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(Vale do Rio Doce photo)

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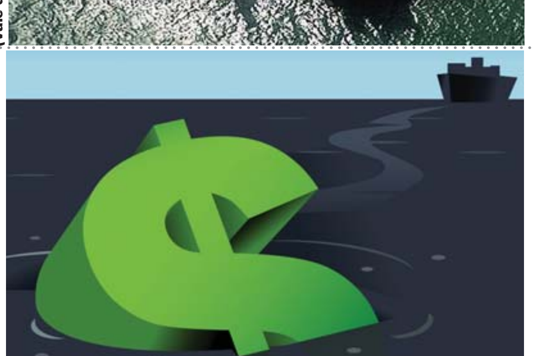

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(Bruno Lima photo)

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Meet the Contributors

Dr. Jim Giermanski, is Chairman, Powers Global Holdings, Inc., an international transportation security company. A former FBI special agent, OSI special agent and a Colonel in the Office of Special Investigations, Giermanski has testified many times at federal and state levels.
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Lawrence O'Connell is Executive Vice President of International Maritime Security Corporation (IMSC).
Story p. 10

Barry Parker, bdp1 Consulting Ltd. provides strategic and tactical support, including analytics and communications, to businesses across the maritime spectrum. The company can be found online at www.conconnect.com.
Story p. 14

Tara Leiter concentrates her practice in the areas of public and private maritime law, admiralty law, environmental law, and port security matters for international and domestic clients. She is a member of the Maritime Law Association, WISTA and the Maritime Administrative Bar Association.
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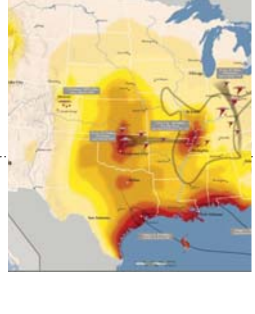

Maritime Professional

HQ 118 E. 25th St., 2nd Floor
New York, NY 10010 USA

Tel +1 212 477 6700
Fax +1 212 254 6271

URL www.maritimeprofessional.com
Email trauthwein@marinelink.com

ISSN - 2159-7758
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Editor
Joseph Keefe
keefe@marinelink.com
+1 704 661 8475

Blogger Roster @
MaritimeProfessional.com

Lead Commentator	Joseph Keefe
U.S. East	Dennis Bryant
U.S. West	Martin Rushmere
Brazil	Claudio Paschoa
Mumbai	Joseph Fonseca
Hong Kong	Greg Knowler
The Netherlands	Keith Henderson

Publisher
John C. O'Malley
jomalley@marinelink.com

Associate Publisher/Editorial Director
Gregory R. Trauthwein
trauthwein@marinelink.com

VP Sales
Rob Howard
howard@marinelink.com

Production
Irina Tabakina
tabakina@marinelink.com

Corporate Staff
Vladimir Bibik, IT
Rhoda Morgan, Sales Administration
Mark O'Malley, Public Relations
Jocelyn Redfern, Marketing
Esther Rothenberger, Accounting

Subscription
Kathleen Hickey
marprocirc@marinelink.com

Advertising Sales
Jack Bond
bond@marinelink.com
+1 561 732 1659
Terry Breese
breese@marinelink.com
+1 561 732 1185
Mike Kozlowski
kozlowski@marinelink.com
+1 561 733 2477
Dawn Trauthwein
dtrauthwein@marinelink.com
+1 631 472 2715
Jean Vertucci
vertucci@marinelink.com
+1 212 477 6700

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Risky Business

Acronyms. Sometimes, it seems that these words formed from the initial groups of letters of words define how we talk about our industry. This, combined with the unique nomenclature associated with all things maritime, makes for a steep learning curve for anyone who migrates over to the maritime side of the equation. The glossary of acronyms in this risk-centric edition of *Maritime Professional* will probably make your head swim. Within these pages, we lay out for you the full gamut of risks facing the commercial maritime sector, while also providing the course line to mitigating those vulnerabilities.

"Risk" as it relates to the maritime industry – ocean, inland, offshore oil & gas, Great Lakes and anywhere else – represents an onion with many layers. No one publication could do the subject justice in a single article. In our second quarter 2012 edition, we define risk in terms of finance, operational strategies, environmental compliance, insurance, port security, piracy, logistics, safety, regulatory oversight and a myriad of others that you should be thinking about.

The feature story of this edition provides the insights of the two individuals who arguably comprise the most knowledgeable and experienced risk management team on the planet. Certainly, in the maritime sector, they have few peers. When the honorable Tom Ridge stood up the Department of Homeland Security (DHS) in 2003, he had help from the leader of its largest new component, ADM Tom Collins, the Commandant of the U.S. Coast Guard. Together, they engineered the most ambitious reorganization of government in history. What they learned then and how they apply those lessons on today's waterfront should be part of your risk mitigation toolbox.

Acronyms. BDN, CBP, DHS, ECA, EEDI, EPA, GAO, ILA, FMC, MEPC, NOX, P&I, PSC, SEEMP, SOX, WMD – and a dozen more – all have one thing in common: Risk. And, each has its own special place in your risk equation. You can be forgiven if you don't yet know what they all mean. After digesting the entire contents of this edition, however, you'll understand the full breadth of what each entails and more importantly, what to do about them. That's something you won't get anywhere else.

Before you move on to the meat of this magazine, there is one more acronym which you should be familiar with. That's because *Maritime Professional*, in little more than one year, has achieved its Initial Brand Audit from BPA Worldwide. What does that mean to you? It means that, unlike some publications, you won't have to risk reliance on unsubstantiated claims of readership, print subscriptions, online presence and/or WEB metrics. While other publications are downgrading – or even dropping – their qualified audits, MarPro joins the full suite of New Wave Media magazines as its youngest, fully audited vehicle. It doesn't take 10 years or more to achieve this lofty standard; just the hard work of a quality staff and the backing of the best media group in the business. But, don't take my word for it. Indeed, you don't have to.

Joseph Keefe, Editor | **keefe@marinelink.com**

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Insights

Finally! At Last – Customs Admits Risk!

By Dr. Jim Giermanski

For many years the Congress, GAO, and I many times, have criticized Customs and Border Protection (CBP) or not addressing or even acknowledging the security risks and loss of revenue from an antiquated, and ineffective in-bond systems that serves as a vulnerability to the security of the United States. However, in February, 2012, CBP has publically admitted the risk and the need to fix it.

The Situation

An in-bond movement is the transportation of imported merchandise, secured by a bond, from one U.S. port to another prior to the appraisement of the merchandise and prior to the payment of duties. Currently, in-bond merchandise may be transported through the United States without appraisement or the payment of duties, provided the carrier or other appropriate party obtains a bond and files the appropriate transportation entry. When the in-bond merchandise reaches its destination, it must be entered into U.S. commerce for consumption, entered for warehousing, or exported. The bond requires the bonded carrier to comply with all laws and regulations governing the receipt, safekeeping, and disposition of bonded merchandise. The transportation entry accounts for the movement of the merchandise during the in-bond process. According to a 2007 Report from the U.S. Government Accountability Office (GAO), in-bond shipments represent 30 to 60 percent of all imports that move through U.S. ports.

This in-bond system provides flexibility to importers and facilitates the flow of trade and commerce by allowing importers and other interested parties to choose when and where to enter imported merchandise into the commerce of the United States or when and where to warehouse or export the merchandise. This enables the importer to delay payment of applicable duties for imported merchandise. The in-bond system also allows merchandise to be transported and exported without the payment of duties and without having to meet all of the entry requirements necessary to enter the goods into the commerce of the United States.

However, its stated advantages serve as the core risk factors of this system. Therefore, in February, CBP published a notice of proposed rulemaking to effect changes to the current system. Eleven fundamental categories of proposed changes in this 112-page document produce numerous other administrative changes to Federal regulations. But within the 11 categories, essentially 5 proposed new rules for in-bond operations drive all the other changes:

1. ***Require carriers or their agents to electronically file the in-bond application;***
2. *Require additional information like, at least a 6-digit HTSUS number and/or information about the safety of the merchandise;*
3. ***Require a maximum of 30 days to transport in-bond merchandise between U.S. ports;***
4. *Require carriers to electronically request CBP permission to divert in-bonds from their intended destination ports; and*
5. ***Require carriers to report the arrival of in-bond merchandise and its location in the U.S. destination port.***

1

Electronic Data Filing: The need to file in-bond information electronically or in "real time" is not only consistent with worldwide "single window" applications used by other Customs authorities, it helps to prevent the use of false and fraudulent documents and helps to control transshipments, re-routings, false declarations concerning country or place of origin, and falsification of official documents. Electronic filings also can be more easily stored, maintained, and managed. The natural question is why it has taken so long for CBP to propose electronic data filing for in-bonds. Electronic filings should be done at origin, perhaps even by an authorized trusted third party who can verify the merchandise at the time of sealing the container or trailer.

2

Need for Additional Information: Incredible as it sounds, CBP admits that it doesn't really know what the merchandise is and its level of safety when it transits the United States. The impact is twofold. CBP admits that the imprecise and vague descriptions by importers and shipping agents impede CBP's targeting trade and revenue violations, and admits that there are potential "health, safety and conservation" issues if the merchandise is not identified at the level of a least a 6-digit Harmonized Tariff Schedule of the United States (HTSUS) number. Not knowing precisely prevents CBP from notifying carriers whether additional inspections are needed. CBP further admits that it needs to know not only the description of the merchandise and its related safety issues but also the container identification number and seal number.

3

Uniform Time Limits for In-bond Transits: Because under the current system, air, vessel, and land conveyance all have different maximum transit time, these divergent transit times make it "confusing and burdensome," and therefore, "difficult to enforce." Additionally, CBP admits that these "…in-bond

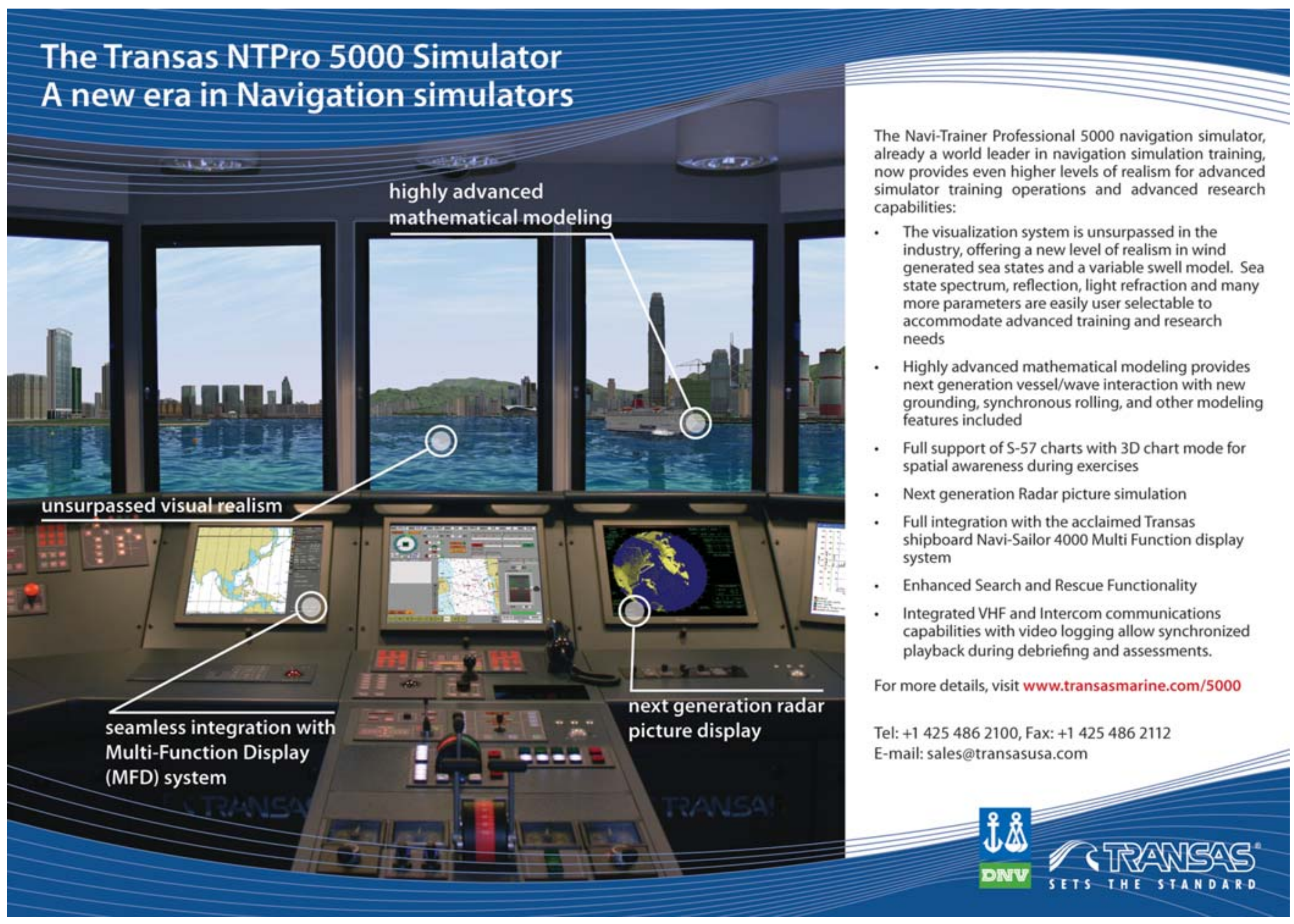
shipments are often unaccounted for and transactions are open for too long a period of time, hindering CBP's enforcement and targeting efforts." Except for pipeline, CBP believes that a standard 30 days to be sufficient for all modes of transport.

4 ***Permission to Divert In-Bonds:*** CBP acknowledges that in-bonds may be diverted without their knowledge. The current diversion procedures make it virtually impossible for CBP to identify the ultimate destination of a diverted shipment and to determine whether the merchandise reaches that destination. This presents a security risk, a risk of circumvention of other agencies' admissibility requirements and a risk that proper duties are not collected. CPB further admits that the control of in-bonds …is critical to security and it necessary to ensure the proper collection of duties and to protect the health and safety of consumers. In essence, CBP confirms what many U.S. Customs brokers have claimed: CBP does not know where the in-bond has been or how often it has been accessed since current mechanical seals are easily bypassed.

5 ***Reporting the Arrival and Locations of In-bonds:*** The current regulations require the carrier to report the arrival of in-bonds no more than 2 days after arrival at the destination U.S. port of export. Two days means that these in-bond shipments can be opened and contents manipulated. Complaints by Custom Brokers in Laredo, Texas seems to confirm this type of in-bond treatment that makes it impossible for CBP to know whether merchandise has be removed, added, or manipulated. The new rules required the carrier to report arrival within 24 hours.

These five primary proposed changes to the in-bond rules, drive many ancillary administrative changes. What is important is the recognition that the current in-bond system is broken and constitutes a serious security risk to the United States and the reason for lost revenue from not collecting the appropriate duties and taxes on those products that find their way into U.S. commerce. The current system can also be blamed for the increase of counterfeit products, drugs, and other contraband. Although these CBP proposed changes are positive and overdue, the remaining question is whether CBP training can prepare their personnel to manage and enforce a new system. But probably most significant is the admission by CBP that it is time for change! Finally, At Last!

Dr. Jim Giermanski is Chairman, Powers Global Holdings, Inc., an international transportation security company. He has authored over 175 articles and is currently writing a global supply chain security book.



Countering Piracy: More than just Countering Pirates

By Michael S. Brewer, N. Scott Brewer, Lawrence E. O'Connell

*The mechanics of the piracy problem are no mystery to readers of **Maritime Professional**. Piracy's scope, purpose, and resilience have been thoroughly detailed in just about every article on the subject for the past two years. The question that remains: what is the best way to deal with piracy? Many of the steps currently taken to counter the piracy problem are really just reactive in nature – steps taken to counter pirates as they approach a target vessel, and not before.*

From the most basic ad hoc measures, such as barbed wire and fire hoses, to the most capable and well-trained security teams available, shippers are still responding to the piracy threat only when that threat is imminent. This puts shippers in a perpetually defensive posture, one step behind the adaptations and advancements pirates will continue to make, and disregards the advantages inherent in a proper risk mitigation strategy. Getting the initiative back may be the difference between finding a long-term solution to the problem and spending hundreds upon hundreds of millions of dollars in a perpetual game of catch-up in which all of the advantages lie on the pirates' side of the equation.

PACE: 4 levels deep

Under conditions of asymmetric warfare (not unlike piracy), U.S. Special Operations Forces are trained to plan their operations at least four levels deep. They use an acronym, "PACE", to remember that a good plan will always account for the Primary, Alternate, Contingency, and Emergency options, and those options regress from the best case to the worst, in order of precedence. The Primary course of action is what you want to happen if operating in a perfect world. The Alternate is what happens when Murphy's Law exerts itself, and the things that can go wrong indeed begin to go wrong. The Contingency plan is what happens when things really start to fall apart or get out of control, and the Emergency plan is exactly what it sounds like: what to do when the mission itself is no longer the priority.

Shippers can use a variation of the same concept in preparing and implementing a piracy risk mitigation plan. This time, however, PACE stands for the actual steps in the plan instead of for its phases: ***Prevention, Avoidance, Control, and Escape.*** By adopting the PACE Methodology for counter-piracy planning, shippers are no longer in a reactive position. Initiative swings back in their favor, and it's the pirates who are forced to adapt at a cost of their own time, expense, and safety.

1 ***Prevention:*** Piracy attacks that never happen cost shippers nothing; no lives are placed at risk, no ransoms are paid, no crews or cargos are lost. Prevention, then, is the most preferable method of dealing with the piracy threat. Shippers currently take some preventive steps, such as following Best Management Practices and planning routes that do not run afoul of the highest-risk areas. But prevention is more than typical route planning or cruising at the right speeds. Shippers don't have infinite routes available to them, and sometimes cargo and timetables require that they transit high risk areas. When they do, they should have the services of specialized analysis and reporting on the types of threats they can expect to encounter. Armed with detailed knowledge of the pirate methodology and operating tempo, analysts can distill the threat environment, then advise shippers and insurers in a standard risk-based decision process.

2 ***Avoidance:*** While preventing an attack is by far the best option in mitigating the pirate threat, avoidance, comes in a close second. For our purposes, avoidance is defined as "becoming aware that a threat exists and reacting in such a way as to eliminate the potential for that threat to affect you." It means staying a step ahead, and it requires professionals who are well-trained in the discipline of threat warning analysis. In the same way a threat warning analyst can help prevent an attack by assisting in the route planning process, analysts imbedded with security teams or even the ship's crew can maintain close contact with militaries, government organizations, and even private cadres of analysts on shore and at sea. Applying their specific knowledge and expertise, they can then provide on-the-spot assessments to help ship's captains avoid emerging trouble spots. To be truly effective, however, the analysis must be proactive. Avoidance of potential threats entails more than keeping an eye on the map for the latest attacks or listening to the radio calls reporting pirate activity; it requires knowledge of the unique environmental conditions within which piracy functions, and recognition of their development, in the same way a meteorologist looks for patterns in the weather to predict dangerous storms.

