

# 2015 World Maritime Review

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**Shashi Kumar**

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The tantalizingly upbeat ambiance that prevailed towards the end of 2013 led most pundits to predict an improving world economy in 2014 and a period of rising expectations in the shipping industry. Although the year was not recessionary by any means, the sluggish 3.3% global economic growth (IMF 2015) simply failed to unshackle key maritime markets from their prolonged morass. Michael Grey, an influential *Lloyd's List* op ed author, referred to the year as one in which the maritime sector was hit by a flotilla of black swans. Even in the U.S. where there were ongoing positive developments in the maritime sector after decades of inertia, the aggressive Saudi Arabian stance to maintain OPEC market share has temporarily throttled the shale oil-driven optimism. One can say with confidence that even the unanticipated steep decline in fuel oil price was insufficient to generate a rising tide that would lift the global maritime community and shipping confidence is now at its level since 2012.

As per IMF statistics, the global economic growth in 2014 remained similar to that in 2013. The GDP growth in advanced economies rose by 0.5% to 1.8%. Among them, the U.S. posted the most impressive growth despite a disappointing first half of the year. However, this was not significant enough to induce economic growth in other parts of the world or change the global shipping market dynamics. The stagnant economies in Japan and the EU (with the exception of the British who benefited from their quantitative easing policy) were even less helpful from the perspective of ship owners and operators. More significantly, the emerging markets and developing economies, the true backbone of shipping fortunes in recent years, registered a 0.3% decline from 2013. The Chinese economic engine in particular cooled down to 7% annual growth, a major departure from the dragon years of consistent double-digit growth. Although the Indian economy posted an uptick to 5.8% growth in 2014 (from 4.7% in 2013), the induced Indian trade is not significant enough to impact global trade volumes or shipping interests. The current IMF forecasts do not provide any room for optimism in 2015 either despite the ongoing lull in oil prices.

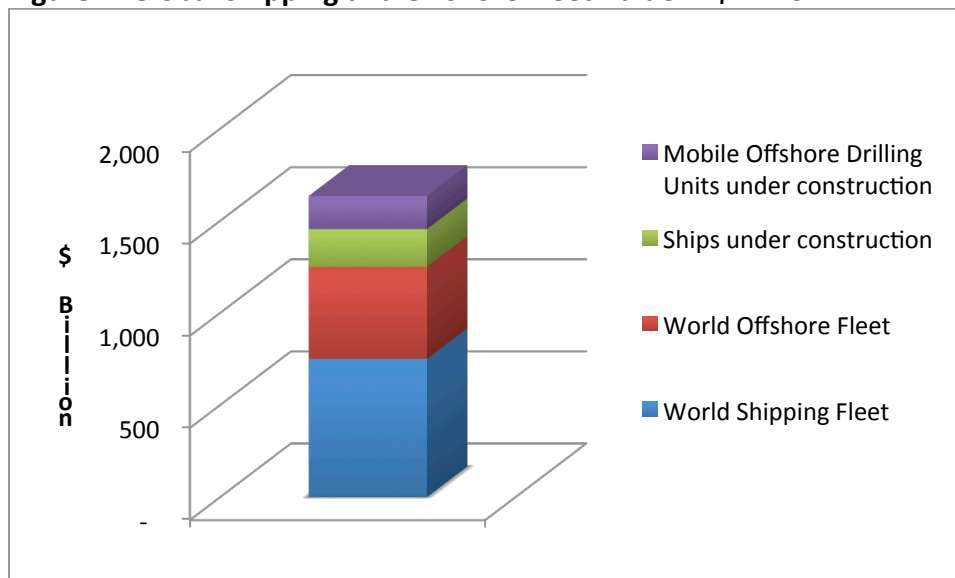
The IMF World Economic Outlook reports that the impact of market fundamentals—marginal revenue exceeding marginal production cost—have positively impacted the supply of various commodities, iron ore and oil being prime examples. However, this has not been matched by a corresponding growth in demand, which has led to a sharp reduction in commodity prices in recent months and declining shipping fortunes in general. The operators of oil tankers (and also LPG carriers) are exceptions and have

benefited from the ongoing oil market contango.<sup>1</sup> In general, the presence of excess shipping capacity continues but for crude oil tankers and LPG carriers. The conditions are not expected to change in the short run as per a recent Danish Ship Finance Report that forecasts world trade growing 3.5-4% annually until 2017 and the world fleet growing 6%.

## Market Developments

Looking at last year's shipping markets through Dickensian eyes, it was the worst of times in recent years for the dry bulk carriers and unexpectedly good times for the oil tankers, with all others being somewhere in between. One can only imagine how bad the year would have turned out had it not for been the precipitous oil price drop that began in September 2014 and the accompanying lower fuel expenses. It has helped them more than offset the increase in other operating cost components such as crew wages, repair and maintenance costs, and insurance expenses.

**Figure 1. Global Shipping and Offshore Fleet Value in \$ Billion**



Source: Tradewinds, Dec. 5, 2014

Figure 1 summarizes the current global shipping and offshore fleet whether in service or under construction in various yards, now valued at \$1.6 trillion. An additional \$1.4 trillion in new assets is expected over the next decade. This includes several specialized ships such as the LNG carriers which alone has attracted close to \$30 billion in the last few years. Many private equity firms invested in shipping markets in the post-2008 financial crisis environment anticipating a windfall. Not having succeeded, they are now restructuring their commitments and exiting the shipping sector.

<sup>1</sup> Contango is a market situation in which the current price of oil is lower than that for future months.

## **Dry Bulk Market**

The Baltic Dry Index (BDI) reached its lowest ever level on February 18, 2015 when it settled at 509. The lackluster growth in demand for dry bulk commodities along with surplus shipping capacity in the market is driving the current outcome. Shipowners appear to be realizing their folly at least temporarily as evidenced by the declining number of newbuilding orders in 2015, presently at one-sixth of the volume from a year ago. In addition, it has become difficult to find financiers even in traditional shipowning nations to support fleet expansion. Other signs of the worsening conditions include an increasing number of bankruptcies, the declining asset value of dry bulk ships, and passionate pleas from leading owners to hold back on adding new capacity. During the month of February 2015 alone, three dry bulk owners—one each from Denmark, China, and the Republic of Korea—filed for bankruptcy protection.

Although 2014 ended registering a strong growth in iron ore exports from Brazil to China, it only helped the Capesize ships, and not helpful in offsetting the overall decline. BIMCO estimates that the supply of new dry bulk ships this year will decrease to 5.1% from 5.5% in 2014 while the Danish Ship Finance Report projects a 7% fleet growth. Regardless, with estimates for dry bulk demand growth only between 3 to 5%, it is highly unlikely that the market will recover from its current woes in the immediate future. Under the current conditions, owners taking delivery of new bulk carriers are unlikely to meet their variable cost, let alone make a contribution toward fixed cost. Scorpio, an aggressive recent entrant to the dry bulk market with significant private equity support, and discussed in my previous annual review articles, has announced plans to convert nine of its Capesize newbuilding contracts to product tankers and reduce exposure to the dry bulk market.

