The NAMS Global eNews

March, 2021

The President's Corner

Members,

David Pereira, President

I hope this message finds you, your family and colleagues in good health.

I would like to remind everyone that the annual conference at the Higgins Hotel is just around the corner. I realize that quite a few of us will not be able to make the conference for various reasons related to the pandemic. For those of you that might be on the fence, you may be glad to know that the state of Louisiana has recently relaxed restrictions in several areas and that the city of New Orleans has one of the lowest occurrences of the virus throughout the state. With that said, the Higgins has assured us that our gathering will allow for us to adhere to all recommendations for social distancing throughout the conference.

As a reminder, the board meeting will be conducted at the hotel prior to the conference on 28 March commencing at 1300 hours.

Best regards,

David Pereira
President

From Matt Knoll, NAMS Vice President

We have applicants who need sponsors, but are not having luck finding a sponsor. As you may have noticed Jennifer will use the member forum to try and spread the word about these applicants. Please consider sponsoring a new member. These applicants likely have made the near term commitment to pursue a marine surveying career. We owe it to ourselves, our profession, and our industry to make sure our competitors, colleagues, and possible employees are knowledgeable, professional, and are capable of generating accurate fact based surveys. Please consider being a sponsor and helping potential new members.

Matt Knoll, Vice President

-I am looking forward to seeing everyone at the conference this March.
-I am working on the following hopefully interesting small projects:
-A virtual conference to be held in 2021. Details to be announced.
-Re-publish our old NAMS tech journals in digital format, with hopes that we can ignite folks to create new tech articles that will help all of us be better informed.
-Hiring a marketing firm to increase NAMS's visibility and online presence, specifically in social media.

View from the Helm

We are delighted to now have regular feature from Joe Derie NAMS-CMS. Joe will be writing a short quiz for each issue on various standards. It is a good way to keep all of us aware of important standards that we occasionally overlook. Thank you, Joe, for your writings!

And it is good to see members posting on the NAMS forum, to bring items of current interest to everyone's attention.

This winter I've been working on a 1973 C&C 27, bringing it back to good condition. As surveyors we are good at finding deficiencies with vessels, and are familiar with the theory of the repair. But there is nothing like hands on experience to get a thorough understanding of the process.

Be safe out there!

Phil Peterson, NAMS-CMS
NAMS eNews Editor

Applicants/Members Change in Status

Name	Applying For	Region	Sponsored By
Jason Brueck	CMS	Great Lakes	William Duval
John Scarcella	CMS	New York	Mark Clark
Marga Fenton	Apprentice	Central Pacific	Richard Martin
Matthew Fenton	CMS	International	William Hansen
Daniel Gorman	Associate	Pacific State	Lee Frain, Jr.
Thomas Greaves	CMS	New England	Robert Paine
William Benns	Associate	New England	Richard Frenzel
Michael Downer	CMS	Eastern Canada	David O'Dougherty
Timothy Green	CMS	South Pacific State	Lee Frain Jr.
Robert Gerosa	Apprentice	New England	Robert Paine

CMS

Name	Discipline	Region	Sponsor
John Frye	H&M	West Gulf	Robert Keister
Seth Mosley	Y&SC	East Gulf	Richard Schiehl
Jessie Page	H&M	East Gulf	Wesley Shiffer

NAMS Associate

Applicant	**Discipline**	Region	**Sponsors**
Tony Fergusson	Y&SC	Central Atlantic	Richard Frenzel
George Malhiot	Cargo	South Pacific State	Richard Frenzel

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Members Retiring

W. Thomas Suggs, North Carolina
David Huffman, Florida
Thomas Laskey, Louisiana
Christopher Small, Canada
Paul DeBold, Florida

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Upcoming Educational Opportunities

* NATIONAL ASSOCIATION OF MARINE SURVEYORS

"The NAMS National Conference is still scheduled for March 28-30, 2021 at the Higgins Hotel in New Orleans, LA. We look forward to seeing you there. - Matt Knoll, NAMS-CMS, Vice President,

NAMSGlobal 58th Annual National Conference
Mar. 28 – Mar. 30, 2021
Higgins Hotel and Conference Center
https://www.namsglobal.org/calendar/2021/3-28-31-58th-annual-national-conference

* INTERNATIONAL ASSOCIATION OF MARINE INVESTIGATORS *

IAMI Virtual CMI Classes
https://www.iamimarine.org/membernews/10099413

* INTERNATIONAL INSTITUTE OF MARINE SURVEYING *

Online Seminars

IIMS has launched a series of online only seminars to be delivered by experts in their fields using Zoom video conferencing technology. Each seminar will last approximately 90 minutes (with the exception of report writing, which lasts about 3 hours). New seminars will become available to review and book, so check back often.
https://www.iims.org.uk/education/online-seminars/

The International Institute of Marine Surveying (IIMS) also publishes a series of self help handy guides, written by acknowledged experts in their field, under the series title 'What a marine surveyor needs to know about'.

The paperback guides are available in a compact and handy A5 size. The series continues to grow and further titles will be published at occasional intervals covering a variety of topics. Click the images below of your choice for a more detailed description of the content of each handy guide.

Typically the guides are published at various price points between £20 and £35. The publications are currently only available directly from IIMS in paperback or in the slightly cheaper, downloadable eBook pdf format.

IIMS Handy Guides:
https://www.iims.org.uk/education/buy-iims-handy-guides/

* LLOYDS'S MARITIME ACADEMY *

A list of online Distance Learning courses here:
https://www.lloydsmaritimeacademy.com/page/Distance-Learning

* AMERICAN INSTITUTE OF MARINE UNDERWRITERS INTRO CLASSES *

AIMU has a number of distance learning programs, including webinars and e-learning:
https://aimu.org/edprograms.html

* AMERICAN BOAT AND YACHT COUNCIL *

ABYC's course listing:
https://abycinc.org/events/event_list.asp

In addition, there are a number of free webinars **that include ABYC CEUs**. A partial list of subjects include:

- Common Mistakes in Fiberglass Repair
- Batteries
- Surveying Electrical Systems
- De-mystifying Basic Electrical Concepts and Standards

https://abyc.elevate.commpartners.com/free-courses

* NORTHWEST SCHOOL OF WOODEN BOAT BUILDING *

Week long classes have tentatively been postponed due to Covid-19:
https://www.nwswb.edu/systemsintensives/

* TOWING VESSEL INSPECTION BUREAU *

The TVIB is presently offering virtual classes. Go to TheTVIB.org "News & Events" then scroll down to "training" for updates.
https://www.thetvib.org/category/tvib-training/

* SOCIETY OF ACCREDITED MARINE SURVEYORS *

Educational Courses, Seminars & Meetings for Marine Surveyors:
https://www.marinesurvey.org/education/

* INDEPENDENT MARINE CONSULTANTS AND SURVEYORS*

Courses listing here:

https://imcs-training.eu/

*** AMERICAN SOCIETY OF APPRAISERS ***

ASA is now offering eLearning classes, including the USPAP 7 hour refresher. Both the 15 hour introductory course and the 7 hour refresher courses are available online: https://www.appraisers.org/Education/national-asa-courses/eLearning/ondemand-class-schedule

