of vessel classification societies continues to change dramatically. As the role and relevance of class is hotly debated, MR/EN picked the brains of the industry's major classification societies to analyze both their individual and collective future.

ABS President Calls For Class Overhaul



Bob Somerville • ABS

"If class is to remain relevant, it must remake itself for the modern world."

If class is to remain relevant, it must remake itself for the modern world, says ABS president and CEO **Robert D. Somerville**. He recently told delegates to the World Maritime Forum in St. Petersburg, Russia that "self regulation will continue to provide an effective method for establishing and enforcing standards only if all elements of the industry recognize that substantive overhaul is needed." Somerville highlighted the remarkable, and continuously improving safety record of the international shipping industry but conceded that, "in the eyes of government and the public, the self regulatory approach no longer meets expectations." Good as the safety record may be statistically, "it is not good enough," he said.

With every tanker spill, regardless of how infrequent they may be, "the effectiveness of the existing maritime safety system will be called into question," he said, "and it will be found wanting. The result will be further regulation."

The ABS chief executive highlighted four principal elements that have changed the environment in which class and the shipping industry operates. 1. The public demands have increased; 2. The nature of ship owning has changed; 3. The technology available to class societies is far more sophisticated; and 4. The pressures on the shipbuilding industry are different to those of the past.

"It is time for the maritime safety system to recognize these changes and adapt to them in a rational and effective manner if the classification profession is to retain any relevance in the future." Comparing the current pressures faced by all sectors of the industry with those of 30 years ago, Somerville noted that "today's VLCC will almost certainly be built in a shipyard where price and production efficiencies are the driving forces. That means keeping the design simple and putting as little material into the ship as possible." Somerville believes that too many of today's shipowners see class as an intrusive watchdog. "They (shipowners) are under intense commercial pressure," he noted. "There is little capability or incentive to maintain the vessel, to repair coatings or to install anodes in the way that was done in the past. That owner will run that ship

until his classification society determines it no longer meets rule requirements, and he will do everything possible to delay that day or defer repairs. The concept of class as a partner is dead." In calling for an industry-wide effort to analyze and improve the existing system, Somerville stressed six key issues for class that should be addressed. "It must address the issue of what role and what power is to be ascribed to the classification societies," he said. "Does the industry want class to be the policeman? If it does, give us the power of enforcement."

Noting the constant criticism of the current system by which the shipowner is invoiced for class services, Somerville says the industry must address the issue of who pays the class society. "It is immaterial to us who pays, but we must charge for the services we provide," he said. "If the industry decides the current system is effective and workable, then support it and put these criticisms to rest." ABS welcomes the recent decision by the IACS Council to work towards the adoption of common scantlings and strength criteria. "It is no longer reasonable to place classification societies in the position where shipyards play one off against another for the sake of 250 tons of steel in a VLCC with a lightweight of some 38,000 tons," he said, urging industry support for the unified rule approach.

Somerville sounds a note of caution. "Much as I believe this reinvention of class is needed, the classification societies cannot and will not undertake this reform by themselves," he conceded. "It is not just that the collective courage does not exist. Any such unilateral action by class would be doomed to failure. For the radical overhaul that I am suggesting to be effective, it must be orchestrated with and accepted by the industry."

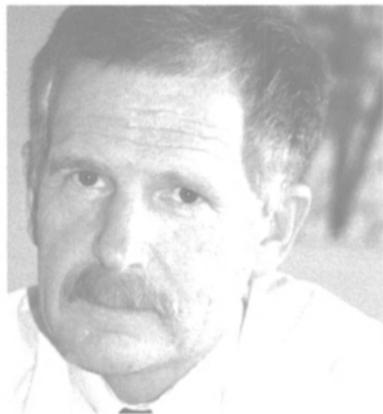
Tanker, Bulker Safety Among GL Priorities

By *Dr. Hans G. Payer, GL*

Current ship safety issues concerning tankers and bulk carriers are among the priorities of Germanischer Lloyd (GL). There is no doubt that overcapacity in the shipbuilding industry and the corresponding increase in competition has brought pressure upon owners, shipyards and class societies to reduce the fabrication cost of newbuildings. This may result in a threat to ship safety as well as to the

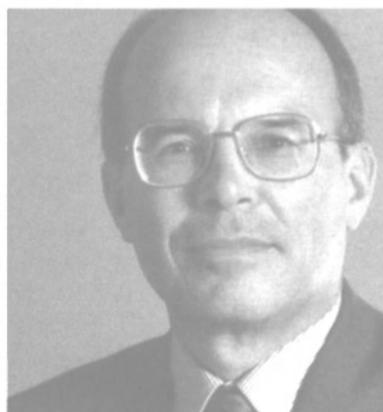
class societies. That is one reason why GL welcomes the recent proposals put to the IMO for uniform goal based standards for new construction. GL believes that IACS, with its technological database and expertise is the right body to enter discussions with a view to creating such standards. The maritime industry is starting to realize the importance of a worldwide agreement on adequate minimum new building standards. We know that mature and responsible shipowners are agreed that future ships will need a common approach, and they are prepared to pay for better ships.

As the industry acts to deal with the early phasing out of single hull tankers, there has been much debate and controversy over the performance of double hull tankers. To this I can add that after 10 years of experience with double-hull designs, GL's own damage statistics show no significant trend of structural failures in cargo and ballast tank areas due to design or fabrication deficiencies. Problems of down grading due to corrosion and wear persist, and need the same attention of owners and class as is the case with single hulls. The well-established CAP regime and the mandatory introduction of a condition assessment scheme (CAS) for single hulls is considered to provide generally improved control over tankers. On the related issue of double hulls for bulk carriers, single-hull vessels upgraded to the latest IMO/IACS requirements can meet adequate safety demands. However, GL's newbuilding classification records show orders for an increasing share of double side bulk carriers of handy, handy max and laker sizes. These vessels are expected to outperform conventional bulk carriers in terms of repair requirements and off hire characteristics. Accident statistics already confirm their superiority particularly in respect of low-energy impact casualties. Since their introduction through the OPA 90 regime, Emergency Response Systems (ERS) have proven their effectiveness on many occasions. Using advanced tools of analysis and a data base of computational models for the large number of subscribing vessels, GL has developed its own ERS to provide fast track evaluations of the residual strength of a ships' hull in accident and distress situations. This includes the advice on optimal ballasting as well as



Dr. Hans Payer • GL

GL's own damage statistics show no significant trend of structural failures in cargo and ballast tank areas due to design or fabrication deficiencies.



Bernard Anne • BV

The challenge for all of us is to harness the strength of class by getting all parts of it working together.

the calculation of the likely outflow of oil. In this way, we are increasingly able to provide practical information to masters and rescue centers in counterbalancing and discharge decisions, which significantly reduce the risk of a catastrophic outcome. We also believe that the use of ERS will fundamentally improve the assessment of the risks associated with decisions on entering a damaged vessel into a port of refuge. For this reason, GL is supporting the

proposal of the IMO subcommittee on liquid bulks for the mandatory introduction of ERS.

**Issues Facing Class:
Specter of Class Liability**

By Jim Harrison, LR, Group Legal Director

The sinking of the 37,238 dwt single-

hull tanker Erika off the coast of France in December 1999 undeniably changed the way in which the shipping industry operates, but it is possible that we are now entering a post-Prestige phase, which will change it further. One of the key issues for class post-Prestige is liability. While class societies have in the past been subject to legal proceedings

involving owners, operators, cargo interests and others, it now appears that future cases may be brought by governments, and there is a clear hardening in attitude by European member states with respect to pollution, especially in light of the European Commission's (EC) proposed directive on criminalizing marine pollution.



Jim Harrison • LR

... it is possible that we are now entering a post-Prestige phase, which will change it further.



Ugo Salerno • RINA

Our whole industry is based upon competition, and classification is no exception.



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Classification Societies

The EC's proposal for a directive on ship-source pollution and on the introduction of sanctions, including criminal sanctions, for pollution offenses, states the following: "...the proposed Directive establishes that discharges in violation of Community laws shall constitute a criminal offence and that sanctions, including criminal sanctions, are

to be imposed if the persons concerned have been found to have caused or participated in the act by intent or grossly negligent behavior. For natural persons this may include, in the most serious cases, the deprivation of liberty. The introduction of adequate sanctions for pollution offences is particularly important in relation to pollution by shipping,

as the international civil liability regimes that govern ship-source pollution incidents involve significant shortcomings with respect to their dissuasive effects."

The proposed directive works on the assumption that the enforcement of MARPOL 73/78 is not strong or consistent enough and that the Civil Liability

Conventions and their attendant Funds do not provide enough of a deterrent to would-be polluters. The proposed directive is aimed as much at operational discharges of oil (in tank-cleaning operations, for example) as at large pollution incidents such as those which resulted from the sinkings of the Erika and the Prestige. The EC believes that the proposed directive would give the nascent European Maritime Safety Agency the legal basis to enforce MARPOL more effectively within European waters.

In light of all this, it remains difficult for classification societies to understand or accept the current situation in which shipowners, who should be in continuous control of their ships, enjoy the protection of statutory limits on their liability by reason of the Civil Liability Conventions, whereas classification societies, who, through their surveyors, only visit the ship for a few hours or days per year, remain exposed to potentially unlimited liability claims. This disparity in treatment seems to be entirely illogical. Shipowners have a non-delegable duty to maintain their ships in a seaworthy condition, yet they enjoy the benefit of limited liability. In contrast, a classification society's duty of care is much narrower than that of the shipowner's, i.e. to perform its classification and statutory surveys with reasonable skill and care, but there is no equivalent statutory limitation of liability bestowed on the classification societies, who should be allowed to do their safety-enhancing work without fear of crippling litigation.

Cooperation is the Key to Progress

By Ugo Salerno, managing director, RINA and chairman of IACS

The biggest challenge facing class today is learning how to co-operate. We have to cooperate with regulators, with shipowners, with shipyards, and above all, with each other. No one doubts that it is only classification societies that have the knowledge, experience and global networks necessary to set, implement and monitor the technical rules for building safe ships. But how do we deploy those assets? Our whole industry is based upon competition, and classification is no exception. Classification societies cooperate, through IACS, but they also compete. That is healthy competition, driving up standards both of service and technical excellence. But when that competition means that standards become too divergent, it must be time for more cooperation and for competition to be where it belongs best, on service standards only.

(Continued on page 55)



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RIB Report



Versatility Prevails at Silver Ships/AMBAR

Having built over 200 aluminum RHIB's, Silver Ships, Inc. / AMBAR Marine, has grabbed a foothold in the design and construction of aluminum RHIB's - all of which are constructed in accordance with SOLAS regulations.

The U.S. Coast Guard operates 90 AMBAR Marine Non-Standard RHIB's and the U.S. Navy Sea Systems Command operates 40 AMBAR Marine Special Service RHIB's. Silver Ships, Inc./AMBAR Marine constructs approximately 43 vessels per year, 80 percent of which are RHIB's while the remaining 20% have been Patrol/Security boats, and various work boats ranging from 23-48 ft. (7-14.6 m).

Circle 59 on Reader Service Card

McKee Craft: The Unsinkables



Upon discovery, in 1966 following extensive R&D, **Lanness McKee, Sr.** uncovered the secret to the most rugged, unsinkable marine construction in the market. Fine tuned throughout the last 35 years, the process has come to be known as the PBS or Pressure Bonding System. Utilizing intense pressure and high density foam to fuse together every inch of the hull and deck, this process

eliminates the need for stringers, thus creating one unitized part of strength.

Circle 86 on Reader Service Card

Almar — Fast, Seaworthy and Durable

With design innovation as its hallmark, Almar's patrol rescue line is no exception to the notion. From rear well deck with transom access doors to dive platforms and de-watering pumps, Almar's boats also employ a unique buoyant outboard bracket that increases water line length, while adding buoyancy and a roomier interior.

Almar's Patrol Rescue Sounder boasts welded aluminum hulls with fully enclosed cabins and 20-24 degree deep vee bottoms for a smooth ride, shallow draft and unsurpassed maneuverability at high speeds. Specifically speaking, onboard a 26 x 9-ft. (7.9 x 2.7-m) Sounder Cuddy Cabin that was built for



the U.S. Army Corps of Engineers. This vessel gains power via its 7.3 liter Mercruiser diesel and Bravo III/O.

Circle 87 on Reader Service Card

Charitable RIB Features CAT Power



A charitable expedition is relying on Caterpillar main propulsion supplied by Finning U.K. Ltd. The expedition, led by **Bear Grylls**, will attempt to cross the Atlantic in a RIB power boat in later July - with a starting point of Nova Scotia. The RIB, built by Ocean Dynamics, is a 35-ft. (10.6-m) aluminum hulled boat which features a Caterpillar 3126B marine diesel propulsion engine rated at 456 mhp at 2,800 rpm, which drives the boat via a Twin Disc TDEJ130 jet drive, and is designed to deliver a cruising speed in the region

of 18-25 knots, depending upon fuel and water storage conditions. The boat will have a top speed of 28 knots at reduced fuel and water levels, but with the longest leg of the voyage — from Greenland to Reykjavik — spanning a distance of over 850 n.m.

Circle 85 on Reader Service Card

The RIBCRAFT 7.8 Mitigator

This past summer, RIBCRAFT USA debuted a technologically driven 25-ft. RIB. The boat integrates multiple technologies, all designed to dramatically increase driver and passenger comfort and safety, into one innovative boat. Though rigid inflatables, RIBCRAFT set out to use the latest technologies — taking things a step further. The charge for this RIB was to take a hull with the RIBCRAFT 7.8 design, and start from the waterline up using completely innovative technologies to improve the overall comfort. This was accomplished by modifying the configuration to allow for longer, more comfortable offshore passages. The 7.8's proven offshore hull design features a generous deep "V", an impressive forward dead rise, and multiple full length spray rails. RIBCRAFT has eliminated the conventional steering wheel for a unique handlebar steering control system. This control system will allow the driver to control steering and all gearshift, throttle and cruise control operations without ever having to release his stabilizing grip of the handlebar. Powered by a 225-hp Honda four-stroke, this RIB will reach 45 mph.

Circle 41 on Reader Service Card



Willard Marine Teams With Scarab

Willard Marine is expanding its line of commercial and tour boats with an alliance with Scarab, Inc. Scarab Inc., was founded by **Larry Smith**, whose offshore race boats are world-renowned. Willard will be offering and building the Scarab 54 RIB, which is the largest RIB to be Coast Guard approved for up to 60 passengers. Several of these RIBs,

of various lengths, are in service in the Hawaiian Islands and the Caribbean as passenger ferries off-loading cruise ships, rafting adventures, snorkel excursions, dolphin and whale watching, ecology tours and corporate charters. The craft are built in high-strength, low-maintenance fiberglass reinforced plastic (FRP). Design features include two heads with 6.5 ft. headroom, optional beverage bar and lunch box facilities for full-day excursions, and a fresh water shower. The 23-degree deadrise deep-vee hull shows its offshore racing pedigree with a ride designed to be smooth and comfortable in rough seas. It can be fitted with conventional shaft, water-jet, I/O, or surface drive propulsion matched to the customer's choice of diesel power. Standard engine installations are Cummins Mercury diesels from 300 to 600 hp. The inflatable collar greatly increases ride comfort and stability, and is manufactured by Wing Inflatables.

Circle 42 on Reader Service Card



Foynes, Ireland - June 3rd

The CLIPPER CHEYENNE, 5,970 dwt, 104m x 20.5m x 4.9m float on float off heavy lift cargo vessel sunk alongside the dock at Foynes, Ireland in the River Shannon, while ballasting to load a floating dredger.

Response & Results:

Titan was awarded the re-floating contract on a Lloyd's Open Form and quickly began mobilization of equipment and people from their New Haven, UK and Ft. Lauderdale, Florida warehouses. The job was completed as agreed and vessel delivered to owners safely afloat.