Enlightened diplomacy between Brazilian and Chinese leaders seems to have resolved the Valemax controversy, which was also discussed in previous annual review editions. Vale, the Brazilian mining giant, invested in a fleet of ultra-large bulk carrier ships of 400,000 DWT to compete against Australia in selling iron ore to China. However, their commodity competition strategy was upset by a 2012 Chinese government edict to ban ships of that size based on safety concerns, allegedly at the behest of competing Chinese domestic carriers. After a state visit by the Chinese President to Brazil in 2014, China announced plans to relax the Valemax restrictions and allow visits to ports that could safely accommodate the big ships. In addition, Vale also secured \$7.5 billion loan from the Chinese Eximbank and the Bank of China. Many Chinese ports are anxious for the Brazilian business. The big ships will however worsen the excess capacity woes by displacing the currently employed fleet of Capesize and Panamax bulk carriers plying on this route. Five leading dry bulk operators of Capesize ships have already announced the formation of a joint chartering entity called Capesize Chartering to consolidate their commercial activities. This is the first such development in the dry bulk sector.

## **Tanker Market**

2014 was an unexpectedly good year for the tanker sector as the volatile oil prices created numerous trading opportunities. The crude oil tankers in particular started off the year maintaining the upward trend of the 2<sup>nd</sup> half of 2013 and made significant rate gains during the second half of 2014 including a \$9,000 hike in one day in late October.

The upward buoyancy in this market is primarily driven by the contango primary market condition and the surplus availability of oil. The Saudi Arabian decision on November 27, 2014, to maintain OPEC production of 30 million barrels per day (mbpd) despite the increasing non-OPEC production gave further boost to the tanker market recovery, and VLCCs were earning over \$80,000 per day in mid-January, 2015.

The International Energy Agency expects crude oil demand to increase one million bpd in 2015 and 2016. Some oil traders are storing huge inventories on board large tankers to take advantage of the contango situation and have created a temporary additional revenue boost for tanker owners. A typical VLCC can store 2 million barrels of crude oil and the even bigger ultra large tankers, 3 million barrels. Shipowners are designating their older, relatively non-competitive and less fuel-efficient large tankers for storage at very attractive daily hire rates, and thereby creating even more opportunities for the rest of the fleet.

It is important to note the role of supply-side conditions in leading towards the current outcome. Excess capacity in the tanker market has been declining over the years. All single hull tankers are now restricted from international movements. BIMCO estimates put the 2014 increase in crude tanker supply at 1.3%, increasing to 1.7% in 2015. For some smaller ship sizes such as the Aframax tankers, the capacity has in fact shrunk. The overall result of these conditions is an increase in asset value and price of most categories of oil tankers. McQuilling Consultants forecasts the value of ten-year old large tankers rising well over 1/5<sup>th</sup> of their current market value. The tanker owners have demonstrated remarkable market discipline over the last two years and stayed away from speculative newbuilding. The longevity of the current condition rests upon that self-discipline and market restraint. As discussed under the dry bulk market, aggressive investors in that troubled market are increasingly scrutinizing their existing newbuilding contracts and altering them to build oil tankers which may not bode well for the tanker market in the long run. Similarly, should there be an OPEC decision to cut their daily production or even a split among the OPEC cartel members on oil production quota, it will not augur well for tanker owners and the conditions may deteriorate as rapidly as the recent improvements. Another imponderable is the non-OPEC producers' resilience to withstand the Saudi Arabian duopoly challenge.

## **Liner Market**

The liner market continued its inherent unpredictability once again in 2014. There was clear consolidation among key operators such as Hapag-Lloyd and CSAV, Hamburg Sud and CCNI, CMA CGM and OPDR, and Horizon Line and Matson. However, the widely

expected P3 alliance involving Maersk Line, Mediterranean Shipping Company (MSC) and CMA CGM (and covered in my 2013 Annual Review essay) did not materialize. Although the U.S. Federal Maritime Commission and the European Competition Directorate saw this as a larger alliance, the Chinese regulators found it to be more of a merger. The fallout from this initiative led to a number of new alliances of convenience and strategic repositioning. The revised liner market portfolio of major alliances include the 2M alliance between Maersk and MSC, the Ocean Three alliance between CMA CGM, United Arab Shipping Company and China Shipping, the addition of Evergreen Lines to the CKYH alliance consisting of COSCO Container Line, K Line, Yang Ming, and Hanjin Shipping, and the G6 alliance between APL, Hapag-Lloyd, Hyundai, NYK, MOL, and OOCL.

On a positive note, excess capacity in the market is at its lowest level in recent years and the idle container shipping capacity far less than a year ago.<sup>2</sup> Containerisation International statistics show that a total of about 631 million TEUs were handled in 2014 of which 366 million (58%) was handled by the top 30 ports. The demolition and recycling of older tonnage continued at a high pace in 2014 although not as high as in 2013. The anticipated gains from cost cutting and alliance formation are readily visible but this is not a rising tide by any means. As an example, while Maersk Line reported a profit of \$2.3 billion in 2014, NOL reported a loss and has sold off its non-core logistics unit to a Japanese supply chain specialist for \$1.2 billion. Sealntel, a maritime analyst group based in Copenhagen, postulates that other liner operators can effectively replicate Maersk's cost saving and enhanced efficiency strategies to improve their profitability. Operationally, the two major canal enhancement projects are progressing well and ports on the U.S. East Coast are on the eve of welcoming 14,000 TEU ships.

Regretfully, the many ominous sides to the perennial Shakespearean tragedy of liner markets, which date back to the late 19<sup>th</sup> century era of Shipping Rings and Fighting Ships, are also flourishing. To begin with, the ordering and delivery of new ships remain very high. Lloyd's List Intelligence estimates a net increase of 8.8% in liner capacity in 2015 and the addition of one-fifth of the existing capacity in three years. In addition, the adherence toward operating container ships at slow speed that began in 2009 may unglue soon because of the drop in fuel oil price. It is estimated that about 2 million TEU container carrying capacity owes its business to the slow steaming strategy. Furthermore, as bulk of the new ships being ordered is of the ultra-large type, the average ship size is increasing at a very high rate (from 6,600 TEU in 2013 to 8,000 TEU capacity in 2015). All ports, from the behemoth gateways ports to the smaller regional ports, are increasingly handling ships larger than what they have historically dealt although many of them are not ready for this challenge. This is ratcheting upwards the supply chain bottlenecks at all port levels. Lastly, although trade volumes have grown

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<sup>2</sup> As per Lloyd's List Intelligence data, only 1.24% (218 vessels, 225,000 TEU) of the total world fleet remained idle on 1/31/2015 compared to 3.2% (313 vessels, 550,000 TEU) a year earlier.

marginally, the freight rates still remain volatile, and new ships entering the market will only worsen it further.

Based on Maersk Line’s stellar performance, the parent company has allocated \$3 billion per year between 2015 and 2019 for investing in new ships and equipment. They will focus on their current strategy of cutting cost and slowing the ship’s speed, and plan to build more Triple E ecoships with slightly higher container carrying capacity.<sup>3</sup> The carrier has ceased the Daily Maersk—a higher priced premium service with guaranteed delivery times—introduced four years ago to differentiate the Maersk brand. The apparent preference of global supply chains for lower cost opposed to predictability remains skeptical but if proven true, it would confirm the commoditized nature of east-west liner shipping services. Other top carriers are also investing in ultra-large container ships. China Shipping’s CSCL Globe’s reign as the largest container ship with a 19,100 TEU capacity lasted only 53 days, beaten by the MSC Oscar with its 19,224 TEU capacity. MOL, another top tier carrier, has ordered four ships of 20,150 TEU and blueprints are readily available for ships of up to 24,000 TEU capacity. The new MOL ships will be LNG-ready dual fuel type, and cost \$154.9 million per vessel.

