

PERISCOPE & FLIGHT DECK

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Newport News Shipbuilding

Latest Newport News Shipbuilding Activities

- Huntington Ingalls Industries Delivers Gerald R. Ford (CVN 78) To U.S. Navy
<http://newsroom.huntingtoningalls.com/releases/aircraft-carrier-gerald-r-ford-cvn78-delivered>
- Huntington Ingalls Industries Delivers Virginia-Class Submarine Washington to Navy
<http://newsroom.huntingtoningalls.com/releases/photo-release-huntington-ingalls-industries-delivers-virginia-class-submarine-washington-to-navy>
- HII Announces the Election of Jennifer Boykin as NNS' New President as Matt Mulherin Plans for Retirement.
<http://newsroom.huntingtoningalls.com/releases/nns-leadership-matt-mulherin-jennifer-boykin>
- HII Redelivers Aircraft Carrier USS. Abraham Lincoln (CVN 72) to U.S. Navy.
<http://newsroom.huntingtoningalls.com/releases/aircraft-carrier-uss-abraham-lincoln-redelivered-usnavy>
- Vice President Mike Pence serves as the Keynote Speaker as HII Christens Virginia-Class Submarine Indiana at Newport News Shipbuilding.
<http://newsroom.huntingtoningalls.com/releases/submarine-indiana-ssn-789-christened>
- President Donald J. Trump Calls Aircraft Carriers “The Centerpiece Of American Military Might Overseas”
<http://newsroom.huntingtoningalls.com/releases/photo-release-president-donald-j-trump-calls-aircraft-carriers-the-centerpiece-of-american-military-might-overseas>



Cover Photo: The aircraft carrier USS George H.W. Bush (CVN 77) transits the Gulf of Aden.
 (U.S. Navy photo by Mass Communication Specialist 2nd Class Abe McNatt/Released)

Supply Chain Management

Ethics and Compliance

Lynné Porter

NNS is committed to Ethics and Proper Business Conduct throughout the supply chain. In an effort to assist our suppliers in enhancing their own internal Ethics and Compliance program we have added tools to the NNS supplier website that suppliers are free to use as a starting point for their own documents. On the link below go to “Supplier Ethics and Compliance” in the left side menu. The link to “Ethics & Business Conduct Supplier Tools” provides templates for procedures on the topic, posters for your facility, example of Code of Ethics, example of code of conduct, and of company values. We urge suppliers to review the Ethics & Business Conduct requirements of your purchase order and if gaps exist review these documents to assist in development of a robust system. Additional links are provided with supporting information on other compliance topics such as Conflict Minerals, Cybersecurity, Counterfeit Electronic Parts, and Human Trafficking. Questions on this information can be sent to SCMCompliance@hii-nns.com.

<https://supplier.huntingtoningalls.com/sourcing/index.html>



The Aircraft Carrier GERALD R FORD CVN 78 departing for sea trials. Photo by John Whalen.

Counterfeit Electronic Parts

DFARS clause 252.246-7007 Contractors Counterfeit Electronic Part Detection and Avoidance System, addresses unlawful or unauthorized reproduction, substitution, or alteration that has been knowingly mismarked, misidentified, or otherwise...

(Continued on Page 7)



A ladle operated by Marc Morotini (A572) containing liquid molten brass is tipped to fill the mold in the Foundry. Photo by John Whalen

SPARS Training

We have embedded the SPARS training module when you log into SPARS. Upon logging in, you will need to select “NNS Forms” to create, query, or search for submittals. An NNPI Warning will pop up. Please read the warning. If you clicked OK to the NNPI Warning, the Active Forms Screen will appear. This is where we embedded the Training Module. Just click on the section “NNS SPARS Training” as shown below. You no longer need separate access to the Training Modules to review SPARS Training.

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Create
Refresh
Search
Excel
Close

Newport News Shipbuilding - Forms Desktop Form Filter:

"Newport News Shipbuilding and Dry Dock Company" is a legal entity and referred to herein as "NNS" or "Newport News".