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RIB Report

Northwind's Enforcer Provides Special Services

Sharp is the best way to describe Northwind Marine's recent 23-ft. (7-m) and 30-ft. (9.1-m) additions to its Extreme Task Force Line of Aluminum-hull Rigid Inflatable Boats. With a 25.5-degree transom dead rise and a 36-degree waterline entry point, the first of

the new models to finish production at the Seattle Wash. facility is the 23-ft Extreme. According to **Bruce Reagan**, president of Northwind Marine Inc., the company has received many requests for a boat of this size with a very sharp deep-V hull. The latest 23-ft Extreme to be put in service is with the Alaskan State Troopers. Outfitted with a T-top,

three-sided center console and twin 130-hp Honda four stroke engines, the state trooper boat reaches top speeds of 40 knots. "The 23's are being configured with single or twin outboard engine packages and several different deck arrangements," Reagan said. Northwind Marine's other new boat addition, the 30-ft. Pilot Master, has a 24-degree tran-



som dead rise and a 42-degree waterline entry point. The commercial models undergoing production are powered by twin 240-hp Yanmar diesels and Hamilton 274 waterjets.

Circle 192 on Reader Service Card

PORT SECURITY WATERCRAFT: RAPID LAUNCH AND DRY-DOCKING SYSTEMS

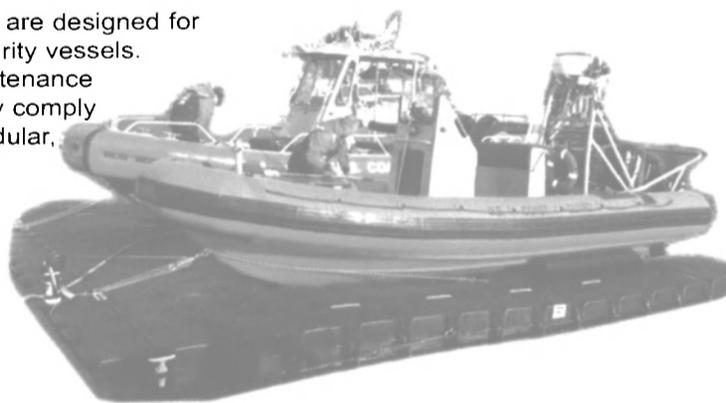
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Wing Inflatables - Model for Strong RIBs

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sons for virtually any RIB. Air-holding or air/foam hybrids, all of Wing's tubes are designed and manufactured in the U.S., using 40 oz. industrial grade, 100 percent polyurethane coated fabric. The use of polyurethane coated fabric, advanced construction techniques, and superior design ensure that a RIB with a Wing sponson will require low maintenance - and look pretty sharp too.

Circle 91 on Reader Service Card

SeaArk Marine Can Multi-Task

SeaArk Marine, Inc., of Monticello, Ark., delivered the first of a multi-boat order for Naval Sea Systems Command. The 34-ft. (10.3-m)



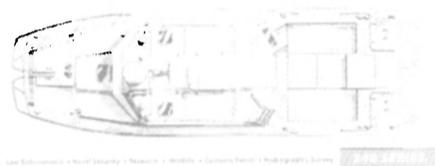
Dauntless RAM, destined for Naval Coastal Warfare units, is the first of 36 boats to be delivered to the Atlantic and Pacific Fleets. These boats feature a 20-degree Radical Vee Deadrise Hull, twin 370-hp Cummins 6BTA5.9M-3 diesel propulsion with Konrad 520 series stern drives, on board AC power, air conditioning, head, galley, electronics suite, foam filled air cushioned collar for boarding and shouldering operations, 4 - 50 caliber weapons mount foundations, ammunition storage, weapons storage, sona buoy storage, recessed forward gunner area and foundations and accommodations for future installation of classified electronics.

Circle 40 on Reader Service Card

Circle 272 on Reader Service Card

The Moose is Loose

Offering catamarans with three basic hulls, Moose Boats, a division of Ironwind, prides itself on the design and construction of boats that are functional, attractive and rugged. The three hull products have various cabin configurations and cabin interior layouts tailored for various needs. Propulsion options range from outboard power v-drive, stern drive, surface drive or water jets. More extensively, each of the options and configurations can be interchanged on any of Moose Boats' hulls.



The all-aluminum boats are built on a ridged steel jig, or frame mold, and every hull is completely welded while on this mold before being removed and turned over for topside construction, thus eliminating any unnecessary

Customized for Protection

Protector, a multipurpose, high-performance boat engineered for work and designed for response has already been customized in the U.S. for marine police patrol, search and rescue, firefighting, and other commercial operations. "Everyone who has had the opportunity to operate our new 28-ft. Port Security demonstrator appreciates Protector's deep understanding of commercial quality," says **Bill Clark**, Protector's director of Commercial Products.

The Protector, a rigid hull inflatable boat (RIB) with a cabin, offers the safety, stability and power - even in the most challenging conditions. Introduced to the U.S. in the late 1990s, Protector already has a successful performance record with New Zealand's leaders in the industry, including the coast guard, police, search and rescue and fire departments. Its commercial grade, multi-functional design will provide any organization the ability to easily deploy a Protector RIB to handle a variety of operations, such as any weather patrolling in a dry, fully-integrated cabin; search and rescue with a smooth riding, high speed, low freeboard design; and high speed firefighting response with an optional, fully integrated pumping capability

Circle 69 on Reader Service Card



frames.

This will in turn reduce weight and welding fatigue points setting the stage for a strong hull that weighs less and maintains fair lines.

Circle 88 on Reader Service Card

New Arctic 20 RIBs for the Hellenic Navy

The Hellenic Navy has specified VT Halmatic Arctic 20 rigid inflatable boats (RIBs) for use aboard their new class of fast attack craft. The first boats have now been delivered to Greece for operational training prior to deployment.

The new Arctic 20 has been designed for demanding military and commercial operators requiring a smaller robust general purpose RIB suitable for a wide variety of operational requirements.

The Hellenic Navy's Arctic 20 RIBs are fitted with twin 90-hp outboard motors providing responsive handling and top speeds in excess of 40 knots.



ANCHORS CHAINS

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Davit-mounted aboard the new 62-m ships, the new Arctic 20's will be used for general ship's duties including boarding, rescue and personnel transfer.

Powered by single or twin outboard motor installations the Arctic 20 offers various deck configurations that include both forward and aft steering positions. The standard specification includes hydraulic steering, a heavy duty, five compartment Neoprene inflation collar and a watertight instrument panel.

Circle 5 on Reader Service Card

AMH - Mission Possible

AMH Government Sales, which is a division of American Marine Holdings, Inc., goes above and beyond the average "boat." The company takes things a step further by supplying solutions geared toward mission requirements. Standing

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by "Operational excellence" as its motto, AMH's engineering philosophy rests on the laurels of shock mitigating hulls, positive flotation and heavy-duty features to ensure that the vessels will hold up to take a beating from both government and commercial users.

Developed as a stand-alone division to service the specialized needs of government and commercial users, AMH utilizes hulls from its sister organizations

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Circle 223 on Reader Service Card

RIB Report

as well, mainly Donzi Marine and Pro-Line Boats, both of which have more than 35 years of proven hull designs.

Circle 89 on Reader Service Card

Rough Water "New RIB on the Block"

Rosborough Boats of Halifax Nova Scotia recently introduced its line of

semi custom Heavy Duty Rigid Hull Inflatable boats. The Rough Water line was developed to meet the new and growing demand for Rigid Hull Inflatables with more personnel carrying capacity, workability space and operational stability. Canada's Fisheries & Oceans Conservation and Protection Police took delivery of four 30-ft. (9.1-

m) Rough Water full wheelhouse, wide body boats this winter (for operations off the Canadian Atlantic coast), and more are expected to be contracted for later this season. The Rough Water designs offer a 26-ft. (7.9-m) and 30-ft. (9.1-m) narrow deep V (33 degree) configuration, as strictly Chase Boat, and the larger 30 ft. version modified deep V



(24 degree) hull. The Wide Body Rough Water 30 boasts a full 6-ft. working floor width, five crew wheelhouse and a forward cuddy area for equipment, toilet, safety gear etc. Working and cockpit floor areas are large with a fore deck area at the bow. All decks are molded in nonskid and hatches are tread plate. The under floor area forward accessed through two water tight hatches offer large storage and hold capacity, and the dual fuel tanks are equal in capacity and together provide a total of 164 gallons for extended operations. Powered with twin Yamaha 150 hp HPDI outboards, the 30 ft. reached a top speed of 45 knots with continuous cruise speeds up to 35 knots. Rosborough's test version of the Rough Water 30 wide body was configured with a pair of Mercury 225 hp.

Circle 90 on Reader Service Card

Zodiac's SRPs Will be Featured in "New" Navy

Zodiac's Short Range Prosecutor or SRP (a.k.a. the Hurricane 770 DJ) is custom-built for the U.S. Coast Guard's multi-billion dollar Deepwater program. The vessel, which has highly advanced deepwater design features, is being portrayed as a boat of the future for far-reaching anti-terrorism and counter-narcotics operations.



Zodiac was recently chosen by the USCG and Bollinger Shipyards to supply the series of 84 custom-built deepwater class vessels for use during extended, long-range patrol missions. SRPs are used on a variety of Coast Guard vessels, such as fast response cutters, national security cutters and offshore patrol cutters. They are launched from patrol boats or cutters for operations consisting of boarding, personnel recovery, and search and rescue. H-770 measures 25 ft. (7.6-m) with an aluminum hull and is equipped with a Yanmar 315 hp engine with a Hamilton 241 water jet drive. It is designed with a four-point lifting sling with a stainless steel ring, which allows for safe, fast launch and recover to and from the Coast Guard vessel.

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Telaurus Expands Tech Support

Telaurus Communications LLC appointed **John Julian** as Project Development Manager and **Ewan Robinson** as Technical Sales Support Manager.

ENSCO Elects New Senior V.P., CFO

ENSCO International named **James W. Swent** as its new senior V.P. and CFO.

Offshore Systems, Kelvin Hughes, Lockheed Martin Form Alliance

Lockheed Martin has teamed with Kelvin Hughes Ltd. and Offshore Systems Ltd. to pursue the expanding U.K. and international military market for electronic chart and navigation systems.

Hornbeck Offshore Acquires OSVs

Hornbeck Offshore Services, Inc. has acquired five 220-ft. (67-m) class deep-water offshore supply vessels (OSVs) and their related business from Candy Marine Investment Corporation, an affiliate of Candy Fleet Corporation, (collectively, "Candy Fleet") for an undisclosed amount of cash and common stock of the Company.

Conrad Expands into Aluminum

Conrad Industries, Inc. is expanding its products and services to include aluminum marine fabrication, repair and conversion for both commercial and government customers. The expansion is part of a \$5.5 million investment.

TechnoFibre Awarded Contract

TechnoFibre concluded two contracts revolving around cruise ship dry-docking schedules in Singapore, specifically Star Cruises' Super Star Aries, and the newly renamed Crown Odyssey. Work on Super Star Aries included the entire replacement of the release hooks, release mechanisms, hydrostatic interlocks and support legs on 3 x 90 person Hatecke Tender boats. Crown Odyssey's workscope entailed the servicing and testing of the Fassmer Duplex on-off load hook release systems, together with extensive glass fiber repairs to hulls and canopies of the tender boats and lifeboats.

Circle 75 on Reader Service Card

Coastal Marine Equipment Debuts New Push Wire Reel

Coastal Marine Equipment, Inc. manufacturers of a complete line of marine deck machinery has added a new product to its line of deck machinery. The new push wire winches developed for and shipped to Sause Bros. Ocean Towing of Coos Bay, Ore., are sized to hold 200 ft. of 1.75 in. wire rope. They develop 47,000 lbs first layer pull at 41 fpm and have a brake holding of 212,000 lbs.

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August 2003



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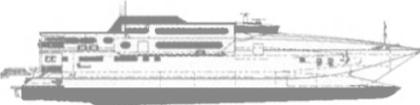
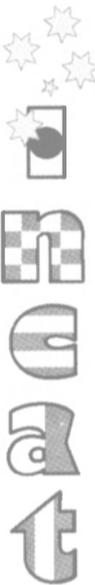
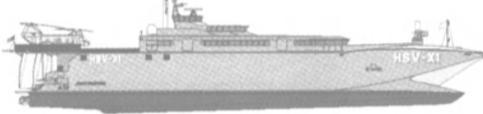
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<p>Hull 045, HMAS Jervis Bay</p>  <p>Length: 86.14 metres Breadth: 26.0 metres Draught: 3.63 metres Deadweight: 415 tonnes Speed: 44 knots</p>		<p>Hull 050, HSV-X1 Joint Venture</p>  <p>Length: 99.37 metres Breadth: 26.58 metres Draught: 4.04 metres Deadweight: 741 tonnes Speed: 40 knots</p>
MILITARY		MIGHT
<p>Hull 060, TSV-1X Spearhead ACTD</p>  <p>Length: 98.0 metres Breadth: 26.61 metres Draught: 3.43 metres Deadweight: 728 tonnes Speed: 40 knots</p>	<p>18 Bender Drive, Hobart, Tasmania 7009 Australia.</p> <p>TEL: +61 3 6273 0677 FAX: +61 3 6273 0932</p> <p>Email: incat@incat.com.au Website: http://www.incat.com.au</p>	<p>Hull 061, HSV-X2</p>  <p>Length: 98.0 metres Breadth: 26.61 metres Draught: 3.43 metres Deadweight: 750 tonnes Speed: 40 knots</p>

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Salvors Forge Their Way into the Future

Maritime Reporter solicited the opinions of two of the leading marine salvage companies to discover trends and challenges facing marine operators in the near future. The 2003 National Maritime Salvage Conference, sponsored by American Salvage Association (ASA), will take place September 9-11, 2003 at the Marriott Crystal City in Crystal City, VA. For more information visit www.americansalvage.org.

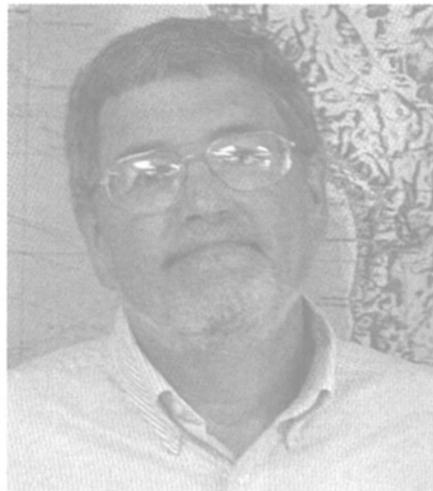
George E. Wittich
Senior Vice President
Weeks Marine, Inc.

MR: How has the industry/your company changed since 9-11?

Wittich: The salvage industry has a critical role to play in assisting the various government entities manage their maritime security mission. Under the recently formed Department of Homeland Security, the United States Coast Guard has been charged with developing the maritime strategy for homeland security. The salvage community can directly assist the Coast Guard in achieving both of these objectives.

During the infancy of the American Salvage Association (ASA), our board made a strategic decision to co-locate our association with the American Waterways Operators (AWO) in Arlington, Va. This arrangement has enabled us to share resources and information, when appropriate, to attain common goals. With regard to issues of national maritime security, the Coast Guard and the Army Corps of Engineers recognize that the waterfront workforce of the ASA and AWO member companies represent the country's "eyes and ears" on the water. As an association, and as individual companies, we are adding security awareness training to our existing training regime. By educating our workforce in such a manner, situational awareness is heightened and suspicious activity can then be identified and properly reported with the utmost expediency.

Like the industry, we, at Weeks Marine have made several changes to our operations in the post 9-11 world. Immediately after the attacks on the World Trade Center (WTC), Weeks Marine, along with many other companies, dispatched its vessels to lower Manhattan to assist in the mass evacuation. As the company tasked with executing all of the waterborne operations



Dick Fairbanks

associated with the World Trade Center Recovery project, Weeks Marine performed the necessary dredging and constructed four temporary barge-ports on New York's East and North Rivers. With a project flotilla of four floating cranes, 43 barges and seven tugs, we then loaded and transported in excess of 1.5 million tons of steel and debris via barge to various offloading facilities within the New York Harbor area. Our ability to tap our in-house expertise in salvage, construction, dredging, stevedoring and marine transportation, as well as our diverse subcontractor network was instrumental to the project. From my firsthand experience as project executive for this project, I can clearly state that our salvage experience was a key factor in our ability to rapidly respond and undertake these tasks and successfully complete them significantly ahead of schedule.

