



Volume and Velocity of Learning

We all have goals to meet the President’s Intent for volume and velocity of shipbuilding while maintaining our teams safe and meeting requisite quality standards. When we crank up the velocity, we are bound to learn more things that didn’t go as we planned, as we desired or as is required. Our volume and velocity of shipbuilding goes hand-in-hand with our velocity of learning. High standards and rapid learning equal increases in efficiency by minimizing rework, leading to increases in our volume and velocity of shipbuilding to support our Nation’s needs.

We have tools for capturing learning in MDD-00664 Managing Resolution of and the Learning from Unplanned Events or Unexpected Occurrences. These tools are most often referred to by the acronyms DLS and TLS...more formally Deckplate Learning Sessions and Team Learning Sessions.

At times, I believe that by use of the acronyms, we forget that the idea is to “learn”. Who wouldn’t want to learn how to do something better every day? I have also noted the negative connotation that arises when when we make statements such as “That’s a TLS” or “You’re going to DLS it”. It almost sounds punitive in nature, especially assuming that our people are already disappointed when things don’t turn out how we planned, prepared and executed.

The principles section of the MDD states “The mindset must be one of an open and unbiased introspection and self-critical learning, without blame. The learning session should be a safe to fail environment, starting with honesty and trust vice fear of criticism.”

In addition to focusing on the “Learning” the MDD states “A sense of urgency is expected to support timely resolution of company problems...personnel are expected to prioritize getting to the learning quickly more so than the structure.”

This has never been more important than now as we grow our new workforce while increasing our volume and velocity. Over the last several months there have been repeat issues that have damaged sensitive shipboard components in a similar manner indicating that we are not learning with enough velocity. Consequently, as an Operations Team we are going to work on a new self-identified A-item titled “Immediate Action is Required to Improve the Efficiency and Effectiveness of Learning from Problems.” While this team works diligently on ways for us to improve, I implore all to seek ways to share your learning rapidly outside of your immediate crews. Take a moment at one of the daily meetings we all attend or when speaking to peers and shipmates around the yard to share your learning and help prevent a similar occurrence that impedes our volume and velocity...or worse yet impacts the safety of our teams.

David McCann

Chief Nuclear Officer - D275

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Continuous Improvement

Defects

Ever get a part or assembly that can't be used without having to rework it? It can be more than aggravating; it is a waste of our time and money. In manufacturing these are referred to as Defects.

Defects occur when a part, assembly, or product is found to not meet specifications or have flaws in it after production occurs. They must be reworked, resulting in additional costs, delays and possible safety issues, or scrapped. In addition they are often one of the most costly forms of waste because they can snowball into other forms of waste such as additional Transportation, Overproduction or Extra Processing.

Defects absorb resources such as time, money or material that produces no, or negative, business value. This means that defects destroy value by using more resources than should be required, or by using resources that produce parts or components that are not useable.

So what can be done? First, ask how often this happens. Is this a one-time occurrence or is it frequent? Next, reach out to the source (department / vendor) and explain the problem to help prevent it from recurring.

A one-time issue (e.g.: an inexperienced worker, etc.) can be addressed by Supervision to prevent it from repeating. A recurring problem usually requires a team effort and often the people with their hands on the parts can tell you a lot about what is creating issues:

- a lack of standards or poor documentation
- poor quality controls
- a lack of a defined process altogether
- poor product design
- undocumented design changes that don't marry to related parts
- poor inventory control leading to "as needed" manufacturing process adjustments

So what can you do? You can:

- review the part or product design for 'designed-in' defects
- check for standardized work plans and QC job aids such as checklists
- check for a full understanding of product requirements and consider training
- and ask the people in that area!

(From an article—Types of Waste in Lean Manufacturing—Part 1—Defects Waste by Emilie A Lachance—April 13, 2018)

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 Process Engineering.

USS Thresher (SSN 593) Lost at Sea - April 10, 1963

On April 10th, we commemorated the 61st anniversary of the loss of the USS THRESHER on sea trials after a nine-month Post Shakedown Availability at Portsmouth Naval Shipyard in Kittery, Maine. This availability provided improvements and new capabilities to the ship that this sea trial would prove out. After a series of shallow dives while transiting to the dive point 220 miles off Cape Cod on the morning of April 10th, THRESHER began her deep dive in 8400 feet of water with close watch from her escort ship, USS SKYLARK. All was well until unexpectedly a message was received from THRESHER... "Experiencing minor difficulties, have positive up angle, am attempting to blow" followed by additional garbled transmissions. At approximately 9:18 am, silence. THRESHER was lost.

