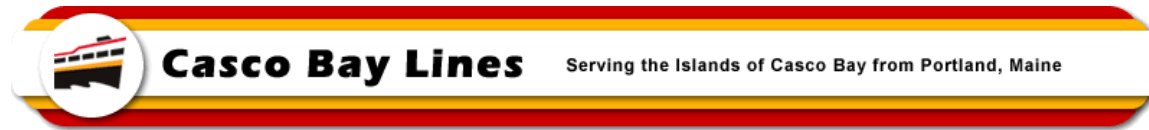


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TO: File

FROM: Paul D. Pottle, Director of Projects

DATE: October 2, 2024

SUBJECT: Construction Progress-Photos for MV Battery Steele at Senesco - # 10

This report covers construction at the Senesco Shipyard for the months of August 2024 and September 2024. The shipyard continues to make steady progress on many of the systems and has made the first submission to the Coast Guard on the overall propulsion system and the supporting power and energy management system. They continue to install much of the piping systems and getting the foundation frames in and secured in preparation for setting all of the equipment along with motors, tanks and the generators. The charger for the vessel went through final factory testing and all systems performed as designed with no issues. That unit was then made ready to ship and is currently in route to the US from Germany. Other submissions to the Coast Guard are still in progress with many of them being accepted and some of them needing minor corrections or adjustments. Inspections by the US Coast Guard are ongoing, with no major issues identified as of this writing. The Coast Guard is on site several times per week inspecting work completed since their last visit and signs off on work that meets the standards.

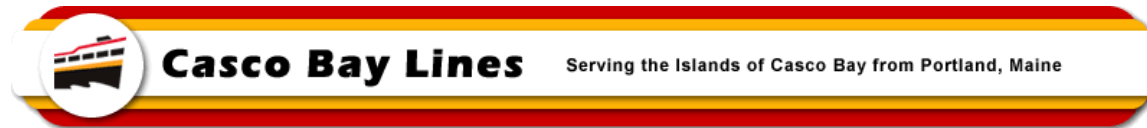
The components for the Power and Energy Management System (PEMS) arrived in September, with a couple of the shipping crate being damaged due to their not being properly secured during transit. This resulted in damage to a couple of the electrical components. One electrical panel had some scratches and a minor dent near the base of the cabinet, but there was no damage to the overall unit and items were tested and there were no issues with any of the sub-components. This panel will have some exterior replacement panels shipped and installed to replace the damaged panels. The other unit was more heavily damaged, since it fell completely over and there was enough damage to some of the internal components that it was decided to reject the entire unit and replace it with a new one. ABB will expedite the fabrication and delivery of the unit, but it will still take about 9 weeks to be delivered. Senesco is looking at the installation sequence to avoid this causing a delay to the overall delivery of the vessel. The electrical equipment, due to the size and the space available, must be installed in a sequence in order to fit it all into the various spaces. They will advance as much of the other work as possible in hopes that there will be no additional delays.

We still expect the vessel to be delivered to Casco Bay Lines in Portland by or before the end of March 2025 and based on this, we expect to be able to have the vessel ready for regular service before the beginning of the 2025 summer season.

The following is a brief overview of the work done from August 1st, 2024 to September 30th 2024:

- Crowley Engineering continues to work on plan development for both US Coast Guard submission and for the shipyard to follow for actually building the vessel. Other sub-contractors are also making submissions for various finishes and fixtures throughout the vessel. Most of these are not required to go to the Marine Safety Center of the US Coast

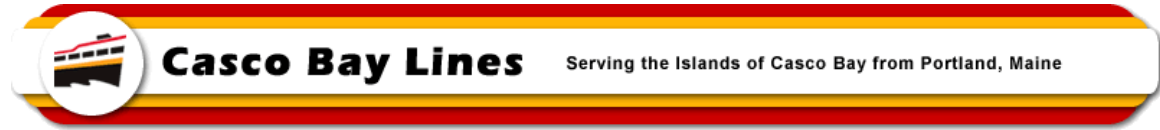
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Guard, but they will be shared with the local Coast Guard inspection team for them to check on conformance with approved submissions.

- ABB working with Senesco provided the documents for the propulsion system to be submitted by the shipyard to the Marine Safety Center. The Coast Guard is currently reviewing that submission.
- Senesco continued with piping fabrication and has been installing various piping systems on the vessel. Extensive work has been advanced, and piping was completed on the bilge system, sprinkler system, fuel lines, and a majority of the sanitary piping.
- Installed most of the battery room off-gassing system.
- Installed a number of valves on the various piping systems.
- Continued to construct various equipment foundation frames and install them on the vessel.
- Installed the remaining handrail piping and installed the wire mesh inserts on all of the railing systems.
- Fabricated the heat shield framing.
- Worked on removing excessive deflection in the 02 deck and the Pilot House deck.
- Installation and base painting several hatches.
- Installed padeyes on top of the Pilot House for the safety lines associated with the mast.
- Installed the Seachest and various connections to the systems it supports.
- Constructed the anchor rode storage box foundation.
- Worked on sprinkler system installation and Novec fire suppression system piping.
- Began the installation process for the stern tube alignment and rudder post system so that could do final welding and keep all of the system in proper alignment. This included doing work in both lazarettes.
- Cut and started installing the rub rails located on the exterior of the vessel at the 01 and 02 deck levels.
- Performed limited painting throughout the vessel. That work will continue to advance as items are installed and areas are made available. There was a focus on getting all of the coats in place around the windows in preparation of installing the windows to get the interior spaces dried in so insulation and other finish work could begin.
- Took delivery of the pumps for the potable water system, bilge system, sprinkler system, and sanitary sewer system.
- Staff attended a site visit where the Acting Administrator for the Federal Transit Administration was on site to receive a briefing of the work being performed on both the Casco Bay Lines vessel and the Maine State Ferry Service vessel. FTA also held a press conference on the states vessel for the purpose of announcing this year's awarding of millions of dollars to support building green ferry system improvements across the country.

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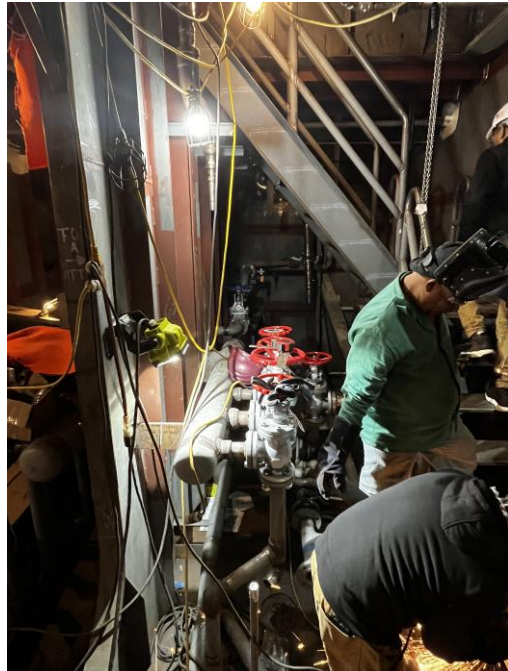
4841 – General View of the Engine Room



4848 – Fire Main Valves & Fittings

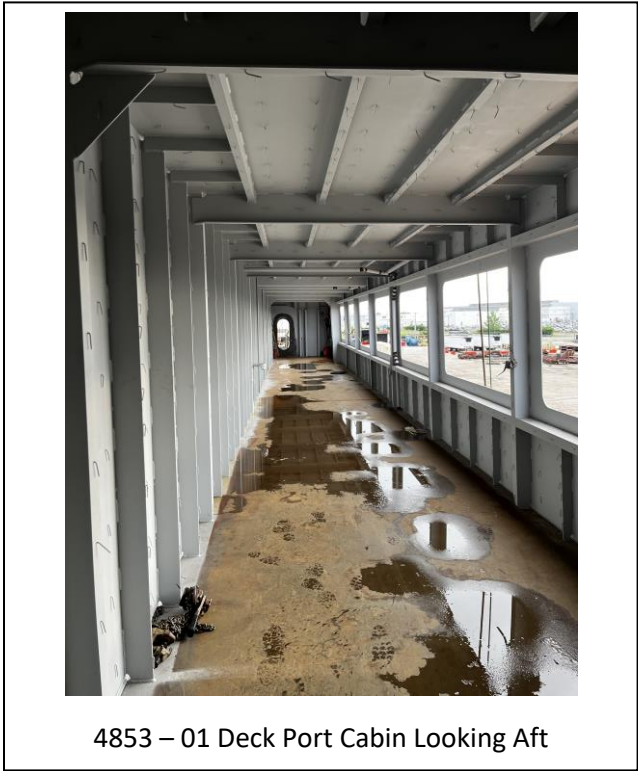
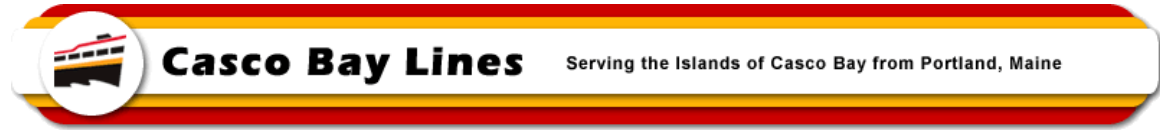


