

# SKEETER NEWS

A newsletter from The Steamer VIRGINIA V Foundation



FALL 2020 \* VOL. 98, NO. 3



Seattle Maritime Academy QMED students learning aboard the Virginia V. L to R: a student records meter readings from the vessel's main switchboard; a student removes piping to replace the inboard feed pump's leaking steam chest gasket; a student checks the crankcase oil level of the vessel's 32kW generator diesel engine. *Photos by Ed Brown.*

## Future Marine Engineers Use Virginia V as Classroom, Summer 2020

By Joe Schmitt, Director of Engineering

As an operational historic vessel, VIRGINIA V serves as a springboard for learning and discovery. This mission has been more challenging to carry out this season as educational programs across the region made the switch to remote learning or postponed programming altogether. That's why we were thrilled when Danny Blanchard, Interim Dean of the Seattle Maritime Academy (SMA), reached out to us about using VIRGINIA V as a training platform for their Marine Engineering Technology (MET) Program.

Seattle Maritime Academy offers two U.S. Coast Guard-approved certificate programs that prepare an individual for a career in the maritime industry: the Marine Deck Technology and the Marine Engineering Technology programs. In the Marine Engineering Technology Program, students learn how to maintain and operate a wide range of marine propulsion systems and equipment. This includes various engine (propulsion) systems, hydraulic systems, electrical systems, and refrigeration equipment.

On July 14, 2020, VIRGINIA V sailed from South Lake Union to SMA. Over the following two weeks, fourteen engineering students came aboard the vessel to undergo training and accrue sea time towards their professional qualifications. These include U.S. Coast Guard certification

as Qualified Members of the Engine Department (QMED), and Ratings Forming Part of an Engineering Watch (RFPEW), an international qualification established under the International Maritime Organization's (IMO's) Standards of Training, Certification and Watchkeeping for Seafarers, widely known as STCW. Individuals who meet these standards gain access to good-paying job opportunities in the maritime industry.

Students participated in three full training days. The training consisted of a lesson and hands-on practice for lining up all systems in preparation for firing the vessel's boiler, lining up and running the vessel's 32kW and 36kW diesel engine-driven generators to provide ship's power, and a lesson on Oily Water Separator (OWS) operations in accordance with local, state and federal pollution prevention regulations. Several maintenance and repair items were also carried out by the students under the direction of VIRGINIA V's Chief Engineer and Chief Electrician. These included: Inboard Feed Pump steam chest head gasket replacement; removal and inspection of the engine's No. 1 Main Bearing; removal of the vessel's unused duplex fuel pumps (for overhaul and repurposing); replacement of the 32kW diesel generator engine's damaged raw water pump impeller; and misc. handrail repairs.

## SKEETER NEWS

is produced by

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### Our Mission:

To promote the Puget Sound's  
maritime heritage through the  
restoration, preservation,  
operation, and interpretation of  
the National Historic Landmark  
Vessel, S.S. VIRGINIA V.



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*Send us your comments, suggestions  
and story ideas!*

## From the Executive

Dear Friends of VIRGINIA V,

We hope you and your families are staying safe and productive as this unusual year progresses. We are grateful that we were able to welcome a limited number of passengers on cruises this year while adhering to strict COVID-19 guidelines. Thanks to our captains, engineers, crew and other volunteers who helped make these trips possible. And a special thanks to the organizations, businesses and individuals who have stepped forward in this difficult year to make special contributions.

The COVID-19 pandemic continues to limit our ability to hold gatherings aboard the ship. Sadly, we have made the difficult decision to suspend passenger cruises and dockside events until Spring of 2021. Note that this will result in a significant savings on our insurance bill, so that's a silver lining!

This Fall, watch for opportunities to learn with V5 online. On our YouTube channel, you can view virtual tours of the ship and other educational content produced by our Senior Docent, Ed Brown. Ed will also give a presentation about the history of the ship and the Mosquito Fleet via Zoom on November 17th at 7 p.m. The talk is free and open to the public. Please pre-register on the events page of our website.

Looking ahead, we plan to accomplish important restoration and maintenance work during a haul-out in January and February 2021. We've already raised significant funding from the M.J. Murdock Trust and 4Culture to replace the fungus-damaged planks in the hull. We are seeking additional funds for repair projects and for our bi-annual maintenance. If you have any contacts with grant-making organizations or family foundations that could support this effort, please reach out to me and we can approach them.

As I'm sure you realize, with all the cancellations this year, we need additional support from the community to keep the organization and the ship afloat. A very generous patron has offered to match, dollar-for-dollar, any donations of \$250 and up made between August 1 and December 31, 2020 (up to a total of \$35,000). During this difficult year, please help us preserve and maintain the ship with your generous contributions. Visit [www.virginiav.org/donate](http://www.virginiav.org/donate) for details and other support options.

