August 2023
Issue #0823

The NAMS Global eNews

A collection of news, views, and announcements from NAMS Global Network

INSIDE

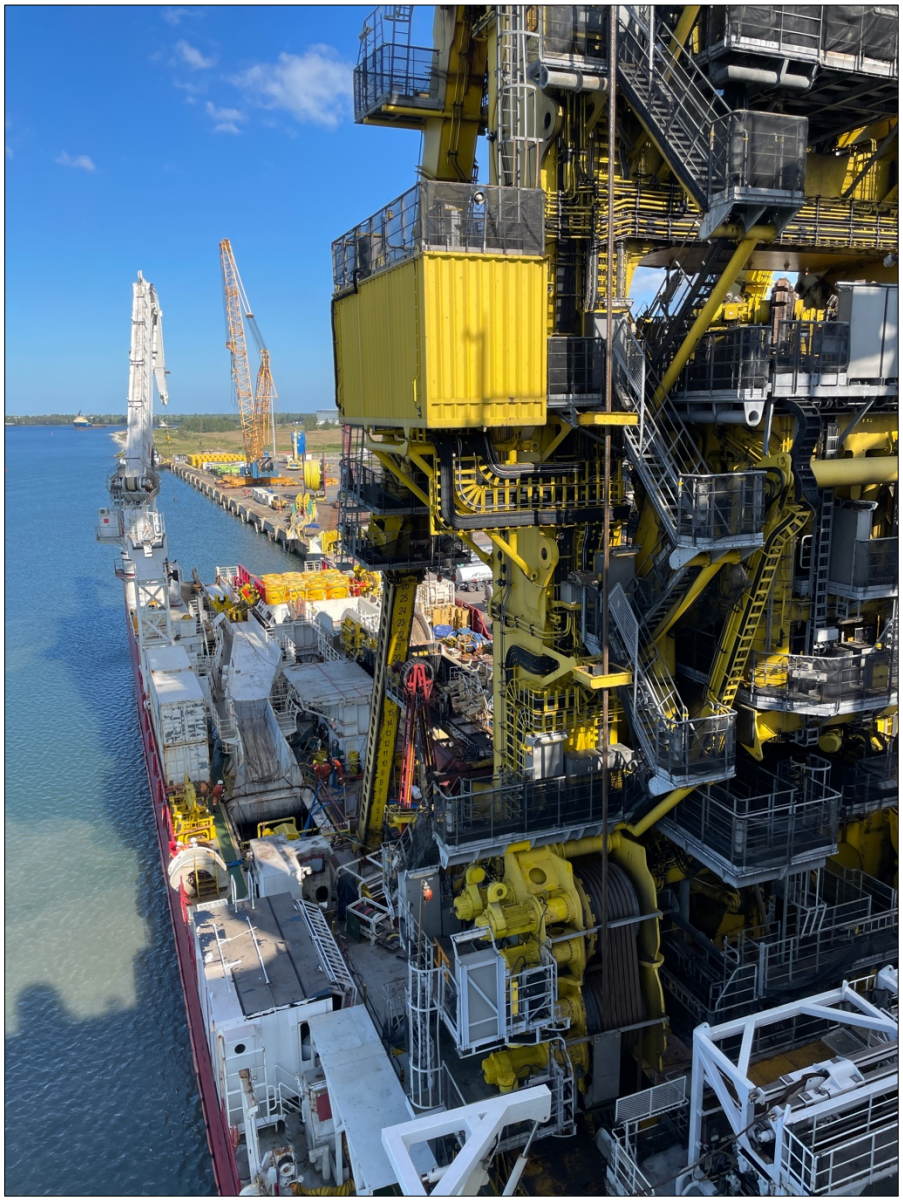

Photo of the month

View of the VLS Tower of the Skandi Buzios, berthed at Port of Açu, Brazil

from Marcos Picolo, NAMS-CMS

Have your photo published on the front page of our newsletter! Please submit your photo to marcos.picolo@gmail.com

PRESIDENT'S CORNER

Fellow Surveyors,

As always, we are continually looking to improve our efforts to support our international organization and this month was with no exception. This quarter, our committees are working on the following:

- The Education Committee – Our new CE credit guidelines were accepted by our executive committee and Board of Directors and is in effect and has been accepted by our membership and working well. Mr. Chris LeBure is and has been attending regional meetings to assist other RVP's and surveyors on obtaining and documenting CE credits. Thank you Chris!

If you have any questions concerning the implementation of the CE credits, please contact your RVP and or the National Office c/o Mr. Chris LeBure - Member of the Qualification and Certifications Committee.

- Redistricting - At our last board meeting the new strategic redistricting plan was initiated and to date has taken great steps to reach out and communicate with our membership as a whole and within the region. This will give you a greater chance to enjoy our fellowship and hopefully give you more insight into the innerworkings of our organization.

Please check out our website for the upcoming Regional Meetings. Look forward to seeing you there.

- Elections – In April of this year, with the redistricting, several new Regional Vice Presidents and Regional Managers were voted in and have taken office as well as the incumbents. Additionally, the Treasurer and Secretary positions recently changed hands.

Thanks to all for stepping up and look forward to working with our new officers.

- Technical Committees – Committee Chairs are in the process of reviewing the current test for CMS exams. The initial goal is to phase out erroneous questions.

This program continues as currently the Cargo Surveyor questions are under review. Other disciplines are working as well. Please note this review process is still ongoing but making great headway.

NAMS GLOBAL

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- Marketing – Our marketing group is continually making a positive impact.

The initial marketing strategy and test period has recently ended last month was very successful.

From this step we will move to advertising in more publications and periodically be guest speakers on podcasts.

- Qualification and Certification Committee – As reported, we continue to have significant interest in membership and based on July's milestone, we have exceeded last year's number of applicants.

- Ethics Committee – Continues to monitor the status of our organization and with positive effect.

Many thanks and appreciation to each of our committee members for your time and efforts to make these most important contributions to our organization. Members and Colleagues, please get involved in our committees. It doesn't take as much time as you think.

Please take a good look at becoming a Sponsor/Mentor to our newer members. Our future depends on it.

In closing, I hope you have a great summer and wish you the best for the remainder of 2023.

"Growth of our association is not only about increasing membership, it's about our core values and providing the tools to maintain the highest quality standards of surveying to our membership."

Sincerely,

Brian Barton
NAMSGlobal – CMS
President

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EDITOR'S COLUMN

A look at alternative fuels in the Marine Industry

The main alternative fuels being considered now include liquefied natural gas (LNG), liquefied petroleum gas (LPG), hydrogen (H2), ammonia (NH3), methanol (CH3OH), and biofuels. In this series, we will look at the pros, cons and challenges ahead for each one of these alternative fuel types.

Marcos Picolo, NAMS-CMS
NAMSGlobal eNews Editor

– Part 3: liquefied petroleum gas (LPG)

In this five-part series we will examine the main alternative fuel types being considered for the future of the Marine Industry.

In the first issue, January 2023, we began this five-part series. We explored liquefied natural gas (LNG) as an alternative fuel type, saw the benefits and the disadvantage, as well as the hurdles and difficulties the industry as a whole must overcome. We saw how, in accordance with DNV's database, it is the largest alternative fuel type at the moment, however, due to methane slip, with an estimated 28 times higher, global warming potential (GWP) than carbon dioxide, LNG has been seen by some more as a transitional fuel alternative and could lose ground to other alternatives by 2050.

In the second series, we looked at ammonia (NH3) as an emerging as a promising alternative fuel for the marine industry due to its potential to significantly reduce greenhouse gas emissions. Ammonia is a carbon-free fuel that can be produced from renewable energy sources, making it a sustainable option for the shipping sector. It has a high energy density, which means it can store and deliver large amounts of energy efficiently. Additionally, ammonia can be easily liquefied and transported, enabling its use as a fuel for large ocean vessels. While challenges such as safe handling and infrastructure development need to be addressed, the adoption of ammonia as a marine fuel holds great potential in helping the industry transition towards a greener and more sustainable future.

In this third series of alternative fuels, we will look at the pros and cons of liquefied petroleum gas (LPG) as an alternative fuel for the shipping industry.

As the marine industry seeks cleaner and more sustainable fuel options, Liquefied Petroleum Gas (LPG) has emerged as a viable alternative. LPG, a byproduct of natural gas and crude oil refining, offers significant advantages in terms of lower emissions, cost-effectiveness, and operational efficiency. This article delves into what LPG is, how it is created, its applications in the marine industry, and explores the current market trends and future prospects of this alternative fuel.

But what is LPG? LPG is a versatile fuel composed primarily of propane and butane gases. It is obtained through the extraction and refinement of natural gas and crude oil. LPG is stored in a liquefied state under moderate pressure, making it highly efficient for transportation and storage.