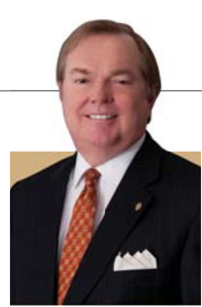
Control: This is the phase at which the best laid plans fall short and a threat appears. Controlling an attack means combining passive and active measures that work effectively in concert to foil an attacker's means of presenting a threat. For example, use of evasive tactics and emerging barrier-interdiction technologies reinforce embarked security teams. This integration of defensive measures creates an economy of force that again shifts the initiative to shippers. Under this model, pirates are no longer dealing with a known problem – fire from security teams – or even one problem. Now, they have to worry about the effects of defense-in-depth, the most serious of which is being funneled into a "chokepoint", where security teams can pick them off. Having complementary defenses means shippers can sail with far less risk to the vessel, the cargo, and ultimately the crew.

Escape: The ultimate objective in a critical-threat situation is to escape. In an ambush (which is actually what a pirate attack is), this is often referred to as "getting off the X." It is the ability to put as much distance between you and a threat as possible, as soon as possible. Done effectively, all the other previous measures support this goal. Strong situational awareness can help make sure that an escape path won't run the ship through yet another high-threat area, and a defensive capability that not only deters the attackers but physically disables their skiffs can maximize the time shippers have to put distance between themselves and the threat. All truly effective counter-piracy solutions require the maximum possible degree of situational awareness, strong and diverse defensive options, and a cohesive unity of effort between all the moving parts. The PACE method can be an effective way to make sure all these aspects are addressed. As a result, they can help keep the initiative where it belongs – with shippers instead of pirates.

The Authors

Lawrence O'Connell is Executive Vice President of International Maritime Security Corporation (IMSC). **Scott and Michael Brewer** are Principals and Co-Founders of IMSC, a Washington D.C.-based firm specializing in maritime consulting and risk mitigation.

Insights



Expanded Panama Canal

By John Padgett

The expansion of the Panama Canal has been heralded as a game changer for the maritime shipping industry. However, the impact of the expanded Canal is still unclear. The port community and shipping lines are placing costly bets on the outcome. Yet, the possibility of labor unrest, the economic downturn and the depressed shipping market have added more uncertainty into supply chain decisions. The expansion of the Panama Canal is, therefore, one of many issues forcing supply chain managers to re-evaluate current strategies.

Catching Up

Scheduled for completion in 2014, the $5.25 billion project adds a third set of locks to the canal system as well as widening and deepening the existing channels. The expansion will allow the Canal to accommodate larger vessels and to significantly reduce the transit time and cost to transport cargo from Asia to the East Coast of the United States. The combination of reduced costs and the delays experienced by shippers using the West Coast ports will encourage more shippers to divert cargo to ports on the East Coast. According to Jones Lang Lasalle, a multinational financial and professional services company, as much as 25 percent of the existing West Coast cargo could shift to the East Coast.

The potential for increased cargo volumes has set off a frenzy of improvement projects in the ports on the East Coast. Larger vessels require deeper drafts, larger cranes and significant infrastructure improvements to port facilities. At least 10 ports along the East Coast have construction projects underway. The projected cost of the port projects over the next decade is $15 billion. The ports are concerned that their inability to accommodate a new generation of vessels will place them at a competitive disadvantage in seeking trade opportunities, and subsequently, new jobs.

Port improvement projects include technology to improve the operations of the terminals. Currently, the processes used to load and unload cargo in most ports are labor intensive. Pressure for upgrades comes from customers that want faster service at less cost. On the other hand, the International Longshoremen's Association (ILA) resists any technology that could reduce the number of ILA jobs. Therefore, an unexpected consequence of the expanded Panama Canal could be labor unrest.

Labor: The Wild Card

The current labor agreement between the ILA and the United States Maritime Alliance (USMX) expires on September 30, 2012. The ILA elected Harold Daggett, then an unknown industry player, as its president last year. Yet, he has already displayed more confidence in dealing with labor issues. Daggett has warned the shipping community that an ILA strike (which hasn't occurred in 35 years) is possible if the union cannot secure acceptable terms in the new contract. One of the most challenging issues being negotiated is how to address the ports' efforts to utilize new technology in port operations.

The possibility of a strike undermines one historical advantage in favor of East Coast ports. Though West Coast ports have a contract with the International Longshore and Warehouse Union (ILWU), their relationship has been more volatile than labor relationships on the East Coast. The shutdown of the West Coast ports in 2002 had a significant impact on supply chains that relied on the Asian markets. Shippers' inability to use West Coast ports forced supply chain managers to look at alternate routes and trade lanes. The East Coast ports presented a viable option and saw cargo volumes increase over the last decade. The effort to diversify supply chain options was a contributing factor in the decision to expand the Panama Canal.

Supply Chain Decisions: Many Variables

Supply chain managers, however, must still minimize cost and reduce the need to deploy much needed capital in maintaining large inventories. The cost and time invested in transporting raw materials to a manufacturing site is a critical path in the "just in time" inventory process. For East Coast ports to receive more Asian cargo, the additional transit time incurred to travel through the Panama Canal must be offset by reduced costs and other efficiencies.

The economy has made this calculus more difficult. Shipping lines have sacrificed speed to reduce costs and the overcapacity in the world fleet. The process, called slow steaming, can significantly reduce the fuel necessary to operate a vessel. However, it increases the time it takes a vessel to transit the Pacific from 11 to 15 days. If you tack on another nine days for transiting the Panama Canal, then the trip from China to the East Coast can take over three weeks. The additional transit time to the East Coast ports is fatal for high-value time sensitive goods such as electronics. Alternatively, commodities

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that are transported in bulk are more likely to use the Panama Canal.

Once delivered to the ports, the goods still need to move from the terminals to the end user, but the lack of funds for significant transportation projects has created challenges. Fortunately, some rail projects have decreased transit times from some ports. For example, the Heartland Corridor will shave a full day from the transit time between the ports in Virginia to Chicago, Illinois. Yet, other projects have stalled or funding has not been approved. Additionally, new environmental regulations will create added costs for vessel owners and truckers in certain ports. The Environmental Protection Agency (EPA) has pressed national standards for truck idling and the treatment of ballast water from vessels. The immediate impact of the EPA regulations is unclear, yet the EPA's involvement has reduced the possibility that environmental issues will favor one port over another.

The opportunities and challenges in the transportation industry require supply chain managers to rethink current strategies. The rising cost of labor in China is forcing a reevaluation of China as a preferred trading partner. Experts predict that the minimum wage in China will double by 2015. Consequently, manufacturers are shifting to lower cost markets such as India and Vietnam.

These factors also suggest that labor markets in Mexico and South America could become more competitive in the future. Labor unrest in United States ports, delays in vessel transit and increased costs of complying with environmental regulations create a favorable environment for locating manufacturing sites closer to domestic United States markets. Near sourcing has become more important to supply chains as companies are increasingly concerned about the impact of recalls on brand value, the theft of intellectual property and the anticipated increased cost of credit.

An Expanded Canal: Only One Part of the Puzzle

Supply chain managers need to look beyond the noise regarding the Panama Canal. Importers need to determine how they can best respond to unpredictable demand and unexpected costs. If slow steaming, labor unrests and the cost of regulations increase the cost of the supply chains, then supply chains need to be reconfigured. In some instances, the edge in labor costs may be overcome by the increased cost and unpredictability of a lengthy supply chain.

Businesses must review their transportation agreements. They should require their transportation providers to absorb more risk and to develop more options in reconfiguring supply chains. In most transportation agreements, the customer absorbs the increased cost of fuel, the cost of additional regulations and delays associated with labor strikes. In many instances, customers are not able to increase the price of a product to absorb the immediate impact of the additional transportation charges.

In a competitive market, the customer should challenge carriers to provide pricing structures that allow for flexible trade lanes in exchange for more stable pricing and predictable delivery dates. If the transportation industry does not respond to the needs of a global market, then the market will begin the process of near sourcing and seeking other strategies to create leverage over transportation providers. The current situation may require a rethinking of the 'just-in-time inventory process to accommodate new realities.

The expansion of the Panama Canal creates new possibilities for transporting goods from the Asian markets. While 70 percent of the United States' population lives east of the Mississippi, the current process relies heavily on West Coast ports and rail systems. The objective is to find the most efficient means of getting products in the hands of the end users. In many instances, the current process has created additional costs and inefficiencies in the supply chains. The introduction of East Coast ports will provide opportunities for competitive alternatives. Yet, it is still too soon to determine whether the impact will be a bang or a whimper to supply chains.

The Author

McGUIREWOODS

John Padgett, a partner at McGuireWoods LLP, regularly counsels clients regarding transportation strategies and supply chain risks. He may be reached at jpadgett@mcguirewoods.com

Finance

Shipping's Cash Flow – Staying Above Water

By Barry Parker, bdp1 Consulting Ltd.

Many corporate strategy articles start by reminding readers that "the Chinese character for risk and opportunity are the same." Unfortunately, capital providers – especially those layering in debt to shipping company balance sheets – do not see things that way. Risk, in the financial context, always works back to the ability of an asset to service its obligations; first debt, and then equity. But shipping is considered more risky than other transport industries. The lethal cocktail of high capital intensity and long-lived assets in the face of overbuilt cyclical markets often leaves the industry with a hangover of the worst type. The recent trail of recapitalizations, restructurings, amendments and waivers bears witness to the pain induced by a sliding market. General Maritime, TBS, Trailer Bridge and Excel are among the few that come to mind in the current environment.

Shared Pain

Debt providers are not the only ones who suffer. In the case of a reorganization under Chapter 11 of the U.S. Bankruptcy Code, now more common even where shipping occurs internationally, equity shareholders who have survived the shipping stocks roller-coaster will likely see their investments wiped out, or nearly so, as lenders and certain other creditors will be higher in the pecking order. Where companies do manage to stay alive amidst dwindling liquidity, fresh money raising- in the form of "follow-on" equity offerings (which sometimes take on a privacy cloak – like Torm's recent deal with bankers), or Horizon Lines recent arrangement with Ship Finance Ltd, have the impact of diluting existing holdings. In other words, the same equity component of a balance sheet is spread over more shares.

Veteran stock analyst Jonathan Chappell, CFA, Managing Director at Evercore Partners, told ***MarPro***, "Shipping is certainly more volatile than other transport modes. If investors equate volatility with 'risk', then there could be a perception that shipping stocks carry more risk." He adds, "In other modes, like rail, you have a mix of strong counterparties like the big chemical companies and also smaller shippers. The same goes for shipping – it's a mix of big and small, but a key difference is that renegotiations seem to happen more frequently in shipping because the rate cycles are far more extreme."

At Standard & Poors, a leading credit rating agency, Philip Baggaley, analytic head of the Transportation, Aerospace and Defense rating team, and Funmi Afonja, transportation analyst, explained that S&P rates both companies and specific debt issues. Mr.Baggaley told ***MarPro***, "We look at both overall business risk – things like the segment fundamentals, and company operating efficiencies, and also the financial risk." In describing the financial risk, Baggaley says that two important measures of cash flow are the EBITDA/interest expense ratio, and funds from operations/total debt; for both, a higher number is better. He added that in the case of an important balance sheet measure, Debt/EBITDA, a lower number is better.

Closer to Home

In the Jones Act trades, a group of companies which were listed during the boom times – 2004 through 2006 – all came upon hard times. The range of solutions illustrates the nature of risk. The companies, all of which chose the Master Limited Partnership structure (restricted to the movements of oil and refined products for U.S. flag companies). In MLP's, investors purchase partnership "units" rather than shares. When things go well, the issuer benefits from a lower capital cost (compared to equity) and investors enjoy certain tax benefits (with depreciation passed through) and healthy distributions that are akin to dividends.

Chappell, "Although balance sheet strength is important to the dividend payment strategies, visibility and sustainability of cash flows are of equal importance." Chappell, a railroad analyst prior to shipping's wave of IPOs in the mid 2000's, added, "A firm in a capital intensive industry that has very strong cash flow though long-term fixed rate contracts with strong counterparties could very easily follow a material dividend payout strategy."

However, among U.S. fleets, distribution payments drained cash that otherwise would have been earmarked for maintaining or augmenting the existing fleets. A group of U.S. flag shipping MLP's experienced severe crunches, following the deep recession that began in late 2008, as they struggled to pay for new vessels at a time of a market slump. One widely followed partnership – OSG Americas – was taken back in-house a little over two years after being partially spun out to investors as an independent company. With its U.S. flag capital program completed, it now operates as an OSG subsidiary.

Another maritime MLP, K-Sea Partners, was finally rescued by Kirby Corporation, (with S & P ratings in the "investment grade" category), following a late 2010 equity infusion by private equity investor First Reserve and MLP fund manager Kayne Anderson. In the mid-2011 Kirby deal, holders of common units ultimately got $8.15/share, a fraction of the $23.50 original IPO price in 2004. Though K-Sea was not engaged in a big construction program, the dramatic drop-off in demand, meaning fewer barrels moving in coastwise or intra-

Funmi Afonja

Philip Baggaley

Jonathan Chappell

"…Jones Act companies, in a sector that is less fragmented than the international realm, may offer less volatility – certainly for tank vessels."

"We look at both overall business risk – things like the segment fundamentals, and company operating efficiencies, and also the financial risk."

"Although balance sheet strength is important to the dividend payment strategies, visibility and sustainability of cash flows are of equal importance."

harbor product trades, resulted in a cash sucking vortex. This solution hints at an antidote to risk – which is diversification. The lion's share of Kirby's business is on the inland waterways, tied to contracts with major charterers.

An important lesson from the U.S. flag sector, but applicable industry-wide, is that cash requirements for payments to financiers funding ship construction, combined with cash needed for requisite distributions to equity investors, can easily overwhelm cash inflows from ongoing operations in deteriorating markets. The MLP model, with distributions to limited partners, has been applied more successfully in foreign flag shipping by Teekay Corporation and Navios – where "parent" companies incubate deals, and then drop them down, fully hatched, into "daughter" companies – which benefit from charter cover without being burdened by construction costs.

Risk, Recovery, and then – Revitalization?

In the view of S&P, "Jones Act" companies may present less risk than their foreign brethren. Funmi Afonja explained that the segment offers certain barriers to entry, and that, especially in the liquid bulk segment, multi-year contracts are in place with strong reputable counterparties from the oil and chemical sector. The result, she said, is that Jones Act companies, in a sector that is less fragmented than the international realm, may offer less volatility – certainly for tank vessels.

Her colleague, Philip Baggaley, adds, "A big part of risk is the sheer capital intensity of shipping; it's hard to cut back once you've made the investment. You'll keep operating as long as you cover marginal costs." He contrasted this with rail and truck modes- where assets are more discrete.

In some cases, all this risk does give way for opportunity, as seen in the recent travails of Trailerbridge, Inc., a Jones Act company which operates roll-on roll-off assets in the U.S. / Puerto Rico trades. All eyes are on the re-organized company, now controlled by an investor group led by Seacor - which has had a string of successes in revitalizing down-trodden shipping assets.

"Risk" means different things to different people. Shipping's legendary volatility has led to great fortunes during the boom years that ended in 2008. But the industry's hefty capital costs, which stay around long after the outsized hire bubble was deflated, have caused heartburn for providers of debt and equity, as the cycle turned downward.

The Author

Barry Parker, bdp1 Consulting Ltd provides strategic and tactical support, including analytics and communications, to businesses across the maritime spectrum. The company can be found online at www.conconnect.com

Insurance

WEATHER

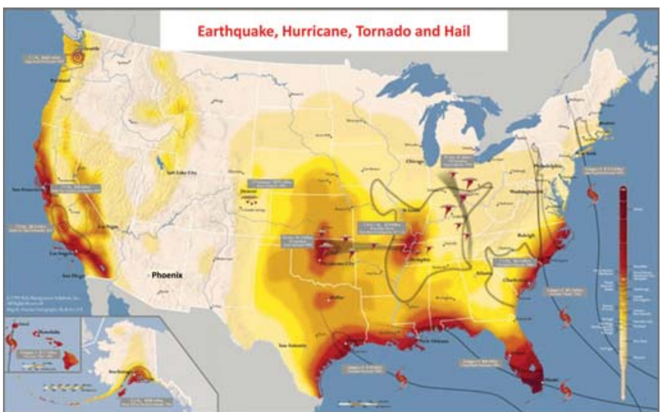
Planning Ahead

Preparing to Weather Any Storm; Big or Small.

By Ken Baldwin and Kord Spielmann

When weather makes the headlines, it's not typically due to temperate or mild conditions. In the past year, the media reported on tornadoes, earthquakes and hurricanes that have significantly impacted businesses and communities nationally and internationally.

In a report to Congress several years ago, the General Accounting Office (GAO) tracked what it identified as the four most costly types of catastrophic perils in the United States: earthquakes, hurricanes, tornadoes and hailstorms. Mapping the combined financial impact of these perils, the GAO report turned an illustration of the country into a colorful warning about the highest risk areas (see map below).



GAO report illustrating high risk areas

It is important to recognize that despite significant weather events in some parts of the country, weather does not have to be on a grand catastrophic scale to potentially cause havoc for a specific business. A blizzard may shut down roads and bring electricity to a halt for several days; a flash flood could damage docks and equipment on a riverfront; a lightning strike may hit a building and touch off a fire; an ice storm can cause roofs to collapse; high winds can knock out power lines; and a heat wave may bring on rolling brownouts and threaten outdoor crews with dehydration. Any of these localized weather events that catch a business unprepared can be both disruptive and costly.

Weather on the Waterfront

It's a message that rings true for the maritime industry, which throughout the centuries of its existence has been at the mercy of foul weather. Despite advances in forecasting and understanding natural events, weather can be just as unrelenting a foe in modern times as it was when ships worried about sailing off the edge of the earth and into the sea of monsters that lay beyond.

Maritime professionals who plan ahead and stay prepared know they have the best chance of limiting weather-related risks to their business. By working with their insurance agent and taking advantage of risk management resources that may be offered by their insurance company, a maritime business can be prepared to sail through the worst storms.

A Three-Step Strategy

Although the specific content of a plan may vary depending on the business, the general approach is similar for most businesses. The following is a three-step strategy for coping with weather-related events:

1. ***Prepare:*** Assess your business and understand the key components that are critical to how you function and serve your customers. Think in advance about what actions you would need to take and who you would have to notify if weather shut down your business both short and long term. Are there supplies you need to have on hand in the event of an emergency? Are there specialists you would need to bring in to get up and running after a business interruption? How would you keep operating, and in the event that you could not carry on in the way your business normally does, what could you do to preserve your relationships with customers? By looking at each part of your business, analyzing the steps you would need to take, and putting together a plan of action, you can best prepare for whatever weather-related event occurs.

2. ***Respond:*** The catastrophe is fast-approaching and the time for you to respond is limited. First, ensure that human life is protected; take action to keep employees safe, whether it is sending them home or getting them to a secure location. Second, protect your physical assets to the extent possible. Tie down equipment, secure vessels, cover windows, sink dry docks, etc. You should not have to scramble for supplies and protective equipment at this late date when the crisis is upon you because of your earlier analysis and advance planning. If Step One was implemented correctly, following the plan of action you created to prepare for this event should carry you safely through Step Two.

3. ***Recover:*** The storm has passed; the physical danger is now behind you. But recovery is still an issue because roads may be closed, river navigation may be impossible,

> "...no maritime business should take on the risks of weather-related events without having a plan that positions the company to respond and recover from any disaster, whether local or widespread."

and power may not be available. Employees can be scattered, attending to their personal concerns in the wake of the storm. If your plan of action was well thought out, you will have identified the resources you need to recover, whether it is temporary contractors to help you serve customers or backup generators to ease operations until power is restored, for example.

