WIB GROTON
GENERAL DYNAMICS
Electric Boat

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60th Anniversary of USS Thresher Loss

Monday, April 10 marks sixty years since the loss of the nuclear-powered submarine USS Thresher. During its initial dive to test depth on April 10, 1963, the submarine was lost with 129 U.S. Navy sailors, Portsmouth Naval Shipyard and civilian company employees on board. It's important that we take time each year to tell the Thresher story as a reminder of why we design, build and maintain submarines to be as safe as they can be.

On the morning of April 9, 1963, the men aboard Thresher waited to head out on sea trials that would prove the new capabilities added to the ship at the Portsmouth Naval Shipyard during the boat's nine-month post-shakedown availability. The men were looking forward to a party two days later to celebrate the 63rd anniversary of the U.S. Navy Submarine Force. Wives and children waved to their loved ones as the boat departed, and life would never be the same for any of them. On her way out to the dive point, Thresher made several shallow dives in practice for her dive to test depth and performed them perfectly. Late that evening, Thresher completed the final leg of her journey to the dive point 220 miles off of Cape Cod in 8,400 feet of water. LT CDR John Wesley Harvey prepared his crew to take Thresher to test depth.

The next morning, Thresher began her controlled dive in 100-foot increments. As she submerged, Thresher sent routine messages to her escort ship, USS Skylark, as she progressed to depth. But at 9:17 a.m., Skylark received an unexpected and garbled message, "…minor difficulties, have positive up-angle, attempting to blow." At 9:18 a.m., Skylark received the message “exceeding test depth," and then detected a high-energy low-frequency noise characteristic of an implosion. At approximately 9:18 a.m., USS Thresher was lost.

Despite the Navy's rigorous investigation following the loss of Thresher, the exact cause may never be known; however, the following is the likely sequence of events:

- One or more silver-braze joints in sea water systems failed, resulting in engine room flooding.
- Due to the ship's design and system arrangements, the crew was unable to quickly access vital equipment to control the flooding.
- Saltwater spray on electrical components caused electrical panels to short circuit, the reactor plant to shut down and loss of propulsion power.

The emergency main ballast tank blow system failed to operate properly. Restrictions in the piping system, coupled with excessive moisture in the compressed air, led to ice formation and subsequently blocked the path of air to the ballast tanks - Thresher couldn't return to the surface.

Later, a court of inquiry determined that the responsibility could not be placed on any one individual or organization. And what's typical with a very complex system like a submarine, they fail in very complex ways. Rather, there were collective failures that most likely led to the loss of the Thresher, including inadequate quality assurance, inadequate training, deviation from building and design specifications, a lack of communication, lack of proper approvals and schedule pressure.

Out of this tragedy, the U.S. Navy created the Submarine Safety or SUBSAFE program, the quality assurance program designed to provide maximum reasonable assurance that a submarine's hull will stay watertight, and that a submarine and its crew can recover from unanticipated flooding. SUBSAFE covers all systems exposed to sea pressure or critical to flooding recovery. All work done and all materials used on those systems are tightly controlled to ensure the material used in their assembly as well as the methods of assembly, maintenance and testing are correct. As a shipbuilder, please take a moment and imagine if you had worked on the Thresher, and the question that would haunt you for the rest of your life—I know it would haunt me: Was it my work that caused the loss of those men and the heartbreak borne by their families?

Never forget our priorities here at Electric Boat: safety, quality, schedule, cost and continuous improvement, in that order. Every job you complete, every document you sign, every decision you make, day by day, contributes to the material condition of our ships and the safety of future crews. Our nation is counting on us to deliver one Columbia and two Virginia-class submarines per year. We're doing this work with new tools, new business systems and increasingly, a new workforce. Along with ensuring ship integrity, our collective commitment to first-time quality means we have less rework, which in turn increases production velocity and volume.

We design, build and maintain the submarines that defend our nation and serve as homes for our service men and women. They, their families and our nation have entrusted us to keep them safe. What you do every day and how you do it matters to the lives of many people. Many of you work side-by-side with sailors and EB employees who are veterans. Ask them; they'll tell you, and I'll tell you, what it means to have confidence in their boat. I began my career as a submariner in 1986, and my family and I are grateful that I served on boats that were SUBSAFE-certified. No SUBSAFE-certified submarine has ever been lost.* And I never lost trust in the people who built my boat.

