INDUSTRY DAY BRIEF

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Propulsion, Power & Auxiliary Machinery Systems, Department 40

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Distribution A: Approved for public release: distribution unlimited
Department 40 Responsibilities

• Systems: Main Propulsion, Electric Power & Distribution, Auxiliary Systems, Steam, Submarine Sail Systems, Submarine Hydraulics, Deck Machinery and Habitability.

• Major Roles:
  – Life Cycle Manager
  – In Service Engineer
  – Acquisition program engineering support
  – TWH for Submarine Sail Systems
  – Technical Authority: Engineering support to SEA 05
  – SUBSAFE Supervising Authority for OII-MSD (NAVSEA note 5000)
DEPARTMENT OVERVIEW

TOTAL END-STRENGTH
(Civilian, Military, Contractors)
692

TOTAL CIVILIAN
604
TOTAL MILITARY
0
TOTAL CONTRACTORS
*88

EDUCATION LEVELS (ALL CIVILIANS)
Bachelors: 362
Masters: 111
Doctorate: 1

*On-site Contractors

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Division 41 Responsibilities

— In the Auxiliary Machinery Systems Division, we provide full spectrum and innovative engineering support for the following systems under our cognizance:

- Air Conditioning and Refrigeration
- Steam Systems
- Auxiliary Systems
- Combat Support Systems
- Auxiliary Machinery Automation
- Life Support & Ventilation Systems
- Fluid Systems Automation
- Compressed Air Systems

— In collaboration with our NAVSEA Technical Warrant Holders, we provide leadership for the research, development, testing, acquisition, integration, maintenance, sustainment, and modernization of these systems thru:

- Technology Development
- Failure Investigation / Analysis
- Metrics Assessment
- Distance Support
- Land & Shipboard Test & Evaluation
- In Service Engineering
- Acquisition Support
- System Design
- Boiler and Pressure Vessel Inspections
- Energy Conservation
- Obsolescence Management & Legacy System Upgrades
- Training and Logistics
Division 42 Responsibilities

In the Propulsion and Power Systems Division, we provide full spectrum and innovative engineering support for the following systems under our cognizance:

• Gas Turbine Systems for Main Propulsion and Power Generation
• Diesel Engines for Main Propulsion and Power Generation
• Power Transmission Systems, Propulsors, and Waterjets
• Electrical Power Generation, and Distribution and Conversion Systems
• Advanced Integrated Electric Propulsion and Power Systems

In collaboration with our NAVSEA Technical Warrant Holders, we provide leadership for the research, development, testing, acquisition, integration, maintenance, sustainment, and modernization of these systems thru:

• Technology Development
• Acquisition Support
• System Design
• Modeling & Simulation
• Machinery Arrangements
• Land & Shipboard Test & Evaluation
• In Service Engineering
• 2S Cog / Depot Management
• Failure Investigation / Analysis
• Metrics Assessment
• Distance Support
• Energy Conservation
• Obsolescence Management & Legacy System Upgrades
• Training
Division 43 Responsibilities

• Applicable Systems/Areas Include:
  – Anchor, Mooring, Towing and Amphibious Assault Systems
  – Aviation & Material Handling and Stowage
  – Weapons/Cargo Handling and Stowage Systems
  – Launch/Recovery & Crane Systems
  – Hydraulics and Steering Mechanical
  – Hull Outfitting
  – Shipboard Habitability
  – Maintenance Technologies
  – Submarine Sail Modernization/Maintenance
  – SUBSAFE
  – Submarine Availability Material Planning


• Responsibilities extend across ship acquisition, modernization and in-service phases

• Major focus areas include technical requirements, design, reliability, maintainability and integrated logistics support (ILS)
NSWCPD LABS & TEST FACILITIES

AUXILIARY & LIFE SUPPORT SYSTEMS COMPLEX
- 3 Test Facilities
- 2 Buildings
- Approximately 23,500 sq. ft.

CARGO, WEAPONS HANDLING, & HULL SYSTEMS COMPLEX
- 8 test facilities
- 2 Buildings
- approx. 7,000 sq.ft.

MACHINERY NETWORK, SENSORS, & DATA SYSTEMS COMPLEX
- 34 test facilities
- 6 Buildings
- approx. 63,000 sq.ft.

PROPULSION & ELECTRICAL MACHINERY SYSTEMS COMPLEX
- 40 test facilities
- 5 Buildings
- approx. 243,000 sq.ft.