### Shipbuilding Market

2014 was not a cheerful year for the yards engaged in new ship construction. Many owners cut back on their newbuilding plans. The 2015 Platou Report cites a 15% reduction in newbuilding orders in 2014, measured in CGT (compensated gross tonnage). Most of this happened during the second half of the year although several incentives were offered to shipowners and investors. Even worse, the major shipyards’ strategy to substitute declining traditional new ship construction with contracts for building offshore shipbuilding units also took a serious setback. The 2014 oil market conditions directly impacted the demand for offshore production units and supply vessels, disappointing the yards’ expectation for a new knight in shining armor to come to their rescue. The six most ordered ship types in 2014 and their estimated contract values, ranked in descending order, are as follows:

**Table 1. Summary of Most Ordered Ships in 2014 in Descending Order**

Ship Type	Size/Category	Ordered in 2014
LNG Carriers	140,000 cu m	63 ships for \$14.6 billion
Bulk Carriers	Capesize	136 ships for \$7.8 billion
Bulk Carriers	Handymax	256 ships for \$7 billion
Tankers	Handymax	178 ships for \$6.2 billion
LPG Carriers	60,000 cu m or larger	54 ships for \$4.4 billion
Ultra-Large Containership	12,000 TEU+	36 ships for \$4.3 billion

Source: Lloyd’s List Daily Briefing, Jan. 8, 2015

<sup>3</sup> The original Triple E ships have a capacity of 18,270 TEUs. The basic design can be modified to increase the capacity to around 20,000 TEUs.

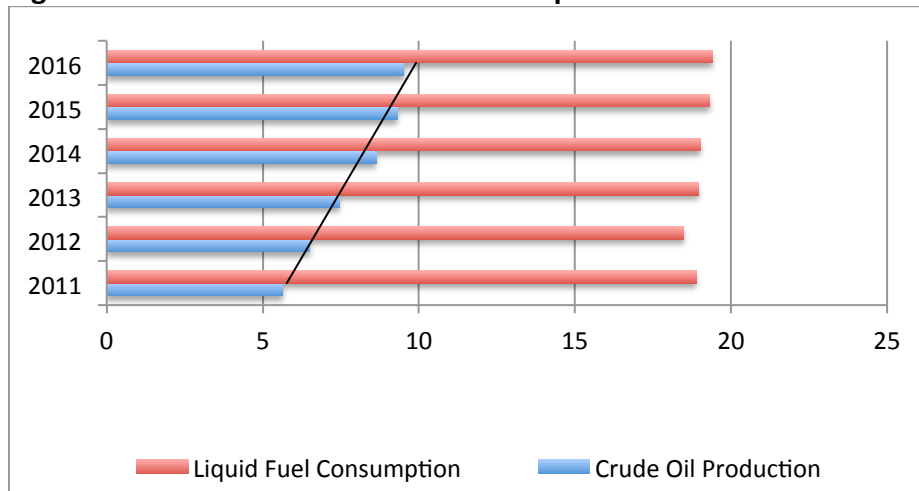
South Korea regained its status as global leader in delivering new ships, measured in CGT. As per Clarksons Shipping Intelligence Network, they accounted for 12.1 million CGT beating back the Chinese yards who had taken over the lead in 2010. However, the Chinese yards received 39% of all new orders in 2014 while the Koreans dropped down to 30%. The Korean yards continue their domination in building specialized ships such as the new class of LNG ships and very large containerships. In addition, the Korea Exim-Bank has launched a Won1 Trillion (\$898 million) eco-ship fund to assist South Korean carriers and yards, and boost the national fleet. The construction of dry bulk carriers, the traditional forte of Chinese yards, was impacted by depressed market conditions. The Japanese yards benefited from that nation's monetary policy and the favorable Yen exchange rate, and held on to a steady 19% of the CGT built in 2014.

## The U.S. Merchant Marine

The emergence of a new dawn for the American merchant marine, discussed in my last year's annual review edition, gained more traction in 2014. From dialogs focused on maritime policy formulation to the nation's new role as the pivotal swing factor in global petroleum hegemony, there was a plethora of upticks that strengthened the sense of optimism in domestic shipping. The energy sector was once again the rising tide until November 2014 when the OPEC cartel led by Saudi Arabia began their classic oligopolistic response, and flooded the market with cheap oil to drive out unwelcome competition.

## Energy Sector Impact

**Figure 2. U.S. Oil Production and Consumption Trends**



Source: U.S. Energy Information Administration (<http://www.eia.gov/forecasts/steo/index.cfm>)

The U.S. crude oil production reached 9.2 million barrels per day (mbpd) in January 2015 as per the federal Energy Information Administration (see Figure 3). They forecast the total crude production to reach 9.52 mbpd. The key driver of the current domestic oil production boom is shale oil. Although the after effects of shale oil exploration remain

controversial, a 2014 American Petroleum Institute study found that registered American voters overwhelmingly favor increased oil and gas production. These developments directly impact the domestic maritime sector because of its multiple roles in facilitating the increased production of oil and gas, and its subsequent downstream distribution.

Forty-four Jones Act coastal tankers now carry crude oil between Corpus Christi, TX and the refineries along the Gulf and East Coasts, or along the West Coast, compared to the one ship engaged in that trade in 2013. In May 2014, American Phoenix, a Jones Act tanker, gained worldwide attention in the tanker market when she was chartered at \$120,000 per day, many multiples of the going global rate at that time.<sup>4</sup> The demand for tanker capacity has led to even speculative (spec) newbuilding taking place in the U.S. yards, unprecedented but justified by the ongoing market conditions. The movement of Bakken crude (from North Dakota) by rail to the Mississippi and Hudson rivers, and from there by traditional barges to the refineries on both the Gulf Coast and the East Coast declined in 2014. The choice of transportation mode for this trade seems to be shifting toward unit trains and the new ATBs (articulated tug barges).

There is concern about the current low oil price, and the overall short-run reduction in supply from relatively expensive production sources like shale oil and offshore oil wells. However, as observed by the International Energy Agency (IEA), shale oil has changed the market and any minor setback will be temporary. The overall U.S. oil production continues and so also the increased opportunity for shipping movements. The export sale of processed light (condensate crude) oil was approved by the U.S. Department of Commerce (Bureau of Industry and Security) in 2014. The first ever such U.S. export took place in July 2014 on board the BW Zambesi, a foreign-flagged tanker and similar exports are expected to rise in 2015. While untreated crude oil is still prohibited from exporting, the U.S. export of gasoline, diesel oil and other refined products have doubled. Similarly, the export of liquefied petroleum gas (LPG) also set a new record during the summer of 2014.

There are even higher expectations associated with liquefied natural gas (LNG) exports from the U.S. Gulf. Estimates include 150 LNG ships awaiting the opening of this trade, presumably upon completion of the Panama Canal widening project. Likely customers are in India, South Korea and Japan, and there is considerable political support for establishing a U.S.-flag presence in this very vital and strategic trade. Around 30 U.S. LNG export projects were at various stages of development until the energy prices dropped after which some were placed on hold. Examples include Excelerate Energy's Texan LNG terminal plant, BG Group's Lake Charles project, and others who have

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<sup>4</sup> Interestingly, this is a ship with a very humble origin—she was sold at a bankruptcy auction as an incomplete hull and then completed in 2012 by BAE Systems Southeast Shipyards in Mobile, AL. The owner, Mid Ocean Tanker Company, recently sold her to Genesis Energy for \$157 million. For details on the “virtual shipyard” efforts to build the American Phoenix that began in 2008, see <http://www.professionalmariner.com/American-Ship-Review-2013/American-Phoenix/>



suspended their activities temporarily. However, the Sabine Pass Cheniere project in the U.S. Gulf is expected to be operational by the end of the year. The Freeport LNG, Cove Point, and Cameron LNG projects are ongoing and making progress.