4850 – Fire Main Valves

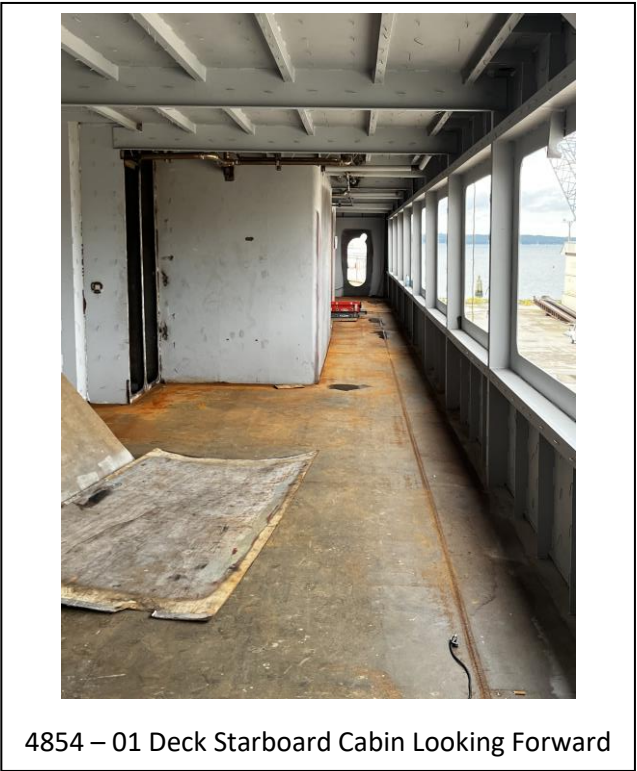


4851 – Bilge Piping Manifold w/Valves

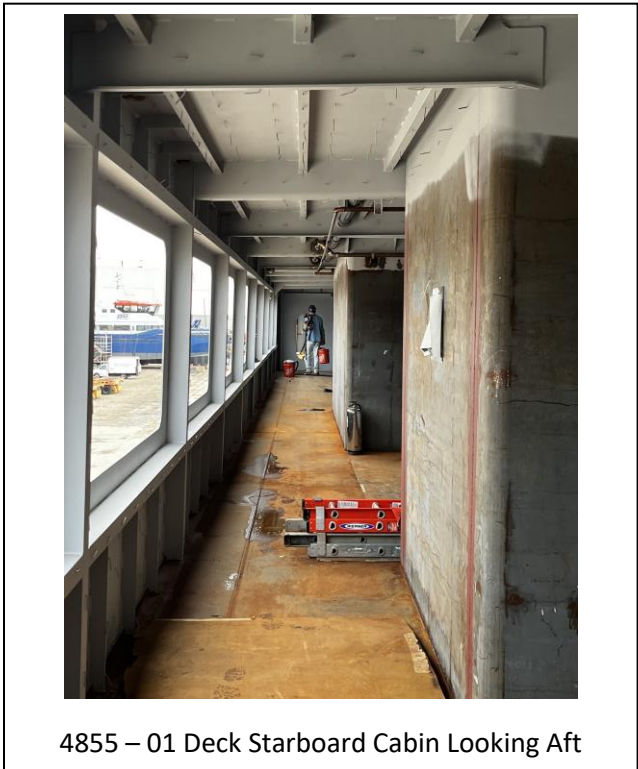
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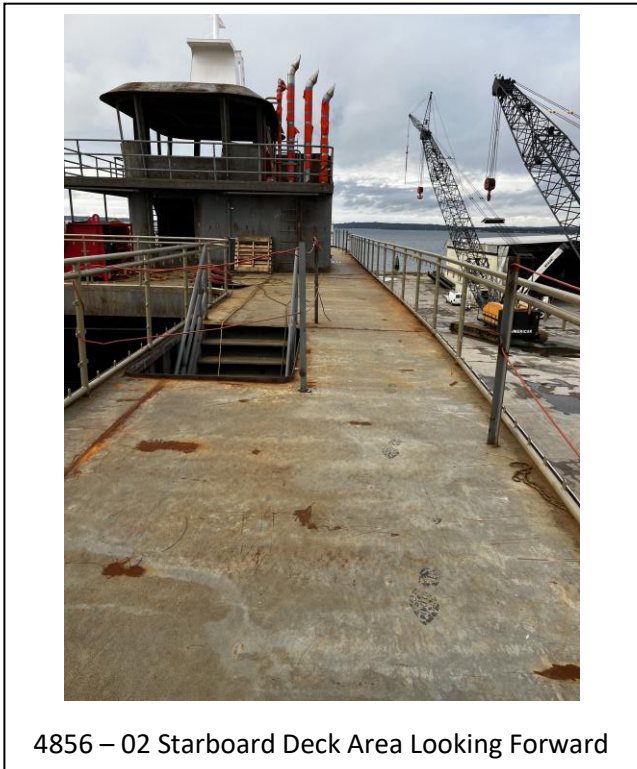
4853 – 01 Deck Port Cabin Looking Aft