ASA Course listing here:
https://www.appraisers.org/Education/national-asa-courses/national-class-schedule

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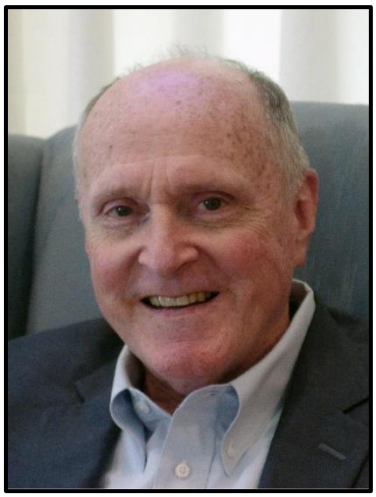
NAMSWorthy Articles of Interest

OSHA STANDARDS QUIZ #2: *LADDER OR STAIRS?*

CAPT Joe Derie, NAMS-CMS; AMS, SAMS; CMI
Co-Chair, NAMS Commercial Workboat Committee
Chair, NAMS Ethics Committee
Southwest Passage Marine Surveys, LLC



Capt. Joe Derie, NAMS-CMS

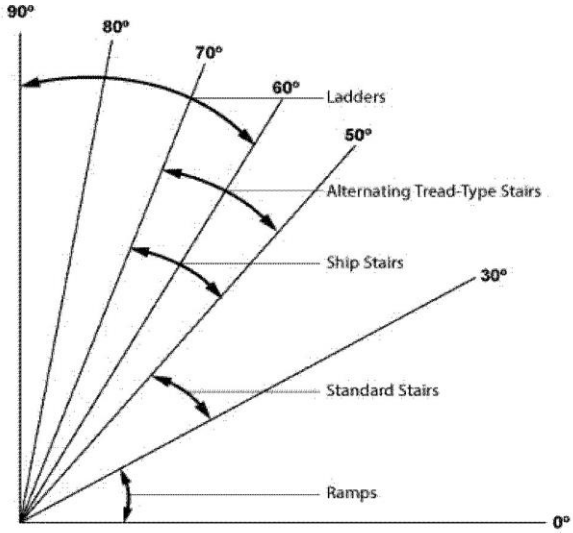
The US Coast Guard has regulatory responsibility regarding safety aboard uninspected commercial vessels at all times. The Occupational Safety and Health Administration (OSHA) also has regulatory responsibility regarding safety aboard these vessels while they are in US waters (OSHA Instruction, Directive 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 these vessels should be done using the required standards of the USCG, OSHA (29 CFR 1910), and if the vessel has a crane, OSHA (29 CFR 1919). To survey a vessel to OSHA Standards requires training in these standards.

Just how well do you know the OSHA standards you should me surveying uninspected commercial vessels to? This is second in a series of articles identifying common OSHA deficiencies on uninspected vessels and quizzing your knowledge of the OSHA standard you should be referring to in your report.

QUESTION: Below is a picture of a type of passageway connecting two decks sometimes found on larger uninspected commercial vessels. You measure its inclination at 55º. How would you describe it in your report? Is it safe?

a. Standard stairs.
b. Ship stairs.
c. Ladder
d. Ramp

ANSWER: At 55º of inclination you are looking at what OSHA describes as “ship stairs ” as seen in Figure D-10 below, taken from OSHA 29 CFR 1910 Subpart D *Walking Working Surfaces.*



Angle	Type
≤ 30º	Ramps
30º – 50º	Standard Stairs
50º – 70º	Ship Stairs
50º – 70º	Alternating Tread-Type Stairs
60º – 90º	Ladders

Figure D-10 – Angles for Stairs, Ramps, and Ladders

Whether the is unsafe or not depends on whether it is in good repair and meets the following guidelines:

29 CFR 1910.25(e) Ship Stairs

29 CFR 1910.25(e)(1)
Are installed at a slope of 50 to 70 degrees from the horizontal;

29 CFR 1910.25(e)(2)
Have open risers with a vertical rise between tread surfaces of 6.5 to 12 inches (17 to 30 cm);

29 CFR1910.25(e)(3)
Have minimum tread depth of 4 inches (10 cm); and

29 CFR 1910.25(e)(4)
Have a minimum tread width of 18 inches (46 cm).

As always, I hope anyone who wants to discuss this column or has questions about Commercial Fishing Vessels will contact me at 503-236-6818.

Marine Safety Center issues Ballast Water Management System Type Approval Certificate to Kurita Water Industries, Ltd.

The Coast Guard Marine Safety Center issued the 40th U.S. Coast Guard BWMS Type Approval Certificate to Kurita Water Industries, Ltd. after a detailed review of the manufacturer's type approval application determined the system met the requirements of 46 CFR 162.060.

The treatment principle of the KURITA BWMS is based on chemical injection at intake and neutralization at discharge. This approval covers seven models with maximum treatment rated capacities between 375 and 3,750 m^3/h.

A complete list of BWMSs that have been approved or have type approval applications currently under review can be found on the Marine Safety Center webpage. Redacted copies of all completed type approval certificates are also available. (https://mariners.coastguard.blog/) (3/4/2021)

Final Rule: Certificate of Documentation-5 Year Renewal Fees

On February 18, 2021 a final rule extending the validity of a recreational vessel endorsement on a Certificate of Documentation (COD) from 1 to 5 years goes into effect.

Congress passed and the President signed the Frank LoBiondo Coast Guard Authorization Act of 2018, which requires the Coast Guard to issue recreational vessel CODs for 5 years. By updating the Code of Federal Regulations to reflect this change, the Coast Guard anticipates this final rule to harmonize with the requirements of the 2018 Act that decreased the

burden on recreational vessel owners by requiring COD renewals every 5 years rather than annually.

For more information about the final rule, view the Federal Register notice or search docket number USCG-2020-0215 on *https://www.regulations.gov*.

For information about this document, call or email Mr. Ronald Teague, Department of Homeland Security, U.S. Coast Guard, National Vessel Documentation Center, 792 T J Jackson Drive, Falling Waters, WV 25419; telephone 304 271-2506; email *ronald.s.teague@uscg.mil.* (USCG Blog 3/4/21)

Ship Structure Committee Publishes Report on Crack Arrestor Enhanced Aluminum Structures: SSC-476

The Ship Structure Committee announces the publication of a new report, SSC-476, titled “Design and Performance Evaluation Methods for Crack Arrestor Enhanced Aluminum Marine Structures” by Mayuresh Paradkar, Xiaolong Xu, and David Hua. The abstract for this report is below and the entire report is available for free at the SSC website, through the National Technical Information Service or may be downloaded by clicking here. All SSC reports are available free of charge at the SSC website.