Aside from the developing LNG export trade and its associated logistical challenges, there are tremendous developments in the use of LNG as a marine propellant in the Jones Act U.S. Emission Control Regions (ECA) and the Great Lakes Region. The use of low-sulfur fuel (0.1% or less sulfur content) became mandatory in U.S. coastal waters from January 1, 2015. Shipowners are benefiting from the short-run low oil prices which have almost halved their fuel oil cost. However, for the long run, the more environmentally friendly and cheaper priced LNG is a better fuel option. On February 6, 2015, a dual fuel offshore supply vessel (OSV) Harvey Energy received the first truck to vessel transfer of LNG fuel in the U.S. This will enable the OSV, currently on charter to Shell for its Gulf of Mexico operation, to operate for about seven days prior to her next refueling. Many such OSVs and LNG transfers are anticipated as the use of LNG fuel becomes more widespread.

### **U.S. Shipbuilding**

The U.S. shipyards have quietly built a broad portfolio of new commercial orders besides their traditional Department of Defense orders. Their current orderbook consists of 17 tankers and eight coastal barges capable of carrying about 150,000 barrels or more, with General Dynamics NASSCO alone being under contract for the design and construction of eight tankers, five for American Petroleum Tankers (now Kinder Morgan) and three for Seabulk Tankers, Inc. The keel for the 1<sup>st</sup> of five 50,000 dwt eco tankers was laid recently in March 2015. The San Diego yard is also on schedule to deliver the world's first LNG powered container ship for TOTE to be used in their Puerto Rican trade. VT Halter Marine is also building two LNG powered 2,400 TEU containerships for Crowley Maritime, also for the Puerto Rican trade. Aker Philadelphia Shipyard, Inc. (APSI) delivered two Aframax tankers for SeaRiver Maritime, Inc., one in 2014 and the other in March 2015. Their joint venture with Crowley to build four Jones Act product tankers received a \$325 million loan, further validating the current lure for domestic tanker market. Other APSI contracts include building two 50,000 dwt product tankers for Philly Tankers LLC and two 3,600 TEU containerships for Matson, all for 2018 delivery.

### **Jones Act and Other Promotional Developments**

There was an abortive attempt to repeal the Jones Act domestic shipbuilding requirement through an amendment attached to the Keystone XL pipeline bill. This followed a Heritage Foundation background paper titled "Sink the Jones Act." A bipartisan group of 32 legislators appealed against the amendment by writing to the Senate majority and minority leaders. The EU is expected to elevate the Jones Act issue yet again at the TTIP (Transatlantic Trade and Investment Partnership) negotiations. Meanwhile, the Jones Act fleet continues to decline and is now down to 93 ships as per MARAD statistics. The shrinking list of Jones Act common carriers is now down to four

survivors. The financially troubled Horizon Lines has shut down its service to Puerto Rico. Matson is taking over its Alaskan service for \$456.1 million, and the Pasha Group acquiring the Hawaiian service for \$141.5 million.

DOT's 2014 TIGER (Transportation Investment Generating Economic Recovery) grant recipients include seven port-related projects. They will receive a total of \$74 million, based on their innovation and ability to create jobs and enhance the local quality of life. The successful projects include the Port of Seattle, Virginia Port Authority, Port Newark, NJ, Wando Welch Terminal in Charleston, SC, Lake Charles, TX, Alaska Railroad's Seaward Marine Terminal expansion planning project, and Oil Spill Response Access Dock Phase II project from the Makah Indian Tribe in WA. Also from a promotional perspective, President's proposed FY 2016 budget includes \$5m for the design of the National Security Multi-Mission Vessels (NSMV). These vessels if built, will replace the ageing training ships operated by state maritime academies, the first in the line being the 52-year old Training Vessel Empire State operated by the SUNY Maritime College in New York. The new ships will be used for disaster relief and humanitarian assistance besides the education and training of the next generation of mariners.

Legislation passed in mid-December, 2014, will increase the inland waterway diesel user fee from April 1, 2015. The resulting \$40 million yearly infusion into the Inland Waterways Trust Fund will help modernize the system and is fully supported by the Waterways Council, Inc (WCI). In addition, the Army Corps of Engineers' Civil Works program received \$5.454 billion in their FY2015 federal appropriations, \$921.5 million over what the President requested.

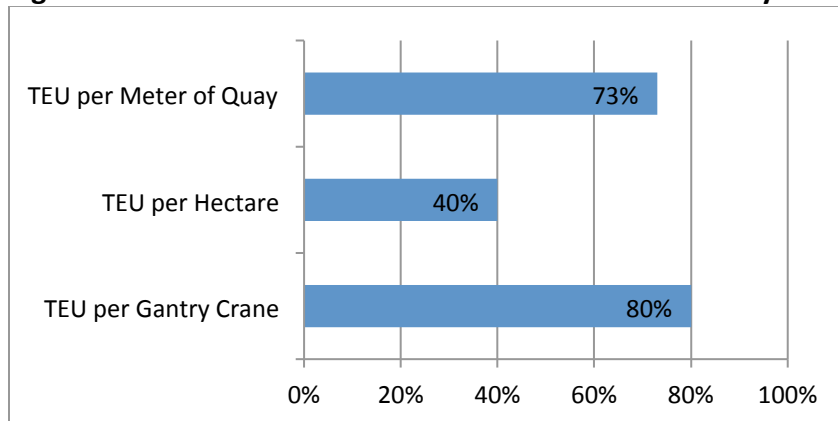
### **The West Coast Port Labor Strife**

No maritime topic received as much attention in 2014 as the port labor strife on the West Coast. The contract between ILWU (International Longshore and Warehouse Union), the union that represents 20,000 dockworkers on the west coast and the Pacific Maritime Association which represents the interests of the 72 employers and 29 ports expired on June 30, 2014. The nine-month long acrimonious negotiations that ensued finally concluded on February 23, 2015 after direct intervention by the U.S. Secretary of Labor and also the Secretary of Commerce, albeit to a lesser extent. The new five-year agreement is yet to be ratified by the rank and file. In the meantime, irreparable damage has been caused the port users' psyche.

The East and Gulf coast container ports have made significant inroads into the huge discretionary volumes typically handled by West Coast ports. The Canadian ports of Vancouver BC and Prince Rupert have also benefited from the recent delays. The 10-day 2002 lockout cost the U.S. economy a billion dollar a day; the economic damage caused through congestion caused this time is estimated twice that much by the American Association of Port Authorities. There were over a 100 containerships awaiting berths prior to reaching the tentative agreement. Typically, these are ships that run on a tight

schedule, rigorously planned months in advance with no time to waste. A recent Journal of Commerce survey found that 2 out of every three shippers plan to ship less cargo through the west coast ports in 2015 and 2016. 62% of those surveyed blamed the ILWU for the delays and disruptions, 2.2% blamed the employers, and 34.5% blamed both parties. ILWU has denied allegations of work slowdowns, and contests that the congestion was caused because of factors beyond their control such as the introduction of larger ships, carriers' withdrawal from chassis ownership, expanded carrier alliances that results in multiple container repositioning moves within yards, the improving U.S. economy, and other related factors.

**Figure 3. North American Container Terminal Productivity Vs. World Average (= 100%)**



Source: Container Terminal Capacity and Performance Benchmarks, Drewry, 2014

The current crisis highlights the fundamental challenge facing all North American ports and container terminals. Our productivity, even without a strike, is far below the world average as shown in Figure 4, and the investment in technology and people inadequate for handling the new generation of ultra-large container ships.