We learned valuable lessons from this project which we now incorporate into our daily business operations. During the WTC Recovery project, it was a challenge to fill the 85 additional positions, especially the supervisory ones. After the project's completion, we retained many of the project hired supervisors and established a program whereby they rotate among all of our operating divisions to gain a broad experience base. During normal operations, these employees work at our yards, or on various projects under the guidance of our more experienced operational managers - like Tom Weeks, VP, who runs our heavy lift and salvage division. When an emergency project emerges, this group is available to handle the task at hand, with little disruption to our ongoing operations.



George Wittich

This initiative proved very effective when in 2002, shortly after completing the WTC project, we were called upon by Con Edison (the primary electrical service provider to New York City) to facilitate an emergency underwater electrical cable repair in Long Island Sound which commenced on Memorial Day week-end. We were able to mobilize immediately and provide the necessary vessel support and Ro/Ro services required to ensure complete customer satisfaction.

MR: Discuss safety and training practices for the salvage industry and for your company?

Wittich: Safety and training is of paramount. The ASA has recently developed the ASA Salvage Safety Standards, a comprehensive safety source document specifically designed for salvage/wreck removal operations. It covers a myriad of topics including, but not limited to: safety plans, inspections, subcontractor safety, accident prevention, safe work practices, emergency procedures and safety check lists. The ASA Salvage Safety Standards is a valuable resource that will undoubtedly benefit each and every ASA member. The full document is presently under final review by the ASA Executive Committee and ratification is anticipated at our September meeting.

Regarding training, the ASA has many initiatives presently underway. Our primary focus has been to participate and involve the United States Coast Guard in many of our training initiatives. Fortunately, we receive a high degree of member participation in these programs, and I would be remiss if I didn't specifically recognize Jim Calhoun of Bisso

Marine, as the catalyst within the ASA for moving many of these programs forward. Our efforts include continuing participation at the USCG Federal On-scene Coordinator (FOSC) school held periodically at Yorktown, Virginia, and our ASA/USCG Cross Training program. At the FOSC school, which is attended by senior Coast Guard officers, as well as invited industry and agency personnel, ASA members join other key players in a panel discussion format to familiarize the attendees with the ins and outs of salvage and wreck removal. This initiative is then supplemented by individual ASA member company visits to local Captain of the Port offices.

Utilizing the USCG Industry Training Program as a vehicle, the ASA has successfully engaged USCG "trainee" involvement in actual salvage / wreck removal projects as an observer and contributor. It proves to be an excellent educational experience for both the company and the Coast Guard. Titan Maritime of Fort Lauderdale received a trainee from USCG Miami for a multi-month training evolution. Bisso Marine of New Orleans has reported that they implement a Coast Guard cross training exercise on nearly every job they do and find it to be most beneficial. Other members are optimistic and hope to participate in similar training evolutions on their own projects in the near future.

Richard B. Fairbanks
President

Titan Maritime

MR: Discuss the Port of Refuge/Prestige issue from the salvor's perspective.

Fairbanks: Marine salvors have asked the International Maritime Organization (IMO) to take account of a set of four proposals when drafting guidelines on places of refuge for ship casualties. In a submission to the IMO's Subcommittee on Safety of Navigation, due to meet in July, the International Salvage Union (ISU) proposes that the new guidelines should include a provision requiring an expert inspection of the casualty before any decision is made on a request for refuge. Here, the ISU calls on the IMO to take a stand against "automatic" rejection of such requests, in the absence of a physical inspection of the casualty's condition.

The ISU makes three additional pro-

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posals for IMO consideration:

- States, after consultation with industry, should set up a panel of experts to advise on the risks posed by any casualty requiring a place of refuge.
- Consideration should be given to the evaluation of consequences, should a place of safety be refused.
- Any financial security for the entry of a ship to a place of safety should be reasonable and not exceed legal liabilities.

The ISU has expressed its support for a French paper to the IMO which backs a provision in the guidelines for casualty inspection. The ISU, however, urges the IMO to accept the principle that this inspection should take place before any refusal of refuge.

On the second proposal, the ISU suggests that the guidelines should urge states to appoint a panel of experts - including salvors, naval architects, biologists, chemists, environmentalists and fire/explosion specialists - to give advice in a marine emergency.

The ISU adds: "In the absence of a place of safety, there is a much greater likelihood of the ship sinking, with consequent damage to the environment, albeit outside the territorial limit of the State refusing access." The paper draws attention to the risks to salvage crews in such situations.

The ISU then claims that some ports make "totally unreasonable and excessive demands" for security, using the salvor's inability to comply as an excuse to refuse entry.

During his recent address to the International Tug and Salvage Conference in Bilbao, Spain, former ISU President Jean Labescat said: "In a proportion of cases, the availability of a place of refuge can be a major factor in determining the success or failure of a salvage. The decision of a government to refuse a request for refuge can have profound consequences. The decision could place lives and the environment at greater risk."

He cited a number of cases where refusal to grant refuge had influenced the outcome of casualty situations, including the tanker *Castor* and the bulk carriers *Treasure*, *Bishmihita La* and *Ikan Tanda*.

The former ISU President told the conference: "Governments have the fundamental obligation to act in the public interest. It is not in the public interest to take decisions which, at best, pass on risks to neighbouring states and, at worst, may lead to an environmental catastrophe."

The ISU has said that IMO-approved criteria for assessing risks associated with ship casualties would be a significant step forward. Jean Labescat noted:

"For the first time, the salvor and the authorities would have an internationally-recognised template to work with."

He added that no distinction should be made between the safety of the casualty's crew and the safety of the salvage team. The IMO guidelines should leave no room for Coastal States to reject a request for shelter without going through a formal process and that this process should focus on the salvage plan and recognise the paramount importance of swift intervention.

MR: How has the industry/your company changed since OPA '90 and the Exxon Valdez?

Fairbanks: At one time, marine salvage was all about saving property. Over the past 40 years the focus changed to saving the environment. This was not only the result of the Exxon Valdez but also a result of several major pollution incidents, mostly in Europe. Here in the USA however, the Exxon Valdez pushed the environmental issue to the top of the public's concern resulting in the OPA 90. The marine salvage business is still about property but environmental issues have become the driving force behind new regulation. The problem with OPA 90 for salvors has been the wrong ended focus. The regulation was aimed at cleaning up the mess after a spill. The salvors' perspective is to try and prevent the spill. On the other hand, clean up became so expensive in the US that ship owners became very careful so as to reduce spills and therefore costs. In that way, OPA 90 became a great success.

About Titan Maritime

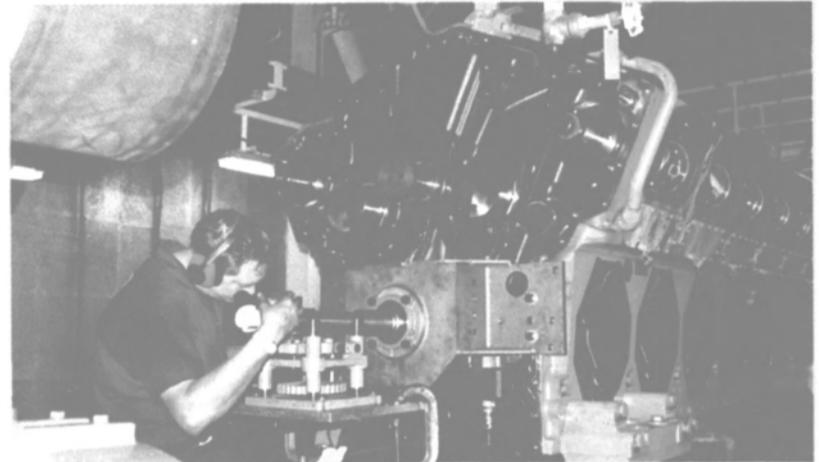
Titan Maritime, LLC, is a commercial marine salvage & wreck removal contractor headquartered in Ft. Lauderdale, Fla., with offices in Newhaven, U.K. and Sao Paulo, Brazil. Founded in 1980, the company is one of the very few in the world that still names marine salvage and wreck removal as its primary and only business.

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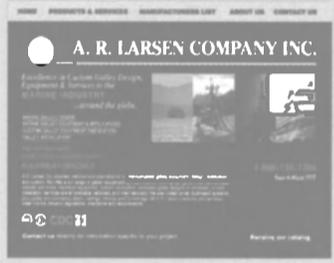
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www.asaelectronics.com

Caribbean Radio & Tel
www.caribbeancomm.com

Furuno USA, Inc.
www.furuno.com

G.A. International Electronics
www.gaiec.com

Geonav Marine Systems
www.geonav.com

GMT Electronics, Inc.
www.gmt-electronics.com

Japan Radio Co. (JRC)
www.jrc.co.jp

JATRON, INC
www.jatron.com

LADD
www.laddinc.com

Marine Electronics - Croatia
www.marine-electronics.hr

RidCom Technologies
www.ridcomtechnologies.com

Radio Holland Netherlands
www.radioholland.nl

Seacrest Electronics Inc.
www.seacrest.com

Shipboard Marine Electronics, Inc.
www.shipboardmarine.com

SIMRAD, Inc.
www.simrad.com

Marine Engineering

Arushnet Towing and Transport
www.arushnettowing.com

Kleinschmidt Associates
www.kleinschmidtusa.com

Krech Ojrd Associates
www.krechojrd.com

MCA Consultants, Inc.
www.maco.com

Robshaw Engineering, Inc./Flexifloet
www.flexifloet.com

Terra
www.terra-surveys.com

The Shipbuilding Report



www.shipbuilding.com

118 E. 25th St.
New York, NY 10010
Tel: 212-477-6700
Fax: 212-254-6271

William E. Williams Valve Corp.



www.williamsvalve.com

38-52 Review Ave.
Long Island City, N.Y. 11101
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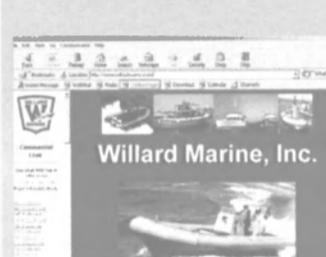
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www.thermaxmarine.com

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Tampa, Fla. 33625-5500
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Fax: 813-264-2507

Willard Marine Inc.



www.willardmarine.com

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Anaheim, Calif. 92806
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Superior Energies, Inc.



www.insulationsei.com

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Superior-Lidgerwood-Mundy Corp.



www.lidgerwood.com

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Orkot Marine Bearings



www.orkotmarine.us

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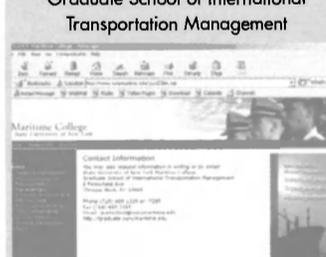
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Internet Resource Guidebook

Yangming (Japan) Co., Ltd.
www.yangming.co.jp

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www.aalborg-industries.com

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www.shipequip.com

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www.consult-mar.com

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www.dwsii.com

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www.epclabs.com

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www.thybar.com

TOPtainer GmbH
www.topcontainer.com

VDMA
www.vdma.com/marine-equipment

Marine Hardware

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www.balmoralmarine.com

CENTRAL LOCK & HARDWARE SUPPLY CO.
www.cenlock.com

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Kiriloff & Associates
www.kiriloff.com

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www.mdoinc.net

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SEA Engineering, Inc.
www.sea-eng.com

Waller Marine, Inc.
www.wallermarine.com

Zentek, Inc.
www.zentek-usa.com

Navigation

Plothouse
www.plothousecharts.com

The Royal Institute of Navigation
www.rin.org.uk

Nozzles / Nozzle Systems

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NeulCAN
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www.ensoolve.com

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www.stapl.com

Port Security

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www.abs-jba.com

C & R Associates, Inc.
www.cra.com

EMX Inc.
www.emx-inc.com

FORTIS Group
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H. Frank, Inc.
www.cargo-xpert.com

Klein Navigation Inc
www.kleinnavigation.com

Lloyd's Marine Intelligence Unit
www.lloydmii.com

Lockhead Martin Naval Electronics & Services
www.lockheadmartin.com/syrcusa

Radar Digital Systems Inc
www.radar-digital.com

Science Applications International Corporation
www.saic.com/products/security

SeaWolf Marine Patrol
www.seawolfmarinepatrol.com

Top Cot Marine Security
www.topcotmarine.com

Tri-state Maritime Safety Assn
www.trimsa.org

Portable Ventilators

Ebac Industrial Products
www.ebab.com

Propulsion Equipment

AcuTech Marine Propeller, Inc
www.acutechmarine.com

HRP USA, Inc.
www.hrp.us

Hurdsted Propeller US
www.hurdstedpropeller.com

Innerspace Corporation
www.innerspacetrust.com

KAPLAN & ASSOCIATES, INC.
www.kaplantrust.com

NAVALIPS S.A.
www.navalips.es

North American Marine Jet Inc.
www.namjet.com

POWER-VENT Technologies, Inc.
www.powervent.com

SDI Electronics d.o.o.
www.sdi-electronics.com

Thrustmaster International Ltd
www.thrustmaster.com

Ultra Dynamics Limited
www.ultradynamics.com

Voith Schiffstechnik GmbH & Co. KG
www.voith-marintech.com

Voith Turbo Inc.
www.voith-marintech.com/index_e.htm

Propulsion Monitoring

Einsfeld Engineering Inc.
www.einsfeld.com

Publications

AAPA SEAPORTS OF THE AMERICAS
www.seaportsoftheamericas.com

MarineNews
www.marinelink.com

Marine Security Sourcebook
www.marinesecurity.com

Maritime Reporter & Engineering News
www.marinelink.com

Congressional Information Bureau, Inc.
www.cibpub.com

The Shipbuilding Report
www.shipbuilding.com

Pump-Repair-Drives

Depco
www.depco.com

EDDY Pump Corp
www.eddypump.com

Leitritz Corporation
www.leitritzcorp.com/pumps

VERTIFLO PUMP CO.
www.vertiflo.com

Remotely Operated Vehicles

Alternative
www.opar-services.com

Deep Ocean Engineering
www.deepocean.com

Oceanearring International, Inc.
www.oceanearring.com

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MainTech Compliance Management
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Safety Products

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www.datrex.com

Electric Fuel Ltd
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Reflexite Americas
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Resolve Marine Group, Inc
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www.titansalvage.com

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KECO Inc
www.keco.com

Satellite Communications

Atlantic Communications
www.aatlgroup.com

Mental Inc.
www.mental.com

Sea Tel
www.seatel.com

Jeknagom
www.jeknagom.com

XANTIC
www.xantic.net

Seals

A. W. Chesterlon Company
www.chesterlon.com

Seating

INDUSTRIAL SEATING, INC
www.indseat.com

Ship Lifts

Synclift, Inc
www.synclift.com

Ship Management

ANYSSA
www.anyssa.com

Barber International (USA), Inc.
www.barbership.com

Dean Maritime, Ltd. Ca
www.deanmaritime.com

Evergreen International Corporation - Legal Dept.
www.evergreen.com

Maritime (2002) Pte Limited
www.maritime2002.com

Mercy Ships
www.mercyships.org

Seabulk International
www.seabulkinternational.com

Ship Supply of Florida, Inc.
www.shipsup.com

Spanco Maritime & Trading Group
www.spancomaritime.gr

Talca Marine b.v.
www.talcamarine.nl

Ship Repair

"MR" Maritime Services Co. Ltd.
www.mr-ms.pl

Adriatic Shipyard Bijelo
www.asybijelo.com

Anchor Laminia Inc.
www.anchorlaminia.com

Buck Kreibitz Company, Inc.
www.buckkreibitz.com

Consolidated
www.consolidatedmarine.com

Deimeks Ship Repair Company
www.hel.se/deimeks

Dynamic Concepts Corporation
www.dycorp.com

Hydrex
www.hydrex.be

IMS International Ltd.
www.imsinternational.com

Key Group Engineering
www.keygroup.net.au

Meriteks Ship Services
www.meriteks.fi

Moan Engineering Company
www.moaneng.com

Promet Marine Services Corp
www.prometmarineservices.com

Qatar Navigation (QSC)
www.qatarnav.com

San Juan Towing & Marine Services, Inc.
www.sanjuantowing.com

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www.swmarine.com

Steel America
www.steelam.com

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www.nauta.pl

verrecut navigation
www.groupeverrecut.com

Shipbuilding-Repairs, Maintenance, Drydocking

The Shipbuilding Report
www.shipbuilding.com

A.P&A. Ltd
www.apanda.com

Austal USA
www.austal.com

People & Company News

Andrasick Appointed Matson President, CEO



Andrasick

James S. Andrasick has been named president and CEO of Matson Navigation Company, Inc., the largest subsidiary of Alexander & Baldwin, Inc., effective August 1, 2003. Andrasick, who had been serving in that position on an interim basis since July 1, 2002, will continue as executive vice president of A&B, while holding interim CFO responsibilities until a replacement is named in the near future. Also: **Dave Hoppes** has been promoted to V.P., ocean services; **Jack Sullivan** now holds the position of V.P., vessel operations; **Gary North**

will assume the title of senior V.P., Pacific; **Bal Dreyfus** will assume the position of director-vehicle operations; **Matt Cox**, Matson senior V.P. and CFO, will assume responsibility for Matson's investment in Sea Star Lines and will join the board of managers of two operating joint ventures.