ABSTRACT: Large, high-speed aluminum vessels are usually required to maintain aggressive operating limitations to prevent failure by subcritical growth of manufacturing flaws and service-induced defects. Studies have shown that the arrest of crack propagation can be achieved through either insertion of a local high fracture toughness material or reduction of the crack growth driving force. The lack of crack arrestor design procedures for aluminum structure has precluded an optimal selection of a mechanical arrestor device to stop the crack before reaching its critical state. This report aims at the development and verification of a design and performance evaluation method for crack arrestor enhanced aluminum marine structures. The objective of this project is to improve the existing modeling capability for crack initiation and propagation. This will efficiently and reliably capture the effect of a crack arrestor on the fatigue and fracture performance of a welded aluminum marine structure. Additionally, this improved capability will be used to explore an optimized design of a crack arrestor to achieve a design requirement.

Click on the above image to access the report. (Control + Click)

The Ship Structure Committee greatly appreciates the contributions of the individuals who volunteered their time to participate on the Project Technical Committee, listed below. They were the subject matter expert representatives of the Ship Structure Committee to the contractor, performing technical oversight during contracting, advising the contractor in cognizant matters pertaining to the contract

of which the agencies were aware, and performing technical peer review of the work in progress and upon completion. The individuals are:

Mr. Chao Lin, US Maritime Administration
Mr. Jose Alberto Rosas, Class NK
Mr. Nathan Korinchak, US Navy
Mr. Gordon MacDonald, Lloyds Register
Mr. Rod Sutherland, NDI Engineering
Mr. Rong Huang
Dr. Pradeep Sensharma, US Naval Sea Systems Command
Dr. Robert Sielski, SNAME

SSC Executive Director:
Lt. Braden Rostad, US Coast Guard

For any questions about this report or the Ship Structure Committee in general, please contact the Ship Structure Committee Executive Director, Lt. Braden Rostad, at (202) 372-1398. (USCG Blog 3/4/2021)

MSIB: Improving Fishing Vessel Stability

The Coast Guard has published Marine Safety Information Bulletin 01-21 to assist mariners in identifying ways to improve their stability awareness.

It has been three years since the release of USCG Marine Safety Alert (MSA) 11-17. Since then, additional commercial crab fishing vessels have sunk, resulting in losses of life due to stability related conditions. In addition to the information communicated in MSA 11-17, this bulletin is intended to be informational to assist mariners in identifying ways to improve their stability awareness. Please note that it is the vessel master's responsibility to maintain satisfactory stability at all times.

Stability is the tendency of a vessel to rotate one way or the other when forcibly inclined. Operators can significantly reduce the risk of capsizing by performing the following actions:

1. Review the vessel's Stability Instructions (SI) periodically to ensure it accurately reflects the vessel's design and actual conditions (pot weights, fuel loads, icing conditions, as may be applicable).
2. Be aware of the assumptions or conditions outlined in the vessel's SI.
3. At the end of any vessel modifications, ensure all alterations made to the vessel are accurately accounted for in the ship's SI. (Special attention should be given to modifications that include changes to fuel tanks, freeing ports areas or areas of the hull near or below the waterline).
4. While at sea, be cognizant of watertight integrity.
5. During icy conditions, be proactive in removing ice build-up.

6. Do not make the mistake of overestimating a vessel's ability to handle heavy loads and heavy seas!

Periodically review the vessel's SI:

- Identify load conditions outlined in the SI.
- Identify the assumed weight of gear loaded on deck.
- Weigh the actual gear used and resolve any differences within the SI.
- Understand how the gear is arranged in the SI, especially for pots. Confirm the height of the stacked gear and its orientation.
- Understand the geographic restrictions and types of waters reflected in the SI.

Be aware of the assumptions and conditions outlined in the SI:

- Identify the max environmental conditions used in the calculations such as wind on the vessel's sail area. Confirm that the sail area include spots, deck loads, rigging, running gear, tarps, icing, etc.
- Be conservative when considering the environmental effects on gear. Wet lines can add as much as 15-pounds per shot. (Example: 100 pots with 2 shots per pot could add 1.5-tons of water weight).
- If the vessel carries pots, identify the weight used for each pot. Weigh a representative sample of each different type of pot including lines and buoys. Rectify any differences in the SI or consult a naval architect to assist.

Review/Evaluate changes to the SI following any maintenance period:

- Pay attention to changes or blockages to freeing ports. If a freeing port location has changed, ensure a naval architect has evaluated the new conditions for compliance with 46 Code of Federal Regulations (CFR)28.555.
- Verify changes to a vessel's rigging, deck, fishing equipment, principal dimensions, cargo holds, tank capacities, or machinery. Any major conversion or substantial alteration needs to be addressed in the vessel's SI. When in doubt consult 46 CFR 28.501.
- Follow SI guidelines with respect to watertight doors and hatches. Monitor the condition of these boundaries periodically when underway, as is safe to do so. The safest practice is to ensure all watertight and weather tight closures are secured while at sea unless in immediate use.
- Set the operational expectation to ensure your crew practices good watertight integrity procedures by putting it in your safety procedures.
- Test bilge alarms periodically. Monitor spaces underway for water intrusion where alarms are not installed.

Ice:

- Vessel operations: Be aware of horizontal/vertical icing condition parameters as outlined in 46 CFR 28.550.
- Know the icing standard used in the vessel's SI.
- Identify if pots are included in the SI icing condition calculations. Be aware that icing calculations may be based on an assumption that ice only accumulates on the pot's external surfaces, which would not account for aggregation of ice on the pot's internal netting and gear.

- Be proactive with removing build-up of ice. When removing ice build-up, break ice from the top down. Removing lower ice first may have detrimental effects on the vessel's overall stability by raising the center of mass of the remaining ice.
- Use available meteorological resources to anticipate potential freezing spray forecasts. One possible source is https://ocean.weather.gov/icing_rates/compare.php?area=ak&fhour=012.

Important vessel stability training on-line resources:

- Vessel Stability Guidance:
  - Fish Safe Stability Resources: http://www.dco.uscg.mil/fishsafe
  - Stability Reference Guide: https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/CG-CVC/CVC3/references/Stability_Reference_Guide.pdf
  - USCG MSA 11-17 (Stability): https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/INV/Alerts/1117.pdf
  - Stability Training: http://www.fishsafewest.info/Training.asp
- Centers for Disease Control and Prevention (CDC):
  - http://www.cdc.gov/niosh/topics/fishing/default.html
- Food and Agriculture Organization (FAO) :
  - http://www.fao.org/fishery/safety-for-fishermen/50787/en/
  - http://www.fao.org/3/a-i0625e.pdf

Questions or comments may be sent to HQS-PF-fldr-CGINV@uscg.mil or to CGCVC3@uscg.mil (USCG Blog 1/19/21)

Golden Ray Wreck Removal Hits Hiccup Cutting Section Seven

Crews working to cut up and remove the Golden Ray wreck from Georgia's St. Simons Sound will shift their focus to another section after a chain failure while cutting the section they have been working on for a month.

The St. Simons Sound Incident Response reports that a link in the cutting chain failed during cutting operations on Section Seven on Friday, the latest hiccup in the cutting of the section which houses the ship's engine. As a result and to avoid further delay, crews will shift the VB-10000 to begin cutting on Section Two.

