USCGC NORTHLAND (WMEC 904)

SPECIFICATION FOR DOCKSIDE REPAIRS

FY2027

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(Rev-0, 05 May 2026)

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REVISIONS RECORD

This page is used to record specification revisions, which may have occurred subsequent to a Revision 0 (Rev-0) package. Information listed is intended to provide contractors and field unit personnel a means to ensure all the current specification revision pages are present when reviewing or utilizing this specification package.

DATE	REV#	WORK ITEM#	CHANGES MADE

NOTE : All work item and paragraph numbers listed above for a given revision correspond to same numbers in the previous revision. This revised specification is self-contained with all of the above listed changes incorporated.

CONSOLIDATED LIST OF REFERENCES

The below-listed documents form a part of this specification to the extent specified herein. Approval/publication dates or revision dates/numbers are also identified, to ensure that same document versions are used at the time of specification writing and during contract execution.

All Coast Guard drawings, technical publications, and standard specifications will be provided to contractors by the Coast Guard at an appropriate time, or upon request, free of charge. Other Government documents may be accessed – free of charge – from links located on the SFLC website. Commercial sites provide access to their respective documents.

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 113-001, Rev E, Tank Top PL & FR Fwd FR 101
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Coast Guard Drawing 901 WMEC 136-001, Rev N, 01 Level Pl & Fr Fwd 101
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Coast Guard Drawing 901 WMEC 243-001, Rev L, Shafting Arrangement
Coast Guard Drawing 901 WMEC 243-005, Rev D, Sftg Align Anal and Procs
Coast Guard Drawing 901 WMEC 256-002, Rev U, Mn and Aux SW Cooling Sys A&D
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Coast Guard Drawing 901 WMEC 320-003, Rev U, Power System Hold

Coast Guard Drawing 901 WMEC 320-011, Rev N, 400 Hz Distr IWD

Coast Guard Drawing 901 WMEC 320-013, Rev C, Anchor Windlass Elec Arr & Wiring Det “A” Class MEP.

Coast Guard Drawing 901 WMEC 320-031, Rev B, 400 Hz Distr IWD

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Coast Guard Drawing 901 WMEC 512-016, Rev B, Magazine Vent’l Purge System

Coast Guard Drawing 901 WMEC 512-018, Rev -, Anchor Windlass & Bosun Workshop Vent Mods

Coast Guard Drawing 901 WMEC 512-019, Rev -, Ventilation Mods to Refridgerated & Dry Stores

Coast Guard Drawing 901 WMEC 512-021, Rev -, HVAC Mods to Systems Serving the 76MM Gun, Mag, & Control Booth

Coast Guard Drawing 901 WMEC 512-022, Rev -, Ventilation Modifications Incdt Talon Helo Grid Instl

Coast Guard Drawing 901 WMEC 512-023, Rev H, Vent Mods to Steering Gear Room 3-228-0-E

Coast Guard Drawing 901 WMEC 513-005, Rev F, Vent, ER & ECC – Plan, Sect & Elev A & D

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Coast Guard Drawing 901 WMEC 514-026, Rev H, HVAC Main Deck Fr 165-186 A&D

Coast Guard Drawing 901 WMEC 514-027, Rev E, Fan Room Arrgt 02-45-0-Q

Coast Guard Drawing 901 WMEC 514-046, Rev – HVAC Modifications to Commissary Stores (4-169-0-A) to Provide Air Cond.

Coast Guard Drawing 901 WMEC 514-048, Rev – Ventialtion Mods to Snsr Rm & CSC 02 Lvl & Abv

Coast Guard Drawing 901 WMEC 529-001, Rev N, Ballasting & Emer Bilge Drainage Sys Diagram

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Coast Guard Drawing 901 WMEC 533-007, Rev J, H & C Potable Water Blw Mn Dk

Coast Guard Drawing 901 WMEC 542-1, Rev J, JP-5 System Diagram

Coast Guard Drawing 901 WMEC 542-2, Rev H, JP-5 System – A&D

Coast Guard Drawing 901 WMEC 572-001, Rev G, Svce Hoist Instl A&D

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Coast Guard Drawing 901 WMEC 581-002, Rev C, Hawse & Chain Pipes