Munoz to Head Fleet Ops at ACBL

Mario Munoz has been promoted to director of Fleet Operations for American Commercial Barge Line LLC. Munoz, whose responsibilities will include management of fleet operations,

fleet vessel contractors and land leases, is a graduate of the University of South Alabama and is currently pursuing an MBA from Bellarmine University in Louisville, Ky.

RCCL Appoints Danis as V.P.

Royal Caribbean Cruises Ltd. appointed **Jeff Danis** as the cruise line's new vice president of Supply Chain Management. Danis will be responsible for overseeing worldwide procurement, inventory management, distribution, warehousing, and shipping operations for both Royal Caribbean International and Celebrity Cruises.

Stolt-Nielsen Appoints Interim CEO



Hurlock

Stolt-Nielsen S.A. (SNSA) has appointed **James B. Hurlock** as Interim CEO of its Transportation Group, effective immediately. Hurlock, who currently serves as a Director of Stolt Offshore S.A., succeeds **Reginald J. R. Lee**, who will serve as an advisor to the company until his planned retirement at the end of 2003.

Tom Crowley Jr. Receives Honorary Degree From the USMMA



Crowley

Tom Crowley Jr., Chairman, President and CEO of Crowley Maritime Corporation, received an honorary doctorate degree from the U.S. Merchant Marine Academy at Kings

Point, NY, at the Academy's commencement exercises on June 23, 2003.

O'Neill to Head Ingram Vessel Ops

Inland Marine transportation company Ingram Marine Group has appointed **David O'Neill** as Vice President of Operations for its Ingram Barge Company.



O'Neill

Anil Raj Leaves VT Halter

Anil Raj has resigned as president and COO of VT Halter Marine. According to **Boyd King**, the company's CEO, Raj has parted company with the firm to pursue other opportunities.

New CEO at Sonsub

Sonsub confirms that **Massimo "Max" Ferraris** has been elected as CEO of Sonsub Inc. as well as Saipem's Manager of the Subsea Robotics Business line. He has corporate responsibility for all of the Sonsub group activities, coordinating and directing the regional areas around the world. Ferraris has also been confirmed to the position of Area Manager- North Atlantic for Saipem.

MTC Appoints New San Diego Manager

Marine Terminals Corporation (MTC), West Coast contract stevedore and terminal operating company, has promoted **Steve Nixon** to the position of site manager for San Diego.



Nixon

Roessland Sets out Life Saving Priorities

Ove Roessland, managing director of lifeboat and davit specialist Schat-Harding, has been elected as chairman of ILAMA, the International Lifesaving Appliance Manufacturers' Association. Roessland, who outlined his priorities and missions following the election at the ILAMA AGM in Gothenburg this past June, stated his concerns and wishes for his upcoming tenure: "There are too many accidents occurring because critical parts of life saving appliances, such as the life boat hooks, are either not serviced or are serviced by untrained and unqualified people. We intend to put the technical strength of ILAMA to work at IMO to ensure that there is a clear and safe international regime for the inspection and maintenance of life saving appliances. There is a very good regime in place for liferafts, and we want to get that extended to cover boats and davits."

Hanby Appointed President, COO at McDonough

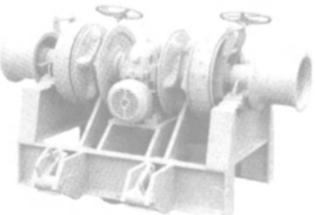
David C. Hanby Jr. has been appointed as president and COO of McDonough Marine Service. McDonough, a 26-year veteran of McDonough, serves on the Board of Directors of the American Waterways Operators and is Chairman of the Southern Region.

GAC Names Godfrey Group Sales Director

GAC has appointed **Neil Godfrey** as its group sales director for the Shipping Division, effective September 1, 2003. Based in London, Godfrey will report to **Lars Peter Heisselberg**, Group V.P. - Shipping Division in Jebel Ali, Dubai. **Darren Martin**, GAC's U.K. marketing manager will assume Godfrey's responsibilities.



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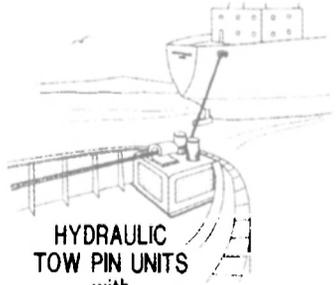


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Ferlship is a strategic consultancy highly specialized in market researches guided to the shipping industry. For additional information, please contact Ferlship @: Pza. Sta. M^o Soledad Torres Acosta, 2. 2^o C, 28004 Madrid, Spain, Tel. : +34 91 531 01 78 , 689 01 45 66; Fax: +34 91 531 01 78' e-mail: ferlship@iies.es (Prices are in U.S. Dollars) (NOTE: Contracts are for June and July 2003)

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UNKNOWN	GUANGZHOU WENCHONG	BULK CARRIER	2	27,000	04	PREMICON	HOWALDTSWERKE DEUTSCHE WERFT	PASSENGER	1	05	
UKRRICHELLOT JOINT STOCK S.C.	DAMEN OKEAN	BULK CARRIER	4	6,300	05	26	SAMSUNG	PASSENGER / VEHICLE/FERRY	2	05	440
TRANSMED SHIPPING	BOHAI SHIPYARD	BULK CARRIER	2	174,000	05	71	KOUAN	PASSENGER / VEHICLE/FERRY	1	03	
TORVALD KLAVENESS	OSHIMA SHIPBUILDING	BULK CARRIER	2	75,000	05		INCAT AUSTRALIA	PASSENGER / VEHICLE/FERRY	1	04	
SPAR SHIPPING	CHENGXI SHIPYARD	BULK CARRIER	3	53,000	04/05	57	INCAT AUSTRALIA	PASSENGER / VEHICLE/FERRY	1	04	
SANKO KISEN	IMABARI SHIPBUILDING	BULK CARRIER	1	178,000	06		PASHA HAWAII TRANSPORT LINES	PCTC	1	13,000	04
SANKO KISEN	IMABARI SHIPBUILDING	BULK CARRIER	1	75,000	06		K LINE	PCTC	3	15,100	05/06
SANKO KISEN	SANDYAS CORP	BULK CARRIER	1	75,000	06		SEACOR MARINE	PLATFORM SUPPLY VESSEL	1	03	
SANKO	KAWASAKI H.I.	BULK CARRIER	1	50,326	04		SEABULK INTERNATIONAL	PLATFORM SUPPLY VESSEL	1	03	16.70
SAFETY MANAGEMENT OVERSEAS	TSUNEISHI	BULK CARRIER	1	74,000	06	23	LAMNALCO	PLATFORM SUPPLY VESSEL	2	03	
PETER DOHLE SCHIFFAHRTS	JIANGNAN	BULK CARRIER	2	74,000	05	42	FARSTAD SHIPPING	PLATFORM SUPPLY VESSEL	1	03	
PACIFIC BASIN BULK SHIPPING	IMABARI SHIPBUILDING	BULK CARRIER	1	28,200	04		WESTERN PETROLEUM	PRODUCTS TANKER	3	53,000	06
ORION SCHIFFAHRTS	HAKODATE DOCK	BULK CARRIER	1	31,550	04		WAGENBORG SHIPPING BV	PRODUCTS TANKER	1	17,000	03
OKOCHI KAIUN	SANDYAS CORP	BULK CARRIER	1	75,500	05		WAGENBORG SHIPPING BV	PRODUCTS TANKER	1	17,000	03
NOMIKOS	ISHIKAWAJIMA HARIMA H.I. (HHI)	BULK CARRIER	3	53,000	04	57	TRANSJETROL	PRODUCTS TANKER	1	45,800	06
KOTOBUKI KAIUN	SANDYAS CORP	BULK CARRIER	1	75,500	05		SUN ENTERPRISES	PRODUCTS TANKER	1	72,910	05
KOBE SHIPPING	OSHIMA SHIPBUILDING	BULK CARRIER	1	52,500	03		SOVCOMFLOT	PRODUCTS TANKER	4	47,000	04/05
KC MARITIME	HUDONG SHIPYARD	BULK CARRIER	2	74,000	05	42	PIETRO BARBARO	PRODUCTS TANKER	2	51,000	05
K LINE	IMABARI SHIPBUILDING	BULK CARRIER	4	76,000	05/06	84	PERTAMINA	PRODUCTS TANKER	1	30,000	05
JJ UGLAND	TSUNEISHI	BULK CARRIER	1	52,000	05	20	PERTAMINA	PRODUCTS TANKER	2	17,500	05
JAPANESE INTERESTS	KAWASAKI H.I.	BULK CARRIER	4	50,300	04/05		PARADISE NAVIGATION	PRODUCTS TANKER	2	72,000	05/06
JAPANESE INTERESTS	SHIN KURUSHIMA	BULK CARRIER	1	32,500	05		OMI CORPORATION	PRODUCTS TANKER	1	37,000	04
ROICDS	HUDONG SHIPYARD	BULK CARRIER	2	74,500	06		OCEAN TANKERS PTE.	PRODUCTS TANKER	2	49,700	06
INUI STEAMSHIP	SHIKOKU DOCKYARD	BULK CARRIER	2	28,800	05		IMC SHIPPING	PRODUCTS TANKER	2	44,500	05
GLEAMRAY MARITIME	HUDONG SHIPYARD	BULK CARRIER	1	74,000	05	21	O ALESIO	PRODUCTS TANKER	2	34,600	05
EGON OLDEHOFF	NEW CENTURY	BULK CARRIER	1	53,000	06		COGEMA	PRODUCTS TANKER	2	45,800	06
EPFLOA SHIPPING	JIANGNAN	BULK CARRIER	1	75,000	05	22.50	BERNHARD SCHULTE	PRODUCTS TANKER	2	35,000	05
COSCO	SASERO	BULK CARRIER	2	76,300	04		B-H GROUP	PRODUCTS TANKER	2	72,650	06
COSCO	SHANGHAI WAIGAOQIAO	BULK CARRIER	2	175,000	05	36	ATHENIAN SEA CARRIERS	PRODUCTS TANKER	2	46,000	05/06
COSCO	HUDONG SHIPYARD	BULK CARRIER	2	74,500	05/06	41	ATHENIAN SEA CARRIERS	PRODUCTS TANKER	2	37,000	05
COSCO	JIANGNAN	BULK CARRIER	2	74,500	05/06	42	A. P. MOLLER	PRODUCTS TANKER	1	110,000	06
CLIPPER GROUP	SHANHAIGUAN	BULK CARRIER	3	30,000	04/05		GUANGZHOU	PRODUCTS TANKER	2	35,000	05
CHINA MARITIME TRANSPORT	SHANGHAI WAIGAOQIAO	BULK CARRIER	1	176,000	05	35	MITSUBISHI H.I.	RO-RO	2	8,000	04
CHELLARAM SHIPPING	SHANGHAI WAIGAOQIAO	BULK CARRIER	2	56,000	05		FLENSBURGER	RO-RO	2	16,000	05
ROCKSTIEGEL REEDEREI	JIANGDONG CHANGJIANG	BULK CARRIER	2	12,850	04	20	BENDER SB	SUPPORT VESSEL	1	03	
ROCKSTIEGEL REEDEREI	JIANGZHOU	BULK CARRIER	2	12,850	04		SAMSUNG	TANKER	2	104,500	05/06
ANANGEL SHIP. ENT.	DAEWOO	BULK CARRIER	1	170,000	05		SHIPPING CORP OF INDIA (SCI)	TANKER	2	300,000	04/05
AKTIF DENIZLIK	ZHEJIANG	BULK CARRIER	2	52,000	05		SHINWA KAIUN KAISHA	TANKER	1	300,000	05
HK SHIPMANAGEMENT	HAKATA ZOSEN	BULK CARRIER / CEMENT CARRIER	1	6,500	03		SHINWA / NYK	TANKER	1	300,000	06
SHIH WEI NAVIGATION	SHIKOKU DOCKYARD	BULK CARRIER / ORE CARRIER	1	28,800	05		YILDIRM GEMİ	TANKER	1	3,500	04
KIJIAI SENPAKU	NAMURA ZOSENSHO	BULK CARRIER / ORE CARRIER	1	177,300	04		MITSUI O.S.K. LINES (MOL)	TANKER	2	300,000	04/05
KIJIAI SENPAKU	XIAMEN	BULK CARRIER / ORE CARRIER	1	177,300	04		MITSUI O.S.K. LINES (MOL)	TANKER	2	300,000	04/05
EMPOS SHIPPING	IWAGI	BULK CARRIER / ORE CARRIER	1	53,000	04		MITSUI O.S.K. LINES (MOL)	TANKER	2	300,000	04/05
EFNAV	STX (DAEONG)	BULK CARRIER / ORE CARRIER	1	75,500	05	22.75	MITSUI	TANKER	2	105,000	05
NORDEN AS	MITSUI	BULK CARRIER ORE CARRIER	1	56,000	04		DAEWOO	TANKER	1	300,000	06
JAPANESE INTERESTS	NAMURA ZOSENSHO	BULK CARRIER ORE CARRIER	4	176,000	05		HITACHI MUKAI	TANKER	1	1,250	03
JAPANESE INTERESTS	TSUNEISHI	BULK CARRIER ORE CARRIER	1	52,200	05		SHANGHAI WAIGAOQIAO	TANKER	2	105,000	06
JAPANESE INTERESTS	KANDA SHIPBUILDING CO.	BULK CARRIER ORE CARRIER	6	32,600	04/05		SAMHO NEW SHIPYARD	TANKER	1	159,000	05
CIDO SHIPPING	SASERO	BULK CARRIER ORE CARRIER	3	76,600	04	66	GOLDEN ENERGY MANAGEMENT	TANKER	2	160,000	06
WONSILD	INP HEAVY INDUSTRIES	CHEMICAL TANKER	2	6,300	04/05						
VELA INTERNATIONAL MARINE LTD	DAEWOO	CHEMICAL TANKER	2	50,000	05	37					
UNICORN LINES	SHIN A SHIPBUILDING	CHEMICAL TANKER	1	37,000	05	26					
TURKISH INTERESTS	CELIKTEKNE	CHEMICAL TANKER	1	5,500	04						
SWEDISH INTERESTS	CELIKTEKNE	CHEMICAL TANKER	2	13,500	05						
STOCK TANKERS	CEKSAN	CHEMICAL TANKER	2	4,500	04/05	18					
STOCK TANKERS	CEKSAN	CHEMICAL TANKER	2	4,500	04/05						
SHIN TAE	INP HEAVY INDUSTRIES	CHEMICAL TANKER	4	8,500	05/06	76					
SCHODLER	INP HEAVY INDUSTRIES	CHEMICAL TANKER	2	8,500	05	38					
PETROSHIPS	KYOKUYO ZOSEN	CHEMICAL TANKER	1	16,500	04						
NANJING CHANGJIANG	DALIAN SHIPYARD	CHEMICAL TANKER	2	75,000	05						
MT MARINE MANGAMT	KITANIHON	CHEMICAL TANKER	1	32,000	04						
MT MARINE MANGAMT	KITANIHON	CHEMICAL TANKER	1	19,500	04						
MORFINI SRL	SHIN A SHIPBUILDING	CHEMICAL TANKER	2	40,000	05/06	56					
JAPANESE INTERESTS	SHIN KURUSHIMA	CHEMICAL TANKER	1	19,500	04						
JAPANESE INTERESTS	SHIN KURUSHIMA	CHEMICAL TANKER	1	19,000	04						
HANSEATIC	QINGSHAN SHIPYARD	CHEMICAL TANKER	4	18,500	05/06	104					
FULLSHIP SRL	SHIN A SHIPBUILDING	CHEMICAL TANKER	2	40,000	05/06	56					
D'AMATO DI NAVEGAZIONE	SHIN A SHIPBUILDING	CHEMICAL TANKER	2	40,000	05/06	56					
DALMARE	HYUNDAI MIPO	CHEMICAL TANKER	1	35,000	06	29					
CLIPPER GROUP	YARDIMCI	CHEMICAL TANKER	1	10,040	04						
BALTIC SHIPPING	YBORG SB	CHEMICAL TANKER	5	6,000	04/05	65					
BAKRI	HYUNDAI MIPO	CHEMICAL TANKER	2	47,000	06	60					
AMORETTI ARMATORI GROUP	FACTORSIA VULCANO	CHEMICAL TANKER	1	21,350	04						
ZEPPENFELD HORST	JIANGSU YANGZIJANG	CONTAINER	2		05	36					
ZEPPENFELD HORST	YANGZIJANG SHIPYARD	CONTAINER	2		05/06	36					
YANG MING MARINE CORP	CHINA SHIPBUILDING CORP.	CONTAINER	2		05	38					
UNKNOWN	WATANABE	CONTAINER	2		05						
UNKNOWN	STX (DAEONG)	CONTAINER	6		06						
SUISSE-ATLANTIQUE	HYUNDAI MIPO	CONTAINER	4		06						
SITC MARINE	KYOKUYO ZOSEN	CONTAINER	2		04						
SIMATECH	PEENE WERFT	CONTAINER	4		04/05	43					
SCHULTE GROUP	GUANGZHOU WENCHONG	CONTAINER	2		05	43					
SCHEPERS ELSFLETH	VOLKSWERFT STRALSUND	CONTAINER	2		04						
RCL	MITSUBISHI H.I.	CONTAINER	2	31,300	05	60					
PETER DOHLE SCHIFFAHRTS	HYUNDAI HEAVY INDUSTRIES (HHI)	CONTAINER	2		05/06	86					
PETER DOHLE SCHIFFAHRTS	SAMHO NEW SHIPYARD	CONTAINER	2		05	86					
PAN CONTINENTAL	DAE SUN	CONTAINER	1		04	116					
OLTMANN VERWALTUNG	VOLKSWERFT STRALSUND	CONTAINER	1		05	90					
NORSE	GUANGZHOU WENCHONG	CONTAINER	1		05	43					
NORDEUTSCHE VERMOGEN	DAEWOO	CONTAINER	3		05	144					
K LINE	HYUNDAI HEAVY INDUSTRIES (HHI)	CONTAINER	4		05	144					
JR SHIPPING	YOLHARDING	CONTAINER	4		04	50					
JORG KOPPING	DAMEN GALATZ	CONTAINER	1		04	17.80					
HERMAN BUSS AG	ZHOUSHAN	CONTAINER	6	12,500	05/06	90					
HARTMANN SCHIFFAHRTS	AKER MTH WERFT	CONTAINER	3		04	116					
HAFAG LLOYD	HYUNDAI HEAVY INDUSTRIES (HHI)	CONTAINER	3		05/06	222					
EVERGREEN	SAMSUNG	CONTAINER	8		05/06	550					
EF SHIPPING	STX (DAEONG)	CONTAINER	2		06	62					
DAL DEUTSCHE AFRIKA LINE	ODENSE STEEL	CONTAINER	1		05						
CSAV	SZCZECIN SHIPYARD	CONTAINER	4		04/05	160					
COSCO	IMABARI SHIPBUILDING	CONTAINER	3		04	162					
CONTI REEDEREI	HYUNDAI HEAVY INDUSTRIES (HHI)	CONTAINER	2	7,800	05/06						
CONTI REEDEREI	HYUNDAI HEAVY INDUSTRIES (HHI)	CONTAINER	2		05						
CONTI REEDEREI	SAMSUNG	CONTAINER	3		06						
CLAUS-PETER OFFEN	HYUNDAI HEAVY INDUSTRIES (HHI)	CONTAINER	1		05	51					
CLAUS-PETER OFFEN	SAMHO NEW SHIPYARD	CONTAINER	1		05/06						
CHINA SHIPPING GROUP (CSG)	HUDONG SHIPYARD	CONTAINER	3		04/05	159					
BELUGA SHIPPING	VOLHARDING	CONTAINER	4		04/05	66					
BELUGA SHIPPING	VOLHARDING	CONTAINER	1		04						
AHRENKIEL	HYUNDAI MIPO	CONTAINER	2		05						
A. P. MOLLER	ODENSE	CONTAINER	1		05						
ROYAL CARIBBEAN CRUISES	KVAERNER MASA-YARDS INC	CRUISE SHIP	2		06/07						
PRINCESS CRUISES INC	FINCANTIERI	CRUISE SHIP	1		06	500					
YANTAI GOLDEN OCEAN	LINGNAN	GENERAL CARGO	1	2,600	03						