VIRGINIA V has weathered many a storm over the years, and I am confident that with the help of our entire community, she'll come through this one as well. Thanks to all of you for your continued support.

With warm regards,

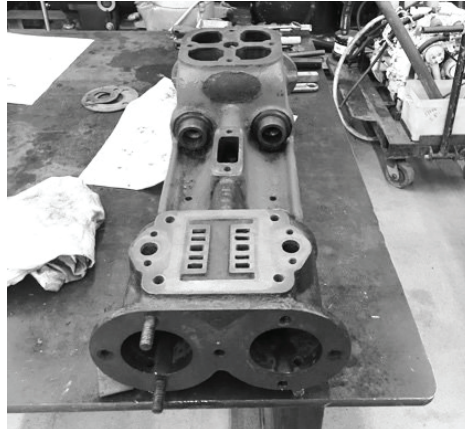
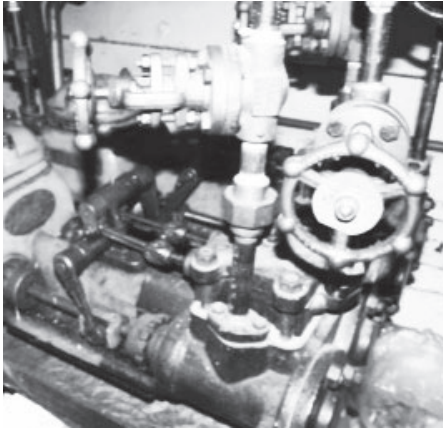
Debra Alderman

Executive Director

The Steamer Virginia V Foundation

# If It Ain't Broke... An Update on Maintenance Projects

By Joe Schmitt, Director of Engineering and Ed Brown, Senior Docent



From left to right: Steam reciprocating fuel pumps; steam reciprocating fuel pump being overhauled; view of Lake Union from the stern end of the boat deck, with painting in progress.

## Engineering Update

We all know the old proverb, “If it ain’t broke, don’t fix it.” In many instances, this is sage advice. But aboard VIRGINIA V, our engineers work hard to ensure that the condition of the vessel’s equipment always remains in safe working order. During our 2020 Winter Lay-Up, over 50 maintenance and repair items were completed. Fortunately, most of the worklist items focused on the continued maintenance of equipment, referred to as preventative maintenance (PM) in the maritime industry. We continue to strive towards performing routine maintenance to reduce the likelihood of equipment failure...IF IT AIN’T BROKE, WE’LL STILL TWEAK IT!

Mairi Dulaney, Chief Electrician, is continuing her inspection and maintenance of every electrical panel, outlet, lighting fixture and wiring connection. She ensures that the electrical systems aboard the vessel are in compliance with the applicable regulations contained within 46 CFR Parts 176 and 183. Mairi has been doing a fantastic job in identifying and rectifying items requiring improvement.

Joe and Mairi are working on overhauling the vessel’s unused steam reciprocating fuel pumps. These pumps became obsolete during the boiler retrofit in 2005, when they were replaced with electrically-driven gear pumps. After overhaul, they will be repurposed as steam driven bilge pumps to augment the pump in use today. This change will be a work saver. The high viscosity of our engine lubricating oil that naturally drains into the bilge causes enough wear and tear to the electric pump that it must be rebuilt 3-4 times each season. Bilge systems are vital

under federal regulations, so this modification will require Coast Guard approval

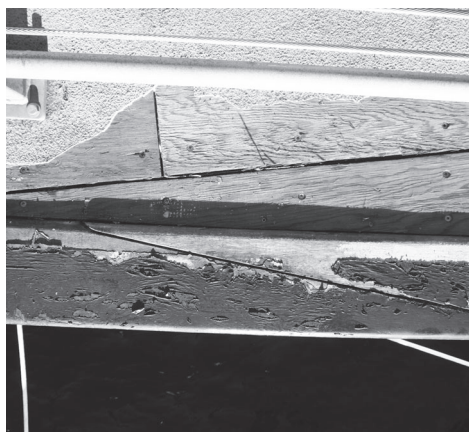
## Engineering projects currently in progress:

**Tankless Hot Water Heaters** - In a previous edition, you learned of the tankless hot water heater project. This project was undertaken to replace the vessel’s malfunctioning Way-Wolff diesel fired ship heater. The project received approval from USCG’s Marine Safety Center (MSC) earlier this year, and all of the materials were purchased. However, social distancing restrictions have prevented us from completing the work onboard until recently. The Engineering Department began the installation of the tankless hot water heaters this past month.