Coast Guard Drawing 901 WMEC 581-004, Rev L, Anchor Windlass Arrangement and Details

Coast Guard Drawing 901 WMEC 581-005, Rev-, Port Anchor Windlass, WMEC 270 A-Class, 1-1/2-inch Chain, Vertical, Model VAW-1.50-30E-36-A-P, General Arrangement

Coast Guard Drawing 901 WMEC 581-006, Rev-, Stbd Anchor windlass, WMEC 270 A-Class, 1-1/2-inch Chain, Vertical, Model VAW-1.50-30E-36-A-S, General Arrangement

Coast Guard Drawing 901 WMEC 581-008, Rev -, Anchor Windlass Upgrade Installation

Coast Guard Drawing 901 WMEC 582-001, Rev F, Mooring & Towing Ftgs – A&D

Coast Guard Drawing 901 WMEC 582-002, Rev F, Capstan Arrangement and Details

Coast Guard Drawing 901 WMEC 634-001, Rev G, Deck Covering Schedule

Coast Guard Drawing 901-WMEC 644-001, Rev E; Plumbing Fixtures List

Coast Guard Drawing 901-WMEC 644-002, Rev A; Chemical, Biological & Radiological Decontamination Station

Coast Guard Drawing 901 WMEC 665-005, Rev H, Ordnance Workshop – A&D

Coast Guard Drawing 901 WMEC 801-004, Rev L, General Arrangement 01 Level

Coast Guard Drawing 901 WMEC 801-010, Rev D, Inboard Profile

Coast Guard Drawing 901 WMEC 801-020, Rev G, Booklet of General Plans

COAST GUARD PUBLICATIONS

Coast Guard Commandant Instruction (COMDTINST) M10360.3, Jun 2006, Coatings and Colors Manual

Coast Guard Technical Publication (TP) 2721, May 2016, Manufacturer's Instruction Book - SWBS 581, Section A, Windlass, Anchor

Coast Guard Technical Publication (TP) 2721, May 2016, SWBS 572, Dumbwaiter

Coast Guard Technical Publication (TP) 2721, May 2016, SWBS 582, Section A, Technical Manual for Warping Capstan Model No. 3404-EC

Coast Guard Technical Publication (TP) 2819, SWBS 302, Feb 2009, Motor Controllers (270 WMEC)

Coast Guard Technical Publication (TP) 2823B, Manufacturer's Instruction Book-SWBS Group(s) 324-426, Section A; Aug 2015; Switchboard, 400 Hz

Coast Guard Technical Publication (TP) 2837, Manufacturer's Instruction Book, SWBS Group 581, Section A, Jul 2016, Capstan-Windlass Model X-1836

Coast Guard Technical Publication (TP) 3231A, Oct 2019, Manufacturer’s Instruction Book-SWBS Group(s) 242-245, Chapter 243, Section A, Stern Tube Seal, MX9, US-71996

Coast Guard Technical Publication (TP) 4432, 10 Oct 2024, Seawater Cooling Pump, Model- DURCO MK 3 – Installation, Operation Maint & User Instructions

Coast Guard Technical Publication (TP) TBD, SWBS 581, Jun xxxx, Anchor Windlass (270 WMEC A-Class)

Coast Guard Technical Specification D-123-2048, Feb 2020, 270’ WMEC A Class Fluid Handling Plan for Tank Inspections

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 0850 (SFLC Std Spec 0850), 2022, General Requirements for Drawing Preparation

Surface Forces Logistics Center Standard Specification 3020 (SFLC Std Spec 3020), 2022, Overhaul AC Electrical Motors In-Shop

Surface Forces Logistics Center Standard Specification 3041 (SFLC Std Spec 3041), 2022, Shipboard Electric Cable Test

Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2022, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2022, Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 5100 (SFLC Std Spec 5100), 2022, Clean Shipboard Ventilation Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 6341 (SFLC Std Spec 6341), 2022, Install Interior Deck Covering Systems

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2022, Temporary Hull Accesses