Prepare, respond, recover. Each step will only be successful if the plan you create is both thorough and accurate – and if it is a living document that you return to often to reconsider and update, rather than leaving it on the shelf for years on end.

Covering All the Angles

No one has to begin the emergency planning and disaster recovery process with a blank piece of paper in front of them. Many templates and guidelines exist for creating plans. Trade associations are one source; insurance companies, who have experience with all kinds of weather events across the country and around the world, may also offer resources. Your agent can help you customize a plan that meets your specific needs, depending on your business, your location and your risks. As you create your plan, there are several issues you may want to consider addressing, including:

1 ***Business Continuity:*** When an earthquake caused a massive tsunami in Japan last year, many factories that American companies depended on for electronic parts were wiped out or damaged enough to halt production. These companies had to find alternative supplies – which is a dramatic example of how a disaster can have an impact on a business far removed from the scene. In other cases, businesses may have to shut down their own activities for some amount of time while repairs are made, equipment is replaced or local infrastructure is brought back online. You may not be able to serve customers, and your cash flow may come to a complete halt for some time. If either your supply line is interrupted or your income flatlines, will your business survive? One way to manage this risk is to arrange for business interruption insurance – which, under certain circumstances, protects an insured against loss of income sustained when the insured is forced to suspend its operations as a result of damage to property from a covered cause of loss.

2 ***Records Retention:*** Whether on paper or in digital files, the records of a business are often the lifeblood of its success. Records may document long-time customer relationships, track the maintenance of vessels and equipment, identify key suppliers and subcontractors, and capture information needed for invoicing customers, paying taxes and meeting loan obligations. A fire, flood or tornado could destroy your business headquarters, eliminating the records you depend on. The lack of information could slow your recovery, diverting you from getting back to work by forcing you to reconstruct records from scratch. To manage this risk, it is important to have paper records duplicated and stored in a safe place, as well as consider backing up digital files to an offsite repository.

3 ***Emergency Contacts:*** In an overly connected world, people are easy to reach, whether by cell phone, through social media outlets, via messaging or through plain-vanilla email. But if a weather event damages cell towers, knocks out Internet connections and puts land lines out of order, it may be difficult to reach people. To manage this risk, it is important to keep updated information, with multiple ways to contact those who are critical for your business operation. Other emergency information should include local officials you may need to work with, subcontractors who could be useful for your business when you are in recovery mode, and insurance policy details.

No captain would set sail without a plan for navigating from home port to the final destination. No shipbuilding yard would start a job without drawings and plans in hand. Similarly, no maritime business should take on the risks of weather-related events without having a plan that positions the company to respond and recover from any disaster, whether local or widespread.

Tornadoes may be mostly in one part of the country, earthquakes in another area, and hailstorms somewhere else entirely. But bad weather happens everywhere, and creating an emergency plan in advance is an essential strategy for coming through storms safely and in good shape to survive as a business.

The Authors

Ken Baldwin is Chief Underwriting Officer and **Kord Spielmann** is Technical Director, Risk Control Ocean Marine, Travelers.

Port Security

Take the Money and Run

US Ports Risk Millions in crush to file FEMA paperwork

By Rick Eyerdam

Across America, from sea to shining sea, hundreds of millions of dollars in Port Security Grant funds that have already been awarded to prevent terrorist attacks at ports, port security agencies, cruise and cargo terminals are about to turn to dust.

Grantees were ordered by FEMA in February 2012 to take immediate steps to expend, draw down or close out DHS/ FEMA Port Security Grants or quickly reprogram the languishing funds. If this is not done very soon, "DHS/ FEMA will reclaim them to the extent permitted by law," according to FEMA's dire Bulletin 379. Deadlines and timelines for that edict are as follows:

- *All FY 2007 grant funding must be spent by June 30, 2012*
- *All FY 2008 and 2009 grant funding must be spent by September 30, 2012*
- *All FY 2010 funding must be spent by September 30, 2013*
- *All FY 2011 and FY 2012 funding must be spent by the end date cited on the award agreement, no more than 3 years.*

FEMA's threat of repossession was caused because, according to FEMA's early 2012 calculations, the most at-risk port communities in America have banked $303,980,061 of the $1,369,263,074 awarded to ports, terminals and security agencies from FY 2007 through 2010, "leaving a balance of $1,065,283,014."

All of the $1 billion remaining in the federal treasury has been dedicated to thousands of security projects and equipment purchases approved at the highest levels as essential to protect ports against terrorist attacks.

The Obama administration has redefined the failed PSG program as a stimulus program. The execution of the new plan involves a carrot and stick. FEMA/DHS will grant extensions -- typically for no more than 6 months -- and will grant occasional, rare waivers of local matching funds; but only if the grantee Fiduciary Agents (FAs) who work for the subgrantee ports and security agencies will promptly file the proper paper work.

Future grants mercurial

Beginning with the 2012 grant cycle, individual ports and terminals will be required to apply directly to FEMA without the help of trained FAs and to compete with their neighbors and regional security agencies for a limited amount of grant funds that will be awarded based on an algorithm that matches estimated risk to theoretical mitigation.

So, this is the last chance for many MTSA regulated facilities to secure and expend the millions in grant funds that they have already been awarded for 2007 – 2009. But even the most diligent port security officials are caught in a trap:

1. Little has been done to capture this potential windfall because tight city, county, state and port budgets constrain department heads from requesting a 25% match.

2. Under the rules in place until the 2012 grant cycle no money can be spent from Port Security Grants without the direct involvement of a single point of contact – often one person -- representing the Fiduciary Agent. That person is responsible to channel all communication, modifications, applications, requests for extensions, grant modifications and Environmental and Historical Preservation documentation from the subgrantees to the single FEMA Program Analyst (PA) assigned to the security region.

3. The FA can draw up to 5% of the total value of the grants as compensation. But the FA earns that money in part by filing at least six reports a year for each grant.

4. FEMA disciplines the FA by refusing to even consider requests for extensions or reprogramming, disbursal or other actions critical to the port security needs of the region when the FA fails to file timely reports.

5. So if the POC for the FA screws up the paperwork, it doesn't matter how diligent the subgrantee ports and terminals are in the region. It doesn't matter how much the safety and security of their facilities require the support of FEMA grants. If the FA has not shuffled the papers correctly and on time, sub-grantees don't get a hearing at FEMA when they want an extension or a modification of their grant.

The Risk of FA Failure

The FedReg says: "Upon receipt of the grantee's request, the FEMA PA verifies compliance with financial reporting requirements by confirming that the grantee has submitted all necessary Federal Financial and Programmatic Reports (SF-425s and CAPRs/SAPRs)." And, that is mouthful.

It means that the Program Administrator at FEMA will not even begin to double check whether the FA/POC has filed correctly all financial reports until after the request for an extension (beyond Sep. 2012) has been submitted. That deadline for filing was April 30, 2012 with FEMA reserving the right to extend the filing deadline. But FEMA warns that the written request for extension "will be granted only due to compelling legal, policy, or operational challenges."

All Photos: Rick Eyerdam

Short course to success

The shortest course to success securing the grant funds awarded for 2007-2008 and 2009 is for subgrantees to pick the projects they really need. Agree to pay the match from budgeted funds. Accept the grant payment from the FA, and then pay the match in monthly or quarterly installments. That is allowed.

This way, if the POC for the FA has failed to keep up his or her end of the deal with FEMA the FA can't get in the way of the approved grant award.

For those who have been awarded the 2010 and 2011 no-match grant funds, it is a no-brainer. Make sure your POC for the FA remains diligent and there are no administrative "holds" on the funds. Then go get them. (Subgrantees are entitled to access the same ND Grants files as the FA. No data can be altered, but the FA/POC diligence can be monitored by any stakeholder listed as a Contact in ND Grants computer program.)

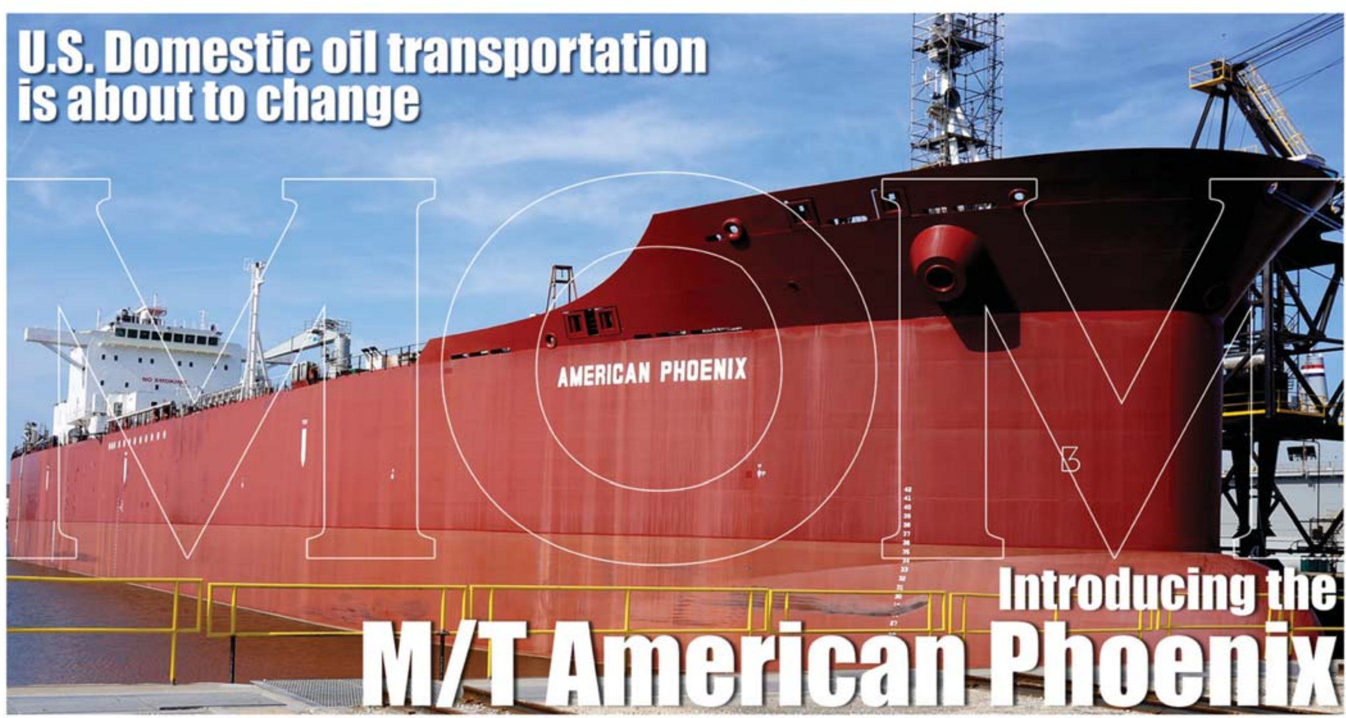
For the lucky ones who have all their paperwork in order and have met the deadlines, there is a pot of gold available, especially if they request the things FEMA wants requested in this election year.

"In light of the current economic situation and the need for further economic stimulus, the Secretary announced the Department and FEMA's commitment to provide grantees with additional flexibility to accelerate the spending of remaining FY 2007 - FY2011," the FEMA bulletin said.

"DHS/FEMA will allow grantees to apply previously awarded FY 2007-2011 grant balances towards more urgent priorities by way of an expedited project approval by DHS/FEMA…. Specifically, this allows expenditure on general purpose equipment and overtime/backfill expenses for first responders engaged in protection or prevention activities consistent with grant guidance."

FedSpeak decoded

That FedSpeak means that FEMA really wants subgrantees to spend this money. For all grants before 2012, the



M/T American Phoenix US Flag 49,000 DWT twin screw diesel electric fully redundant IMO II Chemical/Product carrier.

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FA and the PA at FEMA have remarkable discretion in reprogramming approved grant funds within the parameters of the approved grant budget. And they will apply these rules:

1. Avoid all construction or any modification that could require an Environmental and Historical Preservation Study.

2. Go for increased hours of work for sworn law enforcement and first responders, especially if they are already on duty under an approved security plan. If they are union employees, all the better.

3. Buy maintenance agreements and updates for existing equipment that was purchased from grant funds.

4. Buy upgraded equipment and extended maintenance agreements that can be put to work on approved security details immediately including the vast category of "prevention."

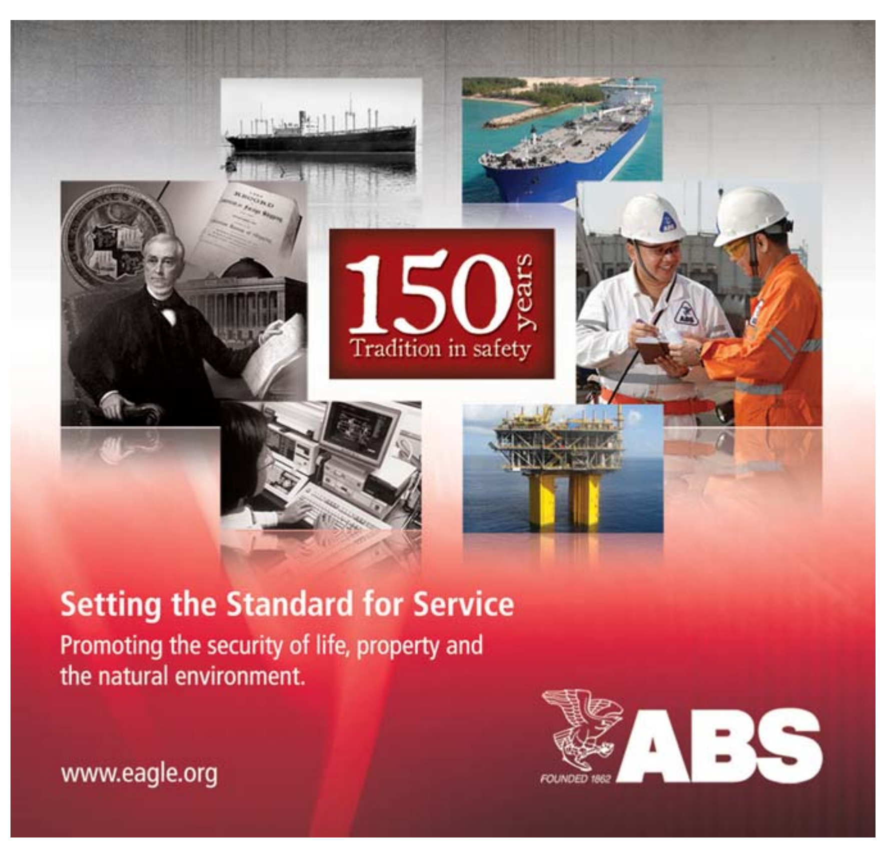
5. Spend the money on training programs already approved by the COPT.

One more tip

Use these words to make the algorithm happy: *Each of the budget items has been reviewed by the Area Maritime Security Committee and the Captain of the Port and found to be necessary and reasonable for proper and efficient performance of established collaborative regional security enterprises and facility security plans.*

The Author

Rick Eyerdam was editor of the Florida Shipper. He has written about and is considered an authority on government regulation of the marine industry. A past director of the Miami River Marine Group, he is a respected maritime consultant focused on port security and port security grant issues.



Regulatory

FMC: Power, Enforcement and – Your Risk

Don't Risk an Expensive Run-in with the U.S. Federal Maritime Commission

By Tara Leiter

For the first time in years, the U.S. Federal Maritime Commission ("FMC") has a full complement of five Commissioners and a renewed commitment to enforce the Shipping Act of 1984 (as amended, the "Shipping Act"). As a maritime lawyer representing clients before the FMC, I am often asked, "What is the FMC, what does it do, and why should I care?" The FMC is ramping up its efforts to find and penalize those who violate the Shipping Act, so it is a good idea to have at least a basic knowledge of the enforcement power of the FMC and how it can affect your business.

The FMC and What It Does

The FMC is the regulatory agency responsible for administering and enforcing the Shipping Act, the Controlled Carrier Act ("CCA"), and the Foreign Shipping Practices Act ("FSPA"). The FMC's jurisdiction extends to all vessel operating common carriers ("VOCCs"), non-vessel operating common carriers ("NVOCCs"), freight forwarders, and marine terminal operators ("MTOs") operating in the U.S. foreign commerce. This article only briefly discusses the CCA and FSPA as the Shipping Act is the most commonly cited statute by the FMC in its enforcement actions.

In short, the CCA allows the FMC to ensure that a controlled carrier's rates are not unjustly and unreasonably below market, which could disrupt trade or harm privately-owned carriers. A controlled carrier is one that is owned or controlled by a government as opposed to an individual or privately or publicly held company. The FSPA authorizes the FMC to investigate the treatment of U.S. carriers by foreign governments. If the FMC determines that U.S. carriers are subject to certain discriminatory practices in a foreign country, but the carriers of that foreign country are not subject to the same discriminatory practices in the United States, the FSPA allows the FMC to issue sanctions against the carriers of the discriminating foreign country.

The primary statute administered and enforced by the FMC is the Shipping Act, which regulates, amongst other things, common carriage in the foreign commerce of the United States. The principal purposes of the Shipping Act are:

1. Protect shippers from "unfair or unreasonable" discrimination by carriers,
2. Protect shippers from disreputable or unqualified NVOCCs and freight forwarders, and
3. Enable carriers and MTOs to enter into agreements between or among themselves that might otherwise run afoul of the U.S. anti-trust laws provided that they are not substantially anti-competitive.

The Shipping Act accomplishes the first purpose by requiring that VOCCs publish a tariff setting forth their rates, charges and terms of service and file with the FMC any privately negotiated "service contracts" they enter into with their shipper customers. The Shipping Act then requires that carriers charge either the applicable tariff rate or the rate contained in a service contract filed with the FMC. The Shipping Act's second purpose is accomplished by requiring NVOCCs and freight forwarders, depending on their location, to either register with or be licensed by the FMC, demonstrate their qualifications, and arrange financial security (usually in the form of a surety bond). The third purpose is accomplished by requiring that all carrier agreements be filed with the FMC for review to determine if the agreement is "substantially anti-competitive." After reviewing the filed agreement, if the FMC finds that the agreement is substantially anti-competitive, it can seek to enjoin operations under that agreement. If the FMC does not seek to enjoin operation under the agreement on the grounds that the agreement is substantially anti-competitive and the agreement becomes effective, the parties are granted anti-trust immunity with respect to activities authorized by the agreement.

Why You Should Care

The available monetary penalties for violations of the Shipping Act can be significant. In addition to monetary penalties, the FMC has the ability to revoke trading privileges if it determines such action is necessary to protect the shipping public from fraud and unfair practices. Although revocation of trading privileges is an available option, the FMC usually resorts to monetary penalties. If the FMC determines that a violation has been committed unknowingly, the penalty can be up to $8,000 per violation. In most cases, each bill of lading constitutes a separate offense. If the FMC determines that the violation was committed knowingly and willfully, that penalty increases to $40,000 per violation. Take a minute to consider the magnitude of these potential penalties. For example, if a carrier was to unintentionally commit a single type of violation during the term of a service contract for 2,000 TEUs with each TEU carried on a separate bill of lading, the potential penalties would total $16,000,000 (i.e. $8,000 x 2,000 bills of lading). If each of the violations in our example were committed knowingly and willfully (such as deliberately mis-rating cargo), the potential penalties skyrocket to $80,000,000.