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Type	YES Tracking Number	NNS Tracking Number	Create Date	Purchase Order
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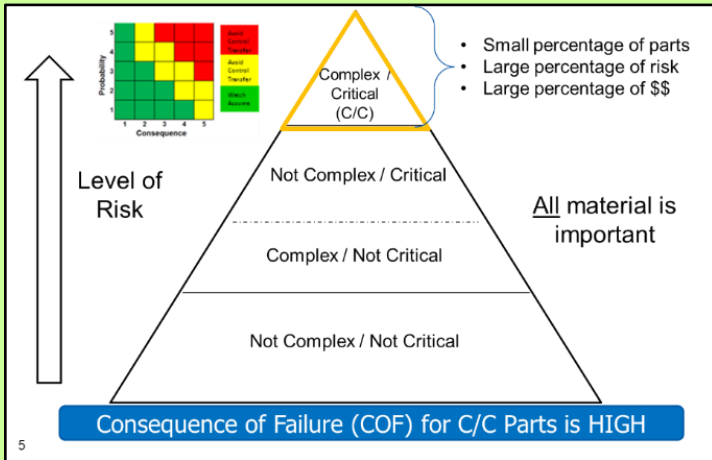
Other Notificat

Type	YES Tracking	NNS Tracking	Create Date	Purchase Order
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Engineering

Complex/Critical Part and Supplier Technical Assessments

Craig Garland



While NNS already has several supplier-focused initiatives, we have found that technical assessments (STAVs) are also needed to help ensure that suppliers understand and execute the key technical requirements throughout the design, manufacture, assembly and test of the components.

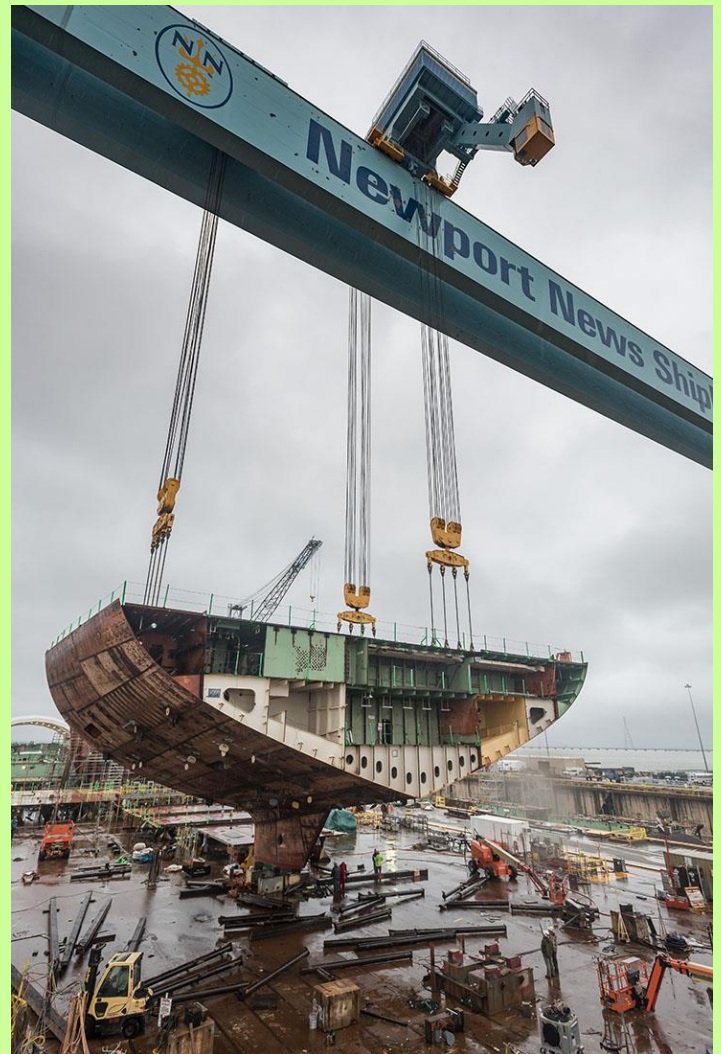
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Complex/Critical (C/C) Parts

Parts that have a high level of complexity with respect to manufacturing and are used in a critical application (high consequence of failure). NNS Engineering evaluates the complexity of the part (e.g. multiple special processes, complex assembly, special qualifications, history of non-conformances, etc) and whether any end-use on the ship has a high consequence of failure and determines if the RISK warrants classifying the part as C/C. C/C parts receive additional oversight during procurement to help ensure that supplier capabilities are acceptably aligned with manufacturing requirements. This oversight includes potential supplier technical assessments and increased quality audits. C/C parts are identified on Purchase Orders by the inclusion of Coded Note Y2600 (Carrier Programs) or Standard Clause 37-8CC (VCS Program).

Supplier Technical Assessments

NNS conducts hundreds of material investigations, annually, due to identified non-conformances with material delivered for shipboard installation. Some of these investigations result in delay of delivering our ships to the Navy. Some of these investigations directly impact the cost of our ships.