## International Developments

### Green Shipping

The emission control areas (ECA) off North America and Northern Europe cut down the sulfur content in ship's fuel from 1% to 0.1% with effect from January 1, 2015. The restrictions in North America will also include nitrogen oxide and particulate matter. In non-ECA European waters, passenger vessels must use fuel oil with sulfur content not exceeding 1.5% until 2020. The global standard in non-ECA areas will drop to 0.5% by 2020. There is a possibility that this may be extended by five years in non-ECA areas outside Europe pending an ongoing IMO study of the worldwide availability of low sulfur fuel.

Shipowners are complying with the new requirements either by switching over to the more expensive low-sulfur marine gas oil, installing scrubbers, or considering alternate

marine fuels such as LNG, methane, biofuels, and fuel cells. In most parts of the world, the low sulfur marine gas oil costs typically about twice as much as the traditional heavy fuel oil used on board ships. According to EPA and EU estimates, the annual cost of compliance with the new requirement will exceed \$6 billion. Shipowners are understandably passing on the added cost as a sulfur surcharge to cargo owners, raising the freight rate in ECAs by 30-50%. This may lead to some cargo owners opting for other modes of transportation, especially for coastal cargo. The conversion to LNG propellant has high upfront cost although as discussed earlier, this is an attractive strategy for new ships under construction. The installation of scrubbers for removing sulfur contents from emissions is very popular with major cruise operators like Carnival, RCL and Norwegian Cruise Lines, and far less expensive than the structural changes needed to burn LNG fuel.

There is concern about yet another option that some shipowners may choose and that is to ignore the rule. The price disparity between the two fuels may provide an incentive to cheat. While this is not expected to be a problem in North America, it may not be the case in Europe because of the multiple jurisdictions involved. So, robust enforcement through a strict regimen of flag-state and port state control inspections is essential to ensure that those who comply are not at a competitive disadvantage.

Another area of concern is the ballast water management system (BWMS) requirement. The 2004 IMO Convention, applicable to all sea-going ships greater than 400 gross tons that use ballast water, is expected to be ratified in 2015 and implemented twelve months later. All new ships must then be fitted with a type-approved BWMS and all existing ships, within five years or their next dry-docking. In addition, the ships must meet national and local ballast water regulations. For vessels visiting U.S. ports, this would mean meeting the USCG and EPA regulations and also applicable state regulations. The apprehension is about the IMO BWMS type-approval guidelines not being robust enough to meet the U.S. standards. A type-approved system for U.S. waters is currently unavailable and hence, there is a call from organizations like the World Shipping Council to delay the ratification and subsequent implementation of the IMO convention. The cost of compliance with the BWMS is very high, with small systems costing up to \$1 million and the larger systems, upwards of \$5 million according to Lloyd's List data. So, there is true hesitation and justifiable confusion among shipowners faced with the very high cost of BWMS compliance.

The 3<sup>rd</sup> greenhouse gas (GHG) study on shipping, commissioned by the International Maritime Organization, found very positive news for the maritime fraternity. Compared to the 2007 2<sup>nd</sup> GHG study data, CO<sub>2</sub> emission from shipping declined from 3.3% to 2.7%. For international shipping, the decline was from 2.7% to 2.2%. One explanation for this is the "slow steaming" business model adopted by several shipowners today. However, the temptation to speed up ships when fuel oil prices are low is very real and may adversely impact the short-run gains made.

The European MRV (Monitoring, Reporting and Verification) system will require ships to submit annualized CO2 emission data on voyages to and from European ports with effect from January 1, 2018. Additional energy efficiency reporting requirements will be imposed on the larger European shipping companies from 2015 itself. The aggressive implementation of regional MRV mandate by EU rather than waiting for a multilateral IMO system could well become the next case of compliance dilemma for shipowners.

### **Maritime Piracy**

International Maritime Bureau statistics indicate that worldwide, there were 245 piracy incidents in 2014 that resulted in 183 ships being boarded. All 11 attacks that took place off Somalia were unsuccessful. There were 18 incidents off Nigeria and a total of 41 in West African waters. The South East Asian waters have once again become the epicenter of pirate activities with 183 attacks during the year, constituting 75% of all incidents worldwide.

Compared to the chilling and often barbaric nature of piracy off Somali and West African waters in recent years, the incidents off South East Asia are of the “garden snake” armed thievery variety. Nonetheless, their 22% annual growth rate is very disturbing to the international shipping community. The pirates operating in these waters target small tankers of about 2,000 gross tons typically, the biggest attacked so far being of about 5,000 gross tons. Fifteen of their attacks resulted in siphoning off the oil cargo or fuel oil, which was then sold off on black market without a trace. It is suspected that at least in some of these cases, unscrupulous crew members had a hand in the effort. This new low profile “pirate business model” gathers little media coverage and reportedly earns easily about a \$1 million per successful attempt.<sup>5</sup> Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP), the multinational group based in Singapore to combat regional piracy, classified only 1 in 5 of the 183 incidents to be very or moderately significant in their 2014 Annual Report. This has not pleased shipowner organizations who are demanding a greater effort to eliminate this rapidly growing new pirate menace.

In June 2014, the Somali pirates released eleven seamen who were held hostage for over three years. They were captured when the MV Albedo, a Malaysian ship, was hijacked 900 miles off Somalia in November 2010 while sailing from UAE to Kenya. Maritime Piracy Humanitarian Response Program (MPHRP), a noble charity funded by ITF (International Transport Workers’ Federation) along with donations from the shipping industry played a key role in releasing the eleven men. Among the Albedo’s original 23 man crew, one was killed when the hijacking took place, seven were released in 2012, and four were drowned when the ship sank in 2014. The tragedy that befell

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<sup>5</sup> “Three-quarters of all piracy attacks happen in Southeast Asia, so why is the local watchdog downplaying the situation?” Lloyd’s List Daily Briefing, <http://www.lloydslist.com/ll/sector/ship-operations/> (Mar. 5, 2015).

those simple mariners, seeking an honest livelihood on board a merchant ship, could not have been more touching.

MPHRP also succeeded in securing the release of seven Indian seamen from the MV Asphalt Venture captured in September 2010. Their four-year captivity ended on October 30, 2014. Four seamen from the Thai fishing vessel Prantalay who spent almost five years in captivity were released on February 27, 2015. There are 26 more innocent seamen held as hostages by the Somali pirates. They were captured five years ago from another Thai fishing vessel.

### **Ship Safety Issues**

The American Geophysical Union (AGU) published an interesting study that mapped shipping traffic from 1992 to 2012. They used altimetry data from seven different satellites to estimate the escalation in maritime traffic and concluded there were major increases worldwide. The increase is as much as 300% in 20 years in the Indian Ocean, and growth rate was as high as 10% in 2011. There are several implications from such high growth in maritime traffic although its authors focused only on the environmental aspects. The safety of maritime operations in light of the increased shipping movements should be of concern to all.

Corroborating this further, a 2015 IHS Maritime and Trade Fleet Capacity model shows that the total number of ships is increasing annually at a rate of 3%. They estimate the number of ships going up from 42,604 in 2014 to 50,000 by 2020. As the number of ships increases, so will the congestion in restricted waters, ports, channels, and harbors, all leading towards more close-quarter situations and the likelihood of increased accidents. IHS data documents a 10% increase in the number of shipping accidents from 2013 to 2014. Two recent ship collisions in Houston within the first two weeks in March 2015, is a grim testimony. Allianz Global, the marine insurer, reports in its latest Shipping and Safety Review Report (2015) that the probability of billion dollar shipping incidents are becoming increasingly likely because of the rapid introduction of ultra large container ships. In particular, they note the inadequate training of new mariners and their over-dependence on electronic navigation aids. The education and training of the next generation of mariners has never been so important as it is now. While an accident-free maritime world is what the industry should aim for, it is well past the time to eliminate accidents caused through sheer stupidity as in the case of the collision between CMA CGM Florida and Chou Shan, or the deadly combination of gross incompetence and corporate greed as in the case of the ferry Sewol, South Korea's worst maritime disaster in recent memory.