4854 – 01 Deck Starboard Cabin Looking Forward

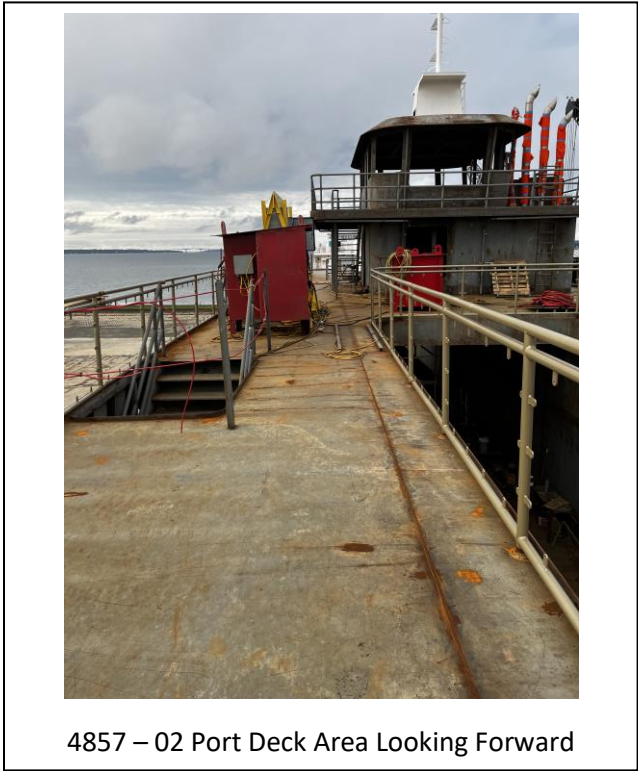


4855 – 01 Deck Starboard Cabin Looking Aft

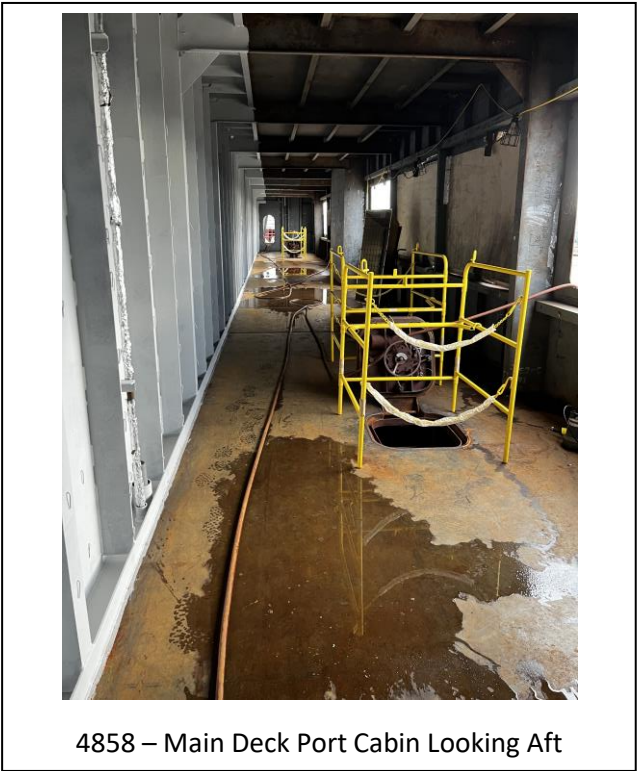


4856 – 02 Starboard Deck Area Looking Forward

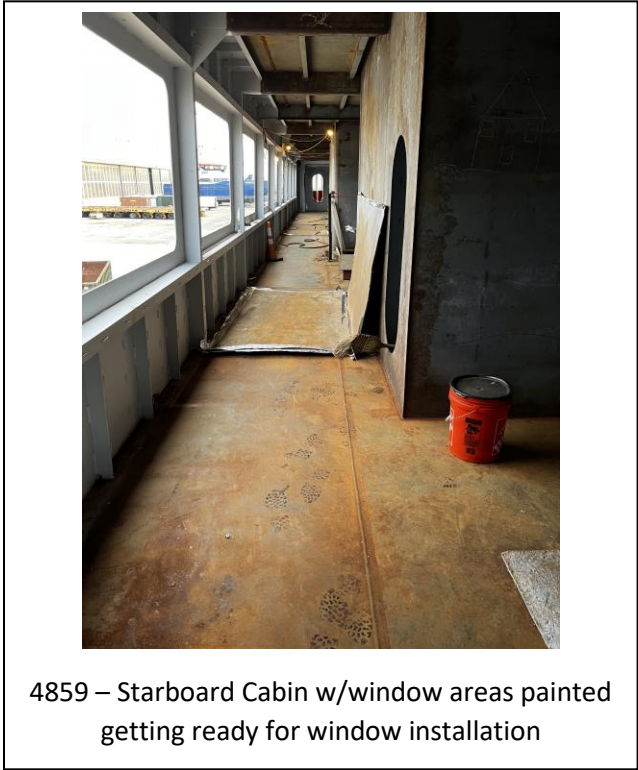
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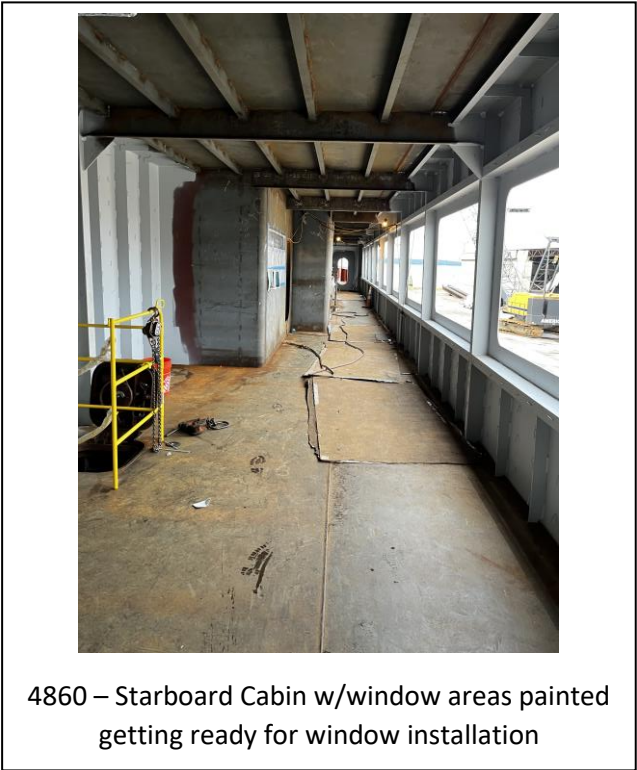
4857 – 02 Port Deck Area Looking Forward



4858 – Main Deck Port Cabin Looking Aft



4859 – Starboard Cabin w/window areas painted getting ready for window installation



4860 – Starboard Cabin w/window areas painted getting ready for window installation

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4870 – Handrail Screen Sections with Hardware



4871 – Handrail Screen Sections

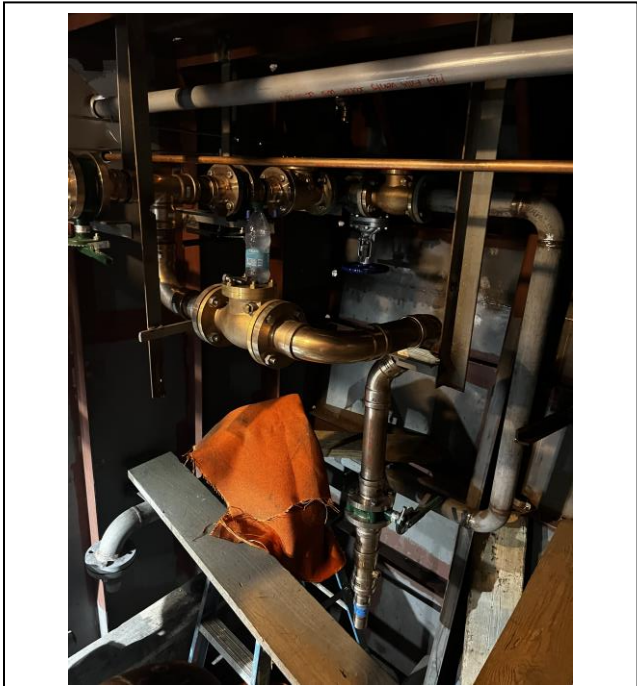
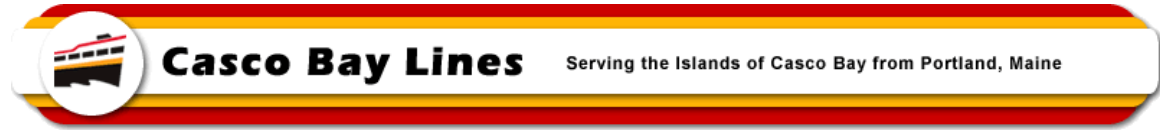


4873 – Hatch from Engine Room

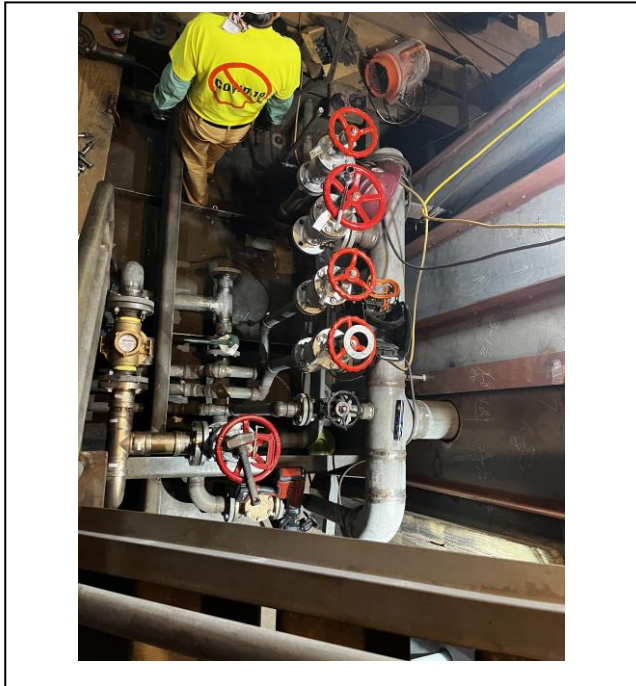


4869 – Working on a Stern Tube

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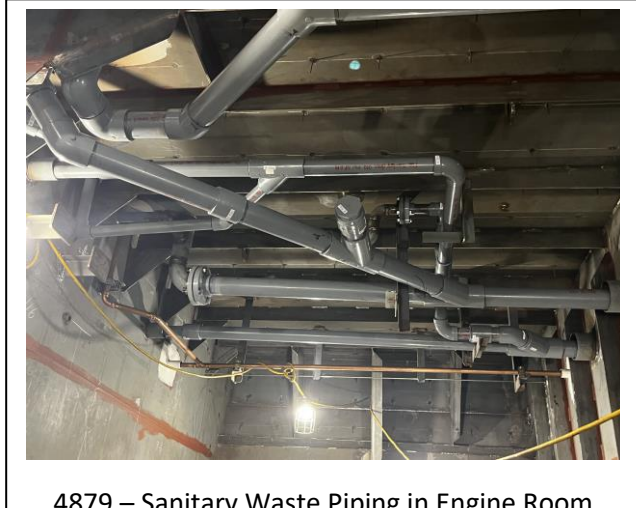
4875 – Fire Main Valves



4877 – Overhead view of Bilge Piping Manifold w/Valves

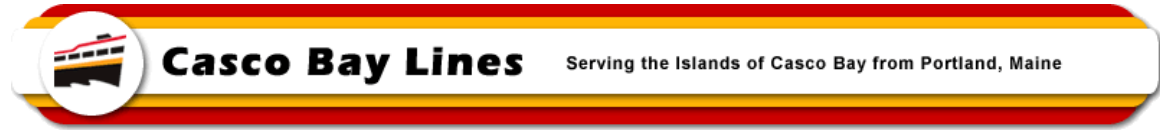


4878 – Foundation Frame for Shore Power Panel in Switchboard Room



4879 – Sanitary Waste Piping in Engine Room

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4881 – Aligning Stern Tube Before Welding