JOHN F. KENNEDY CVN79 Superlift 2921 is prepped for its move into DD12. Photo by Matt Hildreth

Quality

Welding Quality Control System Necessary for Navy Specification Compliance Greg Pike & Sonny Price

Welding is much more than a skill or an art. It involves the complex interplay of the four states of matter (solid, liquid, gas and plasma) as *governed* by the laws of physics. However, welding is *controlled* by appropriate standards and specifications. Common US welding standards include the AWS D1.1 Structural Welding Code for Steel and the ASME Boiler and Pressure Vessel Code Section IX, which have many similarities to Navy fabrication specifications (such as *Tech Pub 1688*, *PPD 802-7094539*, *Tech Pub 278*) but many nuanced differences. Suppliers often fail to recognize that full compliance to Navy fabrication standards requires a welding quality control system. Obtaining approved welding procedures and qualifying welders is a substantial part of that quality control system, but it is not all that is required by the Navy specifications.



Shipbuilder Bobby Vaughan welds on a fixture for the Aircraft Carrier JOHN F KENNEDY CVN 79.

It can take several months to a year to implement a compliant Navy welding system depending on the expertise of personnel responsible for welding related activities and the amount of time available to focus on this task. Because personnel with extensive Navy specification and welding knowledge are relatively rare, most suppliers must rely on less specifically qualified Quality Managers, NDT Examiners, AWS Certified Welding Inspectors, Welding Technicians or Engineers. Inadequate planning for the learning curve is a serious risks to cost and schedule constraints. Each new welding procedure qualification is costly and takes at least three months from planning to approval, even when done efficiently. Other often unaccounted for parts of a Navy welding quality control system, invoked by their fabrication specifications, include:

1. Quality manual delineation of responsibilities, procedures & material control
2. Filler metal procurement to MIL-Spec requirements
3. Verification of filler metal composition and mechanical properties at receipt inspection
4. Storage and control of filler metal in production
5. Surveillance of welders to ensure compliance to approved welding procedures
6. Preheat and interpass temperature controls (where, when & how)
7. Welding equipment calibration and maintenance
8. Welder quarterly qualification maintenance system & annual vision test
9. Welder workmanship training and certification
10. Post weld heat treatment procedures and controls
11. Control and documentation of base metal weld repairs
12. Flow down of welding & NDT requirements to suppliers with appropriate oversight of their activities.



A shipbuilder cleans up welds on the Delaware SSN 791 for magnetic particle inspection. Photo by Chris Oxley.

Most of the above items can only be verified by NNS during a specific on site welding and NDT audit. However, it is the responsibility of each supplier to understand and comply with all invoked Navy requirements. Pay close attention to Purchase Order requirements and obtain the required documents for perusal well ahead of deadlines. Note that invoked welding related requirements may come from multiple sources. Take appropriate NNS supplier training modules and request assistance through the NNS Buyer or Supplier Engineering Advocates. The use of NavWeld and NavNDT software products for documentation of Welding and NDT procedures, Welder Workmanship procedures, and Welder and Inspector Personnel Qualification records is highly recommended and is provided at no charge to NNS or EB supplier. NavWeld and NavNDT are well proven to streamline development and approval of these required documents.



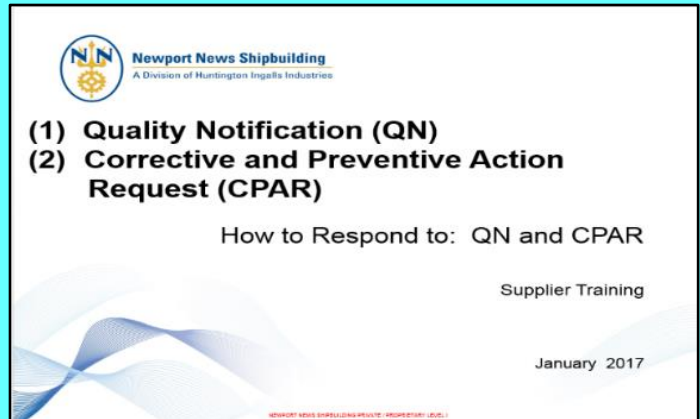
Quality

CPAR/QN Training Module

Dori Duncan

There is a new training module available for HII-NNS suppliers. Formerly, there was only a CPAR training module but due to multiple questions received from suppliers asking the differences between QNs and CPARs, a QN training module was created and combined with the CPAR module into one to help highlight their similarities and differences.