These extreme penalties would be very difficult for the FMC to collect, so it is understandable that the FMC rarely seeks to impose the maximum penalty allowable under the Ship-

ping Act. In fact, the FMC and the alleged violator almost always enter into what is known as a "compromise agreement." Once the FMC's Bureau of Enforcement completes its investigation, it will often negotiate a settlement with the alleged violator. Typically, the alleged violator agrees to pay a mitigated penalty, one that is far less than the maximum statutory penalty, in exchange for a release from further action by the FMC with respect to any alleged violations uncovered during the FMC's investigation. No admission of guilt is made on the part of the alleged violator in exchange for the penalty mitigation. While the mitigated penalties are far less than the allowable penalties under the Shipping Act, they are still steep enough to encourage the alleged violator to change its suspect practices.

With the FMC's stepped up monitoring and enforcement programs, Shipping Act violators may find themselves paying hefty penalties. Just two months ago, the FMC entered into compromise agreements with eight NVOCCs and related companies for total of $490,000 in penalties. Three of the NVOCCs paid a combined total of $235,000. While the FMC appears to be currently focused on NVOCCs, there have been significant penalties assessed against vessel operators, including a $1.2 million civil penalty against a major carrier in 2011. In the announcement made by the FMC in connection with this penalty, the FMC's Chairman said, "These penalties should serve as a reminder… If you're violating the law, sooner or later, we will find you, and the consequences can be serious."

The Author

Tara Leiter concentrates her practice in the areas of public and private maritime law, admiralty law, environmental law, and port security matters for international and domestic clients. She is a member of the Maritime Law Association, WISTA and the Maritime Administrative Bar Association.

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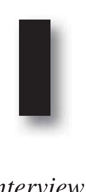


Interview

Urs Rathgeb, GM, Radio Holland USA

By Greg Trauthwein

Radio Holland

Imtech Marine recently made several moves to strengthen its Radio Holland network in the United States. With this, MaritimeProfessional caught up with head of U.S. operations, Urs Rathgeb, to discuss the recent moves and their implications to business in the near and long term.

MR. RATHGEB, PLEASE DESCRIBE YOUR MANAGEMENT STYLE?

I would describe my management style as participative or consultative. However, since I will ultimately have responsibility about the outcome, I reserve it to myself to make the final decision

IMTECH ANNOUNCED A BROADENING AND STRENGTHENING OF ITS RADIO HOLLAND NETWORK IN THE U.S. IN YOUR CANDOR, CAN YOU GIVE US A BRIEF OVERVIEW WHY THIS MOVE WAS MADE AT THIS TIME.

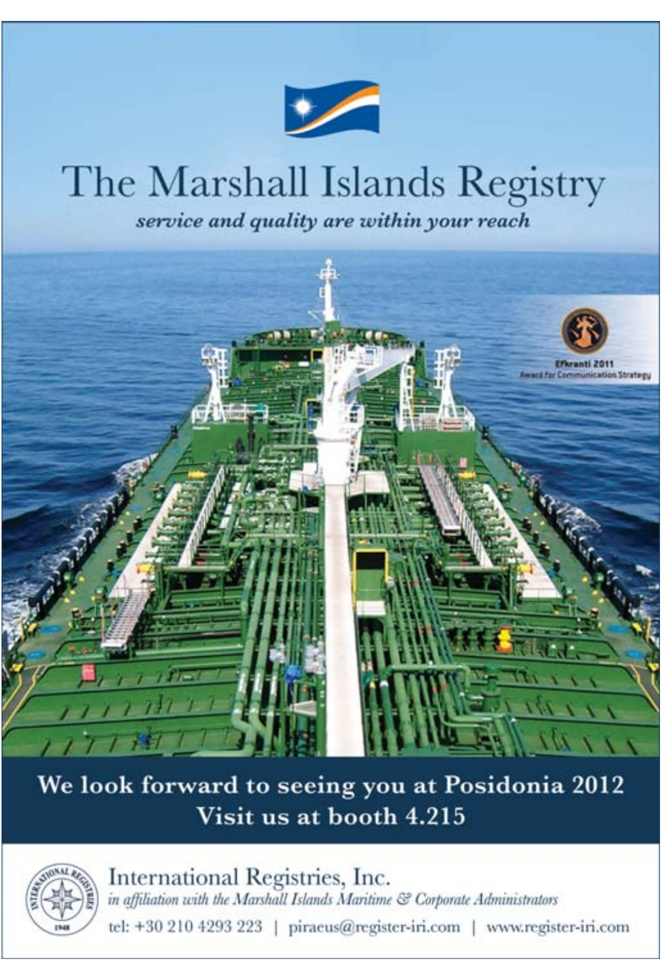
Imtech Marine's ambition is to become a true lifecycle management partner for our customers. From a regional perspective we were looking at how we can realize that ambition in North America. Through frequent customer visits I learned that we really can differentiate ourselves significantly by improving customer service. First, we want to be wherever the customer is. The additional ports where we will have presence (Charleston, Savannah, Corpus Christ, Portland) are key to that and make it possible to serve the customer quicker and more efficiently. It means that in June, we are present in 15 ports, by adding four to the original 11 locations and thus covering the majority of US ports. These offices are now being set up and will be fully operable in June.

Second, we want to take advantage of the acquisition of our sister company Groupe Techsol Marine in Canada by Imtech Marine, and develop joint opportunities. This brings enormous potential for customers in the US, which now have an alternative in a "multi-card" supplier of various integrated systems, versus suppliers that feature a one brand solution. We can truly integrate the best products of various reputed brands into one solution to accommodate customer preferences.

Third, we will bring our service delivery to the next level. The maritime industry uses methods of service dispatch that are proven through time, but are by no way state of the art anymore. We want to make sure that the customer will be served consistently, 7/24/365. Radio Holland service has to be at the same excellent level, wherever the customer's vessels go. This means that we have a team that has full visibility of available resources, and that we can assign the best Service Engineer to the job, from coast to coast, anytime. Fourth, we want to focus on what we are good at. Providing service, and delivering projects is our core. A strategic logistics partner can support us in that effort, much better and flexible than we ever could, also to the benefit of our customers who get quick logistical service, such as spare parts delivered all over the country asap. Finally, we want to have the best Service Engineers in the industry.

FROM A CUSTOMER'S PERSPECTIVE, WHAT TANGIBLE DIFFERENCE WILL THEY SEE IN BOTH THE PRODUCTS AND SOLUTIONS YOU PROVIDE AND HOW YOU PROVIDE THEM.

Expanding on the above, the customer will see us closer to the



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> I wouldn't necessarily say that I am bullish about the market prospects themselves, but about the impact that Radio Holland can have in North America as part of Imtech Marine, and together with our new sister company Groupe Techsol Marine. I believe that there are many customers who have a need for integrated solutions (Electrical, Propulsion, Platform Management & NavCom) that are OEM independent.

locations where he needs us, which is in line with Imtech Marine's global efforts by opening additional service locations more recently in Canada, Spain, Morocco, France, China and soon to come in Brazil. We will be more responsive, consistent, and have better trained engineers, and offer a wider portfolio. The increased portfolio includes, on the service side, in a first step, IT services on board, on the projects side the mentioned integration with Propulsion, Power Automation which we will realize in cooperation with our Imtech Marine sister companies.

TODAY, WHAT ARE THE KEY MARKETS OR MARITIME NICHES YOU SERVE IN THE U.S.?

Today we are still very much focused on the deep sea merchant shipping market, which is approximately 50 percent of our revenues. Offshore and workboat have increased though in importance, and also ferries, which have been an important niche, and have held up better than the traditional commercial shipping. Staten Island Ferries for example is a well known customer of Radio Holland USA now. For the offshore market, we will be present at the world's largest offshore exhibition, OTC, in Houston.

THIS MOVE WOULD SEEM TO INDICATE THAT YOU ARE "BULLISH" ON BUSINESS PROSPECTS IN NORTH AMERICA. SPECIFICALLY, WHAT BUSINESS AREAS DO YOU SEE AS RIPE FOR GROWTH?

I wouldn't necessarily say that I am bullish about the market prospects themselves, but about the impact that Radio Holland can have in North America as part of Imtech Marine, and together with our new sister company Groupe Techsol Marine. I believe that there are many customers who have a need for integrated solutions (Electrical, Propulsion, Platform Management & NavCom) that are OEM independent. This applies in particular for the offshore market in the Gulf, but also for many other customers who build special vessels, including for example for scientific purposes, or for ferries. In the service arena, there is a big demand for a provider which distinguishes itself with regard to professionalism. Besides that, I believe there are good opportunities in NavCom that are driven by regulation changes which are going to be effective shortly. ECDIS is one. BNWAS? We are in an excellent position to consult with customers about converting their fleets, and supporting them in their transitions from beginning to end.

THE WORLD'S ECONOMY HAS BEEN A TOUGH ONE FOR SEVERAL YEARS NOW. PLEASE DISCUSS HOW THIS HAS IMPACTED YOUR BUSINESS.

It would not be fair to say it did not affect us, however with our global reach we have been able to serve our customers globally, and though ship movements have been decreasing, our global service volume has been stable. Indeed, the overcapacity in shipping volume will ensure that shipper's margins continue to be under pressure, and with that, operating costs. Further, fleets today are much younger than even just a few years ago, so we need to work harder to differentiate ourselves, and identify other areas of activity. We are capable and are aiming to manage this whole situation by increasing uptime of equipment and decreasing total operational cost of the ship owner.

GOING FORWARD, WHAT DO YOU SEE AS THE KEY FACTORS FOR A COMPANY SUCH AS YOURS TO DIFFERENTIATE ITSELF FROM THE FIELD?

Be the most focused on the customer. Ultimately, I believe Radio Holland will become even more successful because it has the best network globally and in North America. Another significant factor will be the ability to become more proactive, and to a larger extent partner with the customer. The industry overall is very reactive in responding to equipment that has failed. This is particularly problematic since these failures often happen in places where service is difficult to provide. Imtech Marine's life cycle approach is focused exactly on pursuing a more proactive approach.

ASIDE FROM THE RECENT ANNOUNCEMENT REGARDING THE EXPANSION, HOW IS YOUR COMPANY INVESTING TO ENSURE ITS FUTURE STRENGTH?

We are investing now in our people and in broadening our portfolio and, with Imtech Marine, in state-of-the-art technologies that save the customer real money through the ships life cycle. We are also making significant investments in efficient tools for operations which make fulfilling sales and service

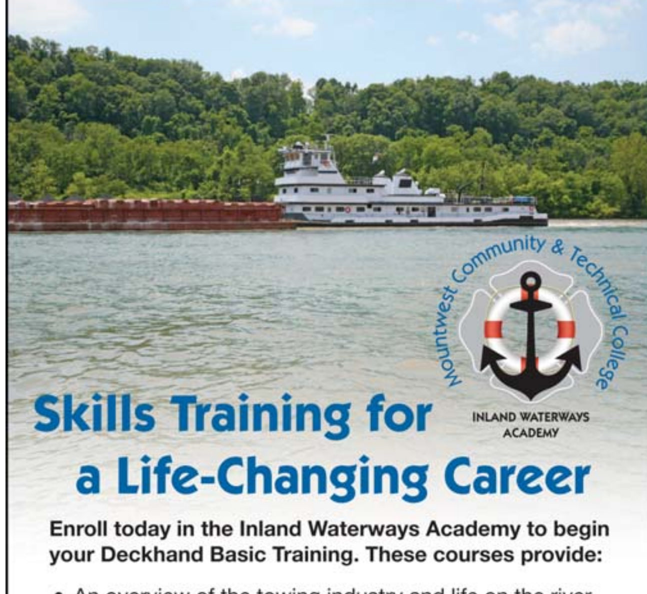
jobs smooth and seamless. Examples here are the strategic relationship with the third party logistics provider, service dispatch tool, or new service vehicles, that allow each Service Engineer to carry tools and supplies on every call, consistently. On a global scale we are investing in new service concepts, such as remote monitoring and maintenance, which is now available.

WHAT DO YOU COUNT AS THE TOP THREE CHALLENGES TO CONDUCTING BUSINESS EFFICIENTLY AND PROFITABLY IN TODAY'S MARITIME MARKET?

The top challenge by far is to have the best people, in particular those on the front. Despite relatively high unemployment and a shaky economy, there appears to be always a shortage of people with the right mix of education/training and experience. The second is to maintain an organization that remains focused on the customer. The third is innovation. I believe the marine industry is fairly conservative, but there is significant room to differentiate ourselves through innovative concepts, that are not yet wide spread. Examples are an approach that focuses more on the ships' life cycle, "green" (and by that I mean concepts that save real money), remote monitoring, and preventative maintenance concepts.

WHO IS URS RATHGEB?

Urs Rathgeb, general manager of Radio Holland USA, has a degree in economics from University St. Gallen, Switzerland. He started out as a Financial Analyst, and eventually assumed the role of CFO at Sulzer Pumps, a manufacturer of engineered centrifugal pumps, focusing on oil & gas, hydrocarbon processing and power plant applications, in Portland, OR. After a period as the head of Sulzer's Holding company in the US, he assumed the role of Integration Manager and then General Manager after acquisition of a manufacturing plant by Sulzer Pumps in the Houston, TX area in the spring of 2005. In 2009, he joined Radio Holland USA, where in the summer of 2010, he was promoted to General Manager, responsible for its activities in the US and Canada, after initially joining as Chief Financial Officer.



Environmental

New "ECO-SHIP" Technology – Risk or Reward?

By Robert Kunkel

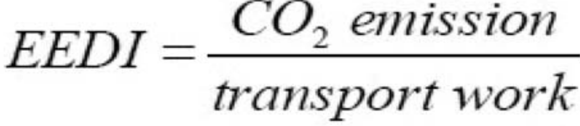
The decision to invest in shipping requires a very thorough risk analysis prior to committing capital, taking into account the supply and demand balance of a certain sector, current freight market, available cargo and asset or operation costs. These categories play a part to determine if the investment risk produces a suitable reward. Recent decisions by the IMO have added a new category in that decision process. This category determines whether the new asset is environmentally efficient and meets a new index. "Will the new regulation become an investment risk or a reward."

The Seahorse 35 - one EEDI Handysize Bulk Carrier design being offered by the Chinese Shipyards.

IMO MEPC: Application of EEDI

On July 15, 2011 mandatory measures to reduce emissions of greenhouse gases from international shipping were adopted by the IMO MEPC. Issued as an amendment to the MARPOL Annex VI Regulations, the regulation adds a new chapter 4 making mandatory the Energy Efficiency Design Index (EEDI) for new ships, and the Ship Energy Efficiency Management Plan (SEEMP) for all existing ships. For those not entertaining the risk of a newbuilding project in the current freight markets, read the regulation again. The intent of the measures is to eventually affect ALL ships. Your existing tonnage may be at a competitive risk. For others looking for the reward and a competitive edge with new EEDI rated designs, is technology is now taking the lead in making that decision?

A review of recent investment candidates produced many debates concerning the application of the new EEDI. Proposed as an environmental initiative, the latest industry discussions speak only to an owner's decision to build this new "ECO" tonnage and the disruption the new ships may cause if introduced into an already over-supplied market. That debate demands a new risk/reward analysis and it is certainly "Green" based. However, it is not the environmental color of green that is forcing the decision process. Some opponents of the index actually question global warming as a whole and the need to control or cap CO2. Others question why government feels compelled to "index" the advancement of technology. Still others believe EEDI is a sales pitch from shipyards, class societies and others who benefit from the need to entice an owner to replace tonnage that will not score highly within the SEEMP. We simply ask if government indexing "efficiency" is an investment oxymoron. Using the relatively simple formula as set forth below, the EEDI looks to establish whether a future ship design meets energy efficiency standards and in turn reduces CO2 emissions. Those standards defining "transport work" taking into account fuel efficiency and speed as it relates to cargo capacity. The basic formula is:



$$EEDI = \frac{CO_2\ emission}{transport\ work}$$

Applying new technology in any industrial sector involves commercial and operational risk. In an effort to reach the EEDI standards many of the new signs are being developed with smaller engines and in turn less horsepower. This is also a concern when the crew may need that extra "push" in a confused sea or dangerous weather.

The calculation of speed and fuel consumption to reach a favorable index rating should not be confused with fuel reductions made available by "slow steaming". The engines in-

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> "Wartsila's report further identifies systems that do not require new ships or expensive modifications. For example, does the company employ weather routing for its fleet (10% savings)? Do voyage estimates take into account variable speeds or ship arrivals that consider port congestion (8%)? Are hulls cleaned and coatings maintained or propellers polished during drydock and when under operation (3%)?"

stalled in existing tonnage may be de-rated or operating below normal continuous rating in these depressed markets. However, the availability to outrun a storm or maintain steerage in a strong current or excessive swell is still available. New EEDI rated designs may not be able to make that claim in the near future. That is a concern with many maritime professionals.

Basic Emissions:

The reduction of CO2 at the funnel is a result of fuel efficiency and it can be completed by burning less fuel, alternative fuels or no fuel. The concept of fuel efficiency is not new in our industry and most owners will discover the greatest savings in fuel costs comes as a result of their crew accepting or developing an onboard culture of energy awareness. Despite discussions of new propeller designs, engine types and hull optimization (all new EEDI promises) the human factor affecting fuel or energy efficiency can be as simple as extinguishing a light, adjusting course and speed to meet actual voyage requirements or properly maintaining the vessel. The 2008 Wartsila energy efficiency report ***"Boosting Energy Efficiency"*** rates that "energy awareness culture" at 10 percent of existing fuel costs. Whether an "index" is applied or not, the basic concept remains; become energy efficient and as a result reduce your emissions.

Wartsila's report further identifies systems that do not require new ships or expensive modifications. For example, does the company employ weather routing for its fleet (10% savings)? Do voyage estimates take into account variable speeds or ship arrivals that consider port congestion (8%)? Does the vessel maintain a spare part inventory that allows proper condition-based maintenance for fuel efficiency (5%)? Are hulls cleaned and coatings maintained or propellers polished during drydock and when under operation (3%)? Each of those categories has been considered in ship operations for decades.

Operators who cannot answer those basic questions with a resounding "yes," then the 1994 IMO requirement of ISM incorporated in Chapter IX of SOLAS has failed. One of the key concepts of ISM was to avoid damage to the environment by creating a safety culture and planned maintenance program. The necessity of an EEDI or SEEMP is an acknowledgement that ISM has not kept its promise. And why not? Because regulations do not take into account the commercial aspects of ship operation. They do not consider the reward.

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Environmentally Sustainable Ops

Consider some of the EEDI debates resulting in discussions of a rush to replacement tonnage or the scrapping of 15 year old ships. The operational items listed above do not require an owner to build new tonnage or scrap existing vessels considered SEEMP deficient. The first move is simply the commitment to an environmentally sustainable operation.

An owner in the position to build or replace existing tonnage must consider whether the EEDI "future-proofs" his ship? We would argue it does not and the decision to build should not be based on energy efficiency alone.

Propulsion systems, hull optimization and fuel types utilized in the construction remain the choice of the builder and the owner. The EEDI does not dictate which technology is correct or for that matter necessary. The instrument only requires a minimum standard of energy efficiency the new design must reach. With the development of common rail fuel injected engines, virtual hull and systems designs, and alternative fuels all potentially and economically feasible, let's hope we are not basing future tonnage on a government compelled index. And here is why: Though the EEDI concept and formula initially spoke to a simple calculation, take a look at the latest revision to the algorithm. It is far from simple (see above).

