



# Forward Deployed Regional Maintenance Center Detachment Bahrain

## 2019 INDUSTRY DAY

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# Outline

- **Mission**
- **Stakeholders**
- **Maintenance & Types of Availabilities**
- **Maintenance & Repair Capabilities**
- **Required Qualifications and Certifications**
- **Improvement areas**
- **POCs**
- **Q &A**



# Mission

**Provide the Surface Fleet with maintenance  
and repair support to keep them  
operationally ready and help ensure they  
meet their Expected Service Life.**



# Stakeholders

**CNRMC**

**FDRMC**

**Program Offices**

**NAVSEA 21**

**Manufacturers**

**Planning Yard**

**FLC**

**SPAWAR**

**TYCOMs**

**Fleet**

**Ship's Force**

**Private Contractors**

**Port Engineers**

**SURFMEPP**

**NAVSUP**

**NAVSEA 05**

**NNSY**



# Responsible for

- Chief of Naval Operations (CNO) Maintenance Availabilities
  - ✓ Dry Docking Periodic Maintenance Availability
  - ✓ Dry Docking Selected Restricted Availability
  - ✓ Selected Restricted Availability
- Continuous Maintenance Availabilities (CMAVs)
- Modernization
- Emergent Repairs/CASREP (Casualty Report)
- Voyage Repairs
- Fleet Technical Support/Assist
- Assessments



# Contracts and \$\$

## FY18 & FY19 SHIP CONTRACTS SUMMARY

	<b>FY18</b>	<b>FY19*</b> (5 months)	<b>TOTAL</b>
<b># OF CONTRACTS/ MODIFICATIONS</b>	<b>638</b>	<b>432</b>	<b>1070</b>
<b>AMOUNT</b>	<b>\$ 38.94 M</b>	<b>\$ 18.67 M</b>	<b>\$ 57.61 M</b>
	<b>BD 14.69 M</b>	<b>BD 7.05 M</b>	<b>BD 21.74 M</b>
<b>Note:</b>			

\*No of Contracts is contracted awarded as of 05/2019

\*Totals includes SURFLANT,SURFPAC,AIRLANT & AIRPAC ships



# Maintenance and Repair Capabilities

- 1. Valve Repair/Replacement**
- 2. Piping/Tubing replacement**
- 3. Welding/Clad welding**
- 4. Non Destructive Testing –VT/PT/UT/MT/RT**
- 5. Machining/Fabrication**
- 6. Engine repairs, Pump repair/ Motor rewind/overhaul**
- 7. Test relief valves**
- 8. Insulations and Lagging**
- 9. Fabrications of flex hoses**
- 10. Structural Repairs (Hull repairs/replacement)**
- 11. Heat Exchanger Cleaning**
- 12. Temporary Services/Temporary Supports**
- 13. System Flush (Oil, Air, Water, other mediums)**



# Maintenance and Repair Capabilities

- 14. Compressor repairs**
- 15. Hull cleaning and preservation**
- 16. Lifting/rigging/Crane Services**
- 17. Diving services**
- 18. Dry-Docking/Un-Docking**
- 19. Small Boat repairs**
- 20. Tank repairs**
- 21. Shaft, propeller, Shaft Seal replacement**
- 22. Blasting and Painting**
- 23. Cleaning and Pumping**
- 24. Calibration/alignment/alignment check**
- 25. Cabling/electrical controls**
- 26. Material Procurement and Storage associated with above work**





# Maintenance & Modernization

- **Definition of Work?**
  - Wrench Turning
  - Inspections
  - Test (Non Destructive Test, Operational Test, Strength Test, etc.)
  - Work Completion Certification (Verification, Reports, Reviews, Validation)
  
- **Where does Work come from?**
  - Modernization Plan
  - Periodic Maintenance- Condition based maintenance
  - Deficiencies – Reported by Operators (Ship's Force)
  - Inspection results
  - Assessment results



# Planning & Execution

- **Port Engineer, SURMEPP, TYCOM, and Program Offices**
  - Screen work to the Maintenance Work Package
- **FDRMC DET Bahrain**
  - Prepares work specification → Requirements/Statement of Work
  - Specification forwarded to NAVSUP FLC Bahrain for contracting
  - Technical Evaluation of proposals
- **FLC**
  - Develop contract documents, RFQ, Receives proposals, review, received funding and awards contracts
- **Contractors:**
  - Planning (Procedures, Material, Resource)
  - Develop Integrated Schedule
  - Milestones/Key Events
  - Execute the plan



# Qualification & Certification Requirements

## ISO 9001-2015: International Organization for Standardization Quality Management System

### Why ISO 9001?

- Meet statutory and regulatory requirements
- Great emphasis on Leadership engagement
- Identify and address risks
- Effective Supply Chain management
- Organize own processes and procedures
- Improve the efficiency of processes
- Continually improve

### Benefits

- Create satisfied customers, management, and employees
- Focus on Quality and Customers