The Barge JULIE B is expected to arrive in Brunswick, Ga. in approximately 10 days and will receive Section Two once the section is separated and lifted.

With two sections already removed, crews began working on Section Seven on January 27, but work on the section was quickly put on maintenance hold to fix issues with the cutting apparatus. While the VB-10000 cuts and lifts Section Two, divers will survey Section Seven and install a system so that the cutting chain can be placed back into the cut groove.

The incident response confirms that the wreck remains stable and responders plan to return to Section Seven after Section Two is removed.

Crews also continue to observe and recover oil sheens and debris on the water around the wreck site

“The Unified Command (UC) developed a multi-layer approach for observing, surveying, documenting and mitigating any releases of oil or debris during cutting and lifting operations. Recovery personnel are on-station at the Environmental Protection Barrier (EPB), at the shoreline and on the water around the Golden Ray shipwreck. Responders are maintaining protective boom at sensitive locations around St. Simons Sound.”

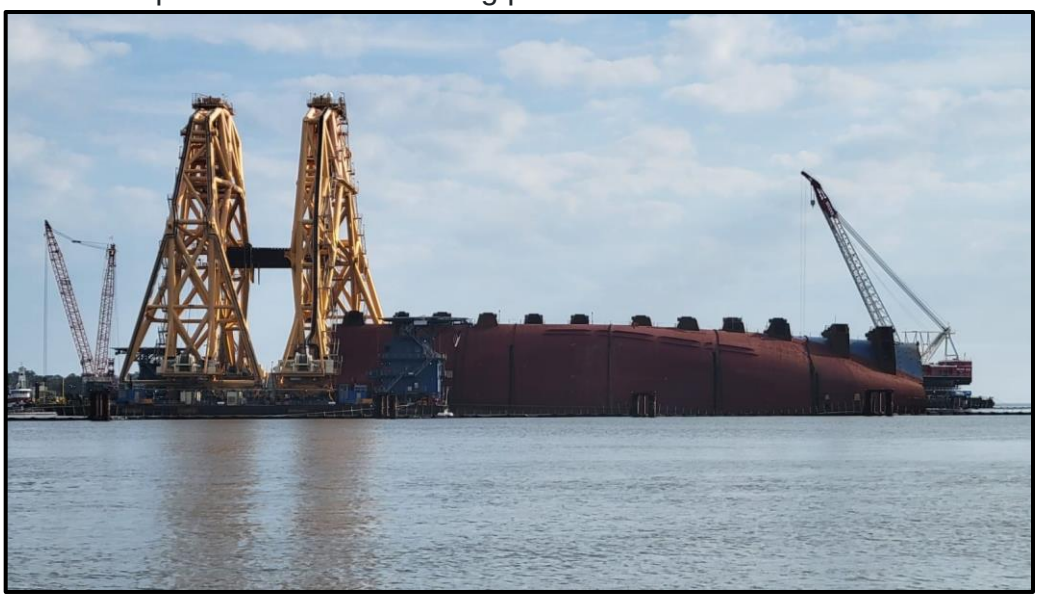


Photo: The VB-10000 moved off Section Seven to prepare for cutting operations on Section Two on Saturday. St. Simons Sound Incident response photo

The Golden Ray was carrying about 4,200 vehicles when it lost stability and grounded in St. Simons Sound as it departed the Port of Brunswick in September 2019. All vehicles remained inside the ship’s cargo holds upon commencement of the cutting and removal operation.

The operation is being performed by the heavy lift vessel VB-10000, which has been modified to carry out the work. It involves making seven cuts through the Golden Ray’s hull, separating the wreck into eight large sections for lifting and removal to a recycling facility.

The first cutting operation commenced in early November. Since then, crews have fully cut and removed two sections (Section Eight and Section One), one each from the bow and stern. (gCaptain 3/1/21)

Maersk Updates on Transpacific Ships’ Return to Service After Cargo Losses

Maersk is providing updates on its two ships that lost a significant number of containers overboard in the Pacific Ocean recently.

First up is Maersk Essen which lost some 750 containers overboard in heavy weather back on January 16. Maersk now reports that port operations at APM Terminals Lazaro Cardenas, Mexico have been completed and the ship was cleared to sail on February 22.

The vessel is now sailing to its original destination at the Port of Los Angeles where it is scheduled to berth at APM Terminals Pier 400 Los Angeles on March 4. The vessel is expected to sail at full-speed during the 3-day voyage in order to keep its itinerary.

The situation is subject to change based on the number of vessels waiting but our plan is to make every effort to advance her in the waiting line for an earlier ETA," Maersk said in its latest update.

The Maersk Essen enters the port of Los Angeles en route to APM Terminals Pier 400 Los Angeles, California USA. Photo: Maersk

Next up is Maersk Eindhoven which lost some 260 containers overboard after a brief loss of propulsion in heavy seas on February 17 approximately 45 nautical miles off northern Japan. Another 65 containers are reported damaged. Maersk said today that the vessel is in Japanese waters awaiting authorities permission for transit to APM Terminals Yokohama, where repairs are expected to be made.

Company surveyors and salvors were on board the ship on Monday to assess the damage.

Maersk reports that the ship's engine and seaworthiness is in "good working order" and in port repairs will address some steel railings and inspection of hatch covers, as well as anything else that the surveyors might find. "At this point in time, we have ensured that all replacement materials and welding activities can be performed in port. This is subject to change in the event our inspection and survey process finds new items to repair," Maersk said.

Similar to Maersk Essen, Maersk said it plans to return the Maersk Eindhoven to service as soon as possible and it should have a better estimate for its return in the following days.

"Once the vessel is in port and surveyed, we will have more specific details on the extent of damaged containers and the amount of time required to fix the vessel and determine the cargo contingency options," the company said.

The Maersk Essen and Maersk Eindhoven container losses are two in a string of similar incidents to hit the trans-pacific trade since November. The vessels are sister ships in the Maersk Edinburgh-class of 13,100 TEU-capacity ships. Both are registered in Denmark and operated by Maersk on the company's Transpacific 6 Asia-US West coast service calling at Los Angeles.

The incidents comes as containerships carrying goods from Asia are pouring into U.S. ports amid the pandemic-fueled cargo boom, hence the urgency for the vessels to return to service.

Meanwhile, Japanese line Ocean Network Express (ONE) says its ONE Apus, which lost an epic 1,816 containers overboard back on November 30, could return to service as soon as mid-March after cargo operations finish in Kobe, Japan. (gCaptain 2/23/21)

New Details on First Jones Act-Compliant Wind Turbine Installation Vessel

We're getting new details about the United States' first Jones Act-compliant offshore wind turbine installation vessel (WTIV) seen as critical to developing the nation's offshore wind industry.

We just learned that the newbuild vessel currently under construction at the Keppel AmFELS shipyard in Brownsville, Texas for Dominion Energy will be built to ABS class . The 472-foot vessel is designed by GustoMSC to handle turbines of 12 megawatt or greater. It will also be capable of the installation of foundations for turbines and other heavy lifts.