The UK-flagged containership CMA CGM Florida and the bulk carrier Chou Shan collided with each other in open waters 140 miles east of Shanghai early in the morning on March 19, 2013. Both vessels suffered major damages although there were no casualties. A 2014 Report on the accident, released by the U.K. Marine Accident Investigation Branch attributed the accident to language problems between the officers

on watch who were in communication with each other via VHF Radio at the time of the accident. The Sewol disaster on April 16, 2014 resulted in 304 confirmed dead or missing persons, 250 of them being teenagers from one high school. The investigation that ensued found numerous evidences that demonstrate sheer avarice and gross incompetence that include serious safety lapses, illegal structural changes made to the ferry to carry more cargo and passengers, collusion between ferry operators and regulators, overloading of the cargo, insufficient water ballast, improper securing of cargo, unstable departure conditions, overall gross incompetence of officers and watchkeepers, tardiness by first responders and above all, homicide through gross negligence. This tragedy will remain a black mark on the global maritime community for decades to come.

### **Arctic Navigation and the Polar Code**

The thinning of the Arctic ice has lengthened the shipping season in high latitudes. The Northern Sea Route (NSR) over Russia and the Northwest Passage (NWP) through the Canadian Arctic have the potential to serve as vital conduits between the Pacific and the Atlantic Oceans during a short span of four to five months from June to November. The NSR in particular had seen a steady increase in commercial traffic until 2013 but declined in 2014 because of rising political risk and the drop in oil price. The extraction of hydrocarbons beneath the ice when oil prices are low does not make commercial sense. In addition, the costs associated with Arctic shipping operations are very high because of ice-strengthening requirements, icebreaker pilotage costs, and other associated expenses. Then, there is the short sailing season, bureaucratic obstacles for non-Russian operators, and the perennial harsh weather conditions. So, most such projects are on hold and the TSR is now being used primarily for Russian domestic traffic and exports.

The MV Nunavik, an ice-strengthened bulk carrier owned by Fednav, a Canadian company, made the first unescorted commercial voyage through the NWP, transporting 23,000 tons of nickel concentrate from Deception Bay in Northern Quebec to Bayuquan in China. This gave a 40% saving in distance compared to the traditional Panama Canal route. The ship has a proprietary onboard ice-navigation system and was supported by a shore-based team of ice navigation specialists from Fednav and its subsidiary, Enfotec. The recent opening of the world's northernmost iron ore mine, the Mary River located in Canada's Baffin Island, is projected to create 50 NWP loadings during a likely 70-90 day window in 2015 summer.<sup>6</sup> The initial anticipated export tonnage is 3.5 million tons annually to Europe and may reach up to 20 million tons per year in the long run. And then, there is the booming luxury cruise business to the Arctic (and the Antarctic) despite the high prices charged. A month-long luxury cruise from Anchorage, Alaska to New York City through the NWP on board the *Crystal Serenity* is now being marketed as

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<sup>6</sup> "Baffin Island project to boost Arctic shipping," Lloyd's List Daily Briefing, <http://www.lloydslist.com/ll/sector/ship-operations/> (Nov. 4, 2014).

the ultimate expedition for the true explorer and will cost \$21,355 per passenger. The cruise is now set for August 16 to September 17, 2016.

The Polar Code (International Code for Ships Operating in Polar waters) was adopted during the 94<sup>th</sup> session of the IMO's Maritime Safety Committee, held in December 2014. The Code will be effective from January 1, 2017 and has several mandatory requirements that enhance the operational safety of ships and protect the pristine marine environment. The Code defines a polar service temperature on which the ships will operate which will guide the testing and specification of materials and equipment. A Polar Ship certificate will be issued based on assessing the operational limitations of the ship, details of which are currently being worked out by subject matter experts in consultation with the International Association of Classification Societies.

The IMO Sub-Committee on Human Element, Training and Watchkeeping (HTW2) met in February 2015 to review training and certification requirements for mariners operating under the Polar Code. The STCW Convention will be amended to make appropriate training and certification mandatory for deck officers and masters at basic or advanced levels of proficiency. All deck officers must complete the basic course and demonstrate competency. In order to earn the advanced certificate, the basic certificate is a prerequisite followed by two months of sea-time in polar waters at the management level or watchkeeping in an operational level. They should then complete the advanced training and demonstrate competency. There are provisions for interim certification, and both certificates must be revalidated every five years similar to other STCW credentials. This is long overdue given the rapidly growing number of shipping incidents in polar waters—55 Arctic Circle shipping incidents in 2014 compared to three in 2005.

### **Mariner Issues**

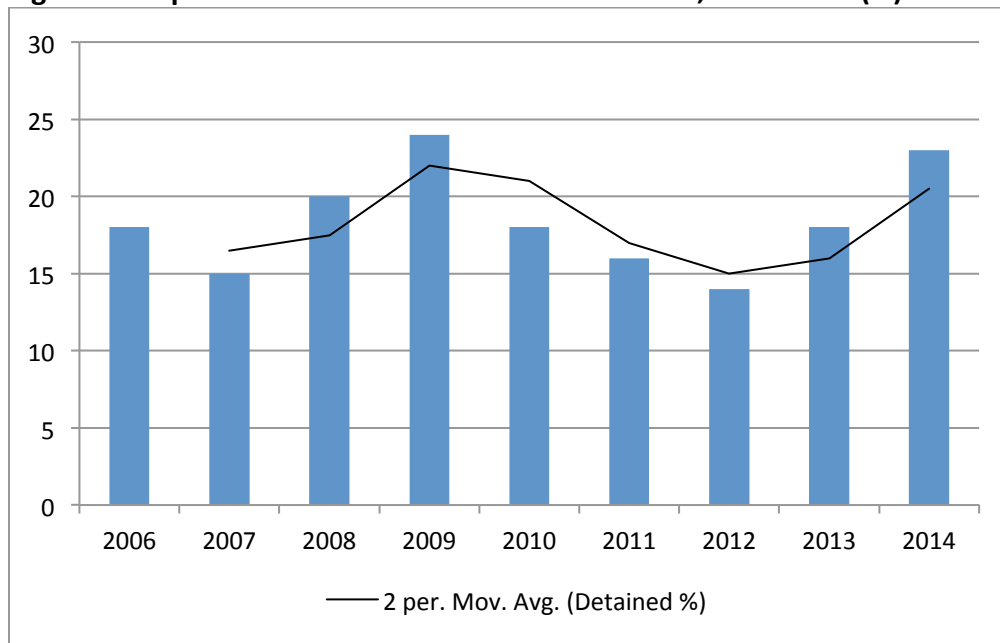
The results of the 13<sup>th</sup> Shore Leave Survey, administered annually by the Seaman's Church Institute's Center for Seafarers' Rights validate lingering concerns about the treatment of mariners in American ports. During the survey week (May 18-24, 2014), port ministries in 27 ports visited 416 ships and met with 9,184 crewmembers, representing 60 nationalities. The survey found that a total of 1,030 seafarers serving on 97 ships were denied shore leave. The main reason for denial (86% of all cases) was not having a valid visa. Other reasons include terminal restrictions, vessel operation-related restrictions, and U.S. Customs and Border Protection restrictions. Overall, as shown in Figure 4, there is an increasing trend in shore leave denials. The data does not include seafarers detained in ships berthed in terminals that chaplains were denied access.