Nippon Paint, International to Separate Marine Operations

Nippon Paint Co., Ltd (NP) and International Coatings Ltd (IC), part of Akzo Nobel, have mutually agreed to terminate their association in marine coatings from the end of October 2004.

During this association the parties have licensed their marine coating technologies to each other and have co-oper-

ated in the provision of support and services to customers. This has meant NP's customers have been supported by IC outside Japan while IC's customers have been supported by NP in Japan with marine coatings and services for newbuilding and maintenance contracts. The parties will continue to service customers under their existing arrangements until the end of October 2004.

Transferred technology will remain available to both NP and IC after the ending of the association. The parties are agreed that given geographic changes in the marine industry over the last decade and their desire to expand their individual marine coatings operations they will each operate independently as from November 2004. Thus NP plans to use its own overseas infrastruc-

ture to serve Japanese and overseas customers and owners building and maintaining vessels throughout the world, while IC plans to extend its global network by developing its infrastructure in Japan to serve Japanese and overseas customers and owners building and maintaining vessels in Japan.

Busch Awarded Crowley Trophy

Todd Busch, Director of Sales for Crowley's Ship Assist and Escort Services business unit, was awarded the 2002 Thomas Crowley Trophy, Crowley Maritime Corporation's highest honor, at ceremonies held on July 17, 2003, in Anchorage, Alaska. Busch is widely credited with helping to secure several high-profile towing contracts, including those involving the historic battleships USS Missouri, USS New Jersey and USS Iowa, as well as the aircraft carrier USS Oriskany.

Forest Lines Names New Execs.

Trans-Atlantic ocean vessel operator Forest Lines has elected **James M. Baldwin, Jr.** as executive V.P. and named **Ronald M. Ackerman** assistant vice president, sales and marketing. Baldwin is a former chairman of the Board of Commissioners of the Port of New Orleans.

New Sales Manager at Transas

Transas has elected Henry Nel, as the sales manager for Shore-Based Systems in the U.S. In his position, Nel will be responsible for increasing the sales of Transas VTS and coastal surveillance systems in North America, providing support on AIS to all Transas offices around the world and giving input to the design team on AIS related products.

Murray New Delta T Sales Manager

Delta T Systems has appointed **Michael Murray** to the position of sales manager/engineer.



A licensed captain, Murray will be responsible for managing Delta T's sales activities and application engineering including custom requests from boat builders, project set-up, tech support and application design.

Telaorus Expands Tech Support Team

Telaorus Communications LLC has appointed **John Julian** to the newly created position of Project Development Manager and **Ewan Robinson** as Technical Sales Support Manager. Both Julian and Robinson join the company direct from Easylink Services (U.K.) Ltd. where they held similar positions.

Maritime Reporter & Engineering News

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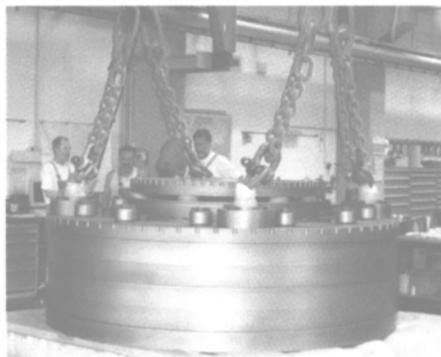
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Circle 255 on Reader Service Card

Geislinger Delivers Record Sized Coupling

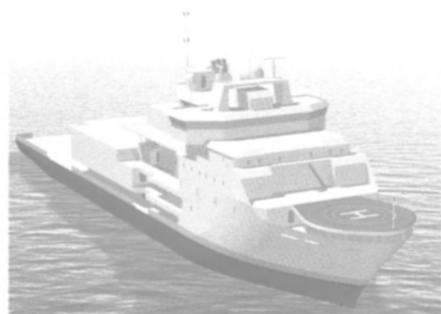


Geislinger GmbH recently delivered its biggest torsional elastic coupling — a coupling with an outer diameter of 2.8-m and a weight of 36.3 tons. The coupling will be built into the drive line of a VLCC tanker, with an energy saving counter-rotating double propeller. More than 2,000 single parts were produced in the Geislinger works in Bad St. Leonhard and assembled in the works in Salzburg. The coupling transmits half of the 27.160 KW engine power at 74 rpm and in this way protects the gear box, which changes the direction of rotation for the backwards running propeller. This causes the energy of the swirling water in the gushing of the propeller to be used and therefore the degree of effectiveness is increased by about 14 percent. About 10 years ago three ships with this innovative CRP system plus Geislinger coupling were supplied from the same shipyard. All these systems were produced in Japan the largest one is scheduled to be built.

In order to monitor the function of the world's largest coupling BE 280/60/140U Geislinger has delivered a highly modern electronic system called Geislinger Monitoring GMS Mark 4. This equipment is supplied with sensor signals and assists the ship owner, among other things, to save maintenance costs.

Circle 83 on Reader Service Card

Alstom Alspa Drive Fitted on Research Vessel



Alstom installed its latest generation ALSPA drives in a new research vessel, which is being built by Alstom Leroux Naval, in Lorient, France. The deep sea

research vessel, Pourquoi Pas, owned by Ifremer, will be the first ship to be fitted with the new ALSPA MV7000 converters as part of a contract for an electric propulsion system. The 344-ft. (105-m) vessel, which will operate at a service speed of 13.3 knots, is due to be delivered to Ifremer in Spring 2005. It will be used for both civil deep-sea oceanographic-going expeditions and hydrography missions.

The Pourquoi Pas will feature two shaftlines, driven by two 1,650 kW at 148 rpm induction motors, supplied by three-level medium voltage PWM Press-Pack IGBT ALSPA MV7000 converters. The ALSPA MV7000 has been specifically designed for marine applications. It is particularly suitable for induction motors up to 30MW at 6.6kV and offers a substantial reduction in underwater motor noise - particularly beneficial for research activities - which avoids the need for filters.

Circle 84 on Reader Service Card

New BEB's Fitted With Ultra Dynamics Waterjets



The U.S. Army Tank Automotive and Armaments Command (TACOM) placed a recent order with the U.S.

Coast Guard to renovate their fleet of Bridge Erection Boats for Army operational uses world-wide. The renovation included not only new Cummins engines powering UltraJet 305 waterjet units via ZF gearboxes, and upgraded electronics package, hydraulically operated haul-in system to lock and secure bridge sections and additional amenities such as cab heaters and seating.

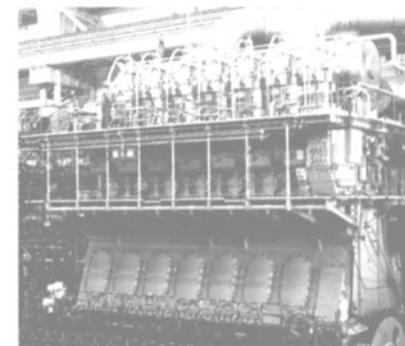
One of the key requirements of the jet's propulsion was the ability to provide a minimum of static boat thrust of 5,500 lbs. at an input power of 250 hp per jet. Therefore a twin Ultrajet 305 installation was tested for TACOM, using controlled static thrust tests that were conducted in which static thrusts of 2,865 lbs. per jet were recorded at an input power of 250 hp.

Circle 82 on Reader Service Card

NVA Orders MAN B&W Engines

German owner, NVA, has ordered 2 + 2 electronically controlled MAN B&W 12K98ME-C engines to power 8,400 TEU containerships. This concept, with its fully integrated electronic control, offers lower operating costs, improved emission characteristics and a high degree of flexibility related to various operating modes. Each engine, which will be built by HSD in Korea, will be able to power an 8,400 teu containership, which measure 1,099 x 140 ft. (335

Hudong Heavy Produces 7S80MC Engine



On July 11, 2003, Hudong Heavy Machinery Company in Shanghai, China, presented publicly, for the first time — their S80MC engine.

The order was placed in May 2002 by NACKS yard in Nantung, China, for two VLCCs being built for Chinese owner Sea Fortune.

Circle 81 on Reader Service Card

Specifications - 7S80MC Engine

Output	25,480 kW (34,650 bhp)
Engine speed	79 rpm
Length	Less than 13 m
Height	Approx. 15 m
Width	Approx. 5 m
Weight	Approx. 1,000 tons

x 42.8 m). The ships are to built at Daewoo in Korea with MAN B&W Holeby GenSets, type 7L32/40.

Circle 30 on Reader Service Card

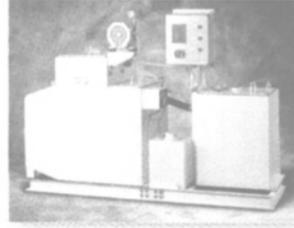
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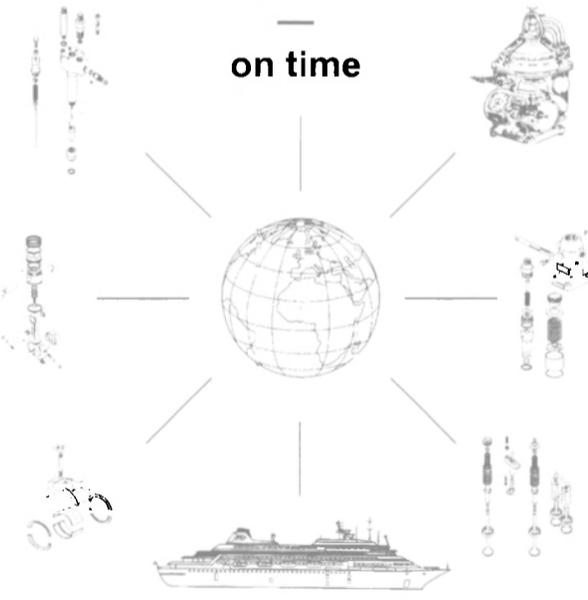
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Circle 247 on Reader Service Card

Products



CAS

Cambridge Applied Systems Inc. (CAS) has provided HFO Viscosity Control systems to the Marine and Power Industries since its formation in 1984. In May, CAS released its latest version of ViscoFuel 2000 software that offers new and enhanced features such as: self-cleaning operation; viscosity displayed in units of SSU as well as cSt and cP

Circle 101



Lubmarine

Diagomar Plus was developed by Lubmarine in cooperation with Intertek Testing Services (ITS) Caleb Brett, who are recognized by major ports as a leader in the inspection and testing of lube oils, fuels, petroleum products and chemicals.

Circle 102



DynaBrade

DynaBrade, Inc. has introduced a new line of air-powered Die Grinders. The straight-line tools are excellent for use in applications where heavy-duty metal removal and grinding is needed. The 1 HP Die Grinders are available in both standard and extension models. The extension models are ideal for applications where a longer reach is desired.

Circle 103



Gorgonz

The Gorgonz brand was created to pick up where the EarGrips brand left off. This new brand focuses on the home improvement, hardware, farm and fleet and uniform markets. Like EarGrips, the Gorgonz product line will provide the behind the head design ear warmer adding new styles and fabrics, gloves that are uniquely designed for warm and cold weather and a hat that keeps your head cool.

Circle 104



Holmatro

Holmatro Industrial Equipment is a Dutch manufacturer of industrial high-pressure hydraulic equipment with manufacturing plants in the Netherlands, U.S. and Poland. The Holmatro products consist of a wide range of lifting, bending, pulling, cutting and spreading equipment, hydraulic as well as mechanical and pneumatic equipment.