UK-based Seajacks will assist Dominion Energy with construction and operations oversight, while Keppel AmFELS is undertaking the engineering and procurement.

An illustration shows a planned Jones Act-compliant offshore wind installation vessel under construction for Dominion Energy. Illustration courtesy Dominion Energy

Dominion Energy is in the process of developing the Coastal Virginia Offshore Wind project, a 2,600 megawatt commercial offshore wind farm that is set to become the largest in the United States. Part of the project includes a 12MW pilot project, 27 miles off the coast of Virginia Beach, that is expected to become the first in U.S. federal waters.

"Dominion Energy is proud to be leading a consortium of respected industry participants in the construction of the first Jones Act compliant offshore wind turbine installation vessel, which will provide significant American jobs, and provide a reliable, home-grown installation solution with the capacity to handle the next generation of large-scale, highly-efficient turbine technologies," said Mark D. Mitchell, Senior Vice President of Project Construction. "This will better enable the offshore wind industry to bring clean, renewable energy to customers in the U.S."

The first Jones Act-compliant wind turbine installation vessel, to be named Charybdis, will be the latest for the U.S. offshore wind industry to be supported by ABS. The first U.S flagged Jones Act offshore wind farm service operation vessel (SOV) ever ordered will be built to ABS Class. It has also issued AIPs for two Jones Act SOVs to Vard and for a series of other wind support vessels from European designers.

“ABS is the ideal partner for a highly specialized wind turbine installation vessel such as this for the U.S. market. Our extensive knowledge of U.S. regulations combined with offshore industry leadership means we are uniquely equipped to support this project and a range of other innovative vessels now being commissioned for U.S. wind farms. ABS is committed to playing a significant role in the safe development of the U.S. offshore wind industry,” said Matt Tremblay, ABS Senior Vice President, Global Offshore.

Construction for the vessel got underway back in December with a keel laying ceremony at Keppel AmFELS. The vessel’s hull and infrastructure will utilize more than 14,000 tons of domestic steel, with nearly 10,000 tons sourced from Alabama and West Virginia suppliers. With a hull length of 472 feet, a width of 184 feet and a depth of 38 feet, it will be one of the biggest vessels of its kind in the world. Huisman will fabricate the main crane, which will have a boom length of 426 feet and an expected lifting capacity of 2,200 tons. It will also include accommodations for up to 119 crew and wind farm technicians.

Overall project costs for the vessel are estimated to be about $500 million.

“We are pleased to be able to build the largest wind turbine installation vessel in the U.S. for Dominion Energy and support the growing offshore wind industry,” said Mohamed Sahlan, President of Keppel AmFELS. “Keppel AmFELS has a solid track record and capabilities in a wide range of offshore vessels and we are also able to leverage the experience of our parent company, Keppel Offshore & Marine, in offshore renewables to provide a compelling construction solution for this milestone project.”

Development of the WTIV and others like it are seen as critical for the construction of a growing number of offshore wind projects planned for the U.S. East Coast. A recent amendment to the Outer Continental Shelf Lands Act (OCSLA) affirming that the OCSLA does in fact apply to offshore wind and other renewable energy development, including its application of the Jones Act which requires goods shipped between U.S. ports to be transported on ships that are built, owned and operated by U.S. citizens or permanent residents.

The U.S. Customs and Border Protection has since ended long-standing ambiguity over the issue by expressly ruling that Jones Act applies to transportation of merchandise from a U.S. port to a location on the outer continental shelf for the purpose of the development and production of wind energy. (gCaptain 2/24/21)

U.S. Shipping Companies to Spend $87 Million in Great Lakes Region this Year

Mike Schuler

American shipping companies operating the U.S.-flag Great Lakes fleet will invest nearly $87 million at shipyards and facilities across the region this year, according to new figures released by the Lake Carriers’ Association.

The work includes replacing steel plating, engine overhauls, navigation equipment updates, and conveyor belt repairs and replacements. Of the $87 million, $36 million will be spent in Wisconsin, $33 million in Ohio, $13 million in Pennsylvania, and over $4 million in Michigan.

Conveyor belt work, in particular, is critical as the U.S. Great Lakes fleet of ships have the unique ability to unload massive amounts of bulk cargo without shoreside assistance. The self-unloading technology allows a 1,000-foot ship to unload up to 70,000 tons of cargo in just eight hours.

Port of Duluth. Photo: The Great Lakes Seaway Partnership

“A ship can arrive in the middle of the night with cargo at any number of Great Lakes port facilities, unload before sunrise, and shoreside workers awake to a huge stockpile of raw material critical to their operations positioned perfectly on the dock,” said Jim Weakley, President of Lake Carriers’ Association. Annual maintenance work to the U.S. flag “laker” fleet allows ships that are 40 and 50 years old, or even older, to continue to sail the Great Lakes. The Lake Carriers’ Association notes that this work is performed by Great Lakes shipyards paid for by the U.S. owned, U.S. operated and U.S. crewed vessel operators.

“The freshwater of the Great Lakes allows vessels to sail for decades while ocean carriers must completely replace their vessels frequently due to the corrosive nature of saltwater and a system built around disposal and replacement over maintenance, unlike the Great Lakes fleet,” the association said.

Despite challenges from the pandemic, the Great Lakes saw a strong 2020 navigation season with overall tonnage down only slightly compared to 2019 (including both American and Canadian ports). Last year’s season, which is marked by the opening of the St. Lawrence Seaway, ran from on April 1, 2020 to its closing December 31, 2020. However, ships can continue to trade between Lake Superior and the lower Great Lakes until the Soo Locks are closed typically a few weeks later once winter ice sets in. This year, the Soo Locks close January 15 and they are not expected to open again until March 25. (gCaptain 2/23/21)

Austal USA President Resigns Amid Investigations Into LCS Program

Ausustralian-based shipbuilder Austal has announced the resignation of Austal USA president Craig Perciavalle amid ongoing investigations in the United States and Australia into the company’s Littoral Combat Ship (LCS) program dating back to before mid-2016.

Austal USA, a wholly owned subsidiary of Austal Limited (ASX:ASB), is a major defense contractor and is responsible for building the Independence-class Littoral Combat Ships (LCS) and multipurpose Expeditionary Fast Transport (EPF) for the U.S. Navy.

Austal said the investigations by U.S. authorities, namely the Department of Justice and the Securities Exchange Commission, concerns the write back of work in progress (WIP) attributable to the LCS program in July 2016, the procurement of certain ship components, and the charging and allocation of labor hours.

The company reports that both Austal and Austal USA have been cooperating with the authorities in the investigations. It also hired an outside law firm to conduct its own detailed investigation into matters that are subject of the federal investigations.

MOBILE, Ala. (Feb. 24, 2015) An aerial view of the littoral combat ship USS Gabrielle Giffords (LCS 10) during its launch at the Austal USA shipyard. U.S. Navy photo/Released

While Austal says it is satisfied with the write back in July 2016, it did note that its internal investigation showed the LCS vessels cost more to construct than originally anticipated and identified "isolated instances of misallocation of labour hours" in the early stages of the LCS program. In addition, certain valves used on LCS 10 through LCS 20 did not meet military standards.