As a reminder, HHI-NNS has *various training modules* available to our suppliers for free. If you have not signed up your employees for access to the training modules yet, just submit a request to: SupplierTraining@HII-NNS.com



Similarities between CPARs and QNs	
(A) The root cause of the discrepancy (B) Corrective action(s) (C) Preventative action(s) (D) Estimated completion dates for the above.	
Corrective/Preventive Action Request (CPAR)	Quality Notification (QN)
<ul style="list-style-type: none"> Issued by Supplier Quality Engineers for various reasons. (Multiple QNs, audit findings, etc.) Requires (A), (B), (C), and (D) on <u>all</u> issued CPARs. Response is detailed on the bottom of the CPAR form. Database-generated issuance with heading on the form called "SUPPLIER CORRECTIVE/PREVENTIVE ACTION REQUEST". 	<ul style="list-style-type: none"> Issued by Receipt Inspection when material discrepancy is discovered. If the QN is document-related, please email your corrective action within 48 hours to QNSoftware@hii-nns.com and the sender of the email. If the QN is hardware-related, please call or email your corrective action to the sender of the email within 48 hours. If no response from the sender is received, please call your corresponding supplier quality engineer. Always identify the QN number on the subject when responding to HII-NNS. If you find that there are other items in the purchase order with similar issues, please let HII-NNS know. ❖ Follow-on actions: <ul style="list-style-type: none"> ➤ For level one materials, a response of the documentation of (A), (B), (C) and (D) should be sent to NNSCPAR@hii-nns.com. ➤ For non-level one materials: (A), (B), (C), and (D) should be retained in your records for HII-NNS review upon request.

Continued

Counterfeit Electronic Parts continued from Page 3

...misrepresented to be an authentic, unmodified electronic part from the original manufacturer, or a source with the express written authority of the original manufacturer or current design activity, including an authorized aftermarket manufacturer. Unlawful or unauthorized substitution includes used electronic parts represented as new, or the false identification of grade, serial number, lot number, date code, or performance characteristics. This clause applies to all electronic parts - even commercial items, and down the supply chain to electronic parts suppliers.

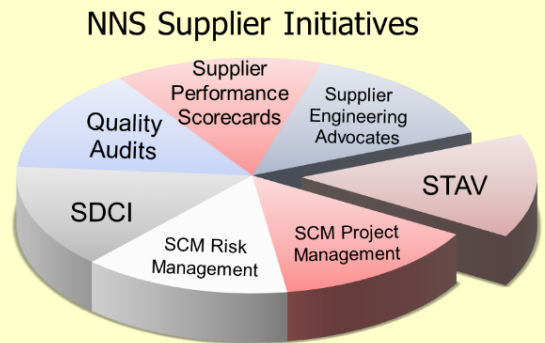
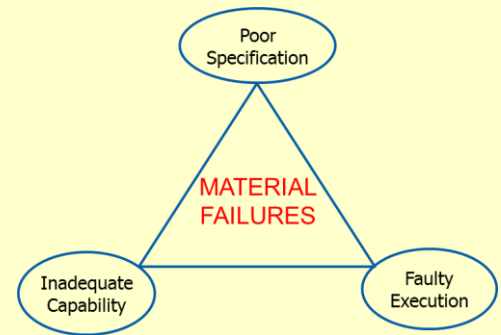


The Submarine WASHINGTON SSN 787 on sea trials. Photo by Ashley Major.

Supplier Technical Assessments continued from Page 4

When NNS elects to perform a STAV, here's what can be expected:

- On-site evaluation focused on observing operations, reviewing procedures, and having open discussions with craftsmen and management
- Conducted through a pairing of NNS subject matter experts (SMEs) with Supplier representatives to allow for one-on-one discussions.
- Conducted over the course of one or two days, depending on the size of the Supplier, complexity of the part(s), and number of SMEs required
- Typically includes a brief presentation by the Supplier of core competencies/capabilities and a facility tour, followed by breakout sessions for the SME pairings.
- Concludes with an Assessment Report identifying observed strengths, weaknesses, and risks and recommended (or required) mitigation actions.
- After the on-site visit, NNS will brief the supplier on the STAV report and establish a risk mitigation or development plan, as needed



Supplier Engineering Advocate (SEA)

This newsletter was put together by the members of the SEA group with the help of various members from around Newport News Shipbuilding providing articles from their area(s) of expertise. The SEA group is a dedicated team that coordinates with suppliers and NNS departments to resolve upstream material engineering issues to positively impact the Material Value Stream. Members of the SEA team are full-time professionals from various technical backgrounds that address a wide variety of material engineering challenges. You may contact the SEA group at SupplEngAdvocate@hii-nns.com or on the link provided below. <http://supplier.huntingtoningalls.com/sourcing/sea.html>



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