LPG is extracted during the refining process of natural gas and crude oil. After extraction, impurities are removed, and the gases are cooled and compressed, resulting in their conversion into a liquid state. This liquefied form enables LPG to be transported and stored in large quantities, making it an attractive option for the marine industry.

LPG has gained attention as an alternative fuel for ships due to its environmental benefits and compatibility with existing infrastructure. It can be used in different types of marine engines, including dual-fuel engines, which can run on both LPG and diesel. LPG can also be used in gas turbines and fuel cells, further expanding its potential applications in the marine sector.

Some of the pros of LPG include:

1. Reduced Emissions: LPG combustion emits lower levels of greenhouse gases, sulfur oxides (SOx), and particulate matter, leading to improved air quality and compliance with stricter emission regulations.
2. Cost-Effectiveness: LPG prices are generally more stable and predictable compared to traditional marine fuels. It offers cost savings for shipowners and operators, potentially attracting financial incentives or subsidies for adopting cleaner fuel technologies.
3. Existing Infrastructure: LPG benefits from a well-established infrastructure for production, storage, and distribution, ensuring a reliable supply chain for ships. Retrofitting vessels or building new ships to use LPG requires minimal modifications.
4. Operational Efficiency: LPG engines demonstrate high combustion efficiency, resulting in improved fuel consumption and extended range capabilities. Quick start-up and responsiveness to operational demands make LPG engines a practical choice for marine applications.

Some of the hurdles and cons that LPG presents are:

1. Energy Density: LPG has a lower energy density compared to conventional marine fuels, requiring larger storage tanks and potentially impacting the vessel's payload capacity.
2. Limited Availability: While LPG infrastructure exists in many regions, it may still be less accessible in certain areas, limiting the widespread adoption of this fuel.
3. Safety Considerations: Although LPG has a good safety record, safe handling and storage practices are crucial due to its flammability. Training and adherence to safety protocols are essential for its use in the marine industry.

LPG is gaining momentum in the marine industry as shipowners and operators seek greener fuel alternatives. While specific statistics on LPG usage in the marine sector are limited, its popularity is steadily increasing. The future looks promising, as advancements in LPG technology and infrastructure continue to address challenges and improve its viability as a marine fuel. The growing emphasis on decarbonization and environmental regulations is expected to drive further interest and investment in LPG as a sustainable solution for the shipping industry.

LPG offers a versatile and sustainable fuel option for the marine industry, with its lower emissions, cost-effectiveness, and compatibility with existing infrastructure. Although it has some limitations, ongoing developments and the increasing focus on environmental sustainability indicate a bright future for LPG in the shipping sector. Collaboration between stakeholders, research and development efforts, and supportive policies will be crucial in fully unlocking the potential of LPG as a mainstream marine fuel, contributing to a greener and more sustainable shipping industry.

NYK to Build Its Sixth LPG Dual-Fuel Very Large LPG / Ammonia Carrier

NYK Line Press Release | July 14, 2023

NYK is delighted to announce the order of its sixth liquefied petroleum gas (LPG) dual-fuel very large LPG / liquefied ammonia gas carrier (VLGC) from Kawasaki Heavy Industries Ltd. (KHI). The ship will be built at the KHI Sakaide Works shipyard and is set for delivery in 2026.

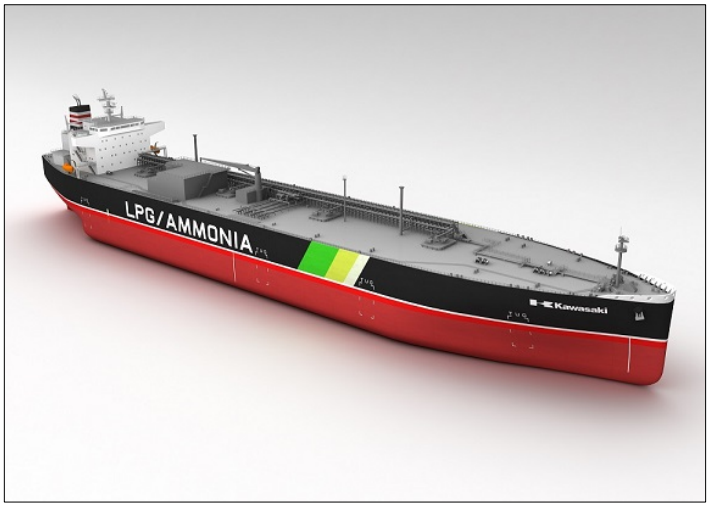

Figure 1: NYK Line's latest LPG/ammonia VLGC will be LPG dual fueled and is also expected to get an ammonia-ready notation. [Image: NYK]

This vessel is the eighth in NYK's fleet of LPG-fueled LPG carriers and the sixth in a new type of vessel capable of carrying ammonia and thus flexibly responding to various trade patterns.

Furthermore, in addition to the LPG dual-fuel engine, the ship will have a shaft generator that can generate electricity during the voyage by using the rotation of the shaft that connects the main engine to the propeller. Since the diesel generator can be stopped during regular seagoing transit, realizing full navigation with LPG fuel will be possible except for the use of a small amount of pilot fuel as an ignition source.

When LPG is used as fuel, exhaust gas from the ordered VLGC will contain at least 95% less sulfur oxide (SOx) and 20% less CO2 than NYK's conventional VLGCs using heavy-oil fired engines.

This new VLGC will comply not only with the SOx Global Cap regulations* that were tightened from January 2020 but also with the IMO's Energy Efficiency Design Index (EEDI)** Phase 3 regulations, which implemented stricter CO2 emission standards from April 2022.

Moreover, the vessel is expected to be given notations*** by Nippon Kaiji Kyokai (ClassNK) as a VLGC that has a preparatory design in accordance with the guidelines issued by ClassNK so that this vessel may use ammonia fuel in the future.

LPG/ammonia VLGC particulars

- Length overall: approx. 230 meters
- Breadth (molded): 37.20 meters
- Depth (molded): 21.90 meters
- Summer draft (molded): 11.65 meters
- Tank capacity: approx. 86,700 cubic meter

NAMS TECHNICAL DISCUSSION

Was Ocean Gate's Titan destined for failure from design?

The deadly implosion of the Titan submersible raises questions about whether the vessel exploring the Titanic wreckage was destined for disaster because of its unconventional design and its creator's refusal to submit to independent checks that are standard in the industry.

PBS, Jun 23, 2023 6:21 PM EDT
With commentaries from Marcos Picolo, NAMS-CMS NAMSGlobal eNews Editor

All five people aboard the Titan died when it was crushed near the world's most famous shipwreck, U.S. Coast

Guard Rear Adm. John Mauger said Thursday, bringing an end to a massive multinational search that began Sunday when the vessel lost contact with its mother ship in the unforgiving North Atlantic.

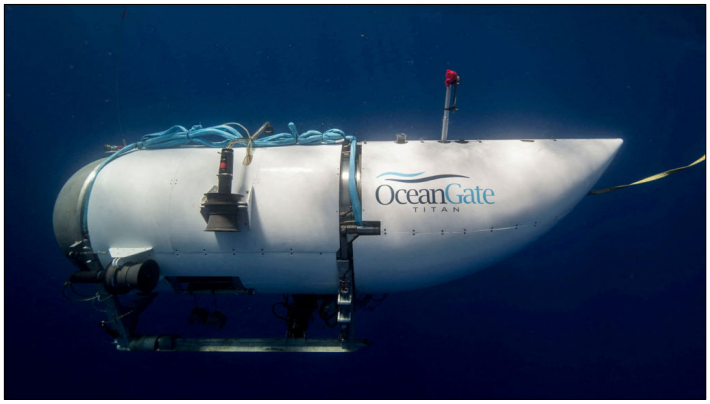

Figure 2: View of OceanGate Titan submersible.

The Titan, owned and operated by OceanGate Expeditions, first began taking people to the Titanic in 2021. It was touted for a roomier cylinder-shaped cabin made of a carbon-fiber – a departure from the sphere-shaped cabins made of titanium used by most submersibles.

The sphere is "the perfect shape," because water pressure is exerted equally on all areas, said Chris Roman, a professor at the University of Rhode Island's Graduate School of Oceanography. Roman had not been on the Titan but has made several deep dives in Alvin, a submersible operated by the Woods Hole Oceanographic Institute in Massachusetts.

The 22-foot long (6.7-meter long), 23,000-pound (10,432-kilogram) Titan's larger internal volume – while still cramped with a maximum of five seated people – meant it was subjected to more external pressure. Elongating the cabin space in a submersible increases pressure loads in the midsections, which increases fatigue and delamination loads, said Jasper Graham-Jones, an associate professor of mechanical and marine engineering at the University of Plymouth in the United Kingdom.

Fatigue, he said, is like bending a wire back and forth until it breaks. Delamination, he said, is like splitting wood down the grain, which is easier than chopping across the grain.