"Following the completion of that external investigation, the Company is satisfied that the quantum of the write back of WIP that was announced to the ASX on 4 July 2016 appropriately adjusted Austal's revenue and profit following the revision that was made to the estimated cost to complete the remaining vessels in the LCS program," Austal said in a statement.

As a result of the internal investigation findings, Austal says its Austal USA Board has accepted the resignation of its U.S. President, Craig Perciavalle. Austal USA Chief Financial Officer, Rusty Murdaugh, will serve as president in the interim as the company searches for a new full-time president.

In its statement, Austal assured that its relationship with the Defense Department remains strong and it continue to work closely with the Department, including on a $100 million upgrade to its Mobile, Alabama facility where the recently delivered the thirteenth Independence-class LCS to the Navy. (gCaptain 2/23/21)

Wakashio Captain Confirms He Navigated Close to Shore to Pick Up Cell Signal, But Blames Chief Officer for Grounding

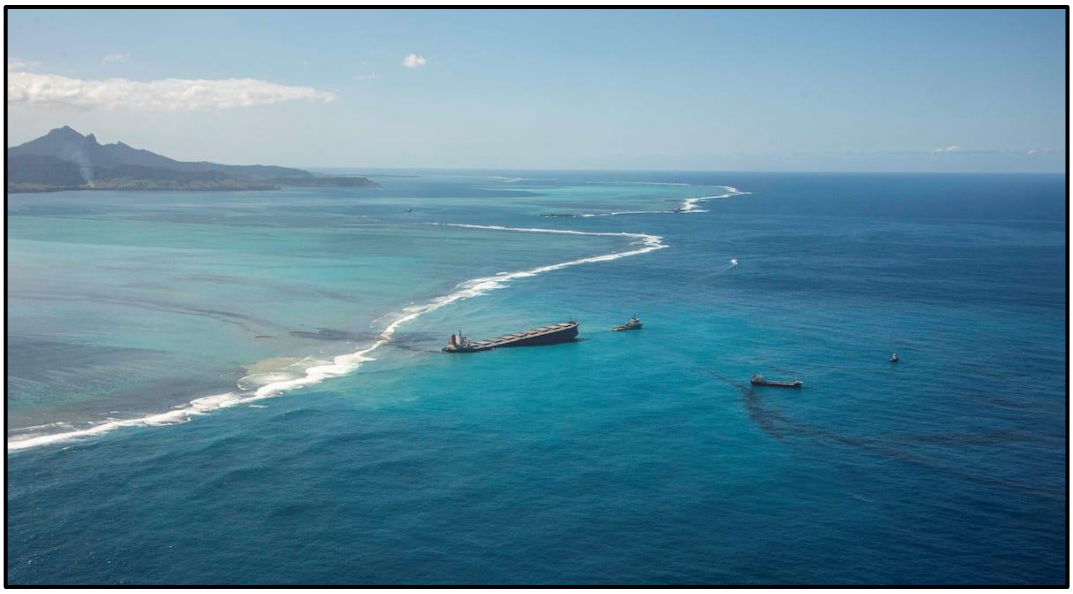
The captain of the ill-fated bulk carrier M/V Wakashio told a Mauritius court that he navigated the ship closer to land to allow his crew members to pick up cell phone service so they could connect with loved ones back home, but said ultimately it was his Chief Officer who ran the ship aground back in July.

Captain Sunil Kumar Nandeshwar appeared for the third and final time before the Court of Investigation set up to investigate the accident, where the 59-year-old Indian national again testified that he decided to maneuver the ship close to land to pick up cell phone signal as a gesture to the ship's crew, who were working beyond the initial scope of their employment agreements. However, according to the captain, fault lies with the first officer.

Captain Nandeshwar said that if Chief Officer Subodha Janendra Tilakaratna had followed his instructions, the ship would not have grounded at all because, in the captain's view, the vessel's

course was altered, bringing it within 1.5 nautical miles of the coast of Mauritius.

He said he did not intervene that night because the Chief Officer was an experienced sailor. He also pointed out that although the Chief Officer had consumed alcohol, he was not under influence on the night of the accident. The consumption of alcohol, he explained, is allowed on board under certain conditions.



A general view shows the bulk carrier ship MV Wakashio, that ran aground on a reef, at Riviere des Creoles, Mauritius, in this handout image obtained by Reuters on August 10, 2020. French Army command/Handout via REUTERS

The Wakashio was unladen when it ran onto a reef off Mauritius' Pointe-d'Esny on July 25, 2020, while en route from China to Tubarão in southern Brazil. The vessel initially appeared stable, but after spending weeks on the reef, it eventually broke up, resulting in the release of some 1,000 tonnes of heavy fuel oil which seeped into Mauritius' lagoons and created an environmental disaster.

In his testimony, Captain Nandeshwar pointed out that he had modified the course of the ore carrier to avoid a tropical depression and to pass as close as possible to Mauritius by heading for an artificial point on the French island of La Reunion. In doing so, crew members would be able to pick up cell signal to contact loved ones back home. The Captain noted that the crew was initially due for crew change on 19 January 2020, but due to COVID-19 restrictions, their crew change had been cancelled.

Speaking about his career, Captain Nandeshwar said he was promoted to captain at the age of 30, well ahead of many of his peers, and he stressed that he had commanded some 20 to 25 ships, mostly tankers, before taking the helm of ore carriers. He claimed he has never had any accidents, and also confided that his wife is a private doctor and that he has two children.

Monday's hearing also saw the testimony of Mauritius' Director of Shipping. Alain Donat, who described the response after he was informed that the MV Wakashio had grounded. Donat stressed that the Government of Mauritius lacked the equipment to pull the ore carrier off the reef and was hesitant to take on the salvage on its own, given liability issues that could arise in doing the work.

Immediately after the accident, Donat said he contacted Scott Shipping, a local ship agent, to inquire about the use of the Coral Sea FOS, a salvage tug that has been stationed in the region in response previous accidents involving the M/V Angel 1 (2011) and M/V Benita (2016).

Donat went on to say that the salvage operation took time because of bad weather and the remoteness of Mauritius. Equipment had to be sent by charter aircraft since local aircraft lacked the

capability. To get from the local airport to the wreck site, equipment had to then be trucked to Port Louis' harbor for loading onto the Stanford Hawk, a tug belonging to Smit Salvage, the appointed salvage firm. The hearing Director of Shipping is expected to continue on Tuesday.