Will financiers, banks and investors now look to a technical index to determine whether the risk meets the reward? In our opinion, "cargo is still king" and the commercial risks of supply and demand will continue to determine whether the risk meets the reward.

The Author

Robert Kunkel is President of Alternative Marine Technologies. A past Vice President of the Connecticut Maritime Association, he is also Technical Manager for Coastal Connect www.coastalconnect.com.

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A Culture of

Former DHS Secretary Tom Ridge and past U.S. Coast Guard Commandant Tom Collins address maritime risk head on. Your corporate brand, reputation, good will and long-term financial viability may well hinge on what they have to say.

— By Joseph Keefe, Editor

Risk Management

Photo credit: David Rider, of The Seamen's Church Institute

Managing risk has never been an easy proposition. The bad news is that it won't get any easier in the short term. According to Ridge Global, a U.S.-based strategic consulting and risk management firm, Maritime Risk is the extent to which an entity is threatened by a circumstance or event occurring in the maritime domain, and can be attributed to assets, individuals, organizations or nations. Maritime Risk Management is the business practice of systematically and methodically identifying, analyzing, and mitigating threats and reducing exposures to loss faced by organizations or individual stakeholders with maritime interests.

Looking at the big picture, how maritime operators and businesses decide to shape their corporate cultures will make all the difference in terms of long term viability and profits. That process must involve a sharply renewed focus on all kinds of risk. That's how former Department of Homeland Security Secretary Tom Ridge and past U.S. Coast Guard Commandant Tom Collins see it. Their combined experience in the maritime domain and careers spent largely addressing the risks facing not just maritime businesses, but all Americans, is worth more than just a look.

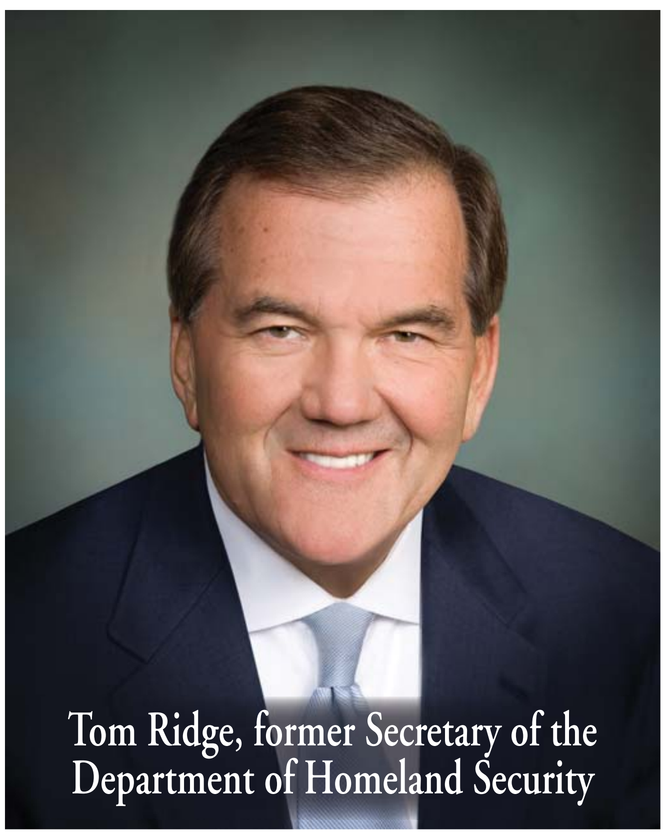
Homeland Security: Global Reach; Corporate Relevance

Standing up the Department of Homeland Security in 2003 was arguably the most ambitious reorganization of government in history. Leading the fledgling government organization of 180,000 employees and 22 individual departments was Tom Ridge, former Pennsylvania governor and congressman. In charge of incorporating the largest and most important DHS component was then-U.S. Coast Guard Commandant Tom Collins. Called on to not only define and mitigate risk in the immediate wake of the 9/11 terrorist attacks, both had to quickly assemble the team to do it from a diverse group of sometimes unhappy participants. The effort continues today as a still uncompleted work, but the fact that it works at all is tribute to the two most prominent players in the mix.

Today, Ridge and Collins have teamed up with an impressive group of mostly flag level military officers to form the newest part of Ridge Global LLC. Ridge Global's Flag Bridge brings together an elite team of former U.S Coast Guard flag officers and maritime subject matter experts to provide high-level, strategic consulting services supporting risk and sovereignty management initiatives in the worldwide maritime domain. Before Ridge Global and Flag Bridge, there was the Department of Homeland Security and the United States Coast Guard. The creation of DHS brought Tom Collins his first contact with Ridge, whom he worked for and with during the early years. What they both brought out of that effort is manifested today in their collaborative private sector work. Looking back at the early days of DHS, Ridge explains, "The task of creating this department was far more complex than most people will ever realize. I say this to educate; not to complain. There was no time to establish a plan to integrate multiple units of government and 180,000 employees. Inte-

Then Secretary of the Department of Homeland Security Tom Ridge speaks to the Commandant of the Coast Guard Adm, Thomas Collins, aboard a 47 foot motor lifeboat from Barnagat Light, 2003.

Photo by PA2 Fa'iq El-Amin


Tom Ridge, former Secretary of the Department of Homeland Security

grating the multiple business-related tasks of some of the bigger agencies – procurement, human resources, IT – continues almost ten years later." Collins remembers the effort by saying, "The question I always got from the Hill was, 'how are you balancing all your missions?' especially as we built out a more robust security organization during those years. The new law that created DHS required that we continue to support all our missions. The Coast Guard has a broad set of missions, historically focused on safety, search and rescue, etc., but, we started out as a law enforcement organization in 1790, enforcing customs laws. That whole thing is a dynamic process; not static. It's very much a risk-based process. The Coast Guard does that all the time to address the greatest maritime threats and risks to public safety and security. And, it happens every four years in earnest because a new management team comes in. It's done within a framework of continuity given the carryover of personnel from one Commandant's term to another. Facilitating mission adjustments, sometimes very quickly, is due to the fact that the Coast builds and maintains versatile, multi-mission capability in its people, ships, boats and planes. Overall, I believe the current Coast Guard leadership team has struck the correct mission balance and the associated lay down of resources given the current risk environment and the budget challenges facing our nation." Transferring that risk management experience to the private sector is one thing. Getting corporate America to buy in is another.

> "At some point in time, corporate America said we're going to turn quality into a core business function. And everything we do, every step along the way, we're going to embed that into our process. It was a significant lifestyle change for these companies. In my judgment, the next lifestyle change should involve taking that same notion and building a culture of resiliency and security into their entities so that it becomes very much as imbedded as a core business function."

Change of Culture

According to Ridge, the best frame of reference with which to put emphasis on managing risk from the private sector is to call upon corporate experience with Total Quality Management. "At some point in time, corporate America said we're going to turn quality into a core business function. And everything we do, every step along the way, we're going to embed that into our process. It was a significant lifestyle change for these companies. In my judgment, the next lifestyle change should involve taking that same notion and building a culture of resiliency and security into their entities so that it becomes very much as imbedded as a core business function."

Ridge describes the effort as a modest add-on cost to an existing insurance policy because the failure to build this cost associated with it will result – if you are a publicly traded company – in the diminution of equity value, brand tarnishment, and a negative effect on employees and the community in which you work. He adds, "You can't afford not to do it. The SEC told companies back in 2010 that have to pay a lot more attention to risk management and risk oversight. But, that's just the tip of the iceberg. What they do, how they do it and how far they drive it into their core processes, all remains to be seen."

Managing risk today in our ports is done, in part, through a series of port security grants to individual port authorities.

That money has created a patchwork of equipment and programs that is imperfect, but arguably improves what was in place in the immediate wake of 9/11. For those municipalities and/or ports that continue to depend heavily (and primarily) on federal funds to secure their assets from danger, Tom Ridge offers caution, and another way forward. What he has to say might not be exactly what readers want to hear.

"The responsibility to secure private sector assets belongs to the private sector. And while these port security grants are a very modest, almost minimalist reflection of a political impulse to do something, at the end of the day, the maritime industry shares the ultimate responsibility to secure its ships, its port and all related infrastructure." Ridge goes on to point to the billions of dollars spent by the financial services sector, the chemical industry and the nuclear power and energy industries to secure their assets. He continues, "It's good to have a few public dollars, but this is only a drop in the bucket as to what needs to be done over a period of time to secure the maritime infrastructure. Anyone who is looking for more money from the federal government to achieve that goal is going to be waiting a long time for an adequate level of funding." Separately, Ridge also explains the hazards of not paying enough attention. "The maritime industry is subject to a new security management standard called ISO 28000. The maritime industry, while recognizing the existence of the standard, has been very slow to comply. The corporate world has been put on notice that they need to take a look at how they are developing the security and resiliency culture within their company. Speaking more to a C-level audience, Ridge neatly sums up his views on the importance of the maritime security commitment. "At the end of the day, there is a return on that investment. A more secure company is a more valuable company. That's not Tom Ridge talking; that's a fact. There is a return when you invest in security and resiliency. Government can encourage public-private partnerships, but increasingly, it should become more and more the concern of the board of directors."

Domain Awareness: A Regional Approach

Headquartered inside the beltway in Washington, DHS consists of 180,000-plus employees from a combined 22 agencies that manages risk for the American people. In the private sector, Ridge Global does the same thing. What Ridge and Collins have to say about the operating models for both sides of the equation is telling. For his part, Ridge insists, "While the notion of risk management is well understood in the private sector, it has yet to be fully adopted in many instances within government. Within DHS, they are moving at glacial-like speed towards that notion at our commercial airports. I don't necessarily blame DHS and/or TSA for this, but Congress has to become more supportive of proper risk practices."

Getting more specific, he adds, "Relevant to the future of

ADM Thomas Collins (USCG retired), Flag Bridge Executive and former U.S. Coast Guard Commandant

"Real progress has been made. The local interagency, joint, public/private control centers in the various ports are good examples of this. Local law enforcement and private sector interests either want a seat at the table and/or timely access to relevant and actionable security information. We just need to evolve it more and get more sophisticated. As a nation, we are under-investing in the joint operation center concept."

SITREP U.S. MARITIME RISK

Ridge speaks from the rare perspective of someone who has not only served at the highest levels of federal and state government, in the U.S. House, the armed services and now, as President & CEO of a private consulting, risk management firm. In April, he weighed in with ***MarPro*** on his take of the biggest risks – short and long term – to the world's maritime sector. "The most immediate operational risk is piracy. In certain parts of the world, this is a constant threat that affects shipowners, insurance companies, financiers, governments; everybody. The longer term threat will continue to be – because we are a maritime nation – the kinds of disruptions that we can anticipate will occur in a globally interconnected world. From political turmoil, natural weather events, black swan events and even such things as port closings due to labor strikes and God forbid, a terrorist incident. So, short term, it's piracy; long term, it involves building that enterprise wide strategy and security platform to deal with the enhanced vulnerabilities of the maritime world."

Also weighing in on what Ridge estimates as shipping's number one immediate vulnerability is Tom Collins. "We have a very poor country (Somalia) with no legal frameworks. That's problematic in itself. Clearly, it is one of the top maritime security issues that we're facing today. There is no silver bullet, no one right answer. You have to attack it diplomatically, economically, legally, and so forth. What IMO has done so far is good. Their template for best practices is terrific. We should be looking for regional cooperation. And governments need to get more involved. And then, there's industry. I think it has to be shared responsibility. It cannot be expected that the world's navies to be police in a 2 million square mile area on a 24/7 basis. If you want to manage risk, then it has to be shared responsibility."

> "...you ask, are armed guards a good thing? Absolutely. To my knowledge, there's not one attack that has been successful when armed guards were involved. The expense of that, relative to the value of the ship, cargo and the crew? Insignificant. But, it's part of the cost of doing business."

Collins goes on to describe a plan which involves well-rehearsed procedures. He adds, "You need to practice good security. This involves awareness, prevention, protection, response and recovery. They have to be active in all phases in that effort. As part of the total solution, you ask, are armed guards a good thing? Absolutely. To my knowledge, there's not one attack that has been successful when armed guards were involved. The expense of that, relative to the value of the ship, cargo and the crew? Insignificant. But, it's part of the cost of doing business."

To those who would insist that the government should pay for piracy security, Collins points to U.S. nuclear power plants where the Coast Guard provides patrols and some waterborne security. "That's a different thing," he contends, adding, "It's a huge public security and safety issue. As a risk management problem, it involves low probability but high consequence if it happens. In a domestic setting, you can't afford a mistake. Piracy, on the other hand, is an international waters issue with multiple players involved. That's a regional approach with the governments providing only one part of the solution. Again, this is a shared responsibility with ships understanding that they must be proactive in their efforts."

DHS is the understanding they must build regions within the department, because you can't secure the country from inside the beltway. Today, a regional plan that sits gathering dust on the shelves at DHS would, if implemented, give the department the opportunity to do more aggressive oversight and build important relationships that the federal government should have with local and state officials, the private sector and the non-profit community." Illustrating his point with a reference to the private sector, Ridge continues, "We can't do all our work at Ridge Global from our headquarters in DC – we have to take it into the field. And that's exactly what DHS should do with a regional concept that was designed a long time ago but has been virtually ignored by the department."

Collins agrees. "We've made incredible progress." The concept of domain awareness, however, has been an evolutionary journey. "It goes back to Jim Loy's tenure as commandant – we 'socialized' the phrase, bringing it to conferences, interagency meetings, workshops – defining what it means. During my tenure, it involved defining how to get the big picture and how to make it better and defining why it was so critical. It involves building blocks. But, we haven't come far enough along in those efforts and we're not there yet."

Protecting Infrastructure, People and Ships

Infrastructure protection is one thing that homeland security and private industry both have in common. Going about that is very much a procedural exercise, no matter where the effort starts. Tom Ridge states unequivocally, "You don't go in with a preconceived notion. You do the assessment first. Based what the team can identify, you then rank priorities. You can look at any enterprise and then identify multiple potential risks to the enterprise. Make the assessment, establish the priorities and recommend solutions. It's transactional and it involves best practices."

Not surprisingly, not everyone thinks they need help. "Just about every security professional we deal with believes that they are fairly well protected and that they don't need a lot of help. The challenge is to convince them that it is not our job to be critical; it is to be supportive. We like to help them build a much more strategic approach to how to look at security and resiliency; help them do as detailed an audit as possible to show them the gaps – to identify where they need to ramp up."

Maritime Domain awareness involves people, cargo, vessels, ports and infrastructure. Collins explains, "All of those things you need to collect information on. Once you get it, you need to put it all together, analyze it and then disseminate it. Where we can do better is in the analysis and dissemination part." Collins then circles back to the need for investments in regional partnerships. "Real progress has been made. The local interagency, joint, public-private control centers in the various ports are good examples of this. Local law enforcement and private sector interests either want a seat at the table and/or timely access to relevant and actionable security information. We just need to evolve it more and get more sophisticated. As a nation, we are under-investing in the joint operation center concept.

Perhaps like no one before him or since, ADM Tom Collins was change agent for the Coast Guard, Homeland Security and the concept of risk management itself. Collins himself admits, "I had the opportunity to lead during a time of great transformation that I don't think has been seen except in rare moments in the long history of the Coast Guard. I would like to think that we managed that change successfully and we left the Coast Guard better than I found it; well positioned for the future."

If the risk management advice seems to roll easily off of Collins tongue, then there is a very good reason for it. Having 'been there and one that,' he also recalls his time at the helm of the Coast Guard. "We were faced with one of the largest regulatory mandates in the history of the Coast Guard; MTSA. At the same time, we pushed a whole maritime security protocol internationally – from scratch – with the ISPS code. We got the ISPS code signed in December 2003 at IMO by 142 nations. That not only required a new security protocol for ships, but for ports, as well. At the same time, we developed a National Maritime Security Plan and associated protocols for the nation. We deployed ships to war, built a robust INTEL support team, here and around the country. And then, we started the largest recapitalization project in the history of the Coast Guard. On top of that, we moved to a new Department at DHS. And all the while, we attained exceptional operational results across all our missions including record setting drug seizures, aggressive fisheries enforcement, and a proactive response to Hurricanes Katrina and Rita." That set of skills and life experience is arguably unmatched anywhere else.

For Tom Ridge, the metrics are quite simple: security and prosperity are interconnected. And, although that's a takeaway from his time spent at DHS, it also rings true for the private sector. "If you are going to be economically viable and prosperous, you are today going to have to pay a lot more attention to security than ever before given the globalization of opportunity and the globalization of vulnerability; they intersect. The connection between the credibility of your enterprise, the reputation of your enterprise, and the brand of your enterprise is linked long term to your vigilance and a culture of security and resiliency within that enterprise."

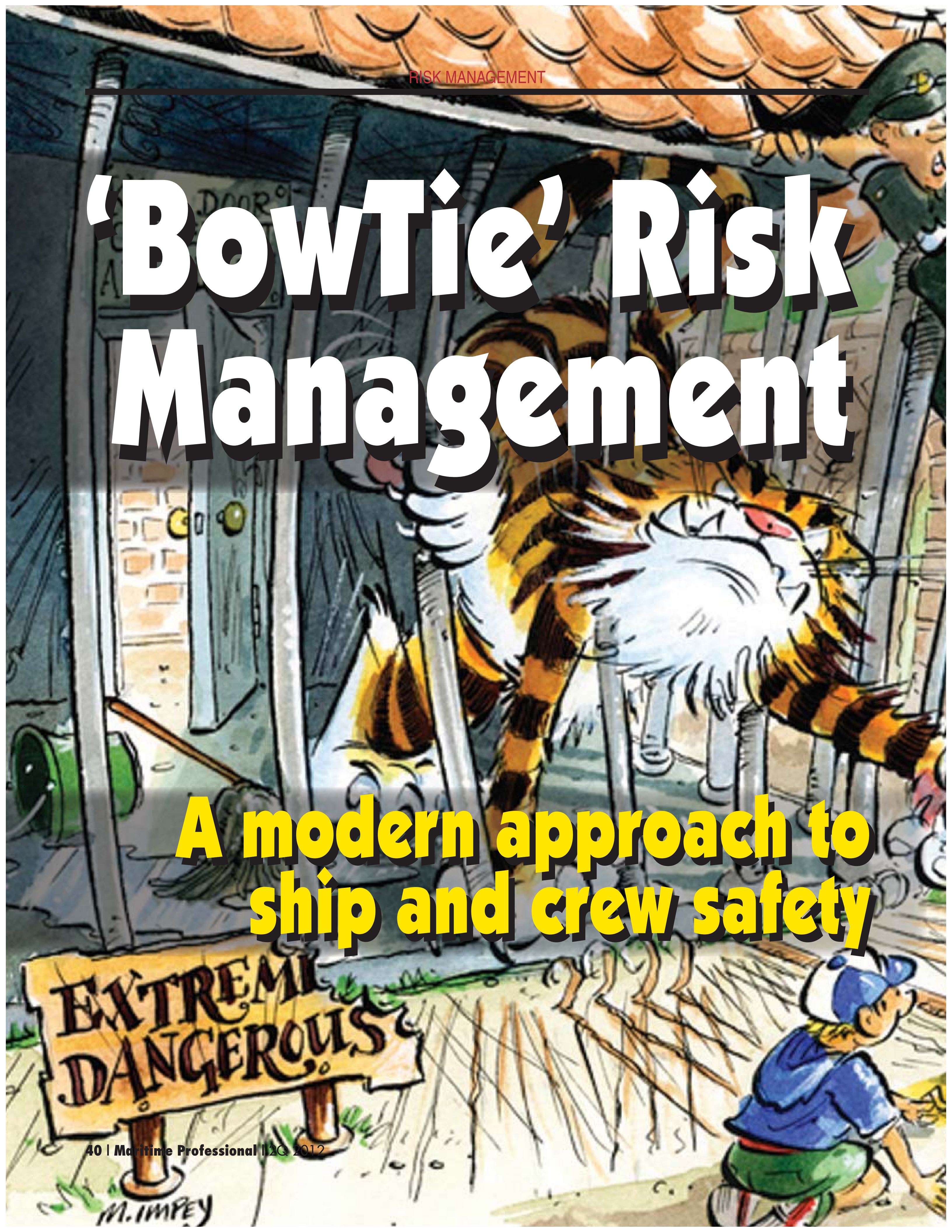
Like safety, quality and other core corporate values, risk management has to be part of today's corporate culture. In order for that to happen, it has to be led from the top. From the maritime perspective, Tom Ridge and Tom Collins, using Ridge Global's Flag Bridge concept as a platform, are both setting a pretty good example. Maritime professionals who fail to follow their simple advice arguably do so at their own peril.