4882 – Aligning Stern Tube Before Welding

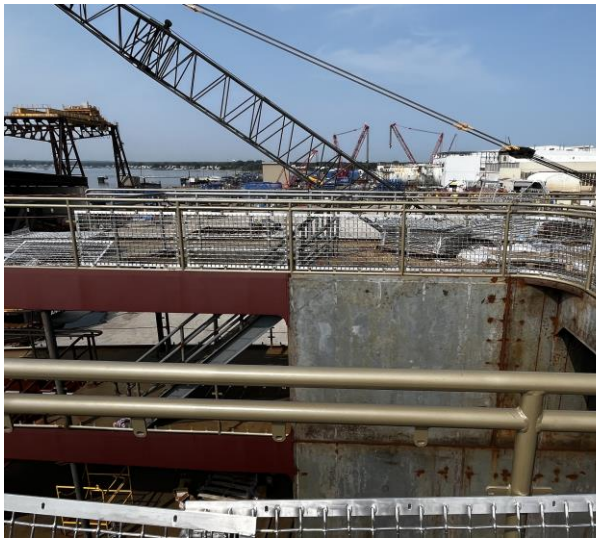
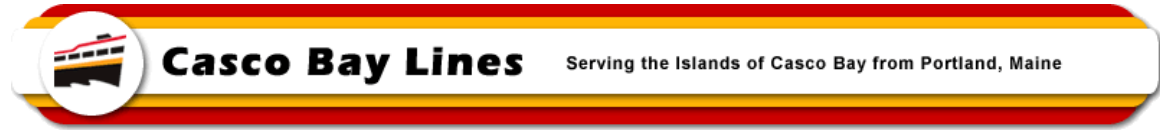


4883 – Aligning Stern Tube

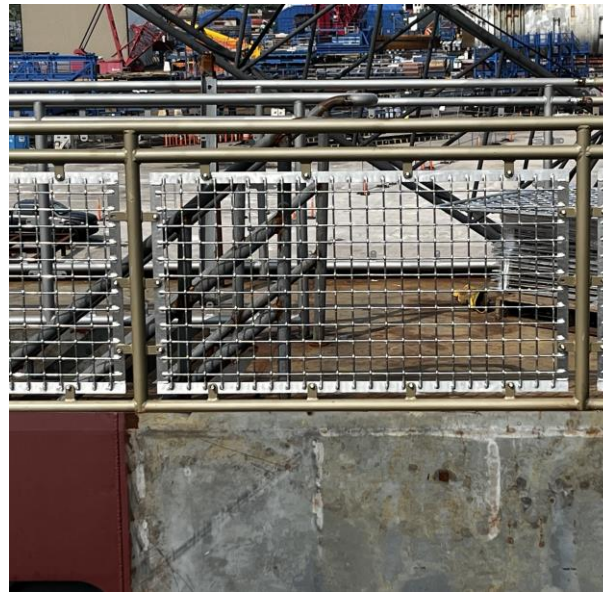


4849 – Aligning Stern Tube

MEMO



4888 – Installing Screen Sections in Handrail System



4889 – Screen Section Connections

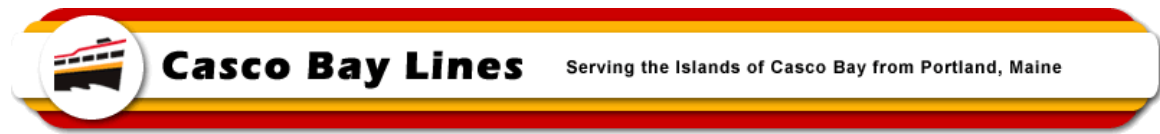


4890 – Screen Section Connections



4891 – Screen Section Connections

MEMO



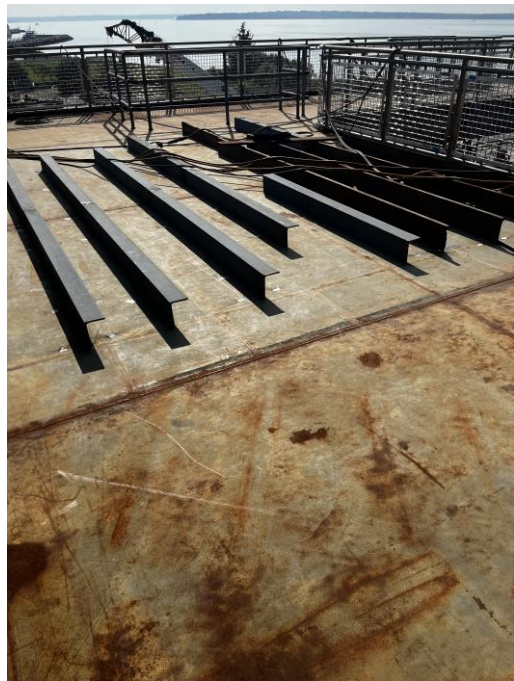
4892 – 02 Deck Railing as seen from Main Deck



4898 – Railing with and without screening

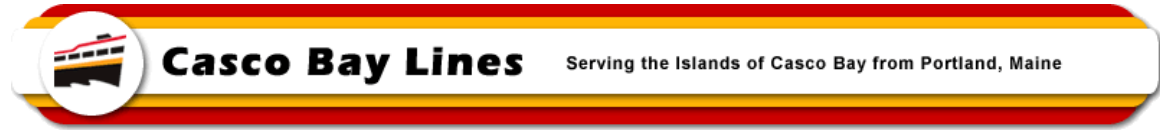


4899 – Screen Section Connection



4932 – Removing deflection in 02 Deck

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4894 – Welding up Stern Tube (This is a slow process due to expansion of steel during welding and the need to maintain very tight alignment dimensions. Welding is very sequential to control alignment movement)



4895 – Rudder Post Tube from Lazarette

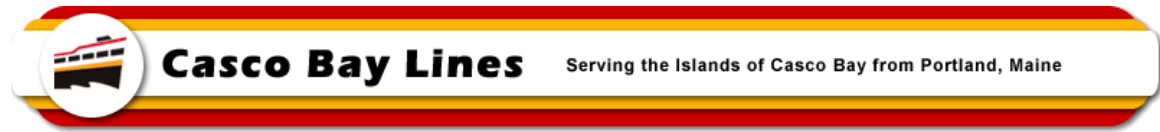


4913 – Stern Tube Tack Welded and Marked to control movement

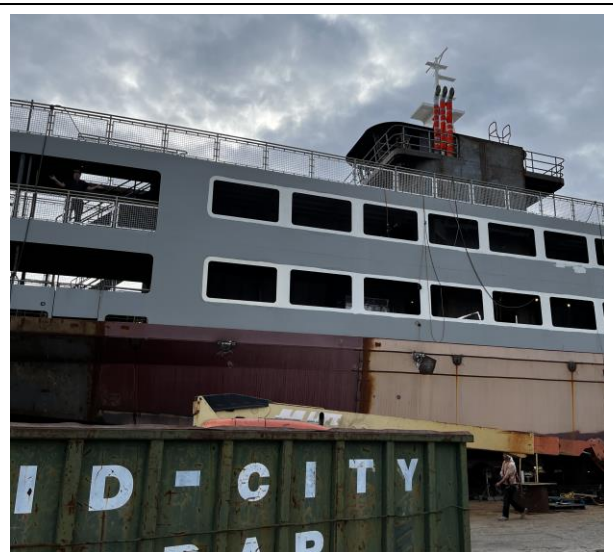


4928 – Heat Sheild Frame for Exhaust Piping

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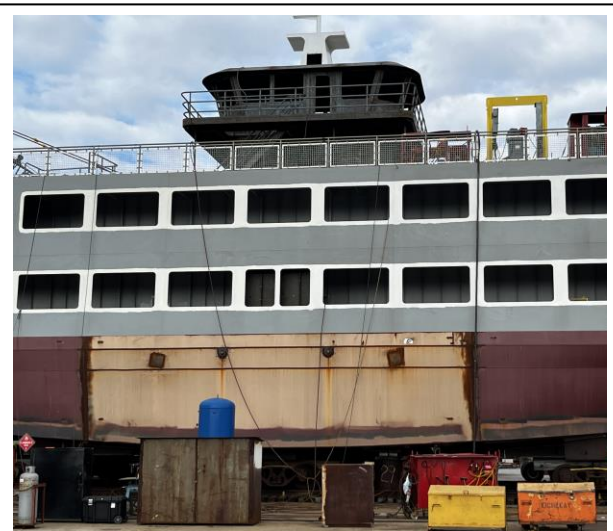
4953 – Paint Prepping Around Windows for Window Installation



4954 – Paint Prepping Around Windows for Window Installation



4955 – Paint Prepping Around Windows for Window Installation (Note that the handrail sections are in place with screening)



4956 – Paint Prepping Around Windows for Window Installation (Note that the handrail sections are in place with screening)