Circle 105



Kaeser

Kaeser's Omega-paK rotary lobe vacuum systems offer high-efficiency, heavy-duty construction and low noise levels at a very competitive price. Vacuum packages are available with full size enclosures or compact clamshell "Vac-paKs". These packages are perfect for dust collection and "blow off," with an industry-leading warranty.

Circle 106



NLB

Marine surface preparation is featured in N I B brochure. Hydroprep system uses ultra-high pressure water jetting to quickly remove old coatings, rust, barnacles, and more, leaving an excellent surface for recoating.

Circle 107



Saab

Saab has signed an agreement with Radio Holland Group for world wide distribution and service for the SOLAS class A transponders.

Saab TransponderTech markets its products for land based applications directly. Saab has decided to sponsor the Volvo Baltic race and Accenture Gotland Run.

Circle 108



Southco

Southco has introduced the newest addition to its popular M1 latch family: the flush-turn compression latch. This new latch is designed for outdoor marine applications, as well as any application requiring a sealed compression latch with a flush panel surface. The latch features the same styling and operation as the M1 latch

Circle 109



Vetus Den Ouden

Vetus Den Ouden has introduced its Bullflex Flexible Couplings. These couplings provide power delivery between a boat's engine and shaft, while reducing vibrations at all speeds. Their safety and mounting versatility are unequaled, too. Vetus Bullflex Flexible Couplings have been specially designed to soak up annoying vibrations.

Circle 110



Watercraft Management Systems

Jet Dock Watercraft Management Systems, are patented, modular, drive-on dry docking systems designed for fast docking, launching, repairing, and maintenance of all types of vessels. The drive-on docking systems and platform systems are used around the world for private, corporate, and military purposes.

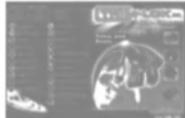
Circle 111



Cole Hersee

The Cole Hersee Company offers its newly patented, innovative Digital Signal Rocker (DSRocker) Switch for marine applications. The DSRocker is the first rocker switch designed to meet current electronic circuitry specifications. The DSRocker was issued a patent number by the US Patent and Trademark office.

Circle 112



Trim-Lok

Trim-Lok, Inc. has announced a new and improved website. Their redesigned website features an easy-to-navigate online catalog as well as a simple to use online quotation request. Visit our updated website to view the extensive products we offer along with the four NEW product lines Trim-Lok has just released.

Circle 113



Cass Polymers

Cass Polymers has announced the updated release of its two most popular catalogs: the Repair & Tooling Guide and the ADTECH Marine Systems Guide. A staple resource for anyone involved with coatings, adhesives, epoxies, urethanes or tooling planks, this issue is full of solutions to improve performance and reduce time-to-market.

Circle 114



UPC

UPC's Marine Guard Floating Monopile Donut Fenders provide a fendering system to meet various docking situations. Marine Guard Fenders are constructed with the same materials as the foam-filled fenders and buoys. Marine Guard fenders skin are composed of a thick protective polyurethane elastomeric skin material.

Circle 115



MMC

The MMC Oxygen-sensor tells you the exact depth of the sensor and percent oxygen in the inert gas in each tank. There's no mess or guesswork. The unit is battery operated, completely portable, with a built-in self-calibrating feature and is approved by BASEEFA as intrinsically safe. Just lock it on an MMC vapor control valve and lower the sensor to the correct ullage level.

Circle 116



McMurdo

McMurdo Transas MT-1 UAIS Transponder is designed to meet the SOLAS requirements for Universal Automatic Identification Systems. It features a touch-screen LCD minimum display and transmits the ship's data to other vessels as well as shore-based VTS systems. It utilizes VHF channels and is a ship-borne mobile station.

Circle 117



Lantec

Lantec has introduced the LH Series Hoist. Specifically designed for Offshore Cranes, this new hoist series includes more than 10 models to suit nearly any crane. Features include long-life gearing, improved high-capacity sprag clutch, stable and reliable brake valve, and footprints identical to competitive models for easy field replacement.

Circle 118



Gems

Gems Sensors introduced the all-new Detector line of Micropower Impulse Radar MIR liquid level sensors. Gems Detector MIR sensors, is an affordable radar liquid level sensors are now available in two series: MIR-800 Series sensors feature solid waveguide rods, while the MIR-900 Series sensors feature fully encapsulated, flexible rods.

Circle 119



Midwest

At Mid-West Instruments of Sterling Heights, Mich., "Custom in Standard." Mid-West's engineers work closely with their firms to customize gauges and switches to meet requirements for optimal installation and performance. To emphasize their confidence in production performance, Mid-West provides a 5-Year Warranty on all gauge and switch products.

Circle 120



Thermo Electron

Thermo Electron Corporation introduces the new TVA-1000B Data Manager. This product is designed to provide an orderly and concise method of monitoring and tracking Fugitive Emissions within a facility. The TVA-1000B Data Manager is a handheld keyboard and display unit that interfaces to the TVA-1000 through existing scanner port.

Circle 121



Wesmar

Wesmar's electronic system cycles at 1000 times per second delivering lightning speed reaction for exceptional performance. The electronic gyro sends information about roll velocity and acceleration directly to WESMAR's proportional valves, which react instantaneously to rotate the fins.

Circle 122



Anderol

Anderol's Biodegradable Synthetic based lubricants provide protection for hydraulic systems operating under extreme temperatures and pressure. Anderol manufactures an expanding and diverse line of synthetic lubricants manufactured to meet the requirements and applications of the industry.

Circle 123



Foamex

Plus Reflex polyurethane foam, a new, high-performance cushioning material for marine applications from Foamex International Inc., provides superior comfort and resiliency along with resistance to objectionable odors and the growth of mold and bacteria. It is protected against micro-biological growth with an FDA-approved anti-microbial agent added during the manufacturing process.

Circle 124



Defelsco

The PosiTector DPM measures and records climatic parameters including: air temperature, surface temperature, relative humidity, dew point temperature and the difference between surface and dew point temperatures. The PosiTector DPM's data logger now automatically records up to 1000 data sets at user selected time intervals, ideal for unattended operation to record climatic trends.

Circle 125

BUYER'S DIRECTORY

This directory section is an editorial feature published in every issue for the convenience of the readers of MARITIME REPORTER. A quick-reference readers' guide, it includes the names and addresses of the world's leading manufacturers and suppliers of all types of marine machinery, equipment, supplies and services. A listing is provided, at no cost for one year in all issues, only to companies with continuing advertising programs in this publication, whether an advertisement appears in every issue or not. Because it is an editorial service, unpaid and not part of the advertisers contract, MR assumes no responsibility for errors. If you are interested in having your company listed in this Buyer's Directory Section, contact Mike Lowe at Lowe@marinelink.com

AIR CONDITIONING & REFRIGERATION

Adrick Marine Corp., P.O. Box 1549, N.Massapequa, NY 11758, 631-491-9475, 631-491-9478, adrick1976@aol.com
Bailey Refrigeration, 4986-1 Euclid Road, Virginia Beach, VA 23462
Cospolich Refrigeration, 14695 Highway 61, Norco, LA 70079
Flagship Marine, Inc. 2427 SE Dixie Hwy, Stuart, FL 34996, 800-316-6426, 772-283-4611, sales@flagshipmarine.com. Contact: Tom Martland.
www.flagshipmarine.com

Port-A-Cool, PO Box 2108, Center, TX 75935
Stork Bronsverk Inc., 3755 C Boul. Matte, Brossard, Quebec J4Y 2P4, Canada
Taylor Made Environmental, P.O. Box 15299, Richmond, VA 23227

AIRHORNS/SIGNALING EQUIPMENT

Airchime Manufacturing Co., 5478 267th St., Gloucester Industrial Estate., Langley, BC V4W 3S8, Canada
Kahlenberg Brothers Co., P.O. Box 358, Two Rivers, WI 54241

ALARMS, FACTORY-MUTUAL APPROVED

NREC Power Systems, 5222 Hwy 311, Houma, LA 70360
Selco USA Inc., 2508 Lakebrook Ct, Atlanta, GA 30360-1715

ALUMINUM BOATS

Island Boats, 6806 Highway 90 East, New Iberia, LA 70560
Metal Craft Marine Inc., 347 Wellington St., Kingston, Ontario K7K 6N7, Canada
Sea Ark Marine, P.O. Box 210, Monticello, AR 71655-0210
William E. Munson Co., 18130 Sunset Way, Edmonds, WA 98026

ANCHORS & CHAINS

Edgewater Machine & Fabricators, 400 Megan Z Ave., EDGEWATER, FL 32132
GJ Wortelboer Jr. B.V., P.O. Box 5003, 3008 AA Rotterdam, Netherlands
Washington Chain & Supply, P.O. Box 3645, Seattle, WA 98124

ANTIFOULING

Flexdel Corp./Aquagard, 1969 Rutgers University Blvd., Lakewood, NJ 08701, 888-353-9335, 732-901-6504, flexabar@sprintmail.com. Contact: Joe. Andy. or Rick.
www.aquagard-boatpaint.com
Jotun Paints USA, 9203 Highway 23, Belle Chasse, LA 70037

AUTOPILOT SYSTEMS

Beier Radio, 1990 Industrial Ave, Harvey, LA 70058
ComNav Marine Ltd., 13511 Crestwood Pl., Ste 15 15, Richmond, BC V6V 2G1, Canada
Mackay Communications, 2721 Discovery Dr., Raleigh, NC 27616-1851

BALLAST

Ballast Technologies, 4620 S. Coach Dr., Tuscan, AZ 85714
Redland Genstar Inc., Executive Plaza IV, Hunt Valley, MD 10912-1031

BEARING- RUBBER, METALLIC, NON METALLIC

Cooper Bearing, 5795 Thurston Ave., Virginia Beach, VA 23455
Craft Bearing, 5000 Chestnut Ave., Newport News, VA 23605
Duramax Marine LLC, 17990 Great Lakes Parkway, Hiram, OH 44234
Orkot Composites, 2535 Prairie Rd. Unit D., Eugene, OR 97402, 541-688-5529, 541-688-2079, msscott@polymerssealing.com. Contact: Mike Scott.
www.orkotmarine.us
Thordon Bearings Inc., 3225 Mainway, Burlington, Ontario L7M 1A6, Canada

BILGE SYSTEMS

Fast Systems, 14040 Santa Fe Drive, Lenexa, KS 66215-1284
Westfalia Separator, Inc., 100 Fairway Court, Northvale, NJ 07647, (201) 767-3900, (201) 784-4399, brown.courtney@wsus.com. Contact: Courtney Brown

BLOCKS & RIGGING

Skookum, P.O. Box 280, Hubbard, OR 97032

BOATBUILDER

Sea Ark Marine, P.O. Box 210, Monticello, AR 71655-0210
Washburn Doughty, P.O. Box 296, E. Boothbay, ME 04544

BOLLARDS

Maritime International, 100 E. Vermilion St. #212, Lafayette, LA 70501

BRIDGE SUNSCREENS

Martek Marine Blinds, Unit 46, Century Business Centre, Maversway, Rotherham, South Yorkshire S63 5DA, UK

BROKERS

Marcon International, P.O. Box 1170, Coupeville, WA 98239

BULKHEAD SEALS/PANELS

CSD North America, 880 Candia Rd., Unit 10, Manchester, NH 03109
Thermax, 3115 Range Rd, Temple, TX 76501

BUOYS

Datrex, P.O. Box 1150, Kinder, LA 70648

CAD/CAM SYSTEMS

Albacore Research, 4196 Kashtan Place, Victoria, BC V8X 4L7, Canada
Autoshop Systems Corp., Suite 312-611 Alexander Street, Vancouver, BC V6A 1E1, Canada
Cadmaic, Ostra Strandgatan 72 (Vita Huset), FI-20810 Turku, Finland
Creative Systems Inc., P.O. Box 1910, Port Townsend, WA 98368

CAPSTANS

Superior Lidgerwood Mundy, 1101 John Ave., Superior, WI 54880

CARGO MONITORING & CONTROL SYSTEM

Hermatic Inc., 4522 Center St., Deerpark, TX 77536

CAST IRON REPAIR

In-Place Machining, 1929 N. Buffum St, Milwaukee, WI 53212

CHAINS

Crandal Drydock Engineers, PO Box 505804, Chelsea, MA 02150
G.J. Wortelboer, Postbus 5003, 3008 AA Rotterdam, Netherlands
Washington Chain & Supply, P.O. Box 3645, Seattle, WA 98124

CHEMICALS/CHEMICAL CLEANERS

Uniservice Americas, 57174 Hardin Rd., Sildell, LA 70461

CLASSIFICATION SOCIETY

American Bureau of Shipping, 16855 N. Chase Drive, Houston, TX 77060

CLOSED CIRCUIT TELEVISION

Hernis Scan Systems A/S, Postboks 619, NO -4809 Arendal, Norway

CNC PLATE CUTTING

Advanced Fabricating Inc. PO Box 3721, Gaiveston, TX 77552

COATINGS/CORROSION CONTROL/PAINT

Chugoku Marine Paints, P.O. Box 73, 4793, Netherlands
DeFelsko Corp. 802 Proctor Ave., P.O. Box 676, Ogdensburg, NY 13699
Ferro Corp., 1301 North Flora St., Plymouth, IN 46563
Flow International Corp., 23500 64th Ave., South Kent, WA 98059

Hempel Coatings, 10-3511 Viking Way, Richmond, BC V6V 1W1, Canada

Jotun Paints USA, 9203 Highway 23, Belle Chasse, LA 70037

Nace International, 140 South Creek Dr., Houston, TX 77084
Resto Motive Laboratories, P.O. Box 1335, Morristown, NJ 07962-1235
Sherwin Williams, 101 Prospect Ave., Cleveland, OH 44115
Sigma USA, P.O. Box 816, Harvey, LA 70059

COMMUNICATIONS

Inmarsat Ltd, 99 City Rd., London EUY 1AX, UK
L-3 Communications, 6000 Fruitville Road, Sarasota, FL 34232
Mackay Communications, 2721 Discovery Dr., Raleigh, NC 27616-1851

Seawave, 76 Hammarlund Way, Middletown, RI 02842
World-Link Communications, 74 Main St., Framingham, MA 01701

COMMUNICATIONS SERVICE

Maritel Marine Communications, 16 E. 41st Street, NY, NY 10017

COMPOUNDS

Philadelphia Resins, P.O. Box 309, Montgomeryville, PA 18936

COMPUTER SOFTWARE MONITORING SYSTEMS

Azonix Corp., 900 Middlesex Turnpike, Bldg 6, Billerica, MA 01821, (978) 670-670-6300, (978) 670-8855, ProPanel-Mariner@azonix.com

COMPUTER/ COMPUTER SOFTWARE

Autoshop Systems Corp., Suite 312-611 Alexander Street, Vancouver, BC V6A 1E1, Canada
Creative Systems Inc., P.O. Box 1910, Port Townsend, WA 98368
Spec Tec, Professor Kuhl's Vey, 1366 Lysaker, Norway

CONSOLE- GMDSS

Mackay Communications, 2721 Discovery Dr., Raleigh, NC 27616-1851

CONSULTANTS

Captain R.J. Underhill & Associates, P.O. Box 1030, Groves, TX 77619
Elliott Bay Design Group, 5301 Shishole Ave. NW, Ste. 200, Seattle, WA 98107
Hornblower Marine Services, P.O. Box 112476, Campbell, CA 95011-2476

CONTROL SYSTEM- MONITORING/STEERING

Beier Radio, 1990 Industrial Ave, Harvey, LA 70058
Electronic Marine Systems, 800 Ferndale Pl., Rahway, NJ 07065
Electrowave U.S.A., 6125 W. Sam Houston Pkwy., Ste 406, Houston, TX 77041

G.R. Bowler, 2261 Lake Rd., Ontario, NY 14519
Governor Control Systems, 3190 S.W. 4th Ave., Ft. Lauderdale, FL 33315
Kobelt Manufacturing Co. Ltd., 8238-129 Street, Surrey, BC V3W0A6, Canada