This is the 1<sup>st</sup> such survey since the Maritime Labor Convention (MLC 2006) was enacted. The results show that 79% of those denied shore leave for lack of visa served on ships where the MLC 2006 was in force. This is a clear violation of the MLC mandate (Standard A 1.4 Section 5(b)) and raises questions about the integrity of the whole MLC certification process. Interestingly, three seafarers were denied shore leave because they did not understand questions asked by the CBP officials. I wonder if the Chinese



had a similar policy, how many of our seafarers would be able to respond to visa interview questions asked in Mandarin.

**Figure 4. Ships with Detained Seafarers in U.S. Ports, 2006-2014 (%)**



Source: 2014 Shore Leave Survey, The Seaman's Church Institute

It is refreshing to note new efforts by the USCG to improve seafarers' access to maritime facilities without compromising the security of our ports and facilities. The Coast Guard Authorization Act of 2010 requires MTSA regulated facilities to provide shoreside access to seamen in a timely manner. As part of the rulemaking, the USCG would like each facility owner or operator to come up with a plan suitable for each facility, which would then be reviewed by the Captain of the Port for its reasonableness. If this moves forward, each facility must submit a revised facility security plan within 10 months of publication that meets the seafarers' access requirements, and implement it within a year. As noted by the Coast Guard spokesperson, this will help preserve freedom and maintain the human dignity of seafarers while keeping the nation safe and secure.

The ITF and the Joint Negotiations group (JNG), representing the employers--jointly referred to as the International Bargaining Forum--agreed upon international seaman salary increases (of 1% in 2015, 2% in 2016, and 3.5% in 2017) after nine-month long discussion that began in October 2013. This will replace the last agreement signed in 2011. Both parties have agreed to downgrade the Somalian waters from war zone status to extended risk-zone status and give JNG members a 10% rebate on ITF welfare fund payments.

The various Port State Control regimes organized a joint Concentrated Inspection Campaign (CIC) in 2014 to verify a list of 10 selected items against the STCW

requirements. The Paris MoU (European waters) CIC on the STCW Hours of Rest requirement, carried out 4,041 inspections over a three month period and arrested 16 ships. The violations they found include 449 cases of incorrect recording of hours of rest, 203 cases of insufficient rest, and 101 cases of not maintaining an effective bridge lookout. The inspections also showed 1,268 ships operating with a two-watch navigational watchkeeping system, and 13 of them were among the arrested ships.

### **Maritime Education and Training (MET)**

The Secretary General of the International Maritime Organization (IMO) announced recently that the 2015 World Maritime Day theme will be the adequacy and quality of MET programs worldwide. Although our seven maritime academies may be flush with new applicants, the longevity of their career as mariners and even the very sustainability of the excellent maritime education they received are not beyond skepticism. Their commitment to the profession when there are unprecedented myriad other competing opportunities remains untested; there are no documented studies related to this and any evidence available is purely anecdotal. Complicating the supply side, the cost associated with mariner education (MET) is rising whereas state appropriations are declining nationwide for all higher education. Furthermore, the availability of an appropriate training ship to provide the necessary shipboard training in accordance with the STCW provisions is approaching a crisis stage in the U.S.<sup>7</sup> Correspondingly, on the demand side, the privately owned U.S.-flag tonnage continues to decline while the brown water fleet and offshore operations in particular, buoyed by the energy sector, are on the ascent. Several related, lucrative career opportunities, hitherto nonexistent, are emerging where there is significant shortage of skilled personnel and may further deplete the supply of licensed officers.

#### The cost factor

A high quality mariner education program is expensive and unlikely to succeed without some level of state support. The magnitude of that support is on the decline worldwide. Internationally, there is increasing emphasis on public-private partnership to ameliorate the state burden, as demonstrated by the integration between the National Maritime College of Ireland and the IMERC maritime cluster in the Republic of Ireland. However, greenfield institutions are still emerging, the most recent entrant being the Kazakhstan Maritime Academy (KMA) in Almaty, Kazakhstan that began operations in 2013 and hopes to be on the IMO white list of approved institutions by 2015.<sup>8</sup> KMA is expected to

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<sup>7</sup> See the Testimony of RADM Richard Gurnon, President, Massachusetts Maritime Academy, representing the Consortium of State Maritime Academies before the Subcommittee on Coast Guard and Maritime Transportation of the House Transportation & Infrastructure Committee, U.S. House of Representatives, Sept. 10, 2013 <<https://transportation.house.gov/uploadedfiles/documents/2013-09-10-gurnon.pdf>> (Aug. 9, 2014).

<sup>8</sup> Angola inaugurated its first maritime education facility on August 27, 2014, established jointly by Sonangol, the Angolan energy company and the Stena Group of Sweden.

educate 300 cadets during its first five years at a total cost of \$25 million, which averages to about \$83,000 per student.<sup>9</sup>

The fully allocated total cost per cadet at maritime institutions (including the cost of on-board training to earn the required sea-time) in Europe and North America is not available in the public domain. However, it is rational to assume that the KMA cost per cadet is not an outlier. In the U.K., the current level of government subsidy alone is \$28,000 per cadet per year for the 800 cadets sponsored by the national Support for Maritime Training (SMaRT) scheme.<sup>10</sup> It is no sheer accident that even in the case of large state-run maritime universities such as the Dalian Maritime University in Dalian, China, those enrolled in the traditional mariner license program is close to 5% of the total student body.

#### Institutions of questionable quality

There are over 600 MET institutions worldwide. Although the STCW provisions have been in place for several years now and there are anecdotal evidences to support overall improvements in safety at sea and pollution prevention, as yet, there has been no empirical evidence to the specific contributions of those provisions in global shipping. Even worse, skepticism about the quality of maritime education provided at several institutions lingers despite the introduction of baseline mariner education standards. A glaring example is the ongoing scrutiny of maritime education in the Philippines by the European Maritime Safety Agency, seeking clear evidence of compliance with provisions of the STCW Convention.<sup>11</sup>

The world needs more competent personnel at sea and ashore than ever before and it is clearly recognized by the industry.<sup>12</sup> The mandatory implementation of STCW provisions by a national authority increases barriers to entry for sub-standard maritime education providers that lack the necessary resources. Even in cases where monetary resources are adequate for a shore-based physical plant, other constraints persist. One such major challenge that many institutions experience, regardless of location, is their inability to attract appropriately qualified instructors. The typical pool of applicants for license-track

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However, cost details of its operation remain unknown. For details, see <http://www.maritime-executive.com/article/New-Maritime-Training-Facility> (Sept. 2, 2014).

<sup>9</sup> Hisashi Yamamoto, “Collaborative Maritime Platform for African Emerging Energy Economies,” Presentation at Gdynia Maritime University, Gdynia, Poland, June 9, 2014.

<sup>10</sup> U.K. House of Commons Transport Committee, *Forging ahead?: UK shipping strategy*, 13<sup>th</sup> Report of Session 2013-14, HC 630. March 26, 2014 (London: The Stationery Office Ltd.), 15.

<sup>11</sup> “EU Wants Training Standards of Filipino Seafarers Raised, <http://www.maritime-executive.com/article/EU-Wants-> (May 02, 2014).