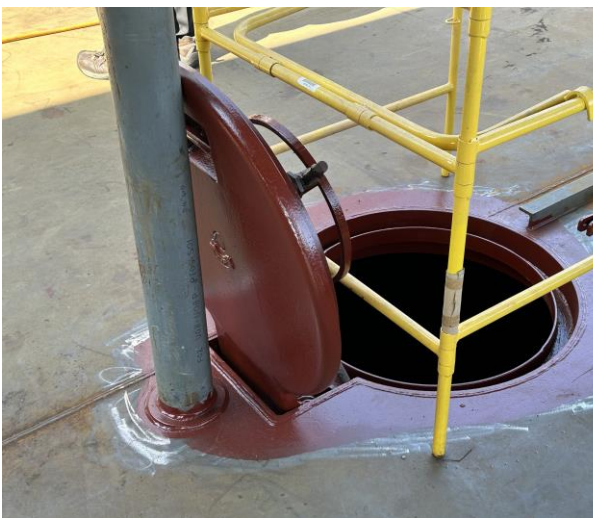
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4957 – Aligning Rudder Post Tube



2582 – Stern View of Battery Steele

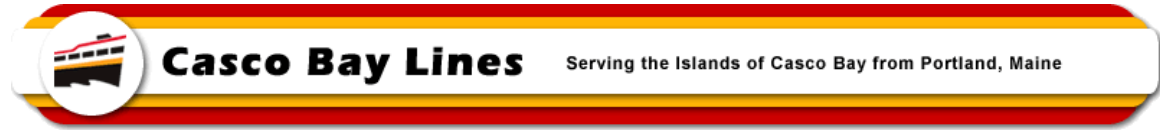


2585 – Spring Assist Hatch

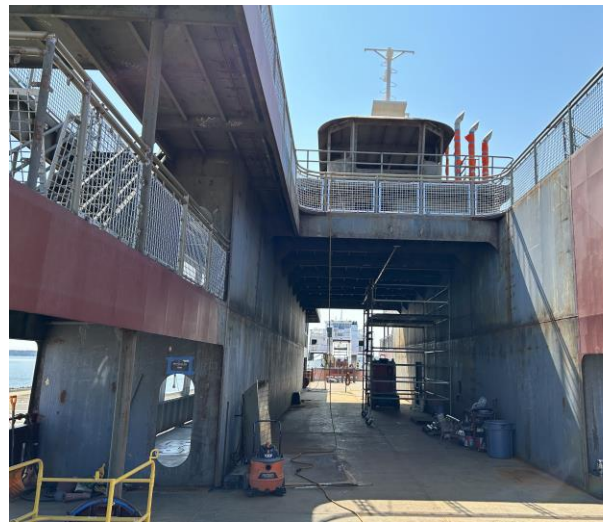


2586 – Spring Assist Hatch

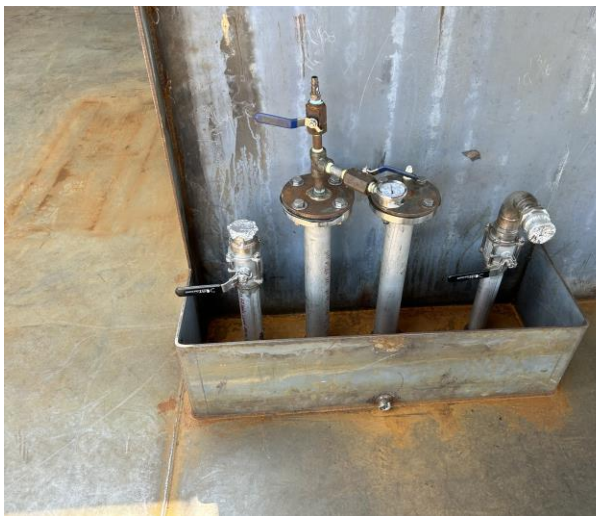
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2587 – Handrails coming together throughout the vessel



2588 – Handrails coming together throughout the vessel

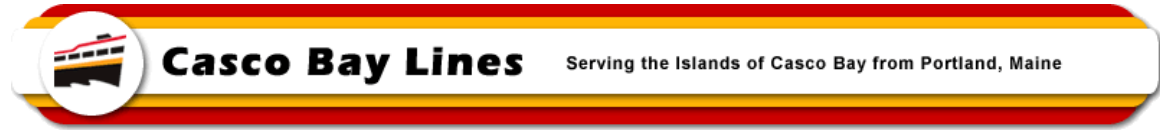


2591 – Fuel Fill Line and Sewer Discharge Line with venting Lines in a Spill Containment Box



2592 – Bilge Manifold and associated valves

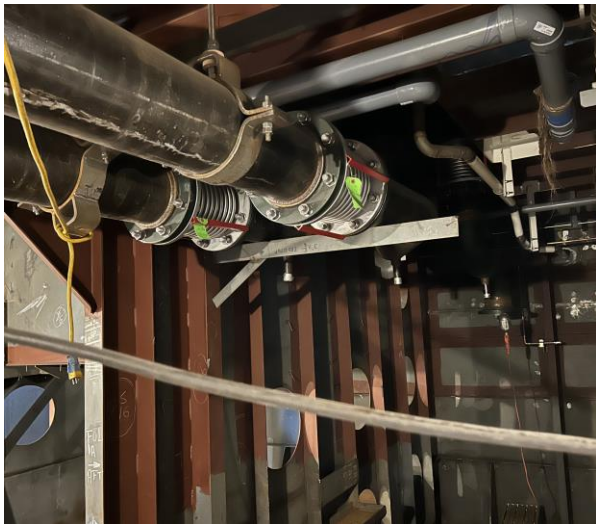
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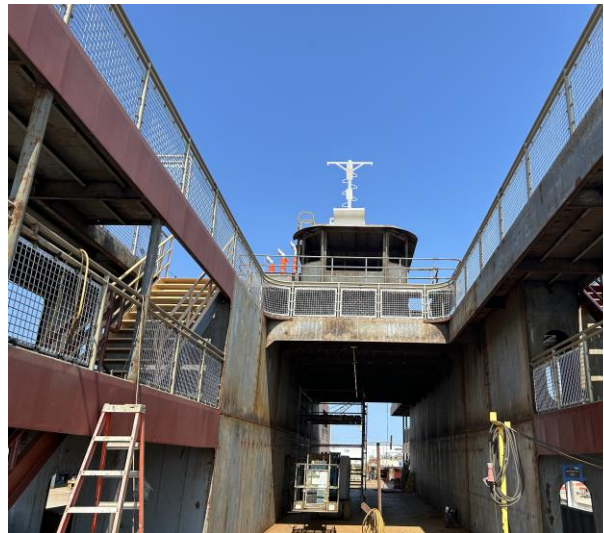
2595 – Battery Foundation Framing with Off-Gassing Piping