Furthermore, the Titan's 5-inch thick (12.7 centimeters) hull had been subjected to repeated stress over the course of about two dozen previous dives, Graham-Jones said.

Each trip would put tiny cracks in the structure. "This might be small and undetectable to start but would soon become critical and produce rapid and uncontrollable growth," he said.

OceanGate promoted the Titan's carbon fiber construction – with titanium endcaps – as "lighter in weight and more efficient to mobilize than other deep diving submersibles" on its website. It also said the vessel was designed to dive four kilometers (2.4 miles) "with a comfortable safety margin," according to court documents.

But carbon composites have limited life when subject to excessive loads or poor design which leads to stress concentrations, Graham-Jones said.

"Yes, composites are extremely tough. Yes, composites are extremely long lasting. But we do have issues with composites and the fact that composites fail in slightly different ways than other materials," he said.

OceanGate was also warned that a lack of third party scrutiny of the vessel during development could pose catastrophic safety problems.

David Lochridge, OceanGate's then-director of marine operations, said in a 2018 lawsuit that the company's testing and certification was insufficient and would "subject passengers to potential extreme danger in an experimental submersible."

He advocated for "nondestructive testing," such as ultrasonic scans, but the company refused.
Ultrasonic testing can help spot areas inside the structure where the composites are coming apart, said Neal Couture, executive director of a professional organization called the American Society for Nondestructive Testing. "Once this thing is going down and going under stress, it'll affect those materials, it'll affect those composites," Couture said Friday. "Nondestructive testing is how you

would then assess those structures and say, 'OK, they're still viable,' or, 'they're still susceptible.'"

The Marine Technology Society, an organization of ocean engineers, technologists, policymakers and educators, also expressed concern to OceanGate about the size of the Titan, the construction material and the fact that the prototype wasn't being examined by a third party.

"We were very afraid that without that certification process, they might be missing something," Will Kohnen, the organization's chairman said Friday. He sent a letter to the company in 2018 warning that its "current experimental approach … could result in negative outcomes (from minor to catastrophic) that would have serious consequences for everyone in the industry." Graham-Jones said it's standard procedure in engineering to seek outside expertise the ensure that vessels conform to the highest industry standards.

In a 2019 company blog post, OceanGate criticized the third-party certification process as one that is time-consuming and stifles innovation.

"Bringing an outside entity up to speed on every innovation before it is put into real-world testing is anathema to rapid innovation," the post said.

Famed undersea explorer Robert Ballard, who first located the Titanic wreckage in 1985, called the lack of outside certification and classification a "smoking gun" in the vessel's failure.

"We've made thousands and thousands and thousands of dives with other countries as well to these depths and have never had an incident," he said Friday on ABC's "Good Morning America."

"Titanic" director James Cameron, who has made multiple descents to the wreck, said there are several possible reasons for the submersible's destruction, but the most likely is a failure of the composite hull.

"The question is, was it the primary failure, or a secondary failure from something else happening?" he told "Good Morning America" on Friday. "And I'm putting my money on the composite because you don't use composites for vessels that are seeing external pressure."

Carbon Fiber in the Marine Industry:

Marcos Picolo, NAMS-CMS
NAMSGlobal eNews Editor

The recent implosion of the OceanGate Titan submarine has raised questions about the safety of using carbon fiber for the hull of deep-diving submersibles.

As we all know, the hull of the OceanGate Titan was made of a carbon fiber composite with titanium endcaps. Carbon fiber is a very strong and lightweight material, but it is also brittle and can be susceptible to cracking under stress. The titanium endcaps were designed to provide additional strength and protection to the hull.

The use of carbon fiber in the hull of the Titan was a departure from the norm for deep-diving submersibles, which typically use titanium for their hulls. Titanium is a much stronger material than carbon fiber, but it is also heavier and more expensive. OceanGate chose to use carbon fiber in the Titan in order to reduce the weight of the sub and make it easier to transport.

It is believed that a small crack in the carbon fiber hull grew under the enormous water pressure at that depth, eventually leading to the implosion.

This is not the first time that a carbon fiber submersible has imploded. In 2012, a Russian submersible called the Mir-1 imploded while on a dive to the bottom of the Black Sea. The Mir-1's hull was also made of carbon fiber, and it is believed that a small crack in the hull grew under the water pressure, eventually leading to the implosion.

The implosions of the Titan and the Mir-1 should serve as a warning to other companies that are considering using carbon fiber for the hulls of their deep-diving submersibles.

Carbon fiber is a strong material, but it is not strong enough to withstand the high water pressure at great depths. If you are considering using carbon fiber for the hull of your submersible, you should carefully consider the risks involved.

There are other materials that can be used for the hulls of deep-diving submersibles that are stronger and more resistant to cracking. Titanium is one such material.

Titanium is much stronger than carbon fiber and is also more resistant to corrosion. It is also more expensive than carbon fiber, but the added safety is worth the cost.

If you are considering building a deep-diving submersible, you should choose a material for the hull that is strong, durable, and resistant to cracking. Carbon fiber is not a good choice for the hulls of deep-diving submersibles. It is a risky material that can lead to catastrophic accidents.

In the wake of the Titan's implosion, OceanGate has announced that they will no longer use carbon fiber for the hulls of their submersibles. They have also said that they will be conducting a thorough investigation into the cause of the implosion.

The implosion of the Titan is a tragedy, but it is also a learning opportunity. We can learn from this accident and make sure that it does not happen again. We need to choose materials for the hulls of deep-diving submersibles that are strong, durable, and resistant to cracking. Carbon fiber is not a good choice for this application.

The implosion has also raised questions about the safety of submersibles that operate at such great depths. OceanGate Expeditions, the company that operated the Titan, has said that the sub was built to withstand the pressure at that depth, and that they are confident that the implosion was not caused by a design flaw. However, the incident has prompted the company to review its safety procedures.

The implosion of the Titan is a tragic event, and our hearts go out to the families and friends of those who were killed.

It is still too early to say for sure what caused the implosion of the Titan, but the use of carbon fiber in the hull may have been a contributing factor. Carbon fiber is more susceptible to cracking than titanium, and it is possible that a small crack in the hull could have grown under the enormous water pressure at that depth, eventually leading to the implosion. The investigation into the cause of the implosion is ongoing, and it is hoped that the results of the investigation will help to prevent similar accidents from happening in the future.

MEMBER'S AREA

North Pacific Region VP Notes – August 2023

Capt. Joseph A. Derie II, NAMS-CMS; SAMS/AMS; CMI
Vice President, North Pacific Region, NAMS
Corresponding Editor, NAMSGlobal e-news
Southwest Passage Marine Surveys, LLC

I hope everyone is enjoying our warm summer in the Pacific Northwest. Everyone I've spoken with has told me that they are staying busy and that's always a good sign.

The annual regional seminar will be held on Thursday afternoon, Friday and Saturday, 19-21 October, in Bremerton in the Fairfield Inn, the same hotel as last year. Rooms have been set aside and there will a special rate. Make your reservations early when the announcement comes out as there is only a small block or rooms set aside.

The Thursday afternoon session will be a visit to the Safeboat factory at Bremerton for 3 CEUs. Individuals who have specific questions or requests for the Safeboats visit should contact me with them as soon as possible. Twelve CEUs, including one Ethics CEU, will be awarded to attendees for the 20th and 21st.

Tentative agenda topics for the regional seminar are:

Thursday 1300-1600:

- Visit Safeboats factory (confirmed by Safeboats).

Friday and Saturday:

- Ethics (1 CEU)
- USCG Fishing vessel stability
- ASA compliant appraisal reports
- Kinetic energy, Momentum and Inertia in marine accident investigation and reconstruction
- Shipbrokering
- Restoring a wooden boat
- Rigging.

As you can see, we still have some openings for speakers. Please let me know of any topics you would like to have presented. Better yet, let me know of a topic you like to present.

Our annual pilgrimage to the *Horse and Cow* is also scheduled.

I've also spoken with Trevor Salmon, our Regional Director who lives in North Vancouver, BC, about having a one-day seminar in the Vancouver, BC area. I'll keep you posted as we work things out.

The 2024 61st Annual NAMS National Conference will be held somewhere on the Western Rivers. If you have a proposed venue, please contact John Baird.

I would also like to add a comment on ethics. Workboats, commercial fishing vessels and barges are not yachts and require a different set of skills and knowledge to properly survey them. Remember NAMS Ethics requires that a surveyor not take on an assignment they are not qualified for. If you want to learn how to survey these vessels find a mentor. I, and other surveyors who have been at it a while, are always available to help you improve your surveying skills.

Anyone who has questions about or would like to discuss this column, NAMS issues, local issues, marine surveying, or anything else should contact me at 503-236-6818.