UK P&I CLUB

Our ability to provide local knowledge and response is unmatched. In 350 ports around the world on-the-spot help and local expertise is always available to members.

'BowTie' Risk Management

A modern approach to ship and crew safety



MONKEYS
CATNIP
SAFE SWIPE ZONE

Despite all the technical advances that have brought us into the 21st century, too many people are still injured and killed when working on board ship and alongside during loading operations. Crew, stevedores and visitors to ships are all at risk. After much study and only after in-depth trials with specific shipowners, the UK P&I Club has launched an innovative risk management scheme utilising a 'Bow Tie' approach to identifying areas of risk and minimising the occurrence of incidents.

How it Works

The UK Club works with its Member shipowners and technical managers to identify the various threats to the smooth, i.e. claim-free, running of their vessels, conducting reviews onboard to identify those areas which may cause claims. The managers of the UK Club, Thomas Miller, have access to an incomparable amount of claims data drawn from extensive analysis of previous incidents over more than 20 years. This has enabled the Club to identify 'threats', 'consequences' and 'controls', the foundations of developing Bow Tie reports on individual vessels.

As an example, the Club says that on one vessel, a Panamax bulk carrier, five 'hazards' were selected as being the most frequent liability claim areas seen by the Club. These were:

- ***Crew hazardous activities*** – these can lead to personal injuries that in a worst case scenario, could be fatal;
- ***Carriage of cargo by sea*** – the level of cargo damage claims can be reduced given the full cooperation of crews;
- ***Ship in transit – collision/grounding damage –*** which clearly can cause injuries and even fatalities;
- ***Ship/crew actions*** – third party property damage – which again can be reduced if the crew and management exercise proper care and follow the correct procedures;
- ***Carriage of pollutants by sea*** – pollution damage – which matters to anyone who cares about the environment – or the cost to the insurers!

Following an extensive on-board survey, 'threats' relating to all five hazards were assessed, 'controls' that needed attention were identified and recommendations for changes in working practices were proposed to the master and owner/manager. The diagram that is used to depict the threats and consequences hazards, and which is prepared for each ship in the programme to be used as a tool for managing the risks, takes the form of a butterfly or a Bow Tie, hence the name: 'Bow Tie' diagram. Bow Tie diagrams are used in many different industries, not just shipping, to assist in the management of risk.

When it comes to applying the Bow Tie concept to ships, the UK Club has identified seven primary risk hazards; 76 common threats, which if not contained could cause an incident; and 450 controls which need to be in place and effective if the threats are to be contained. Although sixty per cent of UK Club claims are caused by 'human error', human error is often only 'the straw that breaks the camel's back' – the last event in a chain of events.

These events can normally be traced back to failures in one or more areas of ship operation. The Club sometimes refers to them as 'accidents waiting to happen'.

Claims insights combine with practical advice

How can a ship operator reduce the frequency of these 'accidents waiting to happen'? What 'controls' should he be looking at to ensure the 'threat' is contained and an 'incident' does not occur?"

When explaining the BowTie methodology, the UK Club usually cites 'the Tiger in the Cage' example. Clearly a tiger in a cage is a hazard but it is perfectly safe unless someone forgets to do something – like entering the cage to clean it without ensuring the tiger is securely shut behind another gate or by simply by not securing the main cage door after it has been opened and closed. Set procedures need to be followed if the tiger is not to escape.

A more practical shipping example however is slips, trips and falls among personnel. These represent nearly one in three of the large personal injury claims submitted to the UK Club. Such claims totalled a staggering $155 m over the past ten years.

As Karl Lumbers, the Club's Risk Management Director explains, "It is easy to dismiss these unpleasant accidents as 'human error' or even 'crew negligence'. There is often an assumption that people 'can look after themselves' and must take responsibility for their own actions. But to examine the detail of so many of them is to reveal other contributors to the chain of causation."

In the case of slips, trips and falls, the environment, which is mostly a function of design, may well have been a contributor: if there was inadequate lighting, if the dangers were not obvious, or the particular design of the ship required people to put themselves in hazardous situations just to get the job done. Visitors to the ship unfamiliar with the layout of the vessel are especially vulnerable.

"They are constant too with very little variation in numbers of claims from year to year. They are important because they represent genuine pain and suffering from people who have been injured or even killed because they have slipped, tripped or fallen aboard ship. It is not simply money, squashed metal or damaged ships as encountered in other sorts of claim," adds

UK P&I CLUB

> “When it comes to applying the Bow Tie concept to ships, the UK Club has identified seven primary risk hazards; 76 common threats, which if not contained could cause an incident; and 450 controls which need to be in place and effective if the threats are to be contained.”
>
> Karl Lumbers, the U.K. P&I Club’s Risk Management Director

Lumbers.

In conjunction with the Bow Tie initiative, UK Club is publishing a series of ‘Risk Focus’ booklets which highlight specific areas of risk. This month (April) sees the publication of ‘Risk Focus: Slips, trips and falls’.

A Role for all: Reaping the Benefits

Many members of the Club when briefed on this new Bow Tie approach to risk management have been enthusiastic and have requested surveys that they can consider and discuss amongst their management teams and sea-going employees. It is essential that seafarers participate in this program so that their practical experience and input can be heard and acted upon.

No matter how inexperienced he or she may be, every member of the crew has a role to play. Simply walking around a ship with open eyes, a crew member will see hazards, some serious, some minor. All need reporting to the relevant officer for action. A frayed rope on the gangway, a broken safety guard on a piece of machinery, oil leaks and spillages, a corroded mounting on a crane or davit, missing pieces of safety equipment, damage to hatchcover seals, the list is endless.

Strategic guidance to ship operators on tackling the root cause of expensive claims enables them to invest proportionately in risk management and loss prevention activity. The detailed reports and reviews share information across the fleet and operational departments enhancing credibility, co-operation and effectiveness. The result is a consistent and inclusive approach that encourages sustained and measured loss prevention activity over the longer term.

Teamwork and focus assists with Port State Control (PSC) compliance, speeding up that process and reducing the delay to ships and the burden on masters and crew during port calls. The transparency of approach enables owners/operators to demonstrate good practice to their customers, contractors, maritime agencies and other third parties.

Safety at Sea (and in port) is everyone’s responsibility. Karl Lumbers sums it up nicely: “With this system you can also look beyond its primary role, namely the reduction in claims levels, to the bigger picture.

Behind so many claims are incidents that lead to serious bodily injuries and loss of life. For those affected, including families and friends of the victims, anything that helps make life safer at sea has to be welcome.”

Vale

Banking on Big in Brazil

by Claudio Paschoa

Murilo Ferreira, President, Vale

Photo credit: Bruno Lima

Vale do Rio Doce, the second largest mining company in the world, is facing various challenges in 2012. These include low iron ore prices in the international market, logistics and casualties involving its iron ore transport trains and ships. If that wasn't enough, the company now finds itself going through a judicial battle with the Brazilian Internal Revenue office (Receita Federal), primarily revolving around taxes imposed on profits that Vale earned through international transactions. Most observers agree that Vale is in no position to pay those additional taxes.

The new president of Vale, Murilo Ferreira, took over the company just one year ago. His first main hurdle was to calm investors who feared that Vale would be eventually come to be controlled by the Brazilian Government. The company's finances are said to be significantly influenced by federal pension funds and the federal investment bank (BNDES); both of which are major Vale shareholders. Ferreira's efforts in this regard have yielded some early successes, but this aspect of his leadership represents just one of his many headaches.

Vale by the Numbers

Record income and profits were presented by Vale in 2011, but performance declined during the fourth quarter, due mainly to lingering effects from the global economic crisis. According to numbers released in mid February 2012, operational revenues last year reached R$105.5 billion (around USD $50 billion), a 23 percent increase over 2010. Vale's profit reached R$38 billion in 2011, also a 25 percent increase over 2010 numbers. Declining iron ore prices had a major impact on the company, as iron ore is its main product.

"The results of the last quarter of 2011 were strong, but inferior in dollars to the last quarter of 2010 due to lower (iron-ore) prices caused by the European recession and the negative expectations caused by the Euro zone debt crisis", said Vale in a media release.

Many market analysts had (correctly, as it turned out) forecast a profit decrease of between 20% and 22% in 2011. Unfortunately, Vale's fourth quarter numbers could be the harbinger of even weaker results in 2012, especially if the European economy continues its downward trend. A similar situation in China is also weighing on the company's future prospects. Significantly, Vale reported record iron ore and pellet sales last year, reaching a total volume of 299 million tons; slightly more than its output in 2010.

Murilo Ferreira puts an optimistic spin on Vale's performance, "Our financial performance was excellent, the best of all time. We broke various records, even with a challenging economic environment." He attributes this to what he characterized as a disciplined execution of strategy, benefiting from strong global minerals and metals demand.

According to Vale, the capital return for shareholders hit the record high of $12 billion, made up of the distribution of dividends reaching $9 billion, equivalent to $1,735 per ordinary share and by the $3 billion program to re-acquire shares, which was completely executed. For 2012, Vale has announced minimum dividends of $6 billion. In 2011 Vale's investments reached $18 billion, excluding acquisition costs. Of this total, $13.4 billion was spent through project operations and research/development initiatives.

Transport Risk

Vale continues to face serious challenges in transporting iron ore and minerals; both on land and at sea. In the first three months of 2012 alone, Vale experienced two train accidents. The second casualty occurred in the north of the country, which left the Carajas railway shut down for five days, incurring steep losses for the company.

Valemax next to a Capesize ship at Dalian Shipyard.

Photo credit: Dalian

Photo credit: Vale do Rio Doce

> "Vale has met with strong opposition in its bid to berth the Valemax ships in major Chinese ports. That said, the Brazilian government has intervened on behalf of the company and it is now expected (although not guaranteed) that permission to dock in Chinese ports will be released within a few months."

At sea, the news was not much better. One of their new Valemax ships ran aground while loading in Brazil and another experienced a ballast tank leak. It is here where Vale's bid to build a fleet of Valemax ships – the biggest bulk carriers by volume in the world – has also been met with skepticism; in Brazil and abroad. Some shipowners – particularly Chinese-based operators – complain that, with these ships, Vale may have a stranglehold on iron ore and minerals exports from Brazil, which negatively affects the already struggling offshore minerals and iron ore transport market.

In recent years, Vale acquired 22 Capesize ships, but the huge Valemax ships – capable of carrying 400,000 metric tons of cargo and at 362 meters LOA – are what Vale is banking on. According to Vale, these massive ships have improved the efficiency of ore transport from Brazil to Asia and also cut carbon emissions per metric ton transported by as much as 35 percent. Skeptics of the Valemax ship design maintain that these ships are unsafe to carry such large volumes and the recent ballast tank rupture that occurred while loading the ship in a Brazilian port have only increased the outcry.

Banking on Big: Economy of Scale

Vale has ordered 35 large Valemax ships, each with 400,000 DWT, each priced at a little under $110 million. Beyond this, they have also ordered another 4 Capesize ships (about 180,000 DWT tons each), plus two barge convoys composed of two pushboats and 32 barges for inland waterways.

Not surprisingly, Vale has met with strong opposition in its bid to berth the Valemax ships in major Chinese ports. That said, the Brazilian government has intervened on behalf of the company and it is now expected (although not guaranteed) that permission to dock in Chinese ports will be released within a few months. To be fair, some Chinese ports had to do some dredging in order to allow the ships to dock and changes also have had to be made in loading infrastructure and procedures in order to accommodate the massive ships.

Already, Vale has received eight of its planned 35 Valemax bulkers. Notwithstanding the previously mentioned ballast tank problem, Chinese shipowners are also claiming that the carriers will worsen the already oversaturated bulk markets and depress freight rates even further. Moreover, the steelmakers are also lining up against the Valemax strategy, claiming that the new vessels, if delivered in full, will give Vale even more control of pricing and delivery.

Bloomberg has reported that the latest Valemax received by the company is already valued at 36 percent less than what it originally cost. Hence, if their long-term strategy of building large and in great quantities does not pan out, a decision to sell

some of these assets in the near term would inevitably create sizable loss to Vale's bottom line. Today, about 80 percent of the world's iron ore is being transported by Capesize ships. These can only carry about one third of the cargo capacity of a Valemax and these Capesize ships are also being devaluated.

It is important to note that Vale, BHP Billiton and Rio Tinto thoroughly dominate the annual billion ton seaborne iron-ore trade. Vale itself actually controls a quarter of the world's supply of iron-ore.

In a nutshell, if the Chinese do not permit these gigantic bulkers to unload in their ports, Vale will face some serious problems. As MarPro went to press, Valemax ships are being forced to unload in other Asian ports, where the cargo is then transshipped to China by smaller ships. Although the system is working on an operational level, the practice clearly defeats the purpose of the "Valemax strategy." None of the five Valemax ships have reached Chinese ports since they began operating in May, although the Berge Everest, another large vessel used by Vale (388,000 metric DWT) called at the Chinese port of Dalian in December. In the meantime, Vale has set-up plans to bypass the exclusion by establishing a transshipment vessel in the Philippines.

Bottom Line: Big Risk, Bigger Possible Headache(s)

Vale claims it needs these ships in order to compete with BHP Billiton and Rio Tinto, which are both located much closer to China (10 days from Australia versus 45 from Brazil), and who pay about half the transport fees to move their product to the world's largest ore market as Brazilian producers do. But, according to Vale itself, Vale's strategy of reducing freight cost volatility won't change even if the company sells its giant ships, because it will lease them back under long-term contracts. According to Vale, the VLOC (very large ore carriers) or Valemax class carriers are here to stay and the problems faced in Chinese ports are only a temporary setback.

At the heart of Vale's new transport strategy is, of course, China itself. China's economy expanded by $2 trillion in the last decade as growth averaged about 10 percent annually. And, even if growth slows by more than one- third, the slower pace of growth – on top of previous gains – still translate into huge demand. When it comes to China, then, Murilo Ferreira, president of Vale do Rio Doce, insists, "We are looking at the long term." That much is clear.

Long term, though, Vale's ability to solve its transport pricing issues will depend on just how badly China needs Brazil's

At the heart of Vale's new transport strategy is, of course, China itself. China's economy expanded by $2 trillion in the last decade as growth averaged about 10 percent annually. And, even if growth slows by more than one- third, the slower pace of growth – on top of previous gains – still translate into huge demand.

Murilo Ferreira, President, Vale

Photo credit: photo Vale do Rio Doce

Photo credit: STX

Vale Beijing in STX drydock during construction.

iron ore output, and what it will give up to get it. Clearly, Vale is banking on big – big ships and big volumes – moving ever larger volumes with economy of scale and in what they claim is a decidedly greener fashion. It all sounds good, on paper.

The world's largest iron-ore producer supplies more than a quarter of the world's annual seaborne iron-ore exports. Gambling on a transport strategy that is at odds with many other shipowners in an already depressed bulk freight environment, while at the same time trying to supply the proverbial 600-pound gorilla known as China, leaves Vale at a critical moment in its corporate history. This big producer has big plans based on big ships. What happens next will make all the difference.

Conference

SHIPPING INSIGHTS 2012

Fleet Optimization: Challenges & Solutions

By Frank Soccoli and Jim Rhodes

We don't need to tell the readers of this journal that the global shipping market faces difficult challenges. To be sure, this is not the first time the maritime industry has found itself in troubled waters. Many of us remember the late 1970s, when hundreds of tankers were laid up at mass anchorages. Today, we face an evil "cocktail," whose ingredients include (a) anemic shipping demand caused by the lingering downturn in world trade since the economic meltdown of 2008, (b) oversupply of tonnage compounded by the newbuild ordering binge of the previous decade and inability of shipbreaking capacity to remove aging tonnage to a significant degree, (c) disastrously low freight rates, (d) tightening credit, (e) rising bunker costs and (f) pending safety and environmental regulations driving up the cost of operating ships.

Given this confluence of business conditions, shipping companies face an uncertain future. Some have already bit the dust. Others will follow. The survivors will be the ones that adopt new techniques and technologies to manage their ships and fleets more efficiently. We believe that ours is a resilient industry which – although it reveals a disturbing trend to repeat the boom-and-bust cycles of the past – can rise to the challenges of adapting to new market conditions and technological advances. To that end, the Shipping Insight Fleet Optimization Conference (www.shippinginsight.com) in October will provide a forum for addressing these challenges and solutions. The conference will bring together senior executives from all segments of the shipping industry, including naval architects, classification societies, insurers, ship owners and managers, shipbuilders and technology suppliers to discuss developments, case histories, best practices and solutions to meet the unique challenges of the coming decade.

The first decade of this century witnessed a boom in demand spurred by economic growth and easy credit, particularly in the BRIC countries and the developing world. Even with the financial downturn in 2008, the decade showed solid financial gains for ship owners. The Clarksea Daily Freight Index, a weighted average of earnings by tankers, bulkers, containerships and gas carriers, reveals the extent of the falloff since then. The average freight rate during 2000 to 2009 was $22.8K per day. Since then, the average is $13.2K per day, a drop of 42 percent.

Given the high cost of fuel and increased costs of compliance with new regulatory requirements, freight rates are now very close to operating costs, leading to razor thin margins, and in many cases operating losses. As credit tightens, shipping companies find themselves increasingly in desperate straits. A major source of the problem has been the new construction boom of the last decade. Following the crash in 2008, many ship owners tried to cut their losses by opting to delay deliveries of ships on order or canceling contracts with hefty penalty clauses. Nonetheless, some of the new ships ordered during the boom are still coming into service, only to face an inherent

Game Changer: LNG as Fuel

The use of LNG as an alternative fuel shows considerable promise for improving ships' efficiency and reducing their environmental footprint, and could indeed produce a paradigm shift in the shipping industry. In Norway, some 20 ferries are currently running on LNG, enabled by a supply infrastructure for LNG as a marine fuel in that country. Bunkerworld Forums recently reported that China is taking a serious look at LNG. CSC has in fact announced plans to modify some ships in their inland fleet from gas oil to a hybrid of LNG and gas oil, and a company spokesman has been quoted as predicting 20 percent cost savings as a result. The GL-classed product carrier Bit Viking, owned by Tarbit Shipping of Sweden, is the world's first bluewater dual-fuel vessel. DNV also recently announced that approval has been granted to Kawasaki Heavy Industries for a newly completed design for a 90,000 TEU container ship running on LNG, and Bureau Veritas has given approval in principal for the basic design of an LNG-powered 14,000 TEU containership, under a joint industry project with Daewoo and CMA-CGM.

imbalance of supply and demand. The slow growth rates of 4 to 5 percent are insufficient to overcome the over tonnage glut, although the situation may be mitigated to a certain extent by the increased efficiency of many of the newer ships, helping to ease the pinch of low freight rates.