Meanwhile, the dismantling of the Wakashio's stern is just now getting underway by experts from the Chinese company Lianyungang Dali Underwater Engineering. (gCaptain 2/22/21)

NTSB reports on Cooperative Spirit contact with bridge

The National Transportation Safety Board has issued its report on the March 15, 2020, incident in which the tow of the 1975-built American River Transportation Company towing vessel *Cooperative Spirit* broke apart after a strike on the Hale Boggs Memorial Bridge (**see earlier story**).
It was the second incident last year involving the *Cooperative Spirit* which, less than two months earlier, on January 26, 2020, **had been involved in a fatal collision** in which four crewmembers on the towing vessel *RC Creppel* were lost when the vessel capsized after being struck by the tow of the *Cooperative Spirit.*

HALE BOGGS BRIDGE INCIDENT

In its bare bones executive summary of the March 15, 2020, incident, the NTSB says:
"On March 15, 2020, about 0113 local time, the towing vessel *Cooperative Spirit,* pushing a 29-barge tow, was transiting downstream on the Lower Mississippi River at mile 121.6 near Luling, La., when the port side of the tow struck the eastern tower pier of the Hale Boggs Memorial Bridge. The tow broke apart and began floating downriver. One of the barges sank, while the remaining barges were recovered by the Cooperative Spirit and other towing vessels in the area.

The towboat Cooperative Spirit. ARTCO screen shot

"No pollution or injuries were reported.
Multiple barges in the tow, along with other barges moored along the river banks that were struck by drifting barges, were damaged and required repairs. Two barges were determined to be total constructive losses. The estimated cost of damages to the barges and cargo was $1.65 million."

PROBABLE CAUSE

The National Transportation Safety Board determines that the probable cause of the contact of the *Cooperative Spirit* tow with a pier of the Hale Boggs Memorial Bridge was the pilot not effectively compensating for the strong current while navigating a turn and approaching the bridge in high-water conditions.

THE REST OF THE STORY

As ever, there is rather more to this incident than can be learned from the executive summary. For the rest of the story, **download the full NTSB report.** (MarineLog 2.25/21)

Article: Container stack collapses – causes and solutions

In 2019 the international liner shipping industry transported 226 million containers around the world with a cargo value of more than US$4tn. Many of these were carried on ships' decks but – due to container stack collapses – not all arrived safely.

Despite various advances in standards and procedures, such collapses are still happening, putting vessels, their crews and the environment in danger. These incidents can often result in significant financial losses to the container industry and their marine insurers, sometimes with hefty fines for clean-up costs.

According to the **World Shipping Council**, an average of 1,382 containers were lost at sea each year between 2008 and 2019. Indeed, the frequency and value of container stack collapse claims experienced by Standard Club members has grown during the past five years, rising to a record US$1m from 13 incidents in 2019. While these figures are only a tiny proportion of the total number of containers carried, container stack collapses and their not insignificant costs are mostly preventable.

This article aims to remind ships' officers and crews of the various factors that can contribute to container stack collapses, and how they can be avoided by taking greater care and attention during loading, securing and passage planning and when underway at sea.

Bigger, stiffer ships

Economies of scale have resulted in ever-larger container ships being built. Modern container ships have come a long way from the first vessels designed in the late 1950s, which had a capacity of about 600−800 TEU with less than 50 containers loaded on deck.
By contrast the 2020 Algeciras class container ships have a capacity of just under 24,000 TEU, with a length of 400m and a beam of 61m – over three times wider than the early vessels. With a deck capacity of 24 bays, 24 rows and up to 12 tiers, ultra-large container carriers can carry nearly 14,000 TEU above the holds.

But the large beams of these post-Panamax giants result in them having relatively large metacentric heights (GM), meaning the vessels are very stable and therefore stiff. This in turn can result in very high rolling accelerations when the weather deteriorates, generating similarly high loads in the container lashing and securing gear.

More powerful ship engines

Increasing commercial pressures means that container ships usually have to keep to very tight operating schedules, particularly in the liner trade, and they need to be as fully loaded as possible. As a result, they have increasingly powerful engines, not only to provide the high speeds required but also to enable speed to be maintained during bad weather.
The consequence is that, at times, container ships can be driven hard. When ships are driven hard in bad weather, the loads on the container lashing and securing gear can be severe.

Higher wind loading

Almost all container stack collapses at sea occur in rough weather with strong winds. When fully loaded, the deck stacks on modern container ships present additional windage areas over 25 m high. Combined with large freeboards, the stacks act like giant sails to amplify a ship's motions as the weather deteriorates, further adding to lashing and securing loads.

Parametric rolling of ships

Parametric rolling is a phenomenon where sudden heavy rolling occurs in head or following seas. Although very rare, it tends to affect vessels such as containerships which have large bow and stern flares.
It is difficult for masters to predict when parametric rolling will occur, as it requires certain conditions to be met. These include larger waves with a wave length equal to the ship's length, and a wave encounter period that is half the ship's natural roll period.

The resulting variations in waterplane area can, at the right frequency, trigger violent rolling of over 30° in a very short period of time. Such violent rolling can lead to extreme loads on container lashing and securing gear.

Synchronous rolling of ships

For beam and quarter waves, if a container ship's natural roll period synchronises with the experienced wave period, resonance can occur resulting in similarly violent rolling motions.
Larger, stiffer container vessels tend to have shorter natural roll periods that more closely match the periods of the wave spectrum. This in turn increases the risk of synchronous rolling and over-loaded container lashing and securing gear.

For example, following a large container stack collapse in January 2019, the **Dutch Safety Board** confirmed that large, wide container ships using the shipping routes north of the Wadden Islands in the North Sea are at risk from synchronous rolling during north-westerly winter storms.

Ship contact with seabed

In the same report by the Dutch Safety Board, it was concluded that on the shallower southern shipping route by the Wadden Islands, there is also a risk of container ships contacting the seabed as a result of violent motions caused by north-westerly storms.

Larger, deeper-drafted container ships are clearly at higher risk of contacting shallow seabeds during extreme roll and heave motions. Such contacts, even on a sandy seabed, can result in large

additional loading in container lashing and securing gear. On rocky seabeds they can also severely damage the hull.

Green water and wave impacts

In heavy weather, waves and ship motions can become so large that water flows over the deck, known as 'green water loading'. On container ships this can cause high impulsive loading on container stacks and potentially trigger a collapse.
Steep waves with high horizontal speeds breaking against the side of a container ship can also generate additional forces in container lashing and securing gear.

Improper container stowage

The stack weight on a container ship is the total weight of all containers and their contents in the tiers of a particular stack added together. The ship's cargo securing manual states the maximum permissible stack weight for each stack. Deck stack collapses often occur in those bays where the stack weight was exceeded.

Furthermore, the distribution of weights in a container stack directly affects a vessel's stability. The cargo securing manual specifies a maximum permissible GM for the vessel to avoid excessively short rolling periods and high accelerations. It is therefore important to get the GM within the right range before a voyage starts to avoid overloading lashing and securing gear.
Cargo securing manuals generally advise that deck containers are stacked in weight order, with the heaviest in the bottom tier and the lightest at the top, to minimise loads on the lashing and securing gear. This relies on accurate knowledge of container weights. If heavy or overweight containers are inadvertently loaded into the upper tiers, it could result in catastrophically high forces on the lashing gear and collapse of the stack.