OSHA AND DECK BARGE SAFETY

CAPT Joseph A. Derie, NAMS-CMS; AMS, SAMS; CMI
RVP, NAMS North Pacific States
Contributing Editor, NAMS Global eNews
Southwest Passage Marine Surveys, LLC

Anyone surveying deck and derrick barges, whether uninspected or inspected should have a copy of OSHA Pamphlet "DECK BARGE SAFETY (OSHA 358-01 N 2009)" and be familiar with its contents.

While the US Coast Guard has regulatory responsibility regarding safety aboard uninspected commercial vessels at all times, the Occupational Safety and Health Administration (OSHA) also has regulatory responsibility regarding safety aboard these vessels while they are in US waters (OSHA Instruction, Directive Number: CPL 02-01-04, effective date: 02/22/2010, Subject: *OSHA Authority Over Vessels and Facilities on or Adjacent to U.S. Navigable Waters and the Outer Continental Shelf (OCS)*. Due to this memorandum, surveying uninspected commercial vessels should be done using the required standards of the USCG, general OSHA (29 CFR 1910), and if the vessel has a crane, OSHA (29 CFR 1919). If the barges are involved in construction, then OSHA 29 CFR 1026.605 *Marine operations and equipment* applies. Available for download online, this pamphlet covers the basics of deck barge safety as well as discussions of typical barge machinery and equipment hazards (hoists, cranes, derricks and winches), confined/enclosed spaces, fire hazards and available training. These basic safety topics and their principles are applicable to uninspected as well as inspected vessels which is why this pamphlet is of use when surveying either of these type vessels. OSHA defines deck barge as "a manned or unmanned barge that has a continuous, flat main deck. It is used to carry deck cargo and is also used the marine construction industry …".

The pamphlet is divided into seven chapters: Introduction; Slips, Trips and Falls; Falling Overboard; Machinery and Equipment Hazards; Hazards Associated with Confined/Enclosed Spaces; Fire Hazards; and Training. Each of these chapters have concluding section with references as to where more information is available from OSHA. At the end of the pamphlet there are sections for References, OSHA Assistance and OSHA Regional Offices.

Surprisingly the photo of the ladder on p-20 shows a ladder that does not meet OSHA standards. 29 CFR 1910.27(b)(1)(v) states: "The rungs of an individual-rung ladder shall be so designed that the foot cannot slide off the end." This refers to ladders constructed by welding the rungs directly into a bulkhead with no railings on the sides as seen in the picture.

Points of especial interest to surveyors when surveying these vessels found in this pamphlet include:

- Keep all walking and working surfaces clean, dry and unobstructed.
- Keep all areas free of debris.
- Use non-skid protective deck compound and do not paint over the non-skid compound with standard paint.
- Paint the perimeter and tripping hazards in a contrasting color.
- All deck holes, opening and hatches should be guarded or covered.
- Emergency shut-offs must be easily accessible, and sufficient guarding should be used for equipment controls.
- Assess the hoisting systems for structural soundness by inspecting regularly for problems with welds, rivets, chains, pulleys, lines, blocks hooks, etc.
- Enclose the winch drum in a cage if practical.
- A guard should be installed between the winch operator and the connected cables to protect the operator from potential whiplash.
- Store engine fuel tanks and compressed gas tanks properly, away from sources of ignition. Only keep onboard quantities of flammable and combustible materials that are necessary for operations and maintenance. Post appropriate danger signs.

• Regularly conduct visual inspections of connections, switches and wiring, which may be subject to corrosion from saltwater and damage from use.

Surveyors wanting to learn more about deck barge safety and earn CEUs can take "Course 895 – Deck Barge Safety" from the OSHAcademy, https://www.oshatrain.org/courses/mods/895m1.html, which is available for a nominal fee.

As always, anyone who would like a to discuss this article or has questions about surveying commercial vessels should contact me at 503-236-6818.

Thoughts On Due Diligence and Marine Surveyors

John Baird | National Vice President

Marine safety has come a long way from the Motorboat Act of 1940 where the requirements for motorboats were a few pages covered everything from whistles and fire extinguishers to ventilation of engine compartments using volatile fuels. Compare the following requirement from the Act to what is currently published in ABYC H-24 (Gasoline Fuel Systems) and 33 CFR 183 (Boats and Associated Equipment) … *"Ventilation of engine and fuel compartment bilges using volatile liquid as fuel.*

Every such motorboat and every such vessel, except open boats, using as fuel any liquid of a volatile nature, shall be provided with such means as may be prescribed by regulations of the board of supervising Inspectors with the approval of the Secretary of Commerce for properly and efficiently ventilating the bilges of the engine and fuel tank compartments so as to remove any explosive or inflammable gases: *Provided,* That this section shall apply only to such motorboats or vessels, the construction or decking over of which Is commenced subsequent to April 25, 1940."

As a practical matter, less regulatory words are better. Currently, there is a plethora of must-do words for marine surveyors to understand and deal with on a daily basis. To miss something with a lot of regulatory/industry standards words, structural, and safety concerns circling around it during survey potentially creates a less than desirable dance card for the attending surveyor. With so much on the line during survey, if a boat isn't presentable for survey, you can't properly survey or inspect it, and therefore, you can't properly report on it. The chances of missing something important are too great when you have to dig through the mess to look at things.

The pictures below are from a recent (attempted) survey of a mid-century wooden auxiliary cutter where I told the boat's owner that he needed to make his boat presentable for survey so I can take expected and reasonable professional steps in surveying his prized possession. That is, to clean up the dang mess to provide good and reasonable access to interior spaces, systems, and equipment so I can do my due diligence in inspecting his boat. At the end of the day, he refused to, so I refused to survey his boat.

I prefer to think of myself as a marginally capable surveyor on the very best day. But having said that, not being able to inspect things on a boat with a bunch of important issues connected to it, presents a situation where I can't perform a systematic and thorough inspection of a vessel as a marine surveyor.

Let's face it, marine surveyors must identify hazards and call out situations and issues that affect the vessel's safety and serviceability. Due diligence is a front line weapon in our armory to guard against the claim that we didn't do our job.

Several years ago, a local surveyor got sued for not identifying a problem with a deck stepped mast on a sailboat. Even though the issue was hidden and not discovered until the mast was removed by yard to be rerigged, his client contented that he, the surveyor, should have caught it during survey. The surveyor presented to the court nearly two-hundred digital photographs along with his systematic and comprehensive survey notes detailing what he could and could not see or inspect. At the end of the day, the court ruled for the surveyor as he proved his claim of properly executing professional due diligence during survey.

Our job as NAMS marine surveyors is to observe (the boat must be presentable for survey), record what we see (in a systematic and detailed manner) and produce a comprehensive and understandable professional survey report which becomes our primary weapon when things go sideways. I don't think of due diligence as a burden, it's my quality control system.

As a sidenote, there is a 4-day marine survey report writing class scheduled for October 16 – 18, 2023 at the Northwest Maritime Center, Port Townsend, Washington. If interested, please contact me for details. There will be a cost for the class with all proceeds donated to NW Maritime Center.

Ethics and Professional Marine Surveyors

Marcos Picolo, NAMS-CMS
NAMSGlobal eNews Editor
Updated from April 2023

Marine surveyors are professionals who are responsible for inspecting and assessing the condition of ships, boats, and other marine vessels. Their role is crucial in ensuring the safety and seaworthiness of vessels, and they are expected to uphold high ethical standards in their work. In this article, we will discuss the ethics that are expected of marine surveyors.

1. Independence and impartiality: Marine surveyors are expected to be independent and impartial in their assessments. They should not be influenced by any external factors such as the owner or operator of the vessel, the charterer, or any other party with an interest in the vessel. Their opinions and recommendations should be based solely on the facts of the case, and they should avoid any conflicts of interest.

2. Competence: Marine surveyors should possess the necessary knowledge, skills, and experience to carry out their duties effectively. They should continually update their knowledge and skills to keep up with changing technologies and regulations. They should also be aware of their limitations and seek advice or assistance when necessary.

3. Confidentiality: Marine surveyors should maintain the confidentiality of their clients' information and should not disclose any information without the client's permission or a legal obligation to do so.

4. Integrity: Marine surveyors should act with integrity and honesty in all their dealings. They should not make false or misleading statements or engage in any behavior that would compromise their integrity.

5. Professionalism: Marine surveyors should conduct themselves in a professional manner at all times. They should dress appropriately and communicate effectively with clients, colleagues, and other parties involved in the survey process.

6. Safety: Marine surveyors should prioritize safety in their work. They should identify any safety hazards or risks and take appropriate measures to mitigate them. They should also be familiar with relevant safety regulations and guidelines.

7. Environmental responsibility: Marine surveyors should be aware of the potential impact of their work on the environment. They should ensure that their assessments do not harm the environment and should promote environmentally responsible practices.