As you would expect, orders for newbuildings have taken a nosedive. According to Clarksons Research Services, the orderbook in 2011 was down almost 45 percent from 2010, with only 1,250 orders placed. Projections for 2012 appear to be slightly above the 2011 ordering level with the longer-term outlook only marginally better. The falloff in new orders has created an overcapacity of shipbuilding resources, as the new shipyards constructed in China are just coming into play, putting pressure on prices for newbuilds. There are rumors of shipyards building "for spec" just to keep their facilities employed. Meanwhile, the price of fuel continues its inexorable rise, squeezing already paper-thin margins. Bunker prices in Singapore, for instance, have risen from a range of $500/MT in late 2010 to $700/MT in the current market, a whopping 40 percent increase. Given the current overcapacity conditions, these increases cannot be passed through to customers in the form of fuel surcharges, and many publicly traded shipping companies are posting lower earnings, or even losses, as a direct result of the soaring cost of fuel, which accounts for some 45 percent of the cost of operating a typical ship. Interestingly, the airline industry has announced substantial raises in passenger ticket prices for this summer due the rising cost of fuel, and Delta Airlines has been reported to be considering the purchase of a Conoco-Philips refinery in Pennsylvania to hedge against rising prices in the future.

Cost of Compliance

Shipping companies face a new wave of regulations coming into force in the coming decade, with significant economic and operational implications. The cost of meeting the new standards for reduced sulphur oxides nitrous oxides, particulate matter and greenhouse gases, especially carbon dioxide, in ship's emissions will be substantial. Ship owners are studying on how best to comply with the Energy Efficiency Design Index (EEDI) and Ship Energy Efficiency Management Plan (SEEMP) requirements. There is a high likelihood that ship owners in the future may be assessed a carbon tax based on the ship's carbon footprint. EU regulators have already implemented a carbon tax on airlines, and shipping is almost certainly in their sights as a future target. The new ballast water management regulations will likewise have a major impact on the bottom line for shipping companies. The cost of compliance is projected to total several million dollars per ship.

Solutions

Under these conditions, controlling costs and increasing operating efficiencies become the "prime directive" for shipping companies in the decade ahead. The solutions fall into several categories. They include ship design and construction, fuels, hull performance, voyage optimization and asset management. These are the subjects that will frame the debate at the Fleet Optimization Conference, which will be held in Stamford, Connecticut, October 8to10. Experts will discuss subjects such as return on investment from new efficient ship designs, bunker management, LNG and hybrid fuels, integrated weather routing and onboard navigation systems, hull treatment options, key performance indicators (KPIs) and integrated communication/IT solutions for more efficient management of ships at sea.

The Authors

Frank Soccoli is president of Soccoli Associates LLC, a maritime industry consultancy. **Jim Rhodes** is president of Rhodes Communications Inc., a public relations and marketing company specializing in the maritime industry. Soccoli Associates and Rhodes Communications, Inc. are jointly producing the ShippingInsight Fleet Optimization Conference, which has media sponsorship from Maritime Reporter and Maritime Professional.

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Risk Mgmt

RISK MANAGEMENT

Maritime Risk Management: Investment or Expense?

By Luke Ritter

Does your firm consider risk management initiatives to be an investment, or an expense? At face value, a very simple and fundamental question; in reality and practice, this question may not be so easy to answer. Either way, meeting this decision point head-on, and establishing corresponding guiding principles, is a critically important step toward effective risk management in the maritime industry.

Investment or Expense?

The Macmillan Dictionary defines an expense as "money spent in order to buy something." Note that their definition of an investment is quite different: "money used to earn more money." The most fundamental difference between these definitions has to do with the expectation that an investment leads to an associated return. Consider the questions for a moment: Was the last risk management project that you were involved with pursued as investment, or an expense? When the risk mitigation plan was developed for this project was there a discussion about an expected return on investment? Were metrics established to measure and monitor results? Was anyone help accountable for the performance of this project? If the answers are yes, your firm is likely at the leading edge and investing in risk management. "No" answers most likely mean that risk management is treated strictly as an expense.

"Businesses that are more risk-averse can logically be expected to invest more aggressively in risk mitigation – but this isn't always the case. Establishing a process to regularly assess risk appetite is an important component of an overall enterprise risk management strategy."

What is Your Risk Appetite?

The insurance industry uses the term "risk appetite" to describe the level of risk that an organization is willing to accept. It is therefore important for maritime firms to do the hard work of determining their risk appetite. The amount of risk exposure that an organization is willing to accept – as a normal course of business – should drive all major risk management decisions. Tolerance for risk exposure can vary greatly from one business to another in the maritime industry. By performing a risk analysis that accounts for a combination of threats, vulnerabilities, and consequences, as they correspond to a firm's security and resiliency posture, a firm can begin to determine its risk exposure. Once the level of exposure is identified, the firm can determine an acceptable level of exposure – or a risk appetite. It's interesting to note that often a company's tolerance for risk does not always match its actual risk exposure. In other words, companies are often unaware that their normal operating posture is exposing them to an unacceptable level of risk. Businesses that are more risk-averse can logically be expected to invest more aggressively in risk mitigation – but this isn't always the case. Establishing a process to regularly assess risk appetite is an important component of an overall enterprise risk management strategy.

Manage Risk Before it Manages You

In an increasingly competitive global marketplace, maritime firms can't afford to ignore opportunities to invest in risk management. In some cases, CEOs may be betting their company's entire long-term viability by betting that the firm will not experience a major disruptive event. The 6 most dangerous words in risk management are: "it will not happen to us." Today's most progressive and proactive management teams and corporate boards are working hard to avoid being accused of "willful disregard for the obvious." In light of the persistent and pervasive risk that exists in today's maritime environment, the "obvious" now includes establishing a comprehensive and effective enterprise approach to risk management. The cost of investing in risk mitigation can easily be dwarfed by the cost of recovering from a major disruptive event such as terrorism, geo-political upheaval, a natural disaster, industrial accident, or major labor unrest. To survive in a business environment replete with operational risk, it is essential that maritime firms cultivate a culture of resilience. Maritime industry leaders must be prepared to manage risk before it manages them – or be willing to accept the consequences.

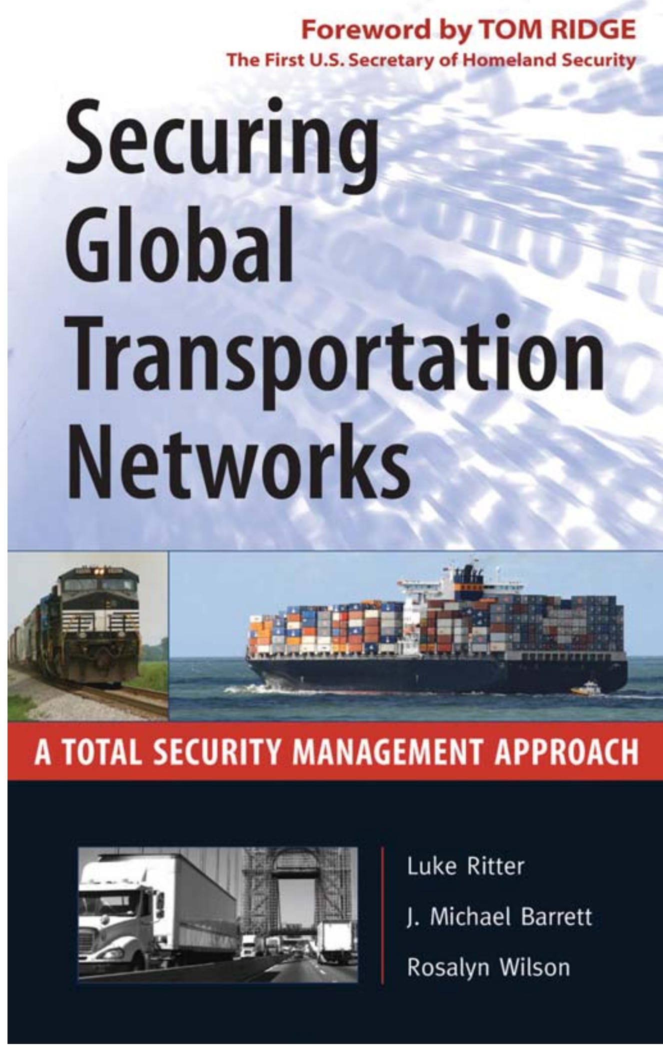
Unmanaged Risk:
"It Won't Happen to Us."

Last year a crew member working on a major cruise line was caught smuggling drugs into a Caribbean island. His primary method of delivery was his workplace – the ship. By using his vessel as both a hiding place, and a delivery vehicle, this crew member was able to smuggle hundreds of thousands of dollars worth of illicit material into a foreign country.

The cost of maritime piracy is conservatively estimated to be somewhere between $5 and $10 billion per year. $238 million in ransoms were paid in 2011. Hundreds of merchant sailors are currently being held as human shields and bargaining chips. A Middle Eastern tanker company recently paid $12 million to get a single pirated ship back in the gulf of Aden. Piracy is the ultimate low probability, high consequence risk. Yet some shipping lines are still willing to leave much of this to process chance. Ships continue to sail directly into high risk piracy areas with little or no information support regarding the risk. Does it make sense to carefully consider weather data for a particular transit area but ignore analytics related to criminal activity in that same area?

In 2006 a container ship was nearly lost in the Indian Ocean. After a mass conflagration broke out onboard, the crew had to abandon ship and was rescued by the Dutch Navy. Investigators determined that the cause of this catastrophic event ($300 million single day loss) was mis-declared freight. Fireworks were manifested as some other cargo and unknowingly stowed on the ship in a way that caused this fire. Visibility in the supply chain is a critical component of effective risk management. This event highlighted a classic maritime risk management challenge: Should sailing with unknown cargo be considered an acceptable level of risk?

We know that terrorists and criminals are determined to use the global supply chain to transport threat objects and illicit material. A few months ago an illegal shipment of surface to air missiles was discovered on a ship by officials in Finland. 69 missiles (labeled as "fireworks") were discovered on the ship. The captain was not aware that he was piloting 160 tons of illegal weapons to an unknown recipient. Effective risk management measures included an effort to deny adversaries the opportunity to use legitimate commercial maritime commerce as a pathway for destruction.



You Get What You Inspect, not What You Expect

Risk can never be eliminated completely, but proactive risk management in the maritime domain requires a commitment to 'leaving nothing to chance'. One of the most powerful risk management tools is one that is often overlooked; the process of verifying and validating business partners. Maritime business enterprises often involve the combined interaction of a complex and diverse mix of firms. Verifying that the firms you are doing business with are not exposing your company to unmanageable risks, and validating that your business partner's risk management strategy is aligned with yours, can go a long way toward reducing overall risk exposure.

Quality Management as a Model

The time-tested Total Quality Management (TQM) approach, pioneered by Dr. W. Edwards Deming, provides a useful framework for managing risk. Just as Deming's TQM methodology enlists the entire organization in an effort to boost quality through an integrated process management approach; effective risk management requires a comprehensive and standardized corporate approach focused on continual, incremental improvement. By implementing the same PLAN / DO / CHECK / ACT cycle used in quality management, maritime executives can use focus points, metrics, process re-engineering, and feedback loops to mitigate risk. If it hasn't been done already, maritime firms should consider designating risk management as an 'essential business function', and committing the requisite amount of resources. Practical management systems serve as the foundation for essential business functions in every successful company – risk management should not be an exception. In today's global marketplace, where weather events, criminal activity, and security breaches can cause immediate and devastating impacts throughout the supply chain, aggressive risk management provides a competitive advantage.

Return on Investment

By treating risk management as an investment, maritime firms can create value, enhance their competitive posture, and ensure long-term viability. Investors, insurers and regulators all encourage this approach as well, which leads to the ultimate competitive advantage: direct market rewards. It's hard to argue that a more secure and resilient business enterprise is not a more valuable one. The cumulative, market-driven effect of businesses investing in risk management initiatives ultimately provides residual benefits throughout the entire global economy. Maritime firms with world-class risk management programs have a true competitive advantage in the market place.

The Author

Luke Ritter leads the maritime practice (Flag Bridge) at Ridge Global. He is the co-author of Securing Global Transportation Networks (McGraw Hill) and can be reached at: maritime@ridgeglobal.com.

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This contest was established to honor the memory of the late Donald S. Sutherland, renowned maritime photographer and writer, who passed away in 2010.

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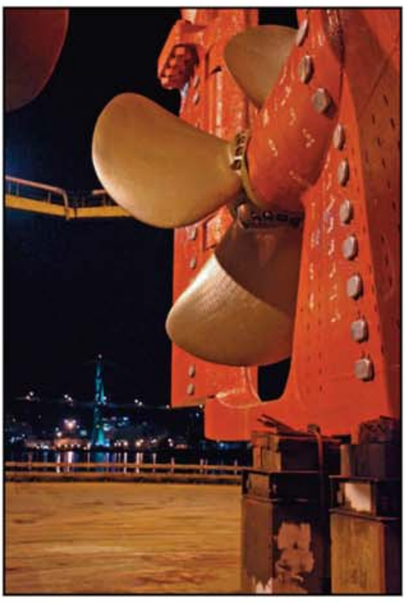


Photo by Sherry Hudson

For complete contest rules go to http://www.maritimephotographs.com/rules-and-terms.asp

ECA's: A Whole New Ballgame, Fraught with Risk

By Rob Leventhal

Springtime 2012 in North America: a season of optimism as America's favorite pastime launches spring training and heads into the long season ahead. How well prepared are the teams? Which team will have more success than others? Much will depend on their pre-season conditioning.

To some degree, the maritime community is entering into the pre-season for the implementation of the August 1st 1.0% sulfur requirement for the 200 mile North American Emission Control Area (ECA). Therefore, it is time to bring all team members together and prepare for the new guideline. So how do we train for the new season?

An Uneven Playing Field?

We start with an overview of the refinery landscape. Over the past year or so we have seen refinery closures in the Delaware Valley region, (Marcus Hook, Philadelphia and Trainer), as well as St Croix, Houston, and Hawaii. Another 7 refineries are up for sale in Europe and one in St. Lucia. With Wall Street suspected of driving up the price of fuel and a glut of oil and distillate in the northeast, many of these refineries are likely to become storage facilities. On the other hand, we are seeing increased arbitrage as new sophisticated refineries in Asia, India, and the Middle East have a growing appetite for crude, especially available Iranian crude. These modern refineries are geared to produce lighter products with a very small residual yield, thus more suppliers are facing challenges in bringing an HFO product to specification. As this transition continues, it will change traditional supply patterns. Now add on the 1% sulfur restriction and the blending challenges become even more heightened.

Spring Training

Over the last year, the USCG has given the maritime community a "learning-training period" for the new regulation, but active enforcement can be expected from August 1st and onwards. As a participating IMO flag State, the USCG is tasked with enforcing Marpol Annex VI. Hence, the methodologies used for ensuring adherence could include review of statutory Bunker Delivery Notes (BDN), log books examined for exact details of switchovers, Marpol samples or perhaps even tank samples taken to an approved testing laboratory.

We have seen the challenges the supply community faced in meeting the January 1st 3.5% worldwide cap. In fact, we are still receiving samples in April that are testing above 3.5% from Asia and the Middle East. From another perspective, we studied all HFO samples received in 2011 with almost one-third of all samples tested showing significant variances (beyond method precision), when comparing BDN figures to laboratory results. How is BDN data compiled? What about 1% sulfur content fuel? How can we be sure our vessels are in compliance as we enter the 200 mile zone? As demand grows for low sulfur HFO combined with sourcing patterns changing, will there be any issues with mixing of fuels currently on board? Will they be compatible?

Fundamentals & Game Savers

These questions lead us to the areas we need our teams to practice during their training, starting with ensuring that the fuel is compliant. This starts with proper sampling technique. Typically BDN sulfur data is taken from shore tank certifications, not the barge. Given the nature of today's blended product(s), the amount of time a product has been stored in a shore tank, and then transported by a third party barge there exists the real potential for variances in BDN stated values vs. results from submitted samples taken by drip samplers on vessels.

An even bigger issue is the regulatory requirement vs. local practice. Marpol 73/78 Regulation 18 (7) (b) states that the supplier is to provide a representative sample of the fuel delivered which is to be used for determination of compliance by Port State Control (PSC). Furthermore, resolution MEPC 96 (47) guidelines for the sampling of fuel oil requires that the IMO sample should be taken at the receiving ship's bunker manifold.

This sample may be an issue basis where bunkers are taken. For instance, in US ports due to insurance laws barge staff are not allowed to leave the barge. This makes it impossible to

> With ISO, one could interpret basis reproducibility and repeatability that a 1.05% fuel is within specification of 1.0%, while the IMO is a bit stricter and would, after verification process, deem a 1.01% fuel out of specification.

jointly draw samples at receiving vessel manifold to be sealed by supplier. Further, many barges are not equipped with approved sampling devices. We have seen many instances wherein supplier samples are taken through a spigot on the barge in a short period of time and sealed. This, of course, is not a true representative sample. In the event there is a Coast Guard challenge, the testing process would most likely be done on the Marpol sample. That 500ml of fuel could be the difference in avoiding costly legal battle/fines with PSC. By drawing truly representative samples and having them testing by an independent laboratory if there is a determination for off specification sulfur, a letter of protest (basis procedural requirements of ship's flag administration) should be issued with copies to supplier, PSC, and records for the ship.

Another issue we see is that the supply community is selling fuel basis an ISO set of standards. This conflicts to some degree with IMO standards governing Marpol. With ISO, one could interpret basis reproducibility and repeatability that a 1.05% fuel is within specification of 1.0%, while the IMO is a bit stricter and would, after verification process, deem a 1.01% fuel out of specification.

So what can an owner/operator do to try and protect their interests? For starters, one could negotiate with suppliers to have sulfur levels basis IMO verification standards as opposed to ISO on precision. Prudent procedures would dictate that if there is any suspicion of the levels pushing above 1.00, then do not burn those bunkers in the ECA zone and treat as HS fuel.

The next area of training would be the technical aspects. Make sure that crews have a standard operating procedure (SOP) and are proficiently trained with a change-over calculator. This ensures the high sulfur fuel has been flushed out with 1.0% or under entering the combustion chamber, before entering the 200 mile zone.

Crews also need an SOP for changing over from a residual fuel to a distillate. We can simply look back to 2009 when CARB (California Air Resource Board) was introduced and numerous vessels lost power during the switchover process. A specific changeover practice that has been tested needs to be set up, (in conjunction with engine manufacturer recommendations), to ensure no loss of power due to issues such as viscosity.