As a leader of a company who builds and maintains submarines, I think a lot about the important role our work plays in our national defense every single day. It fills me with enormous pride and a sense of enormous responsibility—those are emotions I know you all share with me. No matter what your job or role, every one of us has a responsibility to keep our sailors top of mind—that really is our higher purpose. Let's remember the sacrifice and legacy built by all who came before us, and then let's renew our vows and ensure that we build on that legacy for all who will follow us.

Kevin

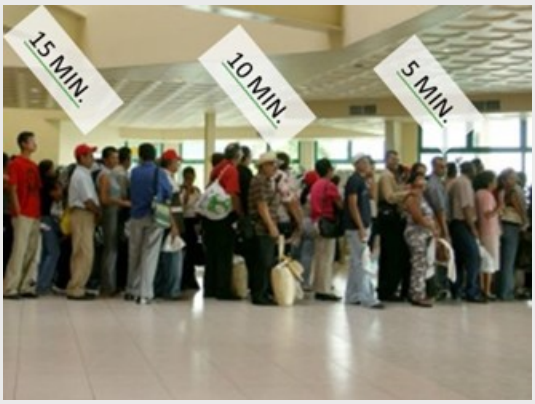
Kevin Graney

CONTINUOUS IMPROVEMENT

8 Wastes - Waiting

Whether you're sitting in traffic, **waiting** for a winning lottery ticket, or standing in line for lunch, you are most likely getting irritated as you watch the clock and think about how you could be doing something much more productive. **Waiting** is an obvious example of **waste** in your personal time as well as one of the most common types of **waste** that we encounter in a manufacturing setting and does not provide any value to our assigned task, or Electric Boat.

The Longer the Line — The Longer the Wait — The More the Waste



In many cases, waiting can compound itself, amplifying the impact it has on the company. That means that each minute you wait, additional labor minutes behind you that are being **wasted** as well.

Did you know that if eleven customers stand in line for a transaction that takes four minutes each person to complete the combined loss of time totals 4.4 labor hours? IT'S TRUE!

Now think of all the time you spend daily **waiting** for tools in a crib, **waiting** for your supervisor to sign a document, **waiting** for assistance from another employee, or **waiting** for preheat to reach the necessary temperature. It all adds up!

There is no one solution to **waiting**, and each case should be evaluated individually. However, there are some solutions that can help alleviate some of the more common sources of **waiting**.

1. Personal Issue Tooling
2. Welder Make Ready—One person retrieves the wire for all the welders on their crew
3. Active Communication between Departments and Organizations ensuring timely support

Do YOU have any ideas on how to reduce the time you spend waiting?

Have a process improvement idea, or simply just want a board to bounce ideas off? Discuss your idea with your Supervisor. If additional resources are required for implementation, your Supervisor can contact Crystal Sherman at csherman@gdeb.com.

Application Period Now OPEN for EB's Summer High School Intern Program (SHIP)

The application period is officially open for Electric Boat's Summer High School Intern Program (SHIP)!

If you know of any high school juniors who would be interested in this eight-week, paid summer internship, we encourage you to send them the below information. **The application period will close on Thursday, April 20, 2023**.

Program Overview:

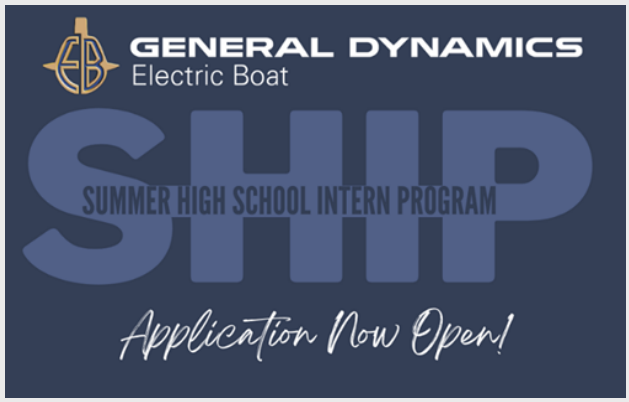
Local high school juniors will be offered eight-week-long summer internships with Electric Boat. Each intern must be at least 16 years of age, a U.S. citizen and have completed their junior year of high school. Interns will work side-by-side with trained mentors who have years of shipbuilding experience. The internship will run June 26, 2023 – August 18, 2023.