**Isolation Transformer** - The presence of stray current (i.e., ground fault) in the water poses two significant threats, one to the vessel itself (e.g., electrolytic corrosion of exposed hull fittings, tail shaft, rudder plating and rudder support system) and of course to swimmers in the water surrounding the vessel. We will correct this problem by installing an isolation transformer, which will eliminate the physical connection between the ship’s electrical system and the dock, eliminate the ground fault, and prevent leakage of stray current into the water. We were fortunate to receive a grant from 4-Culture to assist us with most of the costs associated with this project.

*[Continued on Page 4]*

# If It Ain't Broke... An Update on Maintenance Projects (continued)



From left to right: planking at the edge of the boat deck getting re-caulked and re-painted; gray paint ready to coat the boat deck; bow side of the boat deck nearly complete with new coat of gray paint. Photos by Ed Brown.

Marine Electrician, Barnard Bruce, has reviewed the project and has provided the required shore power connection drawings and transformer specifications for review and approval by the U.S.C.G. We are hoping to receive approval for the installation by mid-September. However, there are stringent requirements associated with adding weight to the vessel. The U.S.C.G. is evaluating our project based on electrical rule requirements as well as in conjunction with the potential lightship change determination criteria. As such, we have been working with the management at Seattle Parks and Recreation and their Electrical Department to ascertain the possibility of maintaining the transformer, within a suitable weatherproof enclosure, on the pier adjacent to VIRGINIA V. This request is presently under review.

## **Topside maintenance update:**

During 2020, the COVID-19 pandemic has unfortunately resulted in the cancellation of most public and private events on VIRGINIA V. Painting may not be the most glamorous job, but it is vitally important to keeping the ship preserved for the future. Longer stretches of time without any visitors on the ship have created a perfect opportunity to take care of all the peeling, cracked, or chipped paint that has accumulated over time. Senior Docent, Ed Brown, has been heading up that effort.

Of course, a painting project is never as simple as just painting. In peeling old paint from the edge of the boat deck, several failed seams were uncovered. Painting had to be paused for several days so that the seams could be cleaned out and re-caulked. Hopefully, this will take care of

the winter rain leaks that tend to develop in the passenger saloon. With the seams re-done, the entire boat deck was repainted in Storm Gray and received a fresh coat of non-skid grit as well.

Painting is the type of task that is never truly done, especially with a ship as large as VIRGINIA V. More projects are constantly being added to the list. Ed is currently repainting the foredeck stairs before moving on to repainting all of the ship's black trim one section at a time. If anyone is interested in helping out with some painting, volunteers would be appreciated. To sign up, contact Ed to by emailing: [info@virginiav.org](mailto:info@virginiav.org).



Senior Docent and deck maintenance wizard, Ed Brown, at work.

# VIRGINIA V Route Word Search

The ship no longer serves these 16 stops from Seattle to Tacoma like we did in 1922. Find them in this word search!

H E P H T B M K Q N T A G F L C I X N Q  
T U R B S D Y A I V L V R Y R V G U G E  
K Z A F R L M Q P L E A J O O I D M F Z  
F T M M U A H A A L G G S R I E F A F G  
C Y O Z H N H L E A E S X R A W V A U X  
V O C L R D O G R C L W U Z X P K D J V  
P Z V C A E L I Y A Q D O K A A V M Q N  
U P S E D R A M N P E D V O X R K H Z T  
D L V U E S H D O W Y Q X N D K A L S U  
P X Y J C O I C A I V R Q A I I E A Q X  
S P W C V N Y T A D X M A V P I S C Y H  
O B M B G P L Q T E N L Q B X O T F T N  
V I W N C O H C A E B N A V L Y S L O G  
L G N P X I L S V T L G L I W K A K Y H  
O K W N Y N M O V K K K N T X E N Q A I  
C R P D F T R B N X K V Y I S O T J L S  
L I S A B U E L A X W N A P R L L Y C X  
E L T T A E S E C G H B M R W P H I N E  
B W N E I P E Y F T L A A I Q H S G B K  
D U B R R P S N T A C O M A A A D K Z R

SEATTLE

COLVOS

ANDERSON POINT

MAPLEWOOD

BILOXI

VIEW PARK

OLALLA

CAMP SEALTH

SYLVAN BEACH

FRAGARIA

LISABUELA

SPRING BEACH

CEDARHURST

COVE

CROSS' LANDING

TACOMA

Thank you to our donors, grantors, and corporate sponsors for supporting VIRGINIA V as a vital part of Puget Sound's maritime history!



