



Hull Butt Process Team

The Hull Butt Process Team was chartered in March of 2024 with an expected level of effort spanning four to six months. The goal of the team is to evaluate and improve the Hull Butt process in Groton. A draft problem statement was presented to the team: VIRGINIA and COLUMBIA concurrent hull butt construction in Groton will present risk to shipyard velocity. This problem statement was derived from issues stemming from Quonset Point COLUMBIA and VIRGINIA Payload Module Hull Butt performance. Issues such as preheat failures, equipment inefficiencies, and welder capacity were causing sequences to be longer than expected. Due to Groton's repair cycles and durations exceeding expectations, and the QP challenges supporting new design hull butt work, Groton's ability to support future hull butt work was deemed an area of high concern. Therefore, the Hull Butt Process Team was to focus on the current hull butt process in Groton and identify any opportunities to improve. The team is chartered with providing recommendations that will lead to construction readiness for future Groton hull butt work as these evolutions will be a major driver to ship schedule. Currently, Groton is expected to perform six COLUMBIA Hull Butts in close succession in addition to their normally scheduled VIRGINIA hull butt work starting in 4Q24. The Hull Butt Process Team will provide their assessment to key stakeholders, including Directors and the Executive Staff. This evaluation will consist of the team's findings of their review, all data collected, Groton's current state, recommended enhancements and process changes.

The Hull Butt Process Team is cross functional, engineering and operations, comprised of 18 employees from Groton and Quonset Point. Each team member was selected due to their successful involvement working hull butts and/or problem solving ability. The experience level of the team ranges from Engineer II to Manger of Operations. Disciplines included on the team are NDT, supplier quality, structural engineering, operations and design build. The team has been divided into sub teams of two people that are assigned tasks. These sub teams are expected to work together until the completion of their respective tasks. This team structure drives accountability between its members.

To date the team has performed:

- Document review
 - VIRGINIA and COLUMBIA Hull Butt Playbooks, bevel and hull butt disclosures, MAPs/MDDs and MEDs, hull butt learning sessions, hull butt reject

rates, previous process improvements, staging and under thick conditions.

- Process mapping
 - High level process flow and start to finish critical path of each planned Hull Butt
- Data Streams
 - Downtime/Paper handoff/Repair cycles/MT metrics/Electronic Work Package data/UT-RT rejection rates and inspection time spans/Equipment lists/Operation trainings
- Interviewed Key personnel and reviewed current QP SSBN826 Quad pack Hull butts

Results of the team's actions identified specific items that need process element investigation. These items include equipment and services, preparation, cut, fit and fair, inside/outside welding, back gouging, grinding, inspection and repair cycles. These items have been assigned to sub teams who are currently identifying problem areas, root causes and solutions through causal analysis.

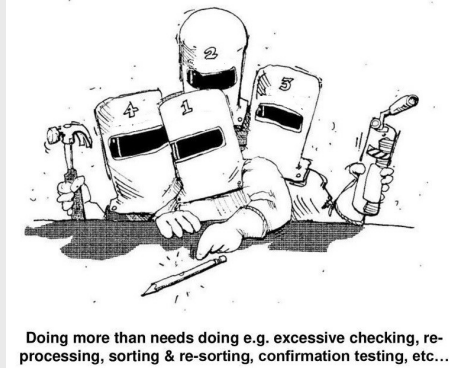
The Hull Butt Process Team will provide an overall assessment of the Groton Hull butt process identifying problems and solutions. Primary goals of the assessment will be to establish first time weld quality and ability to effectively execute hull butt work in Groton. All recommendations will have an established action owner and expected timeline.

With shipbuilding velocity being one of the four priorities of the "President's Intent" in 2024, ensuring Electric Boat Groton is prepared for major construction evolutions is vital. Hull butt pairings are a large contributor to ship schedule and the Hull Butt Process Team will provide Groton the construction readiness for concurring COLUMBIA and VIRGINIA hull butts. The Hull Butt Process Team expects success through engineering and operations working together, holding each other accountable and having the attention and support of key stakeholders along with the executive staff.

Matt Szymonik
Supervisor - Structural Engineering D450



Continuous Improvement Extra Processing is Extra Work



Doing more than needs doing e.g. excessive checking, re-processing, sorting & re-sorting, confirmation testing, etc...

If you hire a plumber to fix a leaky faucet in your kitchen, would you pay for the extra 30 minutes he spent polishing the pipes underneath your sink? No you wouldn't, all you wanted was a faucet that doesn't leak, not shiny pipes where no one will see them. This is an example of [extra processing](#), the concept of adding more features or producing a product or service of higher quality than required by the customer.

The same logic for the plumber doing work that is not required also applies in our business. Neither your internal customer nor the Navy wants to pay for non-value added work which goes above and beyond what they expect or need. Of the [eight types of waste](#), [extra processing](#) is one of the most difficult to recognize because this non-value added work is still work.

Keep in mind what your customer requires and how he/she will use your product.

Electric Boat Examples:

- A fillet joint is specified to be 3/8" and numerous extra passes are added to insure the fillet size passes inspection.
Negative Effects Include:
 - Increased chance of defect
 - Potential for interference with a future installation
 - Increased chance of distortion
 - Unnecessary weld wire and consumables used
- A structural weld surface is specified to be cleaned a minimum of 1" from expected toe of the weld, but the surface was grinded all the way to 8" away to make sure the weld is not impacted.
Negative Effects Include:
 - Increased labor cost
 - Increased chance of mistake
- A steel structure is specified to be blasted to a near white clean finish prior to paint, but the structure was over blasted beyond the time required to ensure surface is paintable.
Negative Effects Include:
 - Increased time spent blasting
 - Increased time for grit recovery
 - Increased labor cost

Each example has adverse effect associated with [extra processing](#) and it is up to all of us to meet the requirements of your customer, while eliminating the non-value added work.

Do YOU have any ideas on how to reduce motion in your area?

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.



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For the first 10 crews to sign up, we will raffle off a water bottle at EACH wellness break (\$40 value!).

Contact: Don Black
 Health Promotion Specialist
 Phone: 952-205-6067
 Email: donald.blackjr@optum.com



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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
7/7/24 – 7/13/24

200%
ACCOUNTABILITY

Electrical Safety Stand Down
Inspection to take place
July 11, 2024



GENERAL DYNAMICS
Electric Boat

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

Week 28

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