<sup>12</sup> Rajesh Bajpae, “Changing the Attitude of Seafarers . . . .,” *TradeWinds*, June 20, 2014, 10.

faculty openings is relatively small.<sup>13</sup> The turnover among faculty, especially those with experience on board specialized vessels such as tankers and LNG ships, is exceptionally high.<sup>14</sup> Furthermore, while many mariners who pursue the teaching option may have the professional skills, they rarely possess formal preparation in pedagogy and instruction, and hence, may have a lengthy learning curve towards becoming effective educators. This has a major impact on the effectiveness of the instruction provided which for deck students is about one-half of the total four-year academic credits required for graduation, and close to 60% for engineers.

#### The training platform issue

Although all world class maritime institutions invest routinely in expensive simulator technology for effective education and training, there is no real alternative to the experiential learning that takes place on board a ship and is a requirement for any approved MET program. However, very few countries today have sufficient on board training (OBT) facilities of their own and this is presently emerging as a serious global concern. Even among those that have a training platform, as per an estimate from Global On Board Training Center (GOBTC), only 40% of the current training vessel capacity is suitable for safe operation and training.<sup>15</sup>

**Figure 5. Worldwide OBT Capability, 500 gross tons and above**

Year Built	No. of Ships	Percent
2000+	13	14
1990-99	20	21
1980-99	14	15
1970-79	12	13
1960-69	35	37

Source: H. Yamamoto, Global On Board Training Center, 2014

The GOBTC estimates that 90% of the total worldwide OBT slots come from commercial fleet, which puts nations without such ships at a significant disadvantage. The newly emerging “energy economies” in Africa and other developing countries that have discovered “a career at sea” as an effective social policy instrument to help lower unemployment and assist with the national balance of payment dilemma are in that category. The daily operating cost of a new training vessel under EU flag is estimated to be \$32,471 and its total annual cost, \$10,715,558.<sup>16</sup> For a ship with 200 cadets on board, this will amount to \$162 per cadet per day. It is a tough task for those who seek public

<sup>13</sup> A recent advertisement for marine transportation faculty position at a U.S. maritime academy attracted one qualified applicant. Similarly, the number of applicants for licensed engineering faculty positions at that institution are also in single digits.

<sup>14</sup> One U.S. maritime academy lost five faculty members to the industry in the last three years, two among them tenured and the other three, well on their way to earning tenure.

<sup>15</sup> Hisashi Yamamoto, Secretary General, GOBTC, e-mail to author, July 15, 2014.

<sup>16</sup> Hisashi Yamamoto, Secretary General, GOBTC, e-mail to author, July 15, 2014

funds in any country to justify such high cost experiential learning. As a result, an estimated one-half of the 51,000 cadets worldwide (that complete MET courses annually) are unable to find the necessary OBT opportunity, resulting in (estimated) 50% forced wastage.

There are some initiatives to address the issue as evidenced by the recent Government of India decision to convert two cargo vessels (one tanker and one panamax) into hybrid trading-cum-training ships at a total cost of \$67 million.<sup>17</sup> The converted cargo vessels will accommodate 100 cadets on board. With the national exchequer meeting the capital cost, the expectation is that freight on board will meet all associated operating costs. However, even this is not enough for the very high number of maritime institutions located in India, many of who must sign their own agreements for cadet berths with foreign ship owners.

The OBT dilemma is becoming increasingly visible in the U.S. as discussed earlier.<sup>18</sup> All six state academies will soon approach a tipping point with regard to their OBT capability, and the national fleet is insufficient to provide the necessary sea-time for all merchant marine cadets currently enrolled. The real challenge for leaders of maritime academies is not merely justifying the need for mariner education but strategizing their academic offerings to articulate a compelling vision for the right level of federal and state support and resource commitment. The challenge is further complicated because of the absence of readily usable data on U.S. mariners, highlighted in a recent GAO Report. The declining U.S.-flag shipping fleet also complicates realistic demand analyses.

### **A Case for Recognizing the Mariners' Selfless Humanitarian Contributions**

As most multinationals and even citizens of neighboring countries fled the Ebola stricken West African nations of Liberia, Sierra Leone, and Guinea, shipping companies that provide regular, reliable supply of food items and other consumer goods, continued their operations unabated. The dire medical conditions impacted their cargo volumes but that did not stop the carriers from reorganizing their essential services to maintain a steady supply of essential items. Maersk split its West Africa services and introduced a separate loop from Southern Europe to the Ebola-stricken countries. Similar actions were taken by CMA CGM, Grimaldi, Evergreen, PIL, MOL and other carriers to maintain services when it was most needed rather than shun this human tragedy. They enacted strict access controls and hygiene rules to protect the crew, and made sensible changes to ship-boarding practices and official ship visits. There was neither shore leave nor crew change in affected ports, and all physical contacts with dock workers were avoided. APM Terminals, a carrier affiliate, even contributed towards the cost of setting up a field hospital in Monrovia. This is the modern merchant marine, and the new era of mariners behaving in quintessential seaman-like manner.

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<sup>17</sup> Joseph Fonseca, "Two training ships to provide sea time for cadets," <http://www.maritimeprofessional.com/Blogs/> (Mar 26, 2014).

<sup>18</sup> See the Gurnon testimony, referred to in Note 7.

In 2014, merchant ships saved the lives of 40,000 migrants who would have otherwise drowned in the Mediterranean.<sup>19</sup> Around 800 ships were diverted from their normal course to rescue hapless illegal migrants trying to cross the Mediterranean in unsafe watercrafts. Some ships took as many as 500 survivors at one time. It is believed that in 2014, about 218,000 migrants from North Africa and the Middle East crossed the Mediterranean and 3,500 among them perished at sea. Human traffickers use unsafe “rust-bucket” merchant ships for their illicit operations sans any trained mariners on board. This has made commercial shipping the *de facto* search and rescue agency, a noble task for which seafarers are neither trained nor equipped well. The UNHCR expects the number of clandestine crossings to double in 2015.

On March 4, 2015, various U.N. agencies met with the IMO and also concerned maritime NGOs to deal with this tragedy. Ironically, on the same day, Italian and Tunisian authorities reported the drowning of 10 North African migrants when their rubber dinghy capsized 50 miles off the Libyan shoreline. Also, on that day, merchant ships rescued over 900 other migrants from Syria, Palestine, Libya and Tunisia, from seven refugee vessels and the Italian Coast Guard rescued 121 other passengers.<sup>20</sup> In February 2015 alone, over 300 refugees drowned during their attempt to reach the Italian shores. This is a serious ongoing crisis and has garnered little if any media attention in the U.S. They are understandably more focused on other human atrocities and problems of which there is no current scarcity. It is a shame that the yeoman services rendered by merchant mariners, saving hundreds of lives at sea while quietly doing their job as professionally as they can and steadfastly withstanding all commercial pressures imposed on them, goes mostly unnoticed. Their service, despite knowing fully well that they themselves are not welcome to step ashore in many parts of the world even after saving a few hundred hapless migrants during the course of their last voyage, is truly selfless. I cannot think of a better candidate for the 2015 Nobel Peace Prize—the global merchant marine community of which I am proud to be one! *Au Revoir!*

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<sup>19</sup> “Mediterranean Migrants Crisis: Shipping cannot cope alone.” Lloyd’s Shipping Daily Briefing, <http://www.lloydlist.com/ll/sector/ship-operations/> (March 4, 2015).

<sup>20</sup> “10 migrants dead in Mediterranean, 1,000 rescued.” <http://www.maritime-executive.com/article/10-migrants-> (March 4, 2015).