OTHER REFERENCES

American Bureau of Shipping (ABS) Approved Chain, Accessory and Bar Manufacturing Facilities List, Oct 2016

American National Standards Institute (ANSI) C37.50, 2018, Low Voltage AC Power Circuit Breakers Used in Enclosures, Test Procedures

American National Standards Institute/American Water Works Association (ANSI/AWWA) C652, 2011, Disinfection of Water-Storage Facilities

American National Standards Institute/NSF International (ANSI/NSF) 61, 2015, Drinking Water System Components - Health Effects

American Society for Testing and Materials (ASTM) A193 , June 2025, Standard Specification for Alloy-Steel and Stainless Steel Bolting for High Temperature or High Pressure Service and Other Special Purpose Applications

ASTM International (ASTM) D1330, 2015, Standard Specification for Rubber Sheet Gaskets

Code of Federal Regulations (CFR) Title 29, Part 1915, Occupational Safety and Health Standards for Shipyard Employment

Commercial Item Description (CID) A-A-59316, 2016, Abrasive Materials; for Blasting

Electrical Plant Installation Standard Methods for Surface Ships and Submarines, MIL-STD-2003B-2020.

Federal Specification (Fed Spec) RR-C-271, Rev E, Mar 2016, Chains and Attachments, Carbon and Alloy Steel

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS), SP-58, 2018, Pipe Hangers and Supports – Materials, Design, Manufacture, Selection, Application and Installation

MIL-C-24633, Oct 2014, Chain, Stud Link, Anchor, Low Alloy Steel, Flash Butt Welded

MIL-DTL-23549, Sep 2016, Grease, General Purpose

Military Specification MIL-A-22262B, March 1996, Abrasive Blasting Media Ship Hull Blast Cleaning

MIL-PRF-17672E, Oct 2012, Hydraulic Fluid, Petroleum, Inhibited

MIL-STD-769, Insulation Requirements for U.S. Naval Vessels

National Electrical Manufacturers Association (NEMA) Std, pub. No. AB4, 2017, Guidelines for Inspection and Preventative Maintenance of Molded Case Circuit Breakers used in Commercial and Industrial Application

Naval Sea Systems Command (NAVSEA) Underwater Ship Husbandry Manuals (UWSH) S0600-AA-PRO-160, Jan 2011, Chapter 16, Cofferdams

NAVSEA Drawing 167-7379842, Rev A, Procedure & Welding Sequence for Non-Ballistic, Watertight & Airtight Quick Acting or Individually Dogged Personnel Doors

Rules for Building and Classing Marine Vessels (ABS/MVR) – Part 4, Vessel Systems and Machinery

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C-6183B, 2019, Cork and Rubber Composition Sheet; For Aromatic Fuel and Oil Resistant Gaskets

The Society for Protective Coatings (SSPC) Surface Preparation Specification No. 1 (SSPC-SP 1), 2016, Solvent Cleaning

The Society for Protective Coatings (SSPC) Surface Preparation Standard No. 11 (SSPC-SP 11), 2013, Power-Tool Cleaning to Bare Metal

The Society for Protective Coatings (SSPC)/NACE International (NACE) Joint Surface Preparation Standard SSPC-SP 10/NACE No. 2, 2007, Near-White Metal Blast Cleaning

The Society for Protective Coatings (SSPC)/NACE International (NACE) Joint Surface Preparation Standard SSPC-SP 6/NACE No. 3, 2007, Commercial Blast Cleaning

Title 46, Code of Federal Regulations (46CFR), Subchapter J, Electrical Engineering

Underwriters Laboratories Inc. (UL) 1066, Apr 2012, Low-Voltage AC and DC Power Circuit Breakers Used in Enclosures

Underwriters Laboratories Inc. (UL) 489, Oct 2016, Molded Case Circuit Breaker

CONSOLIDATED LIST OF GOVERNMENT-FURNISHED PROPERTY

The following is a list of property, which the Government will furnish. This list supersedes any other material obligations indicated or implied by referenced drawings.