Although the actual events will never be known, it is likely a brazed pipe joint in one or more seawater pipes failed. (This was a chronic problem in the fleet at the time and its consequences were not well considered). This failure caused saltwater impingement on electrical equipment shorting out critical functions. It's likely that because of these electrical failures the propulsion plant shut down. Without the propulsion plant, the ship lost its means to drive the ship to the surface and was forced to conduct an Emergency Main Ballast Tank (EMBT) blow. EMBT blow is the last line of defense for a submarine to get to the surface, when all else fails. Unfortunately, it is likely that the high pressure air in the main ballast tank air flasks had excessive moisture content and as it rushed to fill the ballast tanks with life-saving air, that moisture froze in pipes and filters and air flow was blocked. THRESHER was unable to achieve positive buoyancy and never reached the surface. With that, 129 sailors, contractors and shipyard workers did not return to their families and loved ones and are now on eternal patrol with their ship.

Following the loss, a Judge Advocate General Court of Inquiry was convened to establish what happened, and if possible why it happened. Overall, the court concluded design and construction activities were not keeping pace with the complexity of newer ship design and materials, and newer operational capabilities. In short, submarine design, construction and operational capabilities had come "too far, too fast." Inadequate quality assurance, overconfidence in existing fabrication methods, lack of approved documentation on the ship, inadequate training and schedule pressure were attributed to the tragedy.

Some of these themes are relatable to what we see in some of our current high level challenges with the COLUMBIA class and building a "first of a class" boat. First of a class ships always present these challenges, and we must maintain steadfast vigilance to meeting requirements, maintaining our required quality, raising our hands when something goes wrong, and always do the right thing, even when no one is looking. The lessons learned from the THRESHER tragedy can never be lost, and it has never been more paramount for us to embrace that learning and remember each day how critical our roles are to the success of this new program. The stakes are too high to let our quality erode in the effort to meet real and critical schedule demands of this DX program, ...the nation's highest and most urgent defense priority. As you likely have heard many times, the way to meet these demands is simple, get your work done right, with the highest quality, the very first time and schedule adherence will follow.

The compilation of learning from this tragedy was the inception of the SUBSAFE program, the first of the three Special Emphasis Programs (SEP). The robust material condition we design into our ships, the expert craftsmanship, the technical rigor of engineering, the comprehensive testing and certified documentation combined with the Special Emphasis Program's (SUBSAFE, DSS-SOC and Fly-by-Wire Ship Control System) requirements provide the assurances we owe to the crew and their families. The quality of our work forms the crew's trust in us, a sacred trust in us, that they can always depend on their ship to carry out its mission as a capable warship that provides the unfair advantage over our adversaries.

We, as shipbuilders, are proud to now have a grandchild of one of the THRESHER's crew working with us. She is the granddaughter of MM1 John Edward Bell. Megan Grabel joined Electric Boat recently and is currently working in D462 as a Program Representative. She is eager to share her perspective as a direct family member of one soul that was lost and the lasting effect that his loss still has on his family. She is committed to keeping the memory of her grandfather and the crew alive. Please look for her story in a forthcoming interview podcast with Mr. Graney. In the interim, take the opportunity to ponder that MM1 John Bell's family is now one of our Electric Boat family, a family committed to not allowing a tragedy like THRESHER to ever happen again.

Thank you,



Stephen C. Kirkup

Director - Quality Assurance and Special Emphasis Programs



- Limited THRESHER anniversary apparel in stores now
- Hurry In - USS Arizona LS & Hoodies back in stock
- Just Arrived - We Build Freedom gear! Youth sizes available now!
- See Fairwater.com for custom merchandise ordering

Bldg 4: 9:30a to 4p
Bldg 104: 8a to 4p (6a to 3p Wed.)
New London: 7a to 2p
7a to 1:30p Th.



Weekly Safety Briefing
04/14/2024 – 04/20/2024



GENERAL DYNAMICS
Electric Boat

EBP-02852: EB has established health and safety as the company's number one priority.

Week 16

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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