The Beardsley Family Foundation  
The Goodfellow Memorial Fund

# Ask a Chief Engineer

By Joe Schmitt, Director of Engineering

*'Ask a Captain and Chief' is VIRGINIA V's new advice column, where Captain Dale Pederson and Chief Engineer Joe Schmitt respond to your questions about commanding a ship and operating an engine room. No question is too small, too big, or too technical! To submit a question, please email: [info@VirginiaV.org](mailto:info@VirginiaV.org)*

**Dear Chief Engineer...**

**What regulations do you need to adhere to these days, and do those regulations require any periodic tear down and inspection of the boiler?**

**– Maddie**

Dear Maddie,

This is an excellent question, and one that truly warrants a thorough answer. I've done my best to be succinct.

S.S. VIRGINIA V is a U.S. Coast Guard inspected vessel. As a vessel under 100 gross tons certified to carry up to 150 passengers, she is subjected to the regulations of Subchapter "T" of Title 46 (Shipping) of the Code of Federal Regulations (Parts 175-185). In the maritime industry, you will hear such a vessel referred to as a "T-Boat." Subchapter "T" provides a codification of regulations for vessel construction, inspection and certification, stability and watertight integrity, lifesaving equipment, fire protection equipment, machinery installations, electrical installations, and operations.

Subpart "H" (Part 176) of Subchapter "T" requires pressure vessels and boilers to be tested and inspected according to the requirements in 46 CFR Part 61 in Subchapter "F" (Machinery Engineering). The requirements are based on the Maximum Allowable Working Pressure (MAWP) of the boiler, the basic design of the boiler (watertube vs. firetube), and the vessel's service (passenger vessel vs. other vessel). Since the vessel's watertube boiler is rated at a pressure of 250 psi, we must perform the following inspections and tests, in the presence of a U.S.C.G. Machinery Inspector, at the following intervals:

1. Hydrostatic pressure test to 1.25X the boiler's MAWP – 2.5 years
2. Main and auxiliary steam piping hydrostatic pressure test to 1.25X MAWP – 2.5 years
3. Fireside inspection (internal fire box) – 2.5 years\*
4. Waterside inspection (steam drum, mud drum, borescope of generating tube internals) – 2.5 years\*
5. Safety valve pressure testing – 2.5 years\*\*
6. Boiler valve inspection – 5 years
7. Boiler valve stud and bolt inspection – 10 years
8. Boiler mount inspection – 10 years
9. Steam pressure gauge calibration – 2.5 years

\* Our engineers conduct a boiler waterside inspection annually to ensure that the boiler water chemistry protocol is effective in protecting boiler drum and steam-generating tube internals. The boiler firesides are also examined to check the burner throat and diffuser, external tube surfaces, and firebox refractory condition.  
\*\* The boiler safety valve testing is done annually with the vessel's boiler automation test procedure (see below).

In addition, the U.S.C.G. approved boiler automation test procedures must be conducted in the presence of a U.S.C.G. Machinery Inspector. The automation test procedure verifies the proper function of the following boiler operational safety features:

1. Low boiler drum water level alarm
2. Low boiler drum water level fuel trip
3. High boiler drum water level alarm
4. Low steam pressure alarm
5. High steam pressure alarm
6. High steam pressure fuel trip
7. Safety valve pressure test
8. Flame failure alarm and trip
9. Low fuel pressure alarm and trip
10. Low atomizing steam pressure alarm and trip
11. Low forced draft fan pressure alarm and trip

Rest assured, the focus of our vessel engineers is the safety of our passengers, crew, and VIRGINIA V.

Regards,

**Joe Schmitt, Chief Engineer**

# From the Archives

By Ed Brown, Senior Docent



Above: This photo and the one below were both taken on an early Monday morning in 1950 as tired passengers returned home from an unexpectedly long voyage aboard VIRGINIA V. Two hundred people had come aboard for a September excursion cruise on the Puget Sound, but were stranded when the vessel broke down. After drifting near Edmonds for 3.5 hours, the tugboat FOSS NO.16 arrived to tow her home to her Lake Union berth.



Above: In 1950, VIRGINIA V was owned and operated by Captain Howell Parker, who had purchased the ship after her return from Portland, OR in 1944. She ran on her old Seattle-Tacoma route until the end of WWII, when Captain Parker began running VIRGINIA V as an excursion steamer instead. It's a job she still performs today.

The Steamer Virginia V Foundation  
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The S.S. *Virginia V* is a  
National Historic Landmark Vessel  
*Steaming in the Pacific Northwest since 1922*

## It's time to put the steam on plans for 2021!



What could be better than a fabulous celebration or business event aboard the historic steamship **VIRGINIA V**?

The ship is available for underway charters and dockside events. 2021 dates are booking quickly. Contact us today for a tour and to start planning!

Details available on our website:

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