L-3 Communications Westwood Corp./Tano Div., 5700 Citrus Blvd, Ste E, New Orleans, LA 70123, 504-733-4777/1-800-229-TANO, 504-734-2127, guy.hardwick@l-3com.com

MMC International, 60 Inip Dr., Inwood, NY 11096
Prime Mover Controls, 3600 Gimore Way, Burnaby, BC V5G 4R8, Canada
Tano Corp., 57017 Citrus Blvd., Ste. E. New Orleans, LA 70123

CORROSION CONTROL

Furuno USA Inc., 4400 NW Pacific Rim Blvd, Camas, WA 98607
Gardner Denver Water Jetting Systems, 8807 Emmett Rd., Ste 100, Houston, TX 77040
Ultra Strip, 3515 SE Lonel Terrace, Stuart, FL 34996

COUPLERS- TUQ & BARGE
Intercontinental Engineering, PO Box 9055, Kansas City, MO 64168

COUPLINGS

American Vulkan, 2525 Dundee Rd, Winter Haven, FL 33884
Centa Corp., 815 Black Hawk Drive, Westmont, IL 60559
Interexpo Ltd Couplings In Stock, Plateia Theatrou 4, Athens 105 52, Greece. +30 210 3245666, +30 210 3248666, +30 210 3249666, interexpo@interexpo-ltd.gr. Contact: Marie Helene Charon. www.coupling.gr

Mapeco Products, 91 Willenbrock Rd., Unit B, Oxford, CT 06478
MMC International, 60 Inip Dr., Inwood, NY 11096

CRANE - HOIST - DERRICK - WHIRLEYS
Bisso Marine Co., P.O. Box 4113, New Orleans, LA 70178
E. Crane, 241 Executive Dr., #3, Maron, OH 43302
Edgewater Machine & Fabricators, 400 Megan Z Ave., EDGEWATER, FL 32132
Holly Hoist Corp., P.O. Box 86, St. Clair Shores, MI 48080

CRANKSHAFT GRINDING

Goltens Marine, 160 Van Brunt St., Brooklyn, NY 11231

CRANKSHAFT REPAIR

Goltens Marine, 160 Van Brunt St., Brooklyn, NY 11231
In-Place Machining, 1929 N. Buffum St, Milwaukee, WI 53212
Waltz & Krezner, 91 Willenbrock Rd., Oxford, CT 06478

CUTTING & WELDING MACHINES
Bug-O-Systems, 3001 W. Carson St., Pittsburgh, PA 15204
ESAB Cutting Systems, 411 South Ebenezer Road, Florence, SC 29501

DECK MACHINERY- CARGO HANDLING EQUIPMENT
Coastal Marine Equipment, Bldg 9114 MISAAP Ind. Complex, Stennis Space Center, MS 39529
Edgewater Machine & Fabricators, 400 Megan Z Ave., EDGEWATER, FL 32132
Intercontinental Engineering, PO Box 9055, Kansas City, MO 64168
Markey Machinery, P.O. Box 24788, Seattle, WA 98124
Rapp Hydema, 4433 27th Ave. West, Seattle, WA 98199
Smith Berger Marine, 7915 10th Ave. S., Seattle, WA 98108
Superior Lidgerwood Mundy, 1101 John Ave., Superior, WI 54880
W.W. Patterson, 3 Riversea Road, Pittsburgh, PA 15223

DESALINATION - REVERSE OSMOSIS
G.E.T. Inc., 3135 Golden Ave., Long Beach, CA 90806
Reverse Osmosis of South Florida, Inc., 150 S.E. 29th St., Fort Lauderdale, FL 33316

DIESEL CYLINDER INDICATORS
Kiene Diesel, 325 S. Fairbanks St., Addison, IL 60101

DIESEL ENGINE OVERHAUL
Detroit Diesel Corporation, 13400 Outer Drive West, Detroit, MI 48329-4001
Goltens Marine, 160 Van Brunt St., Brooklyn, NY 11231
Governor Control Systems, 3190 S.W. 4th Ave., Ft. Lauderdale, FL 33315

DIESEL ENGINE- SPARE PARTS & REPAIR
Caterpillar, Inc., P.O. Box 610, Mossville, IL 61552-0610
Chris Marine AB, Box 9025, 200 39 Malmo, Sweden
Cummins Marine, 4500 Leeds Ave., Ste 301, Charleston, SC 29405
GE Marine Engines, 1 Neuman Way, Cincinnati, OH 45215

Giro Engineering Limited, Talsman, Duncan Road, Park Gate, Southampton, Hants SO31 7GA, UK
Goltens Marine, 160 Van Brunt St., Brooklyn, NY 11231
Man B&W Diesel, 17 State St., NY, NY 10004
Man B&W Diesel A/S, Teigholmsgade 41, Copenhagen SV DK- 2450, Denmark
Man B&W Diesel AG, Stadtbachstrasse 1, Augsburg D-86153, Germany
Marine Exhaust Systems of Alabama, P.O. Box 698, 757 Nichols Ave., Fairhope, AL 36533
Marine Turbo Diesel Inc., 1090 7th St., Richmond, CA 94801
Mariso USA, Inc., 100 Davidson Ave., Somerset, NJ 08873
Motor Services AB, Box 2115, Ronninge S- 144 04, Sweden
Motor-Services Hugo Stamp, 3190 S.W. 4th Ave., Ft. Lauderdale, FL 33315

NREC Power Systems, 5222 Hwy 311, Houma, LA 70360, 985-872-5480, 985-872-0611
Reagan Equipment, 2550 BelleChase Hwy, Gretna, LA 70054
Scardana Americas Bkg., 502 Empire St., Greenfield Park J4V 1V7, Canada
Wartsila Diesel, 201 Defense Hwy, Annapolis, MD 21401

DIESEL FUEL DECONTAMINATION
Algae X International, P.O. Box 4011, Fort Myers Beach, FL 33932

DIGITAL TORQUE METER SYSTEMS
Instruments, Computers & Controls, 78 Londonderry Tpke, Hookset, NH 03106

DISPLAY TECHNOLOGY
Kent Modular Electronics Ltd., 611 Maidstone Road, Rochester, Kent, UK

DIVING & SALVAGE
Bisso Marine Co., P.O. Box 4113, New Orleans, LA 70178

DOCK FENDERING SYSTEMS
Plastic Pilings Inc., 1485 South Willow Ave., Rialto, CA 92376

DOCUMENTATION/DATABASES
Zaetric Business Solutions, LLC, 24800 I-45 North, Suite 324, Houston, TX 77386, 713-824-1654, 713-621-4885, inquiries@zaetric.com, Contact: David Woody, www.zaetric.com

DOOR LOCKS
The Brass Works Inc., P.O. BOX 566, DeLand, FL 32721, 386-943-8857, 386-943-8810, info@marinedoorandcabinethardware.com

DOORS- DOORING & INDUSTRIAL
Juniper International, 72-15 Metropolitan Ave., Middle Village, NY 11379
Manly Marine, P.O. Box 86788, N. Vancouver, BC V7L 4L3, Canada
Mapeco Products, 91 Willenbrock Rd., Unit B, Oxford, CT 06478
Waltz & Krezner, 91 Willenbrock Rd., Oxford, CT 06478

DRIVES
Allied Systems, 2300 Oregon St., Sherwood, OR

DRIVESHAFTS
The Cline Company, 600 Buncombe St., Greenville, SC 29602

DRUG TEST KITS
Sun State Specialty K-9s, 1500 Beville Road, Daytona Beach, FL 32114

DRY DOCKS- DESIGN
Crandal Drydock Engineers, PO Box 505804, Chelsea, MA 02150

ELECTRICAL EQUIPMENT
MMC International, 60 Inip Dr., Inwood, NY 11096

ELECTRONIC CHARTS
C-Map Commercial, 133 Falmouth Rd, Mashpee, MA 02649
Navionics, 6 Thatcher Lane, Wareham, MA 02571, 800-848-5896/508-291-6000, 508-291-6006, sales@navionics.com

EMERGENCY DISTRESS SIGNAL
Greatland Laser, LLC., 4001 West International Airport RD, Anchorage, AK 99502, 907-245-4475, 907-245-4599, laser@alaska.net. Contact: Jim O' Meara, www.greatlandlaser.com

EMPLOYMENT
All American Marine, P.O. Box 191237, Tillman's Corner, AL 33619

ENGINE ROOM LIGHTING/ MONITORING & CONTROL
GMT Electronics, 171 Main St., South River, NJ 08882

ENGINES
BTMC, 5810 Columbus Pike, Lewis Center, OH 43035, 740-548-4282, 740-548-5756, davemiller@btmccorp.com, Contact: Dave Miller, www.btmccorp.com
GE Marine Engines, 1 Neuman Way, Cincinnati, OH 45215
Power Research Inc., 6970 Portwest Drive, #180, Houston, TX 77063

EVAPORATORS
Alfa -Laval Separation, Inc., 955 Meams Rd., Warminster, PA 18974
Beard Industries, 601 Benton Kelly St., Shreveport, LA 71106
Sasakura Engineering, 7-32 Takeshima, 4-Chome, Nishiyodogawa KY Osaka555, Japan

EXHAUST
Marine Exhaust Systems of Alabama, P.O. Box 698, 757 Nichols Ave., Fairhope, AL 36533

EXPANSION JOINTS
Silex Inc., 6659 Ordan Dr., Mississauga, ON L5T 1K6, Canada

EXTRUDED RUBBER PRODUCTS
Clean Seal Inc., PO Box 2919, South Bend, IN 46880

FASTNERS
Superbolt, PO Box 683, Carnegie, PA 15106

FENDERING SYSTEMS/ BUOYS - DOCK & VESSEL
Duramax Marine LLC, 17990 Great Lakes Parkway, Hiram, OH 44234
Maritime International, 100 E. Vermilion St. #212, Lafayette, LA 70501
Plastic Pilings Inc., 1485 South Willow Ave., Rialto, CA 92376
Poly-Hi-Solidur, 2710 American Way, Ft. Wayne, IN 46899
Schuyler Rubber Co., 16901 Woodred Rd., Woodville, VA 98072
Seaward International, P.O. Box 98, Clearbrook, VA 22624
Urethane Products, 9076 Rosecrans Ave, Bellflower, CA 90706
Viking Fender Co., 1160 State St., Perth Amboy, NJ 08861

FILTERS/FILTER SYSTEMS
AAF International, 10300 Ormsby Park Pl., STE 600, Louisville, KY 40223, 888-388-0529, 888-398-0529, mbragg@aafintl.com. Contact: Myles Bragg, www.aafintl.com

Algae X International, P.O. Box 4011, Fort Myers Beach, FL 33932
Boll Filter, 9822 General Drive, Ste. 180, Plymouth, MI 48170
G.E.T. Inc., 3135 Golden Ave., Long Beach, CA 90806
Hellan Strainer, 3249 East 80th St., Cleveland, OH 44104

US Filter, 2 Milltown Ct., Union, NJ 07083

FIRE & SAFETY PRODUCTS

Brookdale International, 1--8755 Ash St., Vancouver, BC V6P 6T3, Canada
DBC Marine Safety Systems, 101-3760 Jacobs Rd., Richmond, BC V6V 6T3, Canada
IFSTA/Fire Services Program, 9030 N. Willis, Stillwater, OK 74078-8045
IMSSCO Corporation, 2040 Harbor Island Drive, Ste. 201 A, San Diego, CA 92101
Pt. Canaveral Marine Fire Fighter Academy, P.O. Box 267, Cape Canaveral, FL 32920

FLANGES

Jesse Engineering, 5225 7th St., E. Tacoma, WA 98424

FLOW CONTROLS

Hoffer Flow Controls, 107 Kitty Hawk Lane, Elizabeth City, NJ 27906

FLUID SEALING & PACKING

<

KEEL COOLERS

Duramax Marine LLC, 17990 Great Lakes Parkway, Hiram, OH 44234

LASER ALIGNMENT

Ludeca, Inc., 1425 NW 88th Ave., Miami, FL 33172

LAUNDRY EQUIPMENT

Richard Galley Supply, PO Box 4035, Houma, LA 70361

LEAK REPAIR

Indumar Products Inc., 2500 Tanglewilde, Suite 260, Houston, TX 77063

LIFEBOAT TESTING

Water Weights, Inc., 5139 Brook St., Suite E., Mont Clare, CA 91763

LIFEBOATS/RAFTS

DBC Marine Safety Systems, 101-3760 Jacombs Rd., Richmond, BC V6V 6T3, Canada
Edgewater Machine & Fabricators, 400 Megan Z Ave., EDGEWATER, FL 32132
Survival Systems International, P.O. Box 1567, 931 Industry Rd., Kenner, LA 70062, 504-469-4545, 504-466-1884, service@ssinola.com

Viking Life Saving Equipment, 1625 N. Miami Ave., Miami, FL 33136
Willard Marine Inc., 1250 N. Grove St., Anaheim, CA 92806
Wolong International, 151 Chin Swee Road #03-14, Manhattan House, 169876, Singapore

LIFESAVING EQUIPMENT

C.M. Hammar AB, August Barks Gatan 15, 421 32 Vastra Frolunda, Sweden

Viking Life Saving Equipment, 1625 N. Miami Ave., Miami, FL 33136

LIFT EQUIPMENT

Mi-Jack Products, 3111 West 167th St., Hazel Crest, IL 60429

LIFT EQUIPMENT TESTING

Water Weights, Inc., 5139 Brook St., Suite E., Mont Clare, CA 91763

LIGHTING SYSTEMS/ EQUIPMENT

ACR Electronics Inc., 5757 Ravenswood Rd., Ft. Lauderdale, FL 33310-5247

Archway Marine Lighting, 4501 Swan Ave., St. Louis, MO 63110

Gollens Marine, 160 Van Brunt St., Brooklyn, NY 11231

L.C. Doane, P.O. Box 975, Essex, CT 06426

LIN & NET CUTTERS

Spurs Marine, 201 S.W. 33rd St., Ft. Lauderdale, FL 33315

LUBRICANTS

Exxon Mobil Marine Lubricants, 3225 Gallows Road, Fairfax, VA 22037, 1-609-409-2741, 1-609-409-5699, unknown, Contact: unknown, www.exxonmobil.com

Power Research Inc., 6970 Portwest Drive, #180, Houston, TX 77063

LUBRICANTS/LUBRICATION SYSTEMS

Benjamin R. Vickers & Sons Ltd., Airedale Mills, 6 Clarence Road, Leeds, W. Yorkshire LS10 1ND, UK

Companion Products, Inc., 2040 Johnson Ct., Unit A, Kingston, IL 60145-0009

MACHINERY MAINTENANCE, REPAIR & TESTING

Gollens Marine, 160 Van Brunt St., Brooklyn, NY 11231

Mackay Communications, 2721 Discovery Dr., Raleigh, NC 27616-1851

MARINE CONSTRUCTION/REPAIR

Sundial Marine, 5605 N.E. Sundial Road, Troutdale, OR 97060

MARINE CONSULTANTS

Hall Associates of Washington, P.O. Box 1554, Mukitoe, WA 98275

MARINE DECKING & FLOORING

Hopeman Brothers, P.O. Box 820, 435 Essex Ave., Waynesboro, VA 22980

Slipnot Safety Floorings WS Molnar Co., 2545 Beavfai St., Detroit, MI 48207

MARINE DIESEL ENGINES

MAN Engines & Components Inc., 591 SW 13th Terrace, Pompano Beach, FL 33069, 800-MAN-2842, 954-946-9098, www.man-mec.com