WORK ITEM	MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
19	N	**Electric brake	PN: J199133	1 ea.	
19	N	Oil seal	PN: J17E0078	1 ea.	
19	N	**Thrust bearing assy	PN: J05A0269	1 ea.	
19	N	**Spherical roller bearing	PN: J05A0270	1 ea.	
19	N	Gasket cork	PN: J05C0080	1 ea.	
19	N	**Shim	PN: JR1406903	1 ea.	
19	N	**Roller bearing	PN: J056A0021	1 ea.	
19	N	**Tapered roller bearing	PN: J05A0268	1 ea.	
19	N	**Grease fitting	PN: JA2001402	1 ea.	
19	N	**Gearbox vent	PN: J11C0033	1 ea	
19	N	**Locknut	PN: J41NTE-164	1 ea	
19	N	**Lock washer	PN: J199132	1 ea	
19	N	**Spacer	PN: J199135	1 ea	
19	N	**Motor A/C	NSN: 6105-01-685-6254 PN: 15A00117-000	1 ea.	$28,771.00
25	Y	Anchor Windlass Assembly Port (A-Class)	NSN: 3950-01-F25-7136 PN: VAW-1.50-30E-36-A-P	1 ea.	222,000.00
25	Y	Anchor Windlass Assembly Stbd (A-Class)	NSN: 3950-01-F25-7137 PN: VAW-1.50-30E-36-A-S	1 ea.	222,000.00
25	N	Motor Controllers	NSN: 6110-01-F25-7212 PN: ACS880-01-052A-5	2 ea.	5,000.00
25	N	Junction box enclosure with pushbutton control pendant.	NSN: 0000-XF-C39-6480 PN: SCE-10086ELJSS6	2 ea.	2,000.00
25	N	Cable, Electrical	NSN: 6145-01-F25-7423 PN: 37-103-312VFD	238 ft.	4,798.08
26	Y	Intech Marine Services Custom Engine Room Fan Controller	NSN: 6110-01-721-8667 PN: IMS-23-1344	2 ea.	6,755.00
31	N	Flow Switch	NSN: 5930-01-043-0942	2 ea.	456.62
31	N	Meter, Impeller Type, Liquid	NSN: 6680-01-727-4949 PN: G2P10NQ9GMA	2 ea.	800.00
31	N	***Drive Clamp Ring Assembly	PN: H-44789	2 ea.	
32	Y	Auxiliary Saltwater Pump	PN: Durco MK3 Pump 2K6X4V-13RV-CD4 NSN: 4320-99-602-2262	2 ea	$42,000.00

***Government-loaned property, which must be returned to the vessel upon completion of the availability.**
****New or refurbished equipment that the Government may provide for installation in place of existing equipment.**
*****Government-furnished property, which is to be supplied by either the vessel or the C4IT ServiceCenter**

CONSOLIDATED LIST OF CRITICAL INSPECTION ITEMS

The following is a list of work items, which contain Critical Inspection reports, which the Contractor must complete within the first 25% of the availability contract period (see SFLC Std Spec 0000, paragraph 3.2.6.1.4 (Inspection report particulars)):

Work Item	Title
2	Chain Lockers, Clean and Inspect
3	Tanks, MP Fuel Stowage and Overflow, Clean and Inspect
4	Tanks, MP Fuel Service, Clean and Inspect
6	Tanks, Ballast, Clean and Inspect
8	Tanks, Dirty Oil and Waste, Clean and Inspect
15	Commissary Hoist, Inspect and Service
16	Anchor Chains and Ground Tackle, Inspect and Repair
17	Anchor Windlass, Overhaul
19	Warping Capstan, Overhaul
25	Anchor Windlass, Replace
32	Auxiliary Saltwater Pumps, Replace

All other inspection reports on individual work items requiring condition found reports should be provided within the first 40% of the availability contract period.