2596 – Generator Space with Fuel Lines

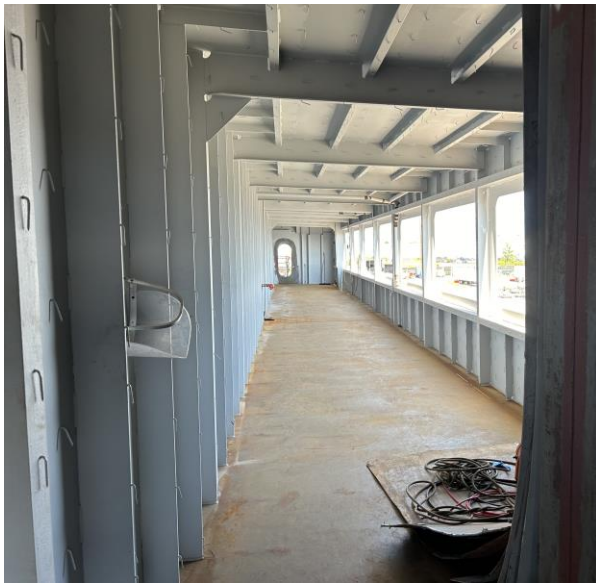


2598 – Exhaust Piping in Engine Room with Expansion Joints



2599 – Looking from Bow up to Pilot House

MEMO



2602 – Port 01 Deck Cabin Looking Aft



2603 – Cleat w/Line Chock at Handrail Penetration

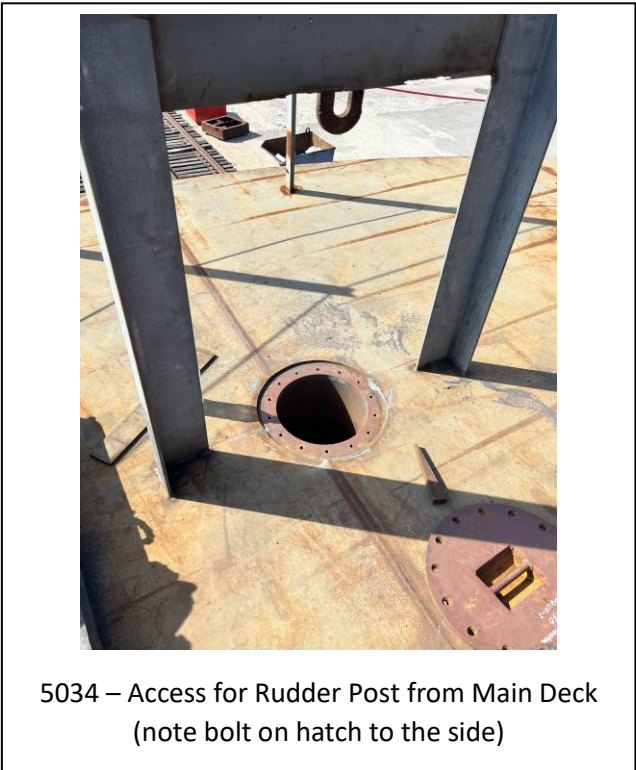
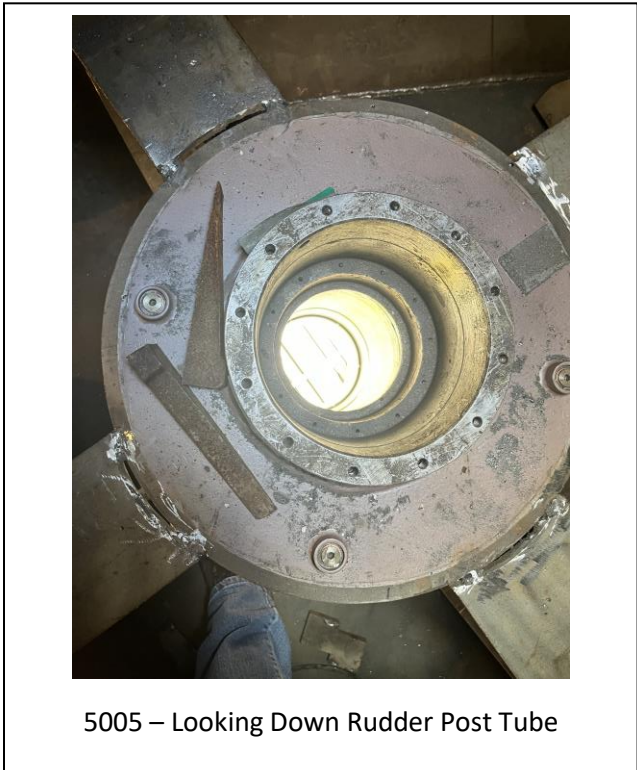
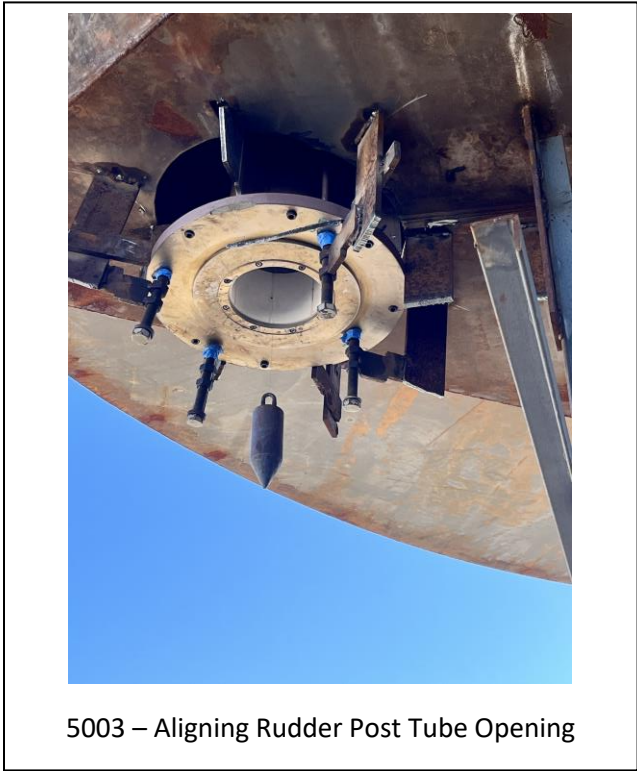
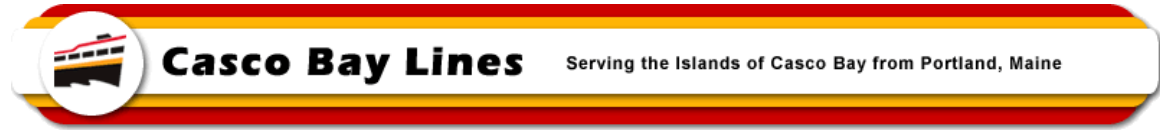


2605 – On 02 Deck looking towards Bow (MSFS vessel in the background)

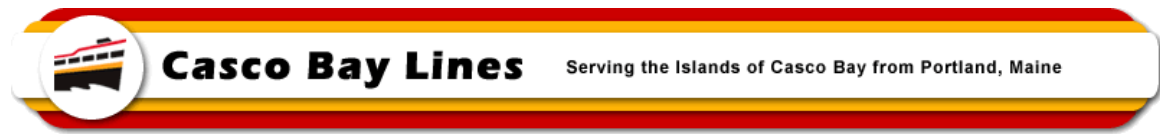


4994 – Potable Water Tank

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MEMO



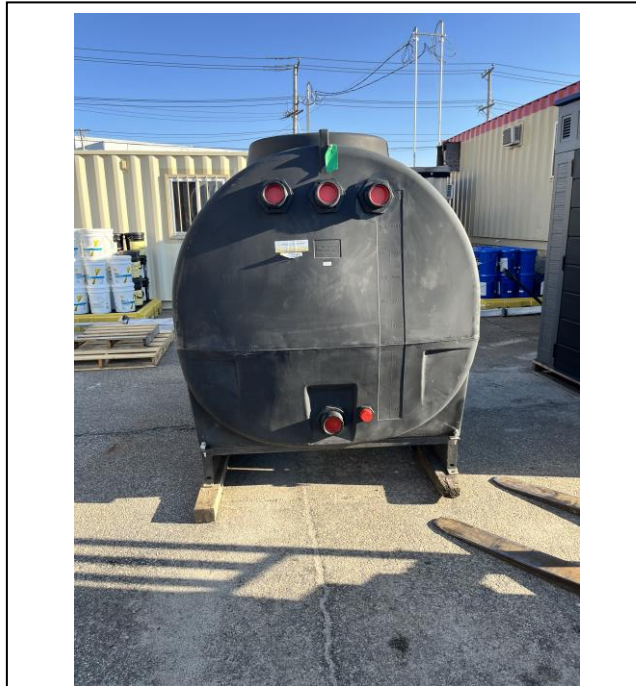
4697 – Heat Shield Framing



5008 – Emergency Fuel Shutoff



5017 – Sanitary Sewer Tank

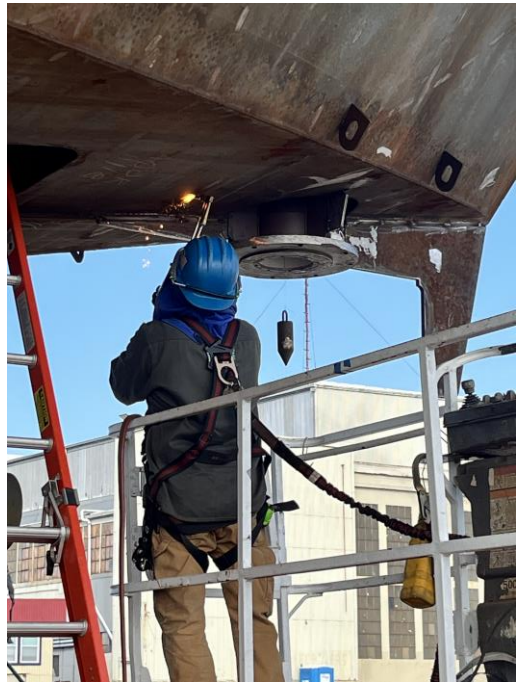


5018 – Sanitary Sewer Tank

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5038 – Aligning Rudder Post Tube and Shroud