# Qualification & Certification Requirements

## **ISO 9001-2015: International Organization for Standardization Quality Management System**

- 1. Requirements for a Quality Management System, including Documented procedures**
- 2. Management responsibility**
- 3. Customer Related Processes**
- 4. Purchasing**
- 5. Production and Service Provision**
- 6. Product realization, including the steps from design to delivery**
- 7. Measurements, Analysis and Improvement (Internal Audits and Corrective/Preventive actions)**



# Qualification & Certification Requirements

## Established Welding and NDT Program

Procedure

Personnel Qualification

Training

Test

Hours

Maintain Qualification

Naval Sea Systems Standard - NSTP 271

ASNT-TC-1A

## Shipboard Fire Protection/Prevention

(Industrial Ship Safety Manual for Fire Prevention and response)

### NAVSEA S0570-AC-CCM-010/8010

- ✓ Fire Response plans, Alarms and Controls
- ✓ Fire Fighting System, Training
- ✓ Drills



# QUALIFICATION & CERTIFICATION REQUIREMENTS

## Painting and Blasting Qualification

- NAVSEA Basic Paint Inspector (NBPI)
- National Association of Corrosion Engineers (NACE)  
Coating Inspector Program
- QP-1 Certification

## Provide Integrated Master Schedule

Work and testing (Predecessor/Successor relationships, dates, duration, Key Events, Milestones)

Integrate Ship's Force and Alteration Installation Team (AIT) work

Provide required Test Integration Plan (TIP)

Integrated Ship Testing



# Master Ship Repair and Alteration of Vessels (MARAV) Process

- 1. Shipboard repair work is complex and demanding.**
- 2. NAVSEA contract only with ship repair companies that are fully capable of conducting all aspects of shipboard work**
- 3. Navy's absolute requirement for reliable operation, create a unique repair environment that demands specialized expertise and capability**

## **The two-tier vessel repair certification process:**

- Navy receives a satisfactory repair effort**
  - Promote an active, competitive private sector industrial base to repair Navy vessels**
- The two agreements utilized are formally titled as follows:**
- (1) Master Ship Repair Agreement (MSRA)**
  - (2) Agreement for Boat Repair (ABR)**



# Master Ship Repair Agreement (MSRA)

**The MSRA is issued to:**

**Firms having the facilities, management, organization and production capabilities to perform an entire complex repair and alteration package.**

**The firm must be capable of:**

- Docking the ship (Dry-docking & Pier-side docking)**
- Mix of Capabilities –**
  - Structural,**
  - Electrical & Electronic,**
  - Machinery**
  - Piping work**

**\*Since the scope of work will vary from repair package to repair package, an MSRA does not automatically certify that a contractor can accomplish a specific work package**





# Agreement of Boat Repair (ABR)

**An ABR is issued to firms that have specialized capabilities on the following field:**

- Welding and NDT services**
- Heating, Ventilation, and Air-Conditioning (HVAC)**
- Pumps and Motor repairing**
- Insulation & Lagging**
- Diesel Engine repairs**
- Pipe fitting**
- Piping system flushing**
- Diving services**
- Flexible Hose repairs**
- Mechanical and Electrical**

**An ABR holder must have the technical and production capabilities, management, organization and facilities to accomplish the scope of work.**



# Advantages of MARAV Certification

- 1. Proven Qualification to conduct NAVY Ship Repairs**
- 2. Familiar with NAVSEA Standard Items – NAVY requirements**
- 3. Access to NAVY Facilities to conduct Ship-check, repair and testing**
- 4. Easy Vehicle access to bring material, equipment and tooling to NAVY facilities to conduct repairs**
- 5. Easy access to performing emergent repairs**
- 6. Be able to team with other specialized ABR holders**
- 7. Employees are already screen as part of MARAV Certification**



# Area of Improvement

- **Safety and Fire Safety = #1 Priority**
- **Adherence to Naval Sea Systems Standard Instructions**
  - **Category I and Category II**
- **Integrated Master Schedule – Key Events and Milestones**
  - **Integration of work tasks of Contractor, Ships Force, Alteration Installation Team work and Intermediate Maintenance Activities**
- **Foreign Material Exclusion Controls**
  - Maintain Cleanliness Controls**
  - System openings, plugs/caps/blanks**
- **Procedure adherence (References, Tech Manuals, DWGs, NSIs)**



# Area of Improvement

- **Material Procurement (Paint, Plates, Piping, Valves, Fasteners, etc.)**
- **Reports/Work Completion Certification (NSI 009-04 Attachment A)**
- **Definition of Guarantee Work**
- **Critiques – Investigations**
  - Problem Identification
  - Root cause of the undesired events – Causal Analysis
  - Corrective Actions (Short and Long term)
- **Correction Action Report**
  - Method “A”, “B”, “C”, and “D”
- **Work Isolation and Authorization Process (WAF and TAGOUT)**
- **MARAV Agreement – Access pass to conduct work**



# Point Of Contact

- **Contact the following personnel for questions:**

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