Internships will be available for the following:

- **Groton Operations:** Electrical, Carpentry, Machining, Pipefitting, Sheetmetal Mechanics, Shipfitting and Welding
- **Groton Design:** Materials, Mechanical, Structural, Electrical and Piping/HVAC

Requisitions:

- **Groton Carpenters:** 2023-9475
- **Groton MDA:** 2023-9476
- **Groton MTC Trades:** 2023-9477



NEW ENGLAND INSTITUTE OF TECHNOLOGY

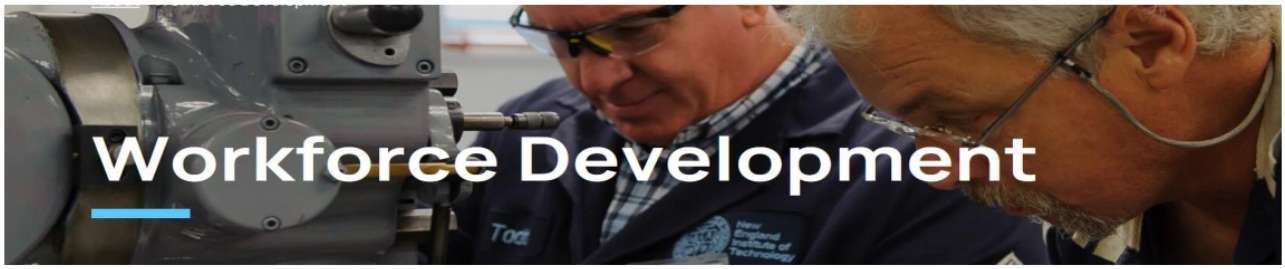
Hiring Welding, OSM, ISM & Shipfitting Instructors

NEIT is looking for instructors with at least 3 years of on the job EB experience.

Instructional training provided

Positions available immediately for both 1st and 2nd shifts at our Warwick, RI campus

Send resume to Kathy Partington at kpartington@neit.edu or
Call the SAMI office for more information at 401-739-5000 ext 3660

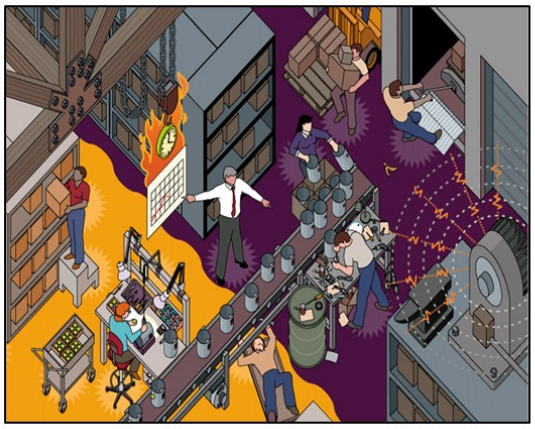


- **Coming VERY soon: THRESHER 60th Anniversary Apparel!!!**
- **Hurry In!! USS Arizona Long Sleeve & Hoodies Back In Stock!!**
- **JUST ARRIVED!! District of Columbia, MA & RI Snapback Hats!!**
- **Come In & Check Out Our USS Massachusetts Collection Today! Going Fast!**

Hours of Operation
Bldg 4: 9:30am to 4pm
Bldg 104: 8am to 4pm

Weekly Safety Briefing
4/9/2023 – 4/15/2023

200% ACCOUNTABILITY



"Ergonomics" in simple terms…
"[is about] fitting the job to the person", not the other way around.

WHEN YOU PRACTICE GOOD ERGONOMICS IT'S A WIN-WIN!

~YOU GO HOME LESS TIRED
~YOU ARE MORE PRODUCTIVE
~YOU ARE LESS LIKELY TO GET HURT

Week 15

GENERAL DYNAMICS Electric Boat

Policy Statement # 13: Electric Boat Corporation has established Occupational Health and Safety as the Company's Number One Priority.

DIRECTORY

When calling from an outside line, remember to dial 433 and the last four digits of the numbers below.

EMERGENCY	3-3333
Ambulance	3-3344
Fire Department	3-3617
EEO Officer	3-4167
Benefits	3-4201
Employment	3-7386
Environmental	3-2791
Ethics Hotline	1-800-433-8442
Payroll	3-3702
Safety	3-2811
Security	3-5530
Van Tran	3-7603
Timekeeping	3-6604
Training	3-0591
Yard Hospital	3-3470
Rad Con	3-5019

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EB Landing: www.EBlanding.com