ENVIRONMENTAL & DAMAGE CONTROL SYSTEMS, & MATERIALS TECHNOLOGY COMPLEX
- 6 test facilities
- 2 Buildings
- approx. 28,000 sq.ft.

UNDERSEA VEHICLE SAIL & DEPLOYED SYSTEMS COMPLEX
- 14 test facilities
- 1 Buildings
- approx. 42,000 sq.ft.

NSWCPD HAS 107 LABS & TEST FACILITIES WITHIN 7 BUILDINGS
A TOTAL OF APPROXIMATELY 400,000 SQ. FT.
A REPLACEMENT COST OVER $1.4B
<table>
<thead>
<tr>
<th>Brief Description</th>
<th>ROM</th>
<th>Anticipated Announcement Date (FY/QTR)</th>
<th>Requiring Technical Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amphibious and Military Sealift Command Weapons Handling Work</td>
<td>$50M</td>
<td>FY16/Q3</td>
<td>432</td>
</tr>
<tr>
<td>Engineering and Technical Services in Support of HM&amp;E and Steam Propulsion Plant Systems and Equipment.</td>
<td>$35M</td>
<td>FY16/Q3</td>
<td>412</td>
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<tr>
<td>Engineering and Technical Services for the Modernization, Upgrade, Inspection and Maintenance of HM&amp;E and Steam Systems</td>
<td>$40M</td>
<td>FY16/Q3</td>
<td>412</td>
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<tr>
<td>Brief Description</td>
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<tr>
<td>Engineering, Technical, Logistics, and Installation Support Services for Propulsion, Power and HM&amp;E Ship Systems Maintenance and Performance</td>
<td>$80M</td>
<td>FY16/Q4</td>
<td>427</td>
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<tr>
<td>Engineering and Drawing Development and Revision Services for Electric Power and Generation Equipment</td>
<td>$15M</td>
<td>FY16/Q4</td>
<td>427</td>
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<tr>
<td>Advanced Weapons Elevator Technical Services in Support of Test Site Infrastructure Design</td>
<td>$5M</td>
<td>FY16/Q4</td>
<td>432</td>
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## Competitive Contract Requirements - Projected FY17 Announcements

<table>
<thead>
<tr>
<th>Brief Description</th>
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<tbody>
<tr>
<td>Fleet Support Services for Compressed Gas Systems (Potential Multi-Award Contract)</td>
<td>$300M</td>
<td>FY17 / Q1</td>
<td>418</td>
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<tr>
<td>Engineering Services to Provide Ship Machinery System, Propulsion, Electrical, and Control Systems Support of New Acquisition, Ship Life-Extension, Sustainment and In-Service</td>
<td>$40M</td>
<td>FY17 / Q1</td>
<td>429</td>
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<tr>
<td>Engineering and Technical Support for Combat Support Systems and Cargo Weapons Handling Systems</td>
<td>$350M</td>
<td>FY17/Q2</td>
<td>414/432</td>
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<tr>
<td>Brief Description</td>
<td>ROM</td>
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<tr>
<td>Habitability Technical and Industrial Services (Potential Multi-Award Contract)</td>
<td>$1B</td>
<td>FY17 / Q2</td>
<td>434</td>
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<td>Engineering and Financial Services for Power Transmission Equipment and Systems.</td>
<td>$25M</td>
<td>FY17 / Q2</td>
<td>422</td>
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<tr>
<td>Engineering, Technical, and Logistics Lifecycle Support for Gas Turbine Systems and Components onboard U.S. Navy Vessels, Other Government Marine Vessels and at Shore Facilities/Land Based Test Sites</td>
<td>$40M</td>
<td>FY17 / Q2</td>
<td>424</td>
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<tr>
<td>Submarine Outboard HM&amp;E Design and Drafting Services</td>
<td>$5M</td>
<td>FY17 / Q2</td>
<td>437</td>
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<tr>
<td>Submarine External Hydraulic Valves, Manifold, Multi-Stage Actuator Design and Production</td>
<td>$15M</td>
<td>FY17 / Q2</td>
<td>437</td>
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<tr>
<td>Assembly, Testing, Repair, Refurbishment and Restoration of Submarine Antenna, Periscope and Communication Systems, Assemblies and Components</td>
<td>$5M</td>
<td>FY17 / Q2</td>
<td>435</td>
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