5039 – Aligning Rudder Post Tube and Shroud

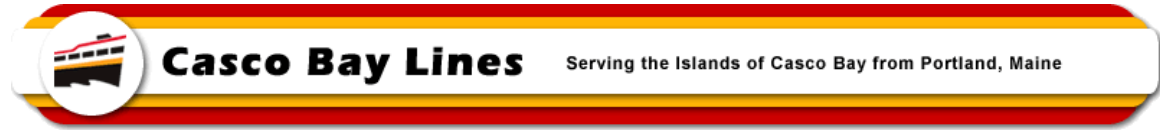


5041 – Support Frame for Potable Water Tank



5042 – Support Frame for Sanitary Sewer Tank

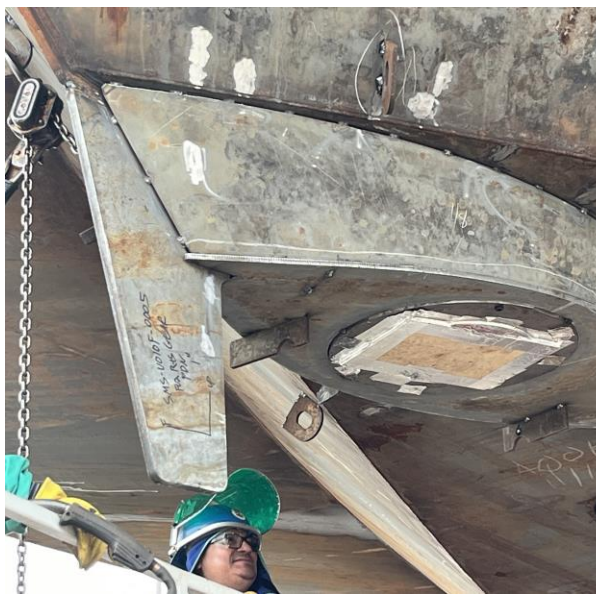
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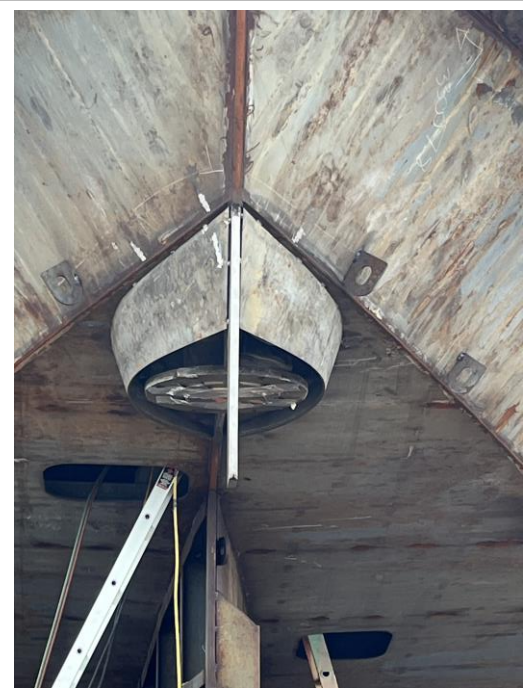
5048 – Aligning Rudder Post Tube and Shroud



5050 – Rudder Post Tube from the Lazarette

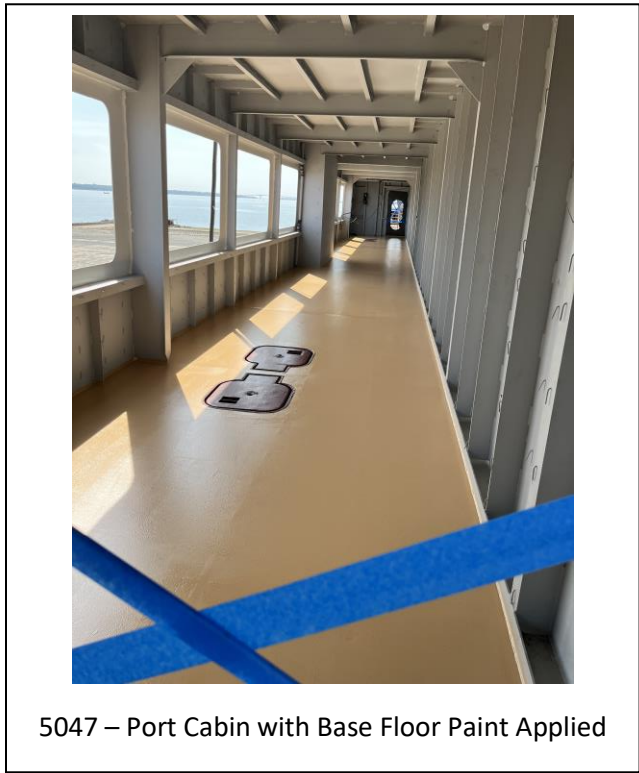
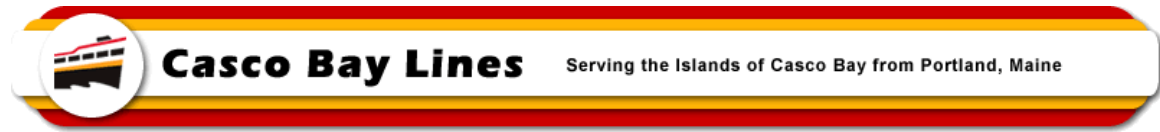


5060 – Building Shroud around Rudder Post Tube



5061 - Building Shroud around Rudder Post Tube

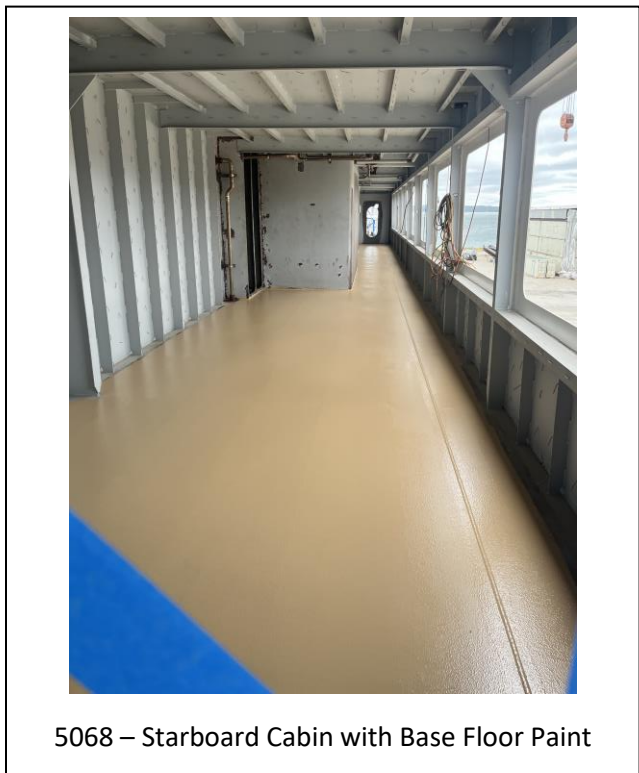
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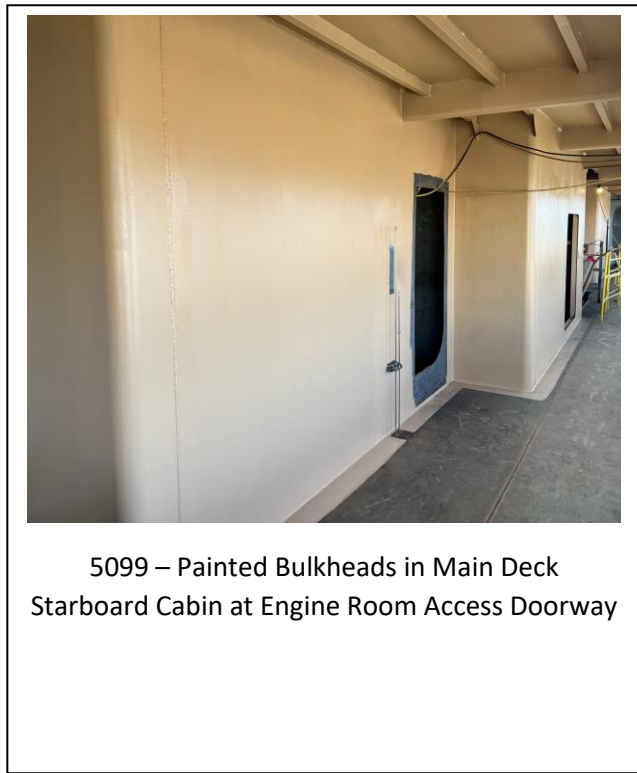
5047 – Port Cabin with Base Floor Paint Applied



5064 – E-Stop Panel for Propulsion Motor Breaker

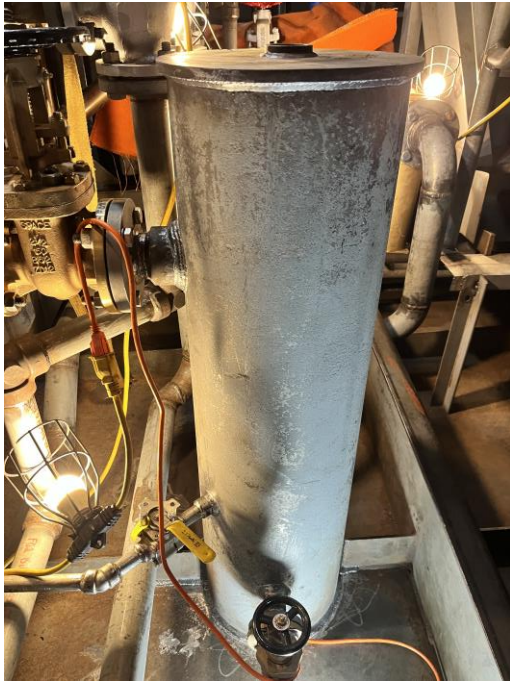
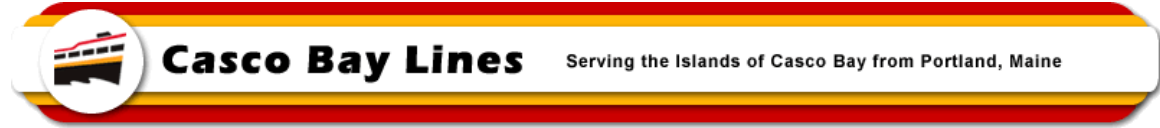