Overweight containers

To tackle the problem of overweight containers, the International Maritime Organization (IMO) amended SOLAS chapter VI regulation 2 in 2016 to require mandatory verification of the gross mass of packed containers loaded on ships.

The shipper is responsible for providing the verified gross mass (VGM) by stating it in the shipping document. They must then submit it to the master or their representative and to the terminal representative in time for it to be used in preparing the ship stowage plan. Furthermore, a VGM declaration is a mandatory prerequisite for any containers loaded onto a ship subject to SOLAS.

In practice, the role of the ship planner and terminal representative in ensuring compliance with the regulations is critical. While some container ports in developed countries have created resilient systems to comply with the regulations, there are ports in lesser-developed jurisdictions which fail to implement them. Port authorities are often unable to afford spot checking or enforcement, which does little to encourage offending shippers to comply.
As stated above, overweight containers with incorrectly declared or deliberately misdeclared weights can, if loaded on the upper tiers of deck stack, lead to a stack collapse.

Poor packing of containers

Incorrect packing of containers can lead to both internal cargo damage and, more seriously, container stack collapse. Unlike breakbulk cargo, masters and officers do not have sight of or control over the contents of containers or the methods by which they are packed and secured. Carriers usually depend on third parties such as the shipper, freight forwarders or their sub-contractors for stuffing and securing cargo in containers.
If contents shift, they could potentially damage a container – and a stack of containers is only as strong as its weakest member. A container damaged due to shifting cargo could collapse and lead to a domino effect, resulting in an entire bay collapsing.

The IMO, the International Labour Organization (ILO) and the United Nations Economic Commission for Europe (UNECE) approved a Code of Practice for the Packing of Cargo Transport Units (CTU Code) in 2014 to help the container industry ensure safe stowage of cargo in containers. In summary, cargo should be packed evenly and solidly, and stowed securely within the container. Project or unusual cargo items should be adequately dunnaged and secured with adequate ratchet straps, wires or chains to secure fixing points. The side panels, end panels and roof panels of an ISO container should not be considered as structural members.

Structurally weak containers

Containers are essentially meant to contain cargo but can get seriously degraded with factors such as rough handling, forklift damage, inadequately secured contents, wear and tear, and overloading. These along with other factors could lead to structural failure of the container, which in turn could cause to the stack above it to collapse.

The strength of a container is provided principally by the outer framework, side rails and corner posts, together with the corner castings. The side, end panels and closed doors provide racking resistance only. Effective stacking of containers relies on the strength of the corner posts to support the weight of the containers above. Damage to a corner post, in particular buckling, can seriously degrade its compressive strength and lead to collapse of a container stack.

Inadequate container securing

The lashing of many containers in a large deck stack can prove challenging and difficult. Containers are basically secured to each other with twistlocks fitted at their four corners. Lashing rods and turnbuckles are then used to secure the container stacks to the deck by connecting them to the hatch covers, deck posts or lashing bridges if fitted.

However, lashing rods are only able to reach to the bottom of the third tier of containers loaded on hatch covers or deck posts, or to the bottom of the fourth or fifth tier of containers where a lashing bridge is fitted. This means that on large modern container ships, several upper tiers are secured by twistlocks only.

For the deck stowage system to be effective, the lashing and securing gear needs to be fitted correctly. Missing twistlocks, unlocked twistlocks, damaged lashing gear and lashings becoming lose in a seaway are examples of inadequate securing which can lead to a container stack collapse.

While lashing and securing gear is class approved, it is not usually inspected by a classification society. Replacement of sub-standard equipment is the responsibility of a ship’s crew, who must keep

a watchful eye out for damaged or worn components and arrange for them to be replaced without delay.

Adjacent container stack clashing

Each cargo stack will experience slightly different lateral and vertical forces during a ship's motions at sea such that, in the event of large motions, adjacent stacks can clash. As a result, a stack of containers could collapse, either falling overboard or against another stack. Stack collapses due to clashing are often progressive as, when one stack begins knocking into adjacent ones, the forces can be much higher.

Conclusions and solutions

Proper packing, stowage and securing of containers, and reporting of correct weights, are of key importance to the safety of container ships, their crews and cargoes; of shore-based workers and equipment; and of the environment. However, despite proper packing of the cargo into containers, correct weight declarations, and proper stowage and securing on ships, factors ranging from severe weather and rough seas to more catastrophic and rare events like groundings, structural failures and collisions can result in containers being lost at sea.

All of the factors discussed in this handout could contribute towards a catastrophic stack collapse which, besides causing large monetary losses, could potentially lead to serious crew injury and damage to the vessel and the environment. Understanding the cause of such collapses is the key to preventing them from occurring again and to appreciate who is liable for the incident.

As container ships have become larger, beamier and thus stiffer, the only significant enhancement in deck lashing and securing systems has been the provision of lashing bridges. While larger container ships provide commercial advantage to shipowners, these are often being staffed with fewer and fewer crewmembers. Given the highly commercial and systems-driven nature of the container trade, crewmembers might sometimes think their role is reduced to that of passive bystanders. This must not be allowed to happen: they must always be able to react quickly and make the correct decisions.

Crewmembers need to be mindful at all times of all the factors which could contribute to a container stack collapse. Indeed, proper training given to crewmembers could enhance their nuanced understanding and therefore enhance situational awareness on board container vessels. A proper understanding of the loading and lashing software and its limitations will go a long way to preventing such losses from occurring. Similarly, a thorough understanding of the trim and stability booklet and the cargo securing manual, and the limitations stipulated within them, must be considered and strictly adhered to by ships' crews and officers.

However, they need to bear in mind that while the cargo securing manual may only state one permissible GM value, this might not account for different wind exposures or consider if high cube containers (2.9 m high) are being loaded. There are many variables and officers and crew need to appreciate the limitations of the cargo securing manual and interpret its content. A correct stow requires innovative planning both ashore and on board. While approved software and advanced programs can be used, it is ultimately the crewmembers and cargo planners who need to make their own considered and informed decisions on loading.

Crewmembers must also not let commercial pressure dictate their actions; a sharp eye on cargo operations should be kept at all times to ensure that errors are prevented. Damaged, leaking and overweight containers must be spotted and rejected from being loaded on board.

Similarly, a sharp eye should be kept on the condition of the lashing and securing gear on board, which should be regularly evaluated for damage and deterioration in quality; and should be removed and replaced as necessary. While at sea, regular checks and tightening of the lashing gear, including turnbuckles and associated check nuts, will help keep the containers safely stowed.
Finally, since heavy weather is always a causal factor for stack collapses, a sound and well considered passage plan, an understanding of the dynamic forces affecting the vessel, and proactive and effective weather routing for container vessels will go a long way to preventing such incidents from occurring in the future. (Standard Club News & Commentary, 1/18/2021)

The Cost of the Concordia

An interesting YouTube video following the timeline of the wreck of the Costa Concordia in 2012. The format is an interesting parody of the movie *Titanic*. Use Control + Click to follow the link.

The Cost of Concordia - YouTube

Legal Stuff

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