In conclusion, marine surveyors play a critical role in ensuring the safety and seaworthiness of vessels. They are expected to uphold high ethical standards in their work, including independence, impartiality, competence, confidentiality, integrity, professionalism, safety, and environmental responsibility. By adhering to these ethics, marine surveyors can maintain the trust and confidence of their clients and promote the safety and sustainability of the marine industry.

NEW APPLICANTS

Applicant	Region	Discipline	Seeking	Sponsor
Rosado, Freddie	Northern Pacific	FV	Associate	Kuhrt Wieneke
Ali, Amin	West Central US	Cargo	CMS	Steve Delong
Dimitrov, Krasimir	West Central US	Cargo	CMS	Jeff Millard
Clauhs, Robert	Central Atlantic	Cargo	CMS	H. David Scott
Smith, Cameron	Upper Mississippi	Y&SC	CMS	Michael Hunter
Flanagan, Arran	Southern Pacific	Y&SC	Associate	James Thomas
Riley, Robert	South Atlantic	Y&SC	CMS	Daniel Robsham
Smith, Robert	Northern Pacific	Y&SC	Apprentice	Gerald Edwards
Woodring, Michael	South Atlantic	Y&SC	CMS	Steven Weiss
Killough, John	Lower Mississippi	Y&SC	CMS	T. Fred Wright
Gaur, Rajni	Central Atlantic	Cargo	CMS	Robert Bartek

NEW MEMBERS

NAMS Full Certified Marine Surveyors

Applicant	Discipline	Region	Sponsor
Sam Littlefield	H&M	Upper Mississippi	Ryan Coffee
Cade VanDerKamp	H&M	Lower Mississippi	Robert Keister
Kyle MacDaniel	Y&SC	South Atlantic	Tim Vincent
Robert Oakley	Y&SC	Northern Pacific	Ward Graessle

NAMS Associated Marine Surveyors

Applicant	Discipline	Region	Sponsors
Freddie Rosado	FV	Northern Pacific	Kuhrt Wieneke
Ben Dodarell	H&M	South Atlantic	Paul Antsey
Mark Hughes	Y&SC	South Atlantic	Bob Bartek
Christopher O'Neil	Cargo	Central Atlantic	Timothy Bucher
Paul Slotsema	Y&SC	Upper Mississippi	Daniel Boltz
Anthony Marciante	Y&SC	Lower Mississippi	Anthony Anselmi
Arran Flanagan	Y&SC	Southern Pacific	James Thomas
Hunter Wray	Y&SC	Central Atlantic	Simon Bridgewood

NAMS Apprentice Marine Surveyors

Applicant	Discipline	Region	Sponsors
Zachery Blake	Y&SC	Southern Pacific	Simon Bridgewood

OFFSHORE & SHIPPING NEWS

Offshore Vessel 'Skandi Buzios' Suffers Major Fire at Brazil's Açu Port

gCaptain, Mike Schuler | June 2, 2023

Figure 3: Photo courtesy VARD

A high-tech offshore vessel suffered a major fire Friday morning while docked Brazil's Açu port complex.

Norwegian offshore specialist DOF Group confirmed the incident on board the vessel *Skandi Buzios*, a subsea construction and pipe-laying vessel.

"On Friday morning, June 2, a fire occurred onboard *Skandi Buzios* while the vessel was alongside Porto do Açu in Brazil," the company said in its statement. Video shows flames and thick smoke billowing from the deck of the vessel.

All personnel are reported safe and there are no serious injuries. The fire has since been brought under control after efforts by the crew and local authorities. *Skandi Buzios* is owned and operated by TechDOF, a joint venture between TechnipFMC and DOF Subsea.

"TechDOF is cooperating in the investigation of the fire and its cause," DOF said.

Skandi Buzios was built in 2016 and is designed for subsea construction and pipe laying, IRM, and ROV services in water depths up to 3,000 meters.

Brazil's Port of Açu opened in 2014 as Latin America's largest private deep-water industrial port complex. It is located in Rio de Janeiro state.

Hornbeck Offshore Announces Conversion Plans for New OSV

gCaptain, Josh Guerrlich | June 2, 2023

Hornbeck Offshore announced they will convert a newly acquired Offshore Supply Vessel (OSV) into a Service Operation Vessel (SOV) for the offshore wind market.

Hornbeck has contracted Eastern Shipbuilding Group to complete the transformation of the 280ft vessel to help meet the demand for offshore wind in the United States.

Once converted, the SOV, soon to become *HOSSOV 300E*, will be capable of both construction and O&M operations. The vessel will also be able to help with the flotel market.

Figure 4: Hornbeck Offshore to convert one high-spec OSV to an SOV / flotel for the offshore wind and petroleum markets

The vessel will be able to hold at least 90 people in flotel or offshore wind service mode. Workers will have a safe walk-to-work transfer system in moderate sea states (up to 2.5m). In addition, the vessel will be fitted with an "Uptime" 30m motion-compensated offshore gangway, a 10-ton 3D compression crane, a helideck, and a diesel-electric powerplant with a 1,500 kW battery.

"We are excited to expand our deep experience in walk-to-work and offshore accommodation services with a fully capable SOV for the benefit of the offshore wind community and our offshore petroleum clients," said Todd Hornbeck, President, and CEO of Hornbeck Offshore. "The SOV is a welcomed addition to our high-spec fleet of vessels, as we continue to grow in both our core oilfield and diversified non-oilfield businesses."

The vessel is U.S. flagged and Jones Act qualified. The ship is expected to be ready for operation in spring 2025.

Ever Given Report Highlights Suez Canal Pilots' Role in Grounding

gCaptain, Mike Schuler| July 13, 2023

The March 2021 grounding of the *Ever Given* marked a critical moment for the maritime shipping industry. Its grounding came near start of the pandemic-fueled boom cycle, thrusting the industry into the global spotlight as some 12% of global trade came to a screeching halt, not to mention launching what seemed like a internet million memes.

Now over two years later, the Panama Maritime Authority, acting as the authority of *Ever Given's* flag state, has submitted its accident report to the International Maritime Organization, finally shedding light on the cause of what is arguably the most famous grounding in the modern shipping industry.

Figure 5: Photo courtesy Panama Maritime Authority

The Suez Canal is a 193-kilometer-long artificial waterway that connects the Mediterranean Sea to the Red Sea, providing a crucial shortcut for international maritime trade. It is owned and managed by the Suez Canal Authority, an Egyptian state-owned authority.

As for the *Ever Given*, it is a massive containership that measures 400 meters in length and can carry up to 20,000 twenty-foot containers (TEUs).

Before its fateful voyage on March 23, 2021, the *Ever Given* was anchored south of the canal, awaiting transit. Winds started to pick up, gusting to 35 knots at one point and causing the ship to drag anchor. The Master then raised the anchor and informed port control that the vessel intended to proceed to a safer location outside the Suez Canal waiting area anchorage. However, port control instructed the *Ever Given* to hold position, as a convoy was starting and a pilot was on the way to the vessel, according to the report.

Around ninety minutes after the first pilot boarded, two additional Suez Canal pilots joined the crew and the *Ever Given* began its transit. It entered the Suez Canal without any issues, becoming the fifth ship in a northbound convoy. However, as the Suez Canal Authority (SCA) pilots changed over, wind speed increased, and visibility reduced due to blowing sand.

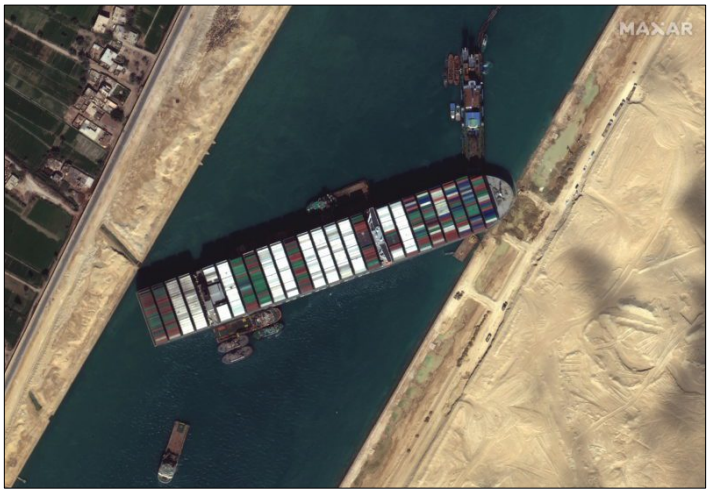

Figure 6: Ever Given container ship is pictured in Suez Canal, in Suez Canal in this Maxar Technologies satellite image taken on March 27, 2021. Satellite image ©2021 Maxar Technologies/Handout via REUTERS

The two pilots had difficulty keeping the ship centered in the channel, and they ordered increased speed to aid in steering. However, the ship began turning to starboard. Despite efforts to correct the course, the *Ever Given*continued turning and eventually ran aground on the eastern bank of the canal.