5068 – Starboard Cabin with Base Floor Paint



5099 – Painted Bulkheads in Main Deck Starboard Cabin at Engine Room Access Doorway

MEMO



5100 – Seachest



5102 – Seachest (Draws in sea water for keel coolers and sprinkler system)



5082 – Side Guard Piping for Outside Guard at 01 & 02 decks



5103 – Guard Piping split in half for installation

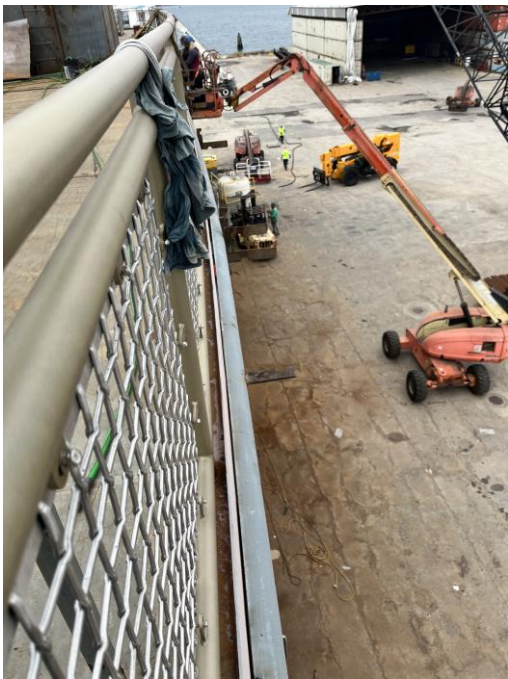
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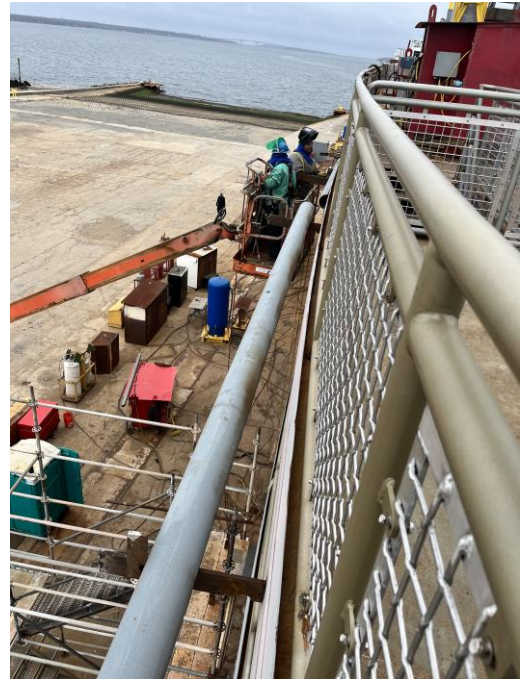
5106 – Installing pipe guard at 02 deck level



5107 - Installing pipe guard at 02 deck level

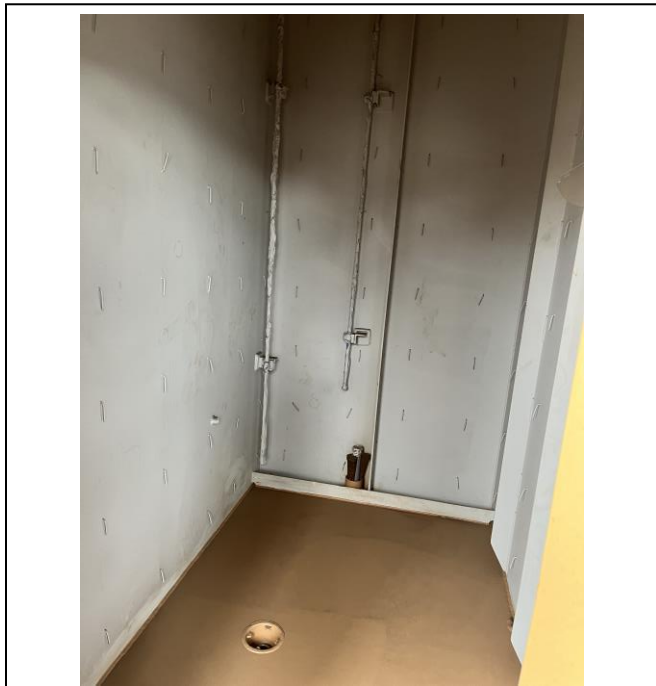
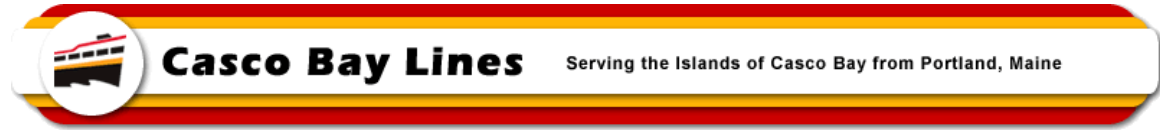


5111 - Installing pipe guard at 02 deck level

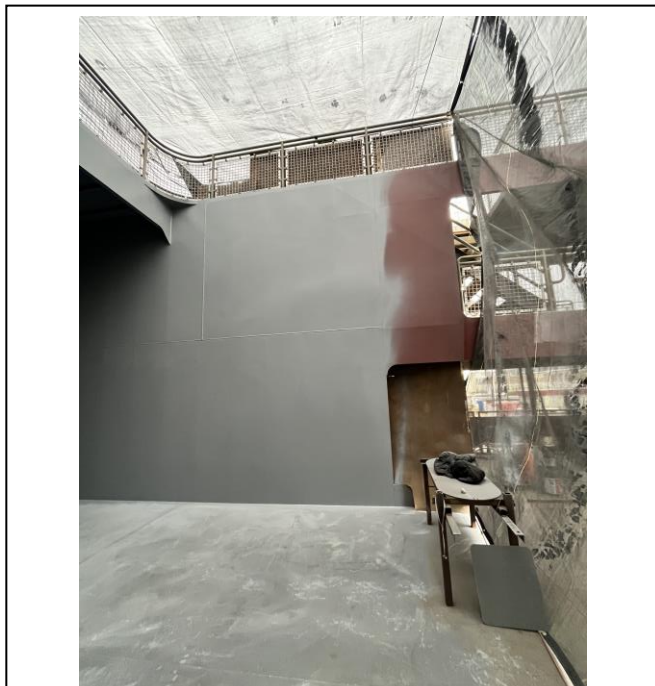


5112 - Installing pipe guard at 02 deck level

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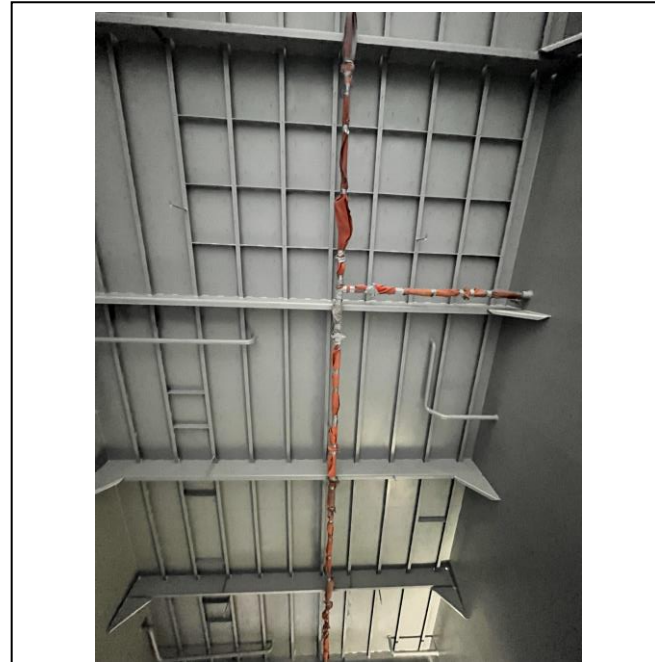
5104 – Cleaning Locker Space with Paint



5108 – Painting Vehicle Alleyway



5109 - Painting Vehicle Alleyway



5110 – Painted underside of O2 deck in vehicle alleyway