MARINE ELECTRONICS

ACR Electronics Inc., 5757 Ravenswood Rd., Ft. Lauderdale, FL 33310-5247

Beier Radio, 1990 Industrial Ave., Harvey, LA 70058

Comark Marine, 93 West Street, Medfield, MA 02052

GMT Electronics, 171 Main St., South River, NJ 08882

Hatteland Display, Bogstadveien, 19, N-0355 Oslo, Norway

Jotron Electronics, Box 85, NO-3280T Jodalving Norge, Norway

Leica Navigation, 23868 Hawthorne Blvd., Torrance, CA 90505-5908

Marine Electronic Solutions, 1522 Crabapple Cove, Jacksonville, FL 32225

Saab Marine Electronics, Box 13045, 402 5Goteborg, Sweden

Standard Horizon, 10900 Walker St., Cypress, CA 90630

MARINE ENGINEERING

Elliot Bay Design Group, 5301 Shishole Ave. NW, Ste. 200, Seattle, WA 98107

MARINE EQUIPMENT

Plastic Piliings Inc., 1485 South Willow Ave., Rialto, CA 92376

Scardana Americas Bkg., 502 Empire St., Greenfield Park J4V 1V7, Canada

Waterman Supply, P.O. Box 596, Wilmington, CA 90748

MARINE GLASS

Bent Glass Design Inc., 3535 Davisville Rd., Hatboro, PA 19040

MARINE HARDWARE

HMS Marine Hardware, 333 W. Merrick Road, Valley Stream, NY 11580-5219

MARINE MANAGEMENT

Hornblower Marine Services, P.O. Box 112476, Campbell, CA 95011-2476

MARINE POWER PLANT SYSTEMS

Auramarine Ltd., Box 849, FI-20101 Turku, Finland

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Mackay Communications, 2721 Discovery Dr., Raleigh, NC 27616-1851

Pnme Mover Controls, 3600 Gilmore Way, Burnaby, BC V5G 4R8, Canada

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C-Map Commercial, 133 Falmouth Rd., Mashpee, MA 02649

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Electronic Marine Systems, 800 Ferndale Pl., Rahway, NJ 07065

Furuno USA Inc., 4400 NW Pacific Rim Blvd., Camas, WA 98607

Hose-McCann Telephone Company, 1241 W. Newport Center Drive, Deerfield Beach, FL 33442, 954-429-1110, 954-429-1130, mchip@hosemccann.com

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Man B&W Diesel, 17 State St., NY, NY 10004

Man B&W Diesel A/S, Telgholmsgade 41, Copenhagen SV DK-2450, Denmark

Man B&W Diesel AG, Stadtbachstrasse 1, Augsburg D-86153, Germany

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Nya Berg Propulsion AB, Box 1005, 430 90 Ockero, Sweden

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Wartsila Lps, 3617 Koppens Way, Chesapeake, VA 23323

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Henry, www.autoship.com
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solutions@marinefast.com, Contact: Alan

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ZNC International Incorporated, 200 William Street

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0650, 914-690-0653, Chris@zncink.com, Contact:

Chris Zimmerman, www.zncink.com

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Worcestershire B98 8NF, UK

(Continued from page 36)

I am very happy now that IACS has united behind the principle of common standards and scantlings for newbuildings, and has made decisive moves to develop those rapidly. And I am delighted that the industry, (as represented by BIMCO, ICS, Intercargo and Intertanko) has reacted so positively to IACS' initiative. These organizations have all welcomed IACS' announcement on the development of common classification rules for newbuildings, and IACS' plan to use small groups to fast track the process. These organisations have advised us of their willingness to provide industry input to IACS working groups developing rules for tankers and bulk carriers, and I welcome that. But better co-operation with industry is only the first step. The IMO has also expressed a desire to set goal-based standards for newbuilding strength. This is a positive development, under which nation states can unite to set global standards for the strength of ships. We as class can help them to develop those goals and standards, and then we can use our unique expertise to develop common rules, which will make sure that every ship built in the future will match up to those goals. Setting those standards will require co-operation, between IMO and its members, between the members of IMO, between all of them and IACS, and between IMO, IACS and the shipping industry. Our industry deserves that co-operation.

August 2003

DNV's Five Points Fight Substandard Ships

Dedicated "Flying Squads" with experienced surveyors is one element in a Five Point Plan launched by DNV to step up the efforts to remove substandard shipping. "DNV considers quality the single most important factor to improve safety and serious quality cases the biggest threat to the public confidence in shipping," says **Tor Svensen**, COO of DNV's Classification activities.

Besides the activation of a dedicated "Flying Squad," the Five Point Plan includes upgraded monitoring of Ultrasonic Thickness Measurement (UTM) companies, improved targeting system for potential substandard ships, actions towards high risk flags and a strengthening of resources and competence within DNV.

Regarding DNV's pledge for a stricter approval program for companies delivering Ultrasonic Thickness Measurements (UTM), Svensen explained the company's plans. "The quality of the UTM companies represents one weak point in the safety chain of international shipping. Surveys based on incorrect UTM results represent a risk for misjudgments in the planning and execution of the surveys," he said.

DNV's new approval program introduces a performance rating of each UTM company. In addition, one-man UTM companies will no longer be accepted, and a DNV surveyor will also be onboard to personally verify the

measurements, and approval certificates will be cancelled for companies not performing according to the requirements.

A special targeting scheme for potentially substandard ships has so far this year been instrumental in leading up to the deletion of 32 vessels due to violation of rules and regulations, with 40 ships presently under special surveillance. The final element in the Five Point Plan is a strengthening of resources and competence within DNV.

"We are in the process of employing an additional 40 surveyors as part of our quality drive. Extraordinary investments of \$10 million in quality measures show that we are stepping up our efforts to fight substandard shipping, knowing that this is the only way to improve safety," Svensen says.

Strength Through Unity

By **Bernard Anne**, marine director,
Bureau Veritas

Classification societies face one major issue today. That is to define the scope of class and to ensure that the great reservoir of technical strength which class represents is put firmly behind a drive towards ever safer shipping. The challenge for all of us is to harness the strength of class by getting all parts of it working together, rather than dissipating it by working individually in different directions.

Within that challenge there are two distinct and difficult issues. One is technical, the other philosophical. First, the

philosophical point. Who should set standards for ships' structure? Today, we have the IMO, which makes rules and regulations for shipping, and we have a number of individual classification societies, which have all developed different detailed rules for construction of ships. It is an untidy situation, which has developed for historic reasons. But in fact, it is a system, which has served shipping well, fostering technical innovation, and allowing massive gains in productivity as ship types evolve. Our ships have never been stronger, nor safer, nor our seas cleaner. But the industry we serve is unhappy with the current situation, and so are some flag states. And frankly, the public and politicians cannot understand it. It is time for a change. The change is simply that we have to move together to a new framework in which IMO nation states do what they do best, which is to set the acceptable standard of safety the world wants from ships.

Then class societies can work together to do what they do best, which is produce detailed harmonized rules that deliver the standards set by IMO. We can make that change, and IACS has already taken the first steps towards doing so, by agreeing to work in a unified and co-operative manner to produce common classification rules for newbuilding scantlings.

The first issues to be tackled will be double hull bulkers and tankers, to be followed by all ship types.

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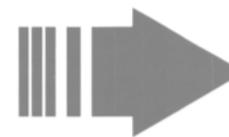
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Page	Advertiser	Product	R/S#	Page	Advertiser	Product	R/S#
C4	ABB Turbocharger Co.	turbochargers	200	43	InPlace Machining	crankshaft repair	236
6	ABB Turbosystems AG	turbochargers	201	23	Island Boats	boat builders	237
35	ABS	classification society	202	43	Jeffboat	shipbuilders	238
22	Allied Systems	deck machinery	203	38	Jet Dock	portable docs	272
20	Anchor Lamina	portable hydraulic drilling equipment	204	28	JJ McMullen	naval architects	273
28	Anchor Marine	marine equipment	205	C3	Juniper Industries	doors and hatches	271
41	AR Larsen	galley design and installation	276	7	Leslie Controls	valves	239
24	Arion International	thermal imaging	206	C2	Lloyd's Register	classification & certification	240
17	Barkemeyer Schiffstechnik GMBH	manoeuvring equipment	207	48	Mack Boring & Parts Company	industrial commercial marine	241
15	Benjamin Vickers & Sons Ltd.	lubricants	208	9	MAN B&W Diesel	diesel engines	242
15	Bollinger Shipyards	shipyard	209	24	Marine Exhaust Systems of Alabama	water cooled manifolds	243
22	Cambridge Applied	viscometers	210	24	Maritime Associates	marine & offshore signage	244
24	Capt.R.J. Underhill & Assocs.	surveyors/consultants	211	48	McElroy Catchot Winch	deck machinery	245
29	Comnav Marine Ltd.	autopilot	212	29	Mid-West Instrument	differential pressure gauges	246
22	Cospolich Refrigeration	refrigeration equipment	213	51	Motor-Service AB	spare part ship deliveries	247
5	Crowley Maritime Corp.	marine logistics/transportation	214	4	Motor-Services Hugo Stamp	diesel engine spare parts	248
25	Curacao Drydock Co.	ship repair yard	215	1	Newport News	shipyard	249
3	Damen Shipyards	shipyard	216	20	NLB Corp.	surface prep equipment	250
36	Dolphin Exhibitions	exhibition	217	24	Ocean Technical Services	ship repair	251
40	EJ Krause & Associates	exposition	218	12	Orkot Marine	bearings	252
27	Electronic Marine Systems	tank level indicators	219	10	Petrocom	communication service	274
29	Electronic Marine Systems	tank level indicators	220	17	Rosborough Boats	boat builders	253
31	Electronic Marine Systems	tank level indicators	221	2	Sea Ark Marine	boat builders	254
33	Electronic Marine Systems	tank level indicators	222	50	Ship Repair & Conversion Informa	exhibition	255
39	Enavi Reparos Navais Ltd.	ship building & repair	223	27	Skookum	rigging products	256
32	EVAC Environmental Solutions	sanitation systems	224	46	SNAME	exhibition	270
23	Flagship Marine	marine a/c	225	24	Southwest Marine	ship repair employment ad	257
14	General Thermodynamics Corp.	cylinder power equalizer	227	24	Sundial Marine	shipyard	258
41	Geniro Systems	systems integrator	228	16	SUNY Maritime College	training & education	275
26	Gibbs and Cox	naval architects	229	14	Superior Energies	insulation manufacturers	259
39	GJ Wortelboer	chains	230	27	Superior Lidgerwood Mundy	deck machinery	260
19	The Havnen Group	consulting group	269	37	Titan Maritime Industries	salvage/wreck removal	261
51	Headhunter Inc.	toilets	231	13	Urethane Products	fendering products	262
21	Hempel	coatings	232	30	Vuyk Engineering Groningen B.V.	naval architects/engineers	263
17	Hepworth Marine International	window wipers & wash systems	233	17	Waterman Supply	marine equipment	264
8	Hornblower Marine Services	consultants	234	48	Western Machine Works	deck machinery	265
41	Incat Tasmania Pty Ltd.	fast vessels	235	11	Willard Marine Inc.	boatbuilders	266
				33	William E. Williams	valves	267
				22	Wing Inflatables	rigid inflatables	268

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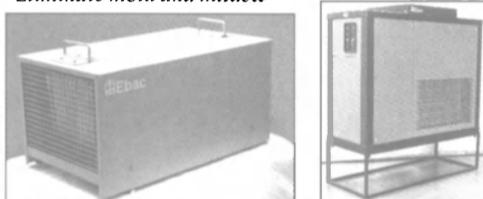
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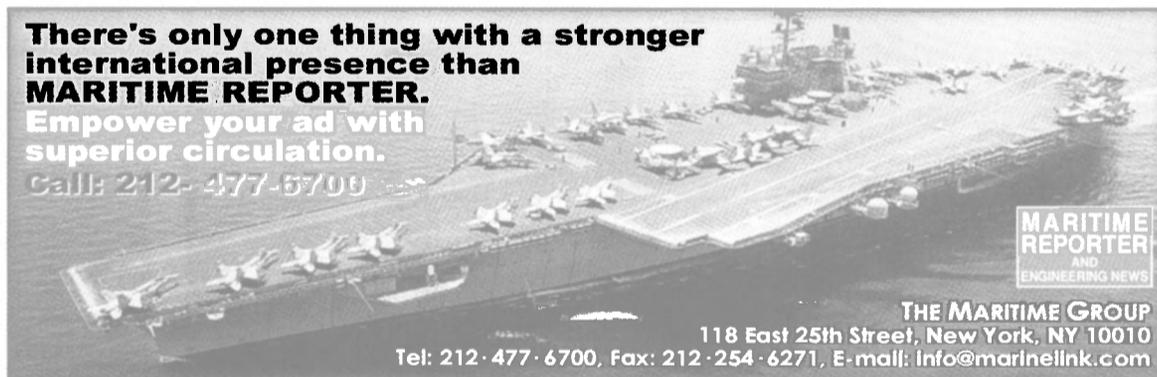
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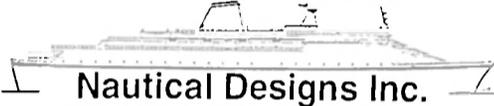
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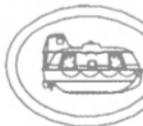
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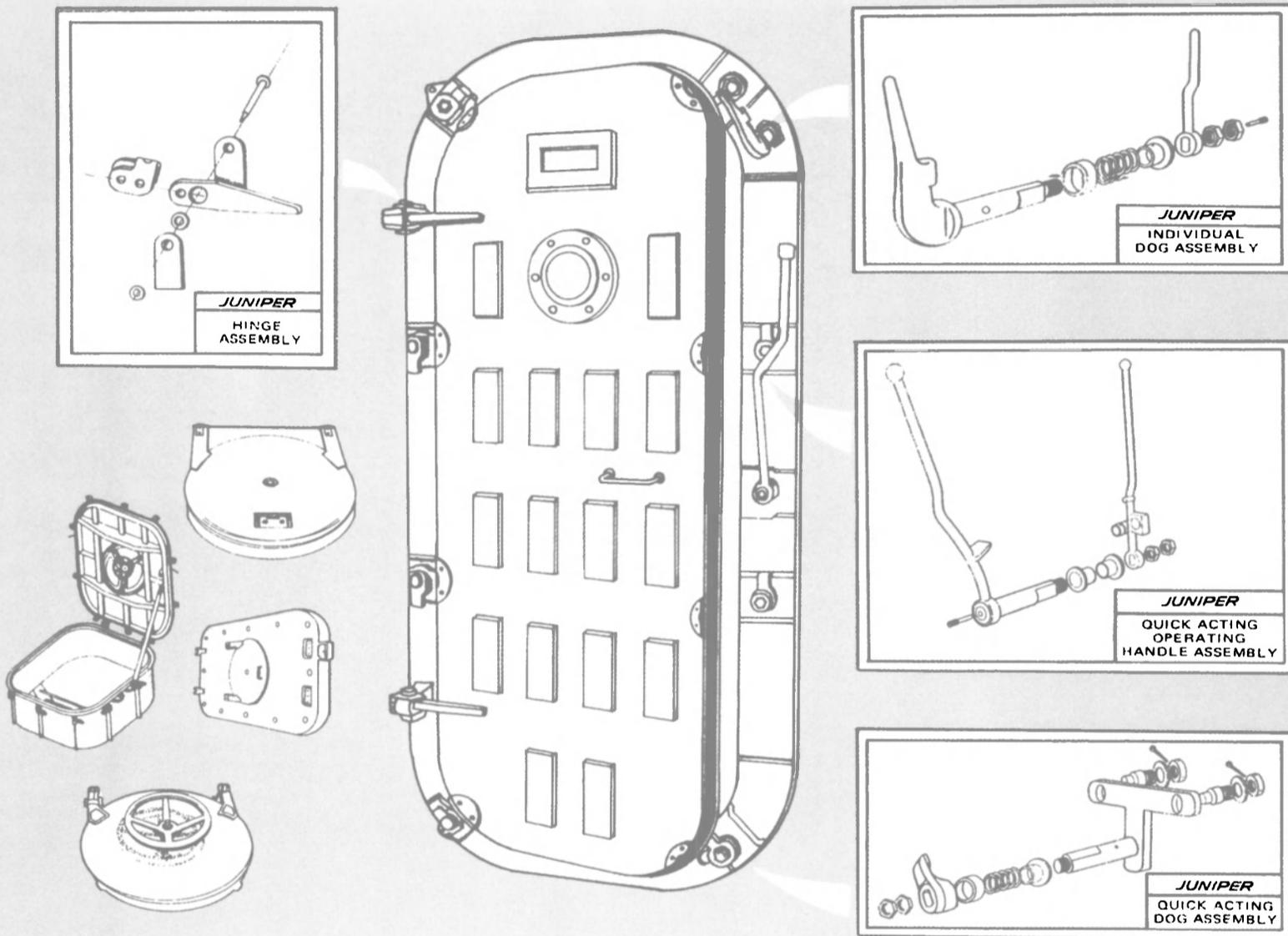
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