The ship became firmly wedged across the waterway, with its bow and stern stuck in the canal banks. Initially, the Suez Canal Authority attempted to refloat the vessel using canal tugs and the now-famous digger to excavate the bow. However, these attempts were unsuccessful. The Suez Canal was blocked.

As the backup swelled to more than 400 ships, a frantic effort was launched to refloat the ship. The Suez Canal remained blocked for six days until it was freed on March 29, 2021.

The report found a combination of factors contributed to the grounding.

First, the VTMS (Vessel Traffic Management System), SCA pilots, and the ship's master failed to adequately assess the risk of bad weather conditions, including strong winds and reduced visibility. The ship did not take preventive measures against such conditions, including requesting tugboat assistance or postponing the transit. The non-use of tugboats in the restricted area contributed to the incident, the report said.

The report was highly critical of navigation decisions made by the SCA Pilots. According to the report, they did not take bad weather conditions into account, gave improper instructions to the helmsman, and did not communicate effectively with the bridge team due to language difficulties. The report emphasizes the importance of careful pilot management and integration with the bridge team to reduce risks, highlighting the ineffective communication between the *Ever Given's* bridge team and the pilots. Discussions between the pilots in Arabic hindered the rest of the bridge team's understanding of the pilot's concerns and potential hazards.

"Language difficulties can also add to problems associated with pilots and these should be considered. In

the case of M/V EVER GIVEN, although Pilots orders were given in English language, the discussion between them was always in Arabic language, therefore the Bridge Team, could not understand pilot's concerns (if any), the potential hazards, in order to on time and effectively conduct risk assessment."

The ship was also traveling at a speed of 12-13 knots, which exceeds the maximum permissible speed of 8.64 knots for ships in the Suez Canal.

The captain's interventions and instructions to the helmsman were ineffective in preventing the grounding, the report says. According to Suez Canal regulations, the captain has ultimate command of the ship, while the pilots fulfill only an advisory role and do not give orders unless authorized by the captain. However, in this case, the captain was not actively involved in piloting the ship.

The effects of squat (reduction in ship's draft due to confined water) and bank (interaction between the ship's hull and the canal bank) also influenced the loss of maneuverability.

The Panama Maritime Authority made several recommendations in its report, including crew training, clear communication during pilotage, evaluating the pilot's actions, and paying attention to the transit.

The report also recommends additional internal auditing for operators and managers, specific training courses for transit in the Suez Canal, and training campaigns for the bridge team. The Suez Canal Authority is advised to review its procedures and regulations, train pilots to maneuver larger vessels, impose English as the working language, and implement a system of alerts and contingency plan procedures.

The grounding of the *Ever Given* had significant impacts on global trade and brought attention to the maritime shipping industry. With the accident report finally shedding light on the various factors that contributed to the grounding and recommendations to reduce the risk of future incidents, it remains to be seen how the industry will respond and what changes will be made to prevent similar accidents from happening in the future.

US Coast Guard Deploys Icebreaker on Months-Long Mission to the Arctic

gCaptain, Josh Guerrlich | July 13, 2023

The U.S. Coast Guard deployed *USCGC Healy*, a 420-ft medium icebreaker, on a multiple-month mission to the Arctic from Seattle on Tuesday.

The *Healy* is set to conduct high-altitude research along with exercises and exchanges with foreign partners in the area.

Figure 7: ARCTIC OCEAN – The U.S. Coast Guard Cutter Healy (WAGB-20) is in the ice Wednesday, Oct. 3, 2018, about 715 miles north of Barrow, Alaska, in the Arctic. (NyxoLyno Cangemi/U.S. Coast Guard)

The *Healy* was commissioned in 2000 and has made annual trips to the Arctic for research purposes.

"We're excited to begin our Arctic deployment to the high latitudes," said Capt. Michele Schallip, commanding officer of the *Healy*. "Our deployment will support scientific exploration to increase understanding of the changing Arctic environment and associated impacts."

Schallip took command of the *Healy* back in June after spending time as the ship's executive officer.

The *Healy* helps with Operation Artic Shield, the Coast Guard's operation to create better awareness and experience in the Arctic, along with building better relationships with partners in the area, in addition to supporting the U.S. Coast Guard's Arctic Strategy.

"We'll also have opportunities to deepen the Coast Guard's cooperation with our allies, and partner nations through engagements and joint exercises to promote regional stability, security and strengthen our collaborative partnerships." said Schallip.

The *Healy's* mission comes as the Coast Guard moves to recapitalize the Polar icebreaker fleet with both economic and national security interests.

Last October, *Healy* marked its third visit to the North Pole, marking only the second time a U.S. ship has reached the location unaccompanied, having previously achieved the feat in 2015.

Pasha Hawaii Delivered Second LNG-Powered Containership for Jones Act Trade

gCaptain, Mike Schuler | July 13, 2023

Pasha Hawaii and AmFELS have announced the delivery of the *MV Janet Marie*, the second of two new 2,525 TEU-capacity 'Ohana' class containerships powered by liquified natural gas.

Delivery follows the delivery of the first Ohana-class vessel, the *MV George III*, in July 2022. Both ships were built by AmFELS in Brownsville, Texas, in compliance with the Jones Act, for Pasha Hawaii's Hawaii/Mainland trade lane. *MV George III* began service on August 17, 2022.

Texas-based AmFELS is part of Singapore-based Seatrium Group, which was formed earlier this year through the merger of Sembcorp Marine and Keppel Offshore & Marine.

"We are delighted that *MV Janet Marie* will be joining its sister vessel, *MV George III*, on the West Coast," said Kelvin Fok, President of AmFELS. "We have developed a strong partnership with The Pasha Group through the construction of these two vessels and look forward to continuing this relationship for future ventures."

By operating on liquified natural gas, the 774-foot LNG-powered vessels surpass the International Maritime Organization (IMO) 2030 emission standards, representing the most technologically advanced and environmentally friendly vessels to serve Hawaii. They also feature a state-of-the-art engine, an optimized hull form, and an underwater propulsion system with a high-efficiency rudder and propeller.

The vessels are named after George Pasha, III and Janet Marie Pasha, the late parents of The Pasha Group President and CEO George Pasha, IV, representing three generations of service to Hawaii.

"We are very grateful to welcome our second ship as a testament to my parents and our incredible Pasha Hawaii

team members who continue to raise the bar on excellence and dedication," said George Pasha, IV. "Once again, we are extremely proud of the perseverance and commitment of our partners at AmFELS, and the skilled men and women at the shipyard, including our own on-site team members, who have proven once more that ship building, and ingenuity are alive and well in the United States."

Pasha Hawaii is a wholly owned subsidiary of the family-owned global logistics and transportation company, The Pasha Group, based in San Rafael, California.

Gard Warns of Liquefaction Risks with Unlisted Cargoes

gCaptain, Mike Schuler | July 13, 2023

P&I club Gard is warning of the liquefaction risk of cargoes that are not listed as Group A cargoes in the IMSBC Code, citing recent incidents where ships carrying such cargoes experienced liquefaction, endangering the crew and the environment.

Group A cargoes can liquefy if shipped with a moisture content above their Transportable Moisture Limit (TML).

In one incident, a vessel carrying over 1,900 tonnes of soil from a landfill listed and eventually sank due to wind and waves causing the cargo to behave like liquid during transit. The crew was rescued, and the authorities ordered the removal of oil from the wreck. An investigation by the Norwegian Safety Investigation Authority (NSIA) concluded that moisture in part of the stockpile and soil taken on board likely contributed to the incident.

In another case, a cargo of calcium carbonate, which was not specifically listed in the IMSBC Code, caused a vessel to develop a list shortly after leaving the load port. The cargo had a moisture content over 30%, exceeding both the TML of 24% and Flow Moisture Point (FMP) of 26.7%, making it unsafe for carriage. The cargo had not been tested for flow characteristics, and laboratory testing later confirmed it to be Group A. Particle size distribution (PSD) analysis revealed the material to consist entirely of particles less than 2mm.

Unlisted Cargoes

Gard cautions that while the IMSBC is not a comprehensive database of all commodities that may be carried on ships, the code does provide instructions for dealing with cargoes not listed, including obtaining acceptance from the competent authority at the port of loading. However, Gard warns these provisions can be difficult to put into practice, and proposals are being formulated to improve the Tripartite Agreement. Members facing commercial pressure to load unlisted cargo without acceptance are encouraged to contact the Club.