Compatibility of fuels will also need to be tested before the mixing of any two fuels. Circling back to the changing refinery landscape, as the traditional supply chains are disrupted and less residual is available, the potential increases for incompatibility and asphaltenes falling out of suspension. That's a situation that can't be reversed and can lead to catastrophic engine failure. In this event, compatibility testing should be done as a standard practice.

Opening Day Expectations

So what might we expect from the USCG? According to statistics posted on the USCG web site there were a total of 28 vessels detained at US ports in the 1st quarter of 2012 for Marpol Annex VI violations. Looking at other Port State Control areas in 2010, The Netherlands PCS sampled and tested 135 vessels for sulfur verification. From January to July 2010 there were 72 vessels tested of which 5 were not in compliance. From July 2010 through December 2010 there were 63 vessels tested of which 46 were not in compliance. Of these 46 vessels, 10 had actions taken against them including fines. Given the long standing role the USCG has had with IMO, we expect active enforcement on August 1st. By taking the time to review fundamentals, set up game plans, and practice those skills, your team should be ready to compete in the new season.

The Author

Rob Leventhal is Vice President of Sales and Marketing for Oiltest Marine Services. He is a member of the Connecticut Maritime Association and IBIA.

Finance

Maritime Mergers & Acquisitions

By Harry Ward

Mergers and Acquisitions in the American maritime industry are relatively few in number and require careful analysis. It is helpful to examine some overall trends in deal activity and company valuations, and then reflect on some key transactions in a few defining subsectors.

Trends

The number of acquisitions completed worldwide dipped during the economic downturn that began in 2007, reaching a low in 2009 and increasing steadily in 2010-2011. Figure 1 illustrates this steady upward trend in deal activity, and total deal values experienced a similar dip in 2009 followed by a strong recovery in the past two years.

Publicly-traded companies offer a window into overall company valuations and investment flows. The set of public company indices in figure 2 indicates the relative share price changes in four marine subsectors over the past 12 months. The most striking trend in this figure is the strong performance of inland and offshore stocks, including companies such as Kirby Corp (KEX), Tidewater Inc (TDW) and Hornbeck Offshore Services (HOS). This flow of capital into companies that provide water transportation for energy and commodity markets is clearly reflected in the strong deal flow for these segments in the United States.

Inland and Offshore

Small vessel operators on the inland waterways and the Gulf Coast oil patch are central to the US marine business, particularly with regard to M&A activity. One notable buyer in 2011 was publicly-traded liquid barge carrier **Kirby Corporation (KEX),** which had several acquisitions including **K-Sea** ($600 million), the liquid barge fleet of **Enterprise Marine** ($53 million) and engine and equipment provider **United Holdings** ($270 million). Throughout 2011, such midstream-related deals dominated the acquisition scene in the US. Limited partnership **Genesis Energy LP** added to its Supply and Logistics division with the acquisition of Florida Marine Transport (FMT) black oil transportation fleet ($141 million). Demand for inland barge transportation has remained strong due to increased coal and petrochemical exports. Though the barge business continues to experience seasonal and secular variations, the overall outlook is positive and deals will likely continue to develop. Most recently, **Ingram Barge Company** announced that it will acquire **US United Barge Line**, adding about 17 towboats and 650 barges to its fleet of 100 and 4,000, respectively.

Ports and Terminals

Port and terminal acquisitions have been a critical part of maritime industry deal-making, as investment firms and operating companies acquired critical properties to position themselves for growth in midstream energy transportation. To expand its North American tank terminal business, **Lindsay Goldberg** invested $247 million to acquire a 49% interest in each of Norway's **Odfjell** Rotterdam- and Houston-based tank terminals as well as in a green field project in Charleston in 2011. Also in 2011, Foresight Energy/Cline Group affiliate **Raven Energy** acquired **Canadian National Railway's** IC RailMarine Terminal on the east bank of the Mississippi in Convent, LA for $73 million.

More recently, Amsterdam-based **Trafigura** AG acquired **Texas Docks and Rail** terminal and stevedoring of Corpus Christi to expand their trading and transportation business in North America. Another terminal and stevedoring company in Houston, **Gulf Stream Marine**, received a majority recapitalization from private equity firm **Cap Street Group.**

Vessel Construction and Marine Equipment

Steady consolidation has continued in the shipbuilding and repair sector. **General Dynamics** expanded its shipbuilding presence with the 2011 acquisition of **Metro Machine Corp.**, a private ship repair facility in Norfolk, VA for $148 million. On a smaller scale, **Arc Lite Power** acquired **Knight and Carver** shipyard in San Diego for $30 million. A pioneer in hybrid, energy-efficient vessel designs, Arc Lite will transform the facility into the world's first global hybrid superyacht conversion and certification center while continuing to conventional marine construction and maintenance services.

In 2012, **Vigor Industrial** raised $75 million in private equity from **Endeavour Capital** of Portland and acquired **Alaska Ship and Drydock.** Vigor continues to expand in the northwest after its 2011 acquisition of **Todd Pacific Shipyards** in Seattle for $130 million.

On the marine equipment front, increased demands to comply with environmental regulations have been driving the development of new products, as well as M&A. Power plant giant **Wartsila** acquired **Hamworthy** in early 2012, for

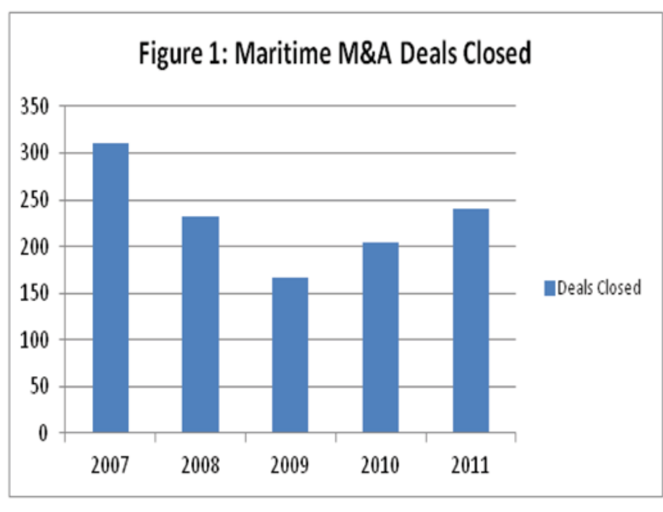
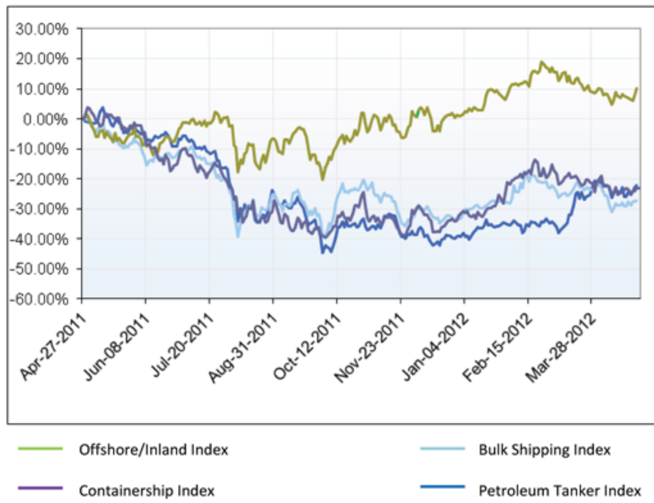


Figure 2: One-Year Trends: Maritime Public Company Indices



$600 million (14.3X EBITDA) in part for access to environmental technology and equipment. A subsidiary of oil rig builder **Keppel** recently acquired a 49.9% stake in **OWEC Tower**, a producer of wind turbine foundations, for $11 million. In services, **JF Lehman & Co** acquired much of **Seacor Holdings'** environmental and spill response business for $97 million in an all cash transaction. An additional environmental-driven trend to watch for in coming years will likely be the consolidation of smaller vessel owner-operators with limited capital and management capacity to meet demands such as diesel emissions standards.

Outlook

Despite some positive signs early in 2012, projections of economic growth and even stability vary considerably. European financial troubles are far from settled, though most US economists are confident that the European sovereign debt crises can be contained. Slowly, maritime trade and investment are rebuilding across the world. Interesting shifts in capital flows and deal-making reflect trends ranging from economic growth in developing countries to environmental changes and the associated regulations. The McLean Group will continue to analyze and report on this narrow niche of maritime M&A activity as players across the world vie to survive and grow into 2012.

The Author

Harry Ward leads the Transportation and Logistics practice at The McLean Group, a middle market investment bank based in the Washington, DC area. He is a US Naval Academy graduate and has executive management experience in the maritime equipment industry. Please contact Harry with questions or requests at hward@mcleanllc.com or 757-613-0476

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Technology

Securing Ports & Borders

Advanced Threat Detection Technology and screening systems are part of the solution.

By Bob Bohn

Customs and border protection requirements are constantly evolving. Traditional fiscal roles continue, such as the collection of excise duties, but there is now additional emphasis on the identification of threats to local and national security – a first line of defense against possible insurgent attacks. Priorities have moved from monitoring cross-border cargo and reducing international shipments of contraband, to screening for explosives, arms, dirty bombs and weapons of mass destruction. Identifying such threats is increasingly more difficult, hidden inside a vehicle or concealed in the middle of the shipment. The challenge is rapid detection without disrupting the daily flow of goods. To that end, High-tech screening systems provide support for all these Customs and border protection requirements.

Multi-Layered Approach

smiths detection
bringing technology to life

As ports and borders face the challenge of detecting and identifying possible security breaches or CBRNE threats, to provide both a safe environment at the ports, the multi-layered approach to security has emerged as the favored solution. There is simply no magic "silver bullet" to safeguard society, protect life and support the free flow of trade in global transport. However, there are some key considerations on how to implement the layered security approach to meets the needs of ports and borders around the world. That said; practical solutions may include:

1 ***Providing More Accurate Detection and Identification Capabilities:*** Paramount to protecting maritime assets, officials should first and foremost focus on security of the people working maritime operations. Continued investments in research and development by the security technology industry have resulted in technological advances able to address evolving CBRNE threats. For example, there have been major product developments in x-ray and metal detection technology, including an upgrade from single view x-ray inspection to dual-view x-ray inspection systems. Dual-view x-ray inspection systems, such as Smiths Detections HI-SCAN 145180-2is, can take images at two different angles of a scanned object during one screening pass to provide the operator with more information in the identification of hidden threats.

2 ***Reducing the Cost of Maintenance and Ownership:*** During these tough economic times, maritime operations, like many businesses, are looking for innovative ways to upgrade security without added or unnecessary costs. The "platform approach" to security products includes constantly upgrading software and software algorithms to detect and identify new threats. Often, this is more cost efficient than purchasing new hardware. One example of a technology that can help lower the cost of ownership is the HCVM e35 mobile x-ray cargo screening system. The HCVM e series is a compact fully-integrated light mobile platform ideal for inspecting whole trucks, containers and vehicles for threats such as explosives, narcotics, weapons of mass destruction (WMDs) and contraband. This robust system offers up to 200mm (7.9in) of steel penetration, with no radioactive source, while providing high throughput of up to 80 trucks per hour in pass through mode, which is especially important during high-volume peak times. The computer system also provides data management tools for the operator to view images of the scanned cargo allowing quick and accurate analysis. And all of these capabilities are provided on chassis that requires no commercial driver's license to operate.

3 ***Providing the Flexibility to Move Where a Capability is needed:*** With smaller, lighter, and more portable threat detection and identification systems, the ability to scan cargo, bags and freight to detect CBRNE threats is more flexible. Hand-held devices, such as Smiths Detection's RadSeeker, is a highly accurate radioisotope detector and identifier. Specifically designed to meet the Department of Homeland Security (DHS) mission requirements for a next-generation system capable of detecting and identifying nuclear threat materials, the device can be useful in customs inspection and border protection.

4 ***Make Use of Existing Civil Works Infrastructure and Reduce Operating Space:*** Advancements in security detection have resulted in detection technology that has not only a smaller energy footprint, but takes up less space, as well. The HCVG e3528 system, for example, delivers high-energy x-ray gantry screening and monitors as many as 23 truckloads hourly. The HCVG is a standalone unit which requires limited external infrastructure with a modular design that can be relocated, adapting to a customer's specific needs. The system is also designed for ease of operation, while still integrating international security screening requirements. The HCVL is a small footprint car scanning system that features top-down

> **"There is simply no magic "silver bullet" to safeguard society, protect life and support the free flow of trade in global transport … The challenge is rapid detection without disrupting the daily flow of goods. To that end, High-tech screening systems provide support for all these Customs and border protection requirements."**

The HCVM e series is a compact fully-integrated light mobile platform ideal for inspecting whole trucks, containers and vehicles for threats such as explosives, narcotics, weapons of mass destruction (WMDs) and contraband.

screening with/without a conveyor system, providing both occupied and unoccupied vehicle scanning.

5

Optimize Security Checks: Integrating information is the key to effective and accurate threat detection and security. For this purpose, the Smith's Dataset management System (DMS) centralizes information providing efficiencies and an operational center on each point of entry or sea port.

6

Reduce Inspection Times: Time is valuable – not only for security personnel in times of critical decision making – but also to every company or government, as they pass through a checkpoint on their way to delivering goods to their customers. By building screening technology that keeps cargo moving quickly through checkpoints, cargo gets to where it needs to go, without unnecessary hassles or hold-ups. Beyond this, technology that can scan multiple truckloads or freight pallets for threats, dual-view screening can help provide the location of threats. This way, security personnel can quickly assess a potentially dangerous situation, as quickly and efficiently as possible.

Evolving Threats / Evolving Technologies

As we continue to fight evolving threats in our world, a range of advanced technologies that meets the practical solutions to maritime security have become available. A wide array of solutions can address the gamut of threats that no "silver bullet" can retire, while the "platform approach" will keep layered security solutions current with emerging vulnerabilities. Regardless of where one turns to address particular port and maritime security concerns, ports and border security operators need to get the most value for their money, while still providing the advanced screening and security needed in cargo screening. That much, we know for sure.

The Author

Bob Bohn is Vice President for Smiths Detection's chemical and biological detection suite. He is responsible for growth across sectors including Emergency Response, Military, Private Infrastructure, Ports & Borders, as well as Transportation markets.

Stats

STATISTICS

Big Risk – Small Market?

A look at the top 25 U.S. Ocean Marine insurance companies tells us a lot – or does it? We can all agree that the waterfront is a risky place to do business and one way to mitigate those vulnerabilities is to be covered by robust insurance policies. The latest statistical compilation published by the A.M. Best Company (November 2011) ranks the group according to **2010 U.S. Ocean Marine** direct premiums written. And, while many of the firms shown are familiar names to all of us, many are not. U.S. commercial marine market tends to write mostly brown water (rivers and coastal) marine business. Some of the markets participate on blue water risks, but most do not. Of the top 25, there are 8 new players, perhaps signaling a major reshuffling of the deck. Or, not. The Starr International Group, for example, moved up from 13th all the way to 5th place, but the reasons for that anomaly are not immediately apparent. Indeed, the premiums shown account for just 1.4 percent of these companies' total premiums written and no one has even as much as 10 percent of the total market. We can, of course, assume that the international market is a much larger subset.

Most insurance business is non-marine in nature. Moreover, very few specialize in this market sector. Indeed, our source – who asked to remain anonymous – tells ***MarPro,*** tongue-in-cheek, that if many of these outfits cancelled all their marine policies, their Board of Directors might not even notice. The list of the top 25 therefore tells us much, but also leaves us with more questions:

2010 Rank	2009 Rank	Company/Group	Direct Premiums Written $	% Change in Premiums	Market Share (%)	Adjusted Loss Ratios	% of Company Premiums
1	2	Travelers Group	273,135	-1.8	9.8	43.6	1.3
2	1	Amer Intl Group	270,155	-6.9	9.7	54.6	1.3
3	3	CNA Ins Cos	199,782	-7.0	7.2	44.7	2.7
4	4	Allianz of America	199,686	-4.5	7.2	69.4	3.9
5	13	Starr Intl Group	193,712	181.6	6.9	59.1	41.6
6	7	White Mountains Ins Group	134,902	-3.3	4.8	40.1	6.3
7	6	Ace INA Group	132,711	-6.7	4.8	48.8	1.8
8	5	Chubb Group of Ins Cos	132,404	-10.0	4.8	42.3	1.5
9	9	Amer Stmship Owners Mut P&I Assn	115,337	4.9	4.1	41.5	100.0
10	10	HCC Ins Group	94,208	3.6	3.4	39.6	8.3
11	11	Great Amer P&C Ins Group	70,514	-7.4	2.5	35.6	2.1
12	14	Markel Corp Group	66,572	-2.4	2.4	26.8	5.3
13	12	Navigators Ins Group	64,838	-11.1	2.3	60.8	13.3
14	15	Zurich Finl Svcs NA Group	61,570	-9.7	2.2	83.4	0.6
15	18	Philadelphia Insurance/Tokio MarineUS	57,813	3.5	2.1	32.7	2.3
16	19	XL America Group	57,425	10.5	2.1	65.2	2.6
17	16	Liberty Mutual Ins Cos	57,267	-4.1	2.1	12.8	0.2
18	17	NY Marine Group	52,001	-12.5	1.9	82.2	23.7
19	20	Axis Ins Group	48,484	-6.0	1.7	41.0	4.2
20	8	Berkshire Hathaway Ins	42,865	-65.3	1.5	56.2	0.3
21	22	Arch Ins Group	31,616	8.8	1.1	82.2	2.0
22	21	Farmers Ins Group	30,626	-13.5	1.1	50.6	0.2
23	23	Hartford Ins Group	28,833	-0.6	1.0	29.7	0.3
24	25	Nationwide Group	27,239	13.5	1.0	83.8	0.2
25	31	State Natl Group	24,997	24.6	0.9	153.4	3.7
		Top 25 Writers	**2,468,692**	**-2.2**	**88.5**	**51.0**	**1.4**
		Top 50 Writers	**2,769,799**	**-1.8**	**99.3**	**52.2**	**1.0**
		Total U.S. P/C Industry	**2,790,395**	**-1.9**	**100.0**	**52.1**	**0.6**

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MarPro sources advise us that the biggest part of marine underwriting is recreational marine, so even the seemingly robust numbers depicted in the top 25 do not necessarily mean that an underwriter has a big part of the commercial marine market. It's hard to know how much. A.M. Best reports that, as annual trend, direct premiums written declined by 1.9% from 2009 to 2010. Looking at the overall economy itself and a tough couple of years on the waterfront, this could be a function of less cargo being moved and fewer ships on the water.

The adjusted loss ratios are worth looking at. As a general rule, our source tells us that in the marine market, a 60 percent ratio represents break-even business in the marine markets. This takes into consideration acquisition costs, commissions, salaries, keeping the lights on, reinsurance, etc. And, he adds, "No one can underwrite to break-even and expect to make money." The higher loss ratios could represent any number of variables, including but not limited to those working on much smaller margins in a soft market with too many players. At the end of the day, it may be too difficult right now to get rates up to where they should be.

According to our source, "Those showing loss rations over 60 should be concerned over whether they have adequate pricing or good selection of tonnage or cargo risks." That said; the industry average for marine underwriters shows a cumulative **Adjusted Loss Ratio** of about 52 percent, perhaps indicative of a nominally healthy business sector. Beyond this, that cumulative ratio, since 2008, has improved from 68.4 percent. Is industry getting safer in the interim, insurers getting choosier or perhaps is it a combination of the two? In this highly complicated and secretive business, your guess is as good as ours.

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