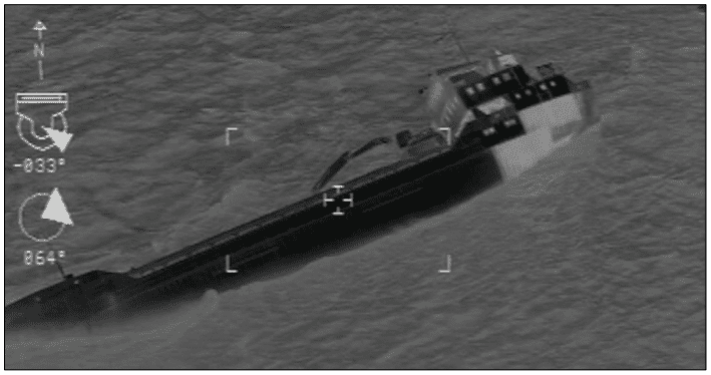

Figure 8: Cargo containers piled up at a marine terminal at the Port of Los Angeles in March 2022. Photo courtesy Port of Los Angeles

Bulk Cargo Shipping Names (BCSN)

Gard reminds shippers that Section 4.2.2 of the IMSBC Code requires shippers to use the BCSN when listing cargo, and trade names should only be used as

secondary names. This ensures that the Master can confirm that the cargo aligns with the properties listed in the Code. If the cargo does not meet the Code's description, the Club should be consulted. Members are advised to ask for the correct BCSN or acceptance from the competent authority if shippers provide cargo documents without it.

In the end, Gard emphasizes knowing your cargo to reduce your risk. Understanding the cargo properties and risks is essential for safety control, especially if the crew is unfamiliar, Gard says.

CARGO, PORTS AND TERMINALS

Trade Cools at Port of Long Beach

gCaptain, Mike Schuler | July 13, 2023

Trade passing through the Port of Long Beach slowed down in June, as retailers continued to clear out their warehouses, the port said Thursday.

Dockworkers and terminal operators at the port moved 597,076 TEUs last month, a 28.5% decline from June 2022, which was the port busiest June on record, and more than 21% below May's volume.

Imports were down 34% YoY to 274,325 TEUs, while exports declined 18% to 94,508 TEUs. Empty containers moving through the Port decreased 25% to 228,243 TEUs.

"We are hopeful to obtain a greater percentile of market share," said Port of Long Beach CEO Mario Cordero. "We remain confident that our reliability, efficiency and unparalleled service will attract additional trade and economic activity to our Port."

Next door, the Port of Los Angeles reported its best month in a year in June, with volumes just 5% below last year's monthly record.

Economists report that consumer spending exceeded expectations during the first half of 2023 and may flatten out through the rest of the year, the Port of Long Beach said.

Figure 9: Photo courtesy Port of Long Beach

"We continue to work with our industry partners to grow cargo volume and raise the bar on sustainable operations," said Long Beach Harbor Commission President Sharon L. Weissman. "Our highly skilled workforce, infrastructure projects and environmental programs continue to make us the Port of Choice."

In the first half of 2023, the Port of Long Beach moved 3,732,676 TEUs, down 25.5% from the same period last year.

Carrix to Expand North American Terminal Footprint

gCaptain, Mike Schuler | June 23, 2023

Carrix, a leading marine terminal operator based in Seattle, Washington, has announced plans to expand its North American terminal footprint with the purchase Ceres Terminals.

The agreement was reached with Ceres Terminals' current owner Macquarie Infrastructure Partners III, a fund managed by Macquarie Asset Management.

Ceres currently operates in 18 locations throughout North America, including California, Houston, Montreal, Vancouver, B.C., and the U.S. Atlantic and Gulf coast regions. Its container terminals can handle approximately 10 million TEUs per year. In the past eight years, Ceres has broadened its stevedoring operations to include a range of terminal concessions that offer on-dock logistics services for containers, roll-on roll-off cargo, breakbulk cargo, and cruise passengers.

Carrix is the parent company of SSA Marine, which operates at over 250 port and rail locations globally. This includes 18 container terminals in Long Beach, Oakland, Seattle, Tacoma, Jacksonville, Panama, Mexico, Chile, Colombia, and Vietnam. SSA Marine runs cruise, auto, and other conventional terminals throughout the United States and Canada.

"We are excited to expand SSA Marine's footprint further into the rapidly growing Atlantic and Gulf Coast regions of the United States," said Uffe Ostergaard, President & CEO of Carrix.

"Ceres Terminals has developed a leading position serving the world's largest cruise line customers throughout the U.S. and in Canada, and we look forward to expanding this segment with our combined cruise operations expertise," he added.
Financial terms of the transaction were not disclosed. The purchase remains subject to the execution of a final deal and regulatory approval.

NextDecade Finalizes $18 Billion Investment to Construct Largest U.S. LNG Export Facility

gCaptain, Mike Schuler | July 12, 2023

Figure 10: An illustration of the Rio Grande LNG's 984-acre facility courtesy Port of Brownsville/NextDecade

Houston-based NextDecade Corporation has announced an $18.4 billion final investment decision to construct the first three liquefaction trains at its Rio Grande LNG terminal, the largest proposed liquefied natural gas (LNG) export facility in the United States located at the Port of Brownsville, Texas.

The company called the decision the largest greenfield energy project financing in U.S. history, highlighting the importance of LNG and natural gas in the global energy transition.

At full capacity, Rio Grande LNG will produce 27 million metric tonnes of LNG for export. The project includes a large carbon capture and storage component that will aim to capture and permanently store over 5 million metric tonnes of CO2 per year, reducing carbon emissions by over 90%.

Phase 1 has a nameplate liquefaction capacity of 17.6 MTPA and 16.2 MTPA of long-term binding LNG sale and purchase agreements with various companies including TotalEnergies, Shell NA LNG LLC, and ExxonMobil LNG Asia Pacific.

The project is expected to generate over 5,000 jobs and provide a significant boost to the gross domestic product, with an estimated increase of $6 billion in Cameron County, $23 billion in Texas, and up to $35 billion in the United States, according to the company.

"The future of the Rio Grande Valley's economy begins at the Port of Brownsville," said Brownsville Navigation District Chairman Esteban Guerra. "This dynamic project, the largest private infrastructure investment in the State of Texas, will provide good-paying jobs and economic growth to the region."

NextDecade has also issued the notice to proceed (NTP) to Bechtel Energy Inc. (Bechtel) for Phase 1 construction under its lump-sum turnkey engineering, procurement, and construction contracts (EPC).

Global Infrastructure Partners, GIC, Mubadala, and TotalEnergies have committed $5.9 billion for Phase 1, with options to invest in two additional trains and the CCS project. TotalEnergies' investment in trains 4 and 5 is dependent on exercising their LNG purchase rights.

As U.S. Imports Slow, Ports Eye Shipping Turnaround Later This Year

gCaptain, Reuters | March 17, 202
By Lisa Baertlein

LOS ANGELES, March 16 (Reuters) – The leader of the busiest U.S. seaport on Friday said February's cargo volume hit the lowest level since the start of the pandemic as inflation and economic upheaval hurt demand, and signaled that activity may not pick up until the second half of this year.

"This is a global phenomenon. We may not be at the height of the pandemic, but there are more container vessels sitting idle around the world today than at any time since it began," Port of Los Angeles Executive Director Gene Seroka said on Friday.

He and other ocean shipping experts say a turnaround won't come until retailers and other cargo owners clear clogged U.S. warehouses to make room for new shipments.

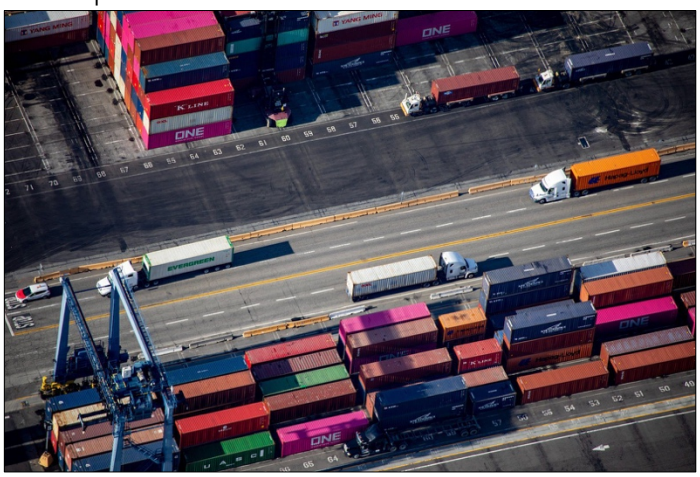

Figure 11: Photo courtesy Port of Los Angeles

Executives at Walmart, the largest U.S. importer of containerized goods, say they have made progress clearing unsold goods. Nevertheless, they remain cautious about consumer spending as inflation gobbles up money otherwise spent on goods, and recession and other "unknowns" threaten.

Meanwhile, importers are selling products for pennies on the dollar to liquidators or offering steep discounts in customer email blasts. Still others have thrown up their hands.

Bobblehead maker Funko earlier this month said it was destroying $30 million to $36 million of toy products from its overstuffed distribution center in Arizona.

The Port of Los Angeles handled 487,846 20-foot (6-meter) equivalent units (TEU) of goods in February, a 43% year-over-year drop led by plummeting imports.

Seroka expects first-quarter volumes to be down roughly 33% from last year and about 20% below the five-year average before starting to improve in the third quarter.

"How much (improvement) remains to be seen," said Seroka, who added that ongoing West Coast port labor talks are also weighing on results.

(Reporting by Lisa Baertlein; Editing by Sandra Maler)

SHIPYARD NEWS

Philly Shipyard Wins Contract for Hospital Ship Design Study

gCaptain, Mike Schuler| July 13, 2023

Philly Shipyard, Inc. has announced the contract award to conduct a six-month feasibility study of the U.S. Navy's new T-AH(X) hospital ship.

Figure 12: he USNS Comfort passes Manhattan as it enters New York Harbor during the outbreak of the coronavirus disease (COVID-19) in New York City, U.S., March 30, 2020. U.S. Coast Guard

The T-AH(X) are planned to replace the two current hospital ships, USNS *Mercy* and USNS *Comfort*, which are owned by the U.S. Navy and operated by Military Sealift Command (MSC).

The design study is being performed for naval architecture firm, Gibbs & Cox. Philly Shipyard will subcontract to Vard Marine Inc. to provide engineering and technical services.

"This contract win highlights our commitment to pursuing and securing work in the government market," said Steinar Nerbovik, Philly Shipyard President and CEO. "Along with our current commercial and government backlog of shipbuilding projects, we have completed previous design studies for the U.S. Navy and are very interested in pursuing government opportunities that fit our production delivery cycles and skill sets. We are excited and grateful to team up, once again, with Vard Marine on this important industry study."

Philly Shipyard and VARD will use design work from a special study completed for the U.S. Navy's CHAMP program to inform their work going forward.

The T-AH(X) hospital ship is different from Navy's Expeditionary Medical Ship (EMS(X)), known as the Bethesda Class Expeditionary Medical Ship. Compared to their predecessors, *USNS Mercy* and *USNS Comfort*, the EMS ships are designed with a shallower draft and faster operating speed, enabling them to reach shallow ports and provide care at a faster speed.

Daewoo Investor Eyes Purchase of US Navy Shipbuilder

gCaptain, John Konrad | March 17, 202

Figure 13: 150224-N-EW716-002 MOBILE, Ala. (Feb. 24, 2015) An aerial view of the future littoral combat ship USS Gabrielle Giffords (LCS 10) during its launch sequence at the Austal USA shipyard. The launch of the Gabrielle Giffords marks an important production milestone for the littoral combat ship program. (U.S. Navy photo/Released)

by John Konrad (gCaptain) South Korean conglomerate Hanwha, valued at $42 billion, is considering a strategic acquisition of Austal, a pivotal player in the global shipbuilding industry, according to the Financial Review. Hanwha, keen to enhance its recent expansion into shipbuilding following the acquisition and renaming of Daewoo Shipbuilding to Hanwha Ocean, is particularly interested in Austal's US operations.

Hanwha, a publicly-traded Korean conglomerate, has made significant strides in the shipbuilding sector this year. In a strategic move this May, it acquired a controlling stake of 49.3% in Daewoo Shipbuilding & Marine Engineering, one of South Korea's top three shipbuilders, for an investment of $1.49 billion. Following the acquisition, Daewoo Shipbuilding underwent a rebranding, emerging under the new name of Hanwha Ocean.

Austal, an Australian company with shipyards in Western Australia and Alabama, USA, presents a compelling investment opportunity. Its anticipated contract for surveillance ship construction, valued at $3.2 billion, and its paltry market capitalization (under $1 billion) compared to other defense industry companies, make it an attractive prospect for investors. The intensifying competition with China has led to the US Navy's desire to expand its shipbuilding efforts, further augmenting Austal's appeal. Additionally, Austal USA's recent strategic investment in enhancing its manufacturing capabilities by adding steel production lines to its existing aluminum manufacturing further

bolsters its value proposition in the sector.

However, Austal's US operations have recently grappled with substantial challenges. Following an extended investigation, the Department of Justice and the Securities and Exchange Commission (SEC) charged three of its maritime executives with accounting fraud. These allegations sent shockwaves through the industry.

Austal, recognized as the builder of the Independence Class Littoral Combat Ship (LCS) – which have facedharsh criticism for failing to meet expectations – is implicated in systemic accounting fraud allegations.Among those charged by the Securities and Exchange Commission is Austal USA's former Chief Executive, Craig Perciavalle. These legal actions, coupled with an unsettling insight into the daily operations at Austal's US shipyard, could hamper its capacity to attract critical executive hires and secure future financing.

Amid these turbulent times, Hanwha's interest in Austal surfaces when the latter is on the cusp of significant defense contracts, thanks to the AUKUS pact. This agreement commits Australia to a massive $368 billion investment over the next three decades for the procurement of eight nuclear-powered submarines. Austal does not build submarines directly but has contracts to work on the US Navy's Virginia-class and future Columbia-class nuclear-powered submarine for General Dynamics' Electric Boat.

The Financial Review also points out that this potential move has sparked interest among other financial behemoths. New York-based JF Lehman & Company, enjoying the backing of Morgan Stanley, is preparing to lodge a bid. Cerberus Capital Management and Washington's Arlington Capital Partners are also interested.

Should Hanwha proceed with the acquisition, it could signal a remarkable shift in the US shipbuilding industry. This could usher in greater collaboration with Korean shipbuilders who, despite losing market share to China, still reign supreme in efficiently constructing large, highly complex ships. According to several experts interviewed by gCaptain, a symbiotic partnership combining Korea's commercial shipbuilding efficiencies with American warship funding and expertise could revitalise Naval shipbuilding, as long as it can circumvent US government red tape.

Industry Consolidation

Austal USA's strategic location holds one more significant appeal to private equity firms. Its close proximity to the newly revitalized Alabama Shipyards could offer potential investors a significant advantage in the shipbuilding industry. Merging the operations of the two yards would provide a combined capability to construct steel and aluminum ships and would also facilitate the much-needed upgrade and repair services for the US Navy's aging fleet.
Given Alabama Shipyards' remarkable turnaround story – from having less than a dozen employees in 2018 to a workforce of around 250 with the ability to surge to 600 as needed – the company offers not only an ample supply of skilled labor but also the capacity to undertake substantial projects. Its extensive waterfront real estate and deep-water access further bolster its potential.

Also Read: Alabama Shipyard: On the Mobile waterfront, a sleeping giant has awakened

By strategically capitalizing on these existing opportunities, and other promising prospects in the commercial sector – such as supplying the burgeoning workboat market through the construction of aluminum vessels, or acquiring a primary provider of Jones Act tankers to the US Navy, Overseas Shipping Group (currently undervalued with a paltry market-cap of just $322 million, which is at or below the replacement cost of a single Jones Act crude tanker) and launching a newbuild project – savvy private equity investors could forge a robust shipbuilding conglomerate that meets several of the Pentagon's most presssing needs. This well-positioned entity would be capable of effectively addressing the rising demand in both the defense and commercial sectors.

Conclusion

The potential acquisition of Austal by Hanwha could be a transformative event in the shipbuilding industry. Despite Austal's current challenges, its significant growth potential, marked by robust U.S. Navy and Australian submarine contracts, make it an appealing prospect.

Hanwha's acquisition could not only solidify its position in the U.S. shipbuilding sector but also ignite greater collaboration between South Korean shipbuilders – which have been loosing market share to China – and American shipbuilders – which would benefit from the technologies and processes that make Korean yards among the world's most profitable and efficient.

Yet, the intricacies of the political, legal, and competitive environment cast a shroud of uncertainty over the outcome. This potential acquisition highlights the volatile interplay between international business and defense strategy, underscoring the challenging reality faced by the U.S. Navy. Like VT Halter before it – which also had billions in contracts and invested hundreds of millions in expansion yet sold for an astonishing low $15 million – Austal is confronted with the stark truth that new facilities, substantial U.S. Navy contracts and promising opportunities do not guarantee financial security.

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Agenda;
August 15. 2023
2:00 to 3:00 Chris LaBure – NAMS CE Program
3:00 to 3:15 Break
3:15 to 4:15 Lloyd Griffin – Yachts and Small Craft Report Writing
4:15 to 4:30 Break
4:30 to 5:30 Garrison – Surveyor Business Ethics

August 17, 2023
2:00 to 3:00 Richard Falcinelli – NAMS Insurance
3:00 to 3:15 Break
3:15 to 4:15 Joseph Derie – Stability Flotation Capacity Overloading
4:15 to 4:30 Break
4:30 to 6:00 Mike Monahan – The Hull as a Ship System

August 22,2023
2:00 to 3:00 Dana Teicheira – Vessel Appraisals
3:00 to 3:15 Break
3:15 to 4:15 Kevin Ritz - Marine Corrosion
4:15 to 4:30 Break
4:30 to 5:30 Jonathan Klopman – Failure Analysis

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