PRINCIPAL CHARACTERISTICS

270' WMEC (A-CLASS)	
PHYSICAL	
Length overall	270' 0"
Length between perpendiculars	255' 0"
Beam molded	38' 0"
Depth molded, main deck amidships 01 level amidships	23' 6" 31' 4"
Full load displacement	1,902.2 long tons
Draft, full load to baseline amidships	14' 3"
Highest projection above baseline *height approximated	≈ 110' 0"
Shore tie voltage requirements	2 cables, 400A / 450V, 3 phase
Frame spacing	1' 0"
MACHINERY	
Main propulsion	2 ALCO Model 18-251-F Diesel Engines, 3,600 BHP each
Ship's service generators	2 Caterpillar Model D-398-TA Diesel-driven KATO 6P6-1350 Generators. 475 KW each @ 0.8 power factor, 450VAC, 3 phase, 60 cycle
Emergency generators	Caterpillar Model D-348-TA Diesel-driven KATO 4P4-1900. 475KW @ 0.8 power factor, 450VAC, 3 phase, 60 cycle
Number of propellers	2
Propeller diameter	9' 0"
Number of blades, Each	4
Pitch	Controllable
Shaft RPM	260
Shaft diameter	10.55" at exit of hull
Anchor & chain	Two 4,000 lb Navy Stockless Anchors, 8 shots of chain each
TANK CAPACITIES	
Diesel fuel total (95%)	79,210 gal.
JP-5 total (95%)	25,890 gal.
Potable water total (100%)	8,553 gal.
Hydraulic & lube oil total (95%)	2,237 gal.

General Requirements

1. SCOPE

1.1 Intent. This standard specification invokes general requirements for conducting vessel repairs performed by commercial contractors at a Coast Guard facility for Coast Guard vessels.

1.2 Term interchangeability. The terms 'Contractor', 'CG Yard', 'NAVSTA EVERETT', 'shipyard', 'Base', and 'Coast Guard Industrial' are used interchangeably in this specification. Where the primary service provider is Coast Guard personnel, references to contractor and other noted descriptors within this specification or within drawings, publications, SFLC Standard Specifications or other commercial and military references are deemed the same as prime service provider.

2. REFERENCES

COAST GUARD DRAWINGS

None

COAST GUARD PUBLICATIONS

Coast Guard Commandant Instruction (COMDTINST) M10360.3 (series), Coatings and Color Manual

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

OTHER REFERENCES

Code of Federal Regulations (CFR) Title 29, Part 1915, Occupational Safety and Health Standards for Shipyard Employment

3. REQUIREMENTS

3.1 General. The Contractor must conform to all requirements specified in SFLC Std Spec 0000 and in this item, as applicable, during the performance of this availability. The requirements in this WI applies to all work under the scope of this contract, whether explicitly stated in all following work items or not, and to all other work subsequently authorized by changes, modifications, or extensions to the contract.

NOTE

NAVSEA drawings listed will be available FOR INSPECTION ONLY from the Coast Guard Port Engineer post-award. SFLC will not redistribute NAVSEA documents. Contractors can apply to NAVSEA headquarters directly for copies.

3.2 Fire watch requirements. The Contractor must refer to 3.3.1.3 (Fire watch requirements) of SFLC Std Spec 0000, in accomplishing the following task:

- Provide portable fire extinguishers for Coast Guard fire watch personnel. Coast Guard fire watch is in lieu of contractor personnel during the hours of 0800-1600, Monday through Friday, and limited to two Coast Guard fire watch personnel.
- Provide fire watch personnel and fire extinguishers for the duration of the availability period, during and beyond noted Coast Guard fire watch support.

3.3 Preservation requirements. The Contractor must accomplish all preservation tasks, including touch-ups, in accordance with SFLC Std Spec 6310.

3.3.1 Brand name approval. Ensure that all contractor-furnished coatings are in accordance with SFLC Std Spec 6310, Appendix C (Authorized Coatings for Use on Cutters and Boats).

3.3.2 Coating colors and system color schemes. The Contractor must obtain a written KO authorization to deviate from any coatings required in SFLC Std Spec 6310 Appendix C before work.

3.3.3 In-process quality control measures. The Contractor must abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for "critical-coated surfaces").

3.3.3.1 Quality control requirements. The Contractor must abide by the following when performing preservation related inspections. The following measurements must be randomly spaced throughout for the purposes of providing a representation of the entire prepared or coated surface.

3.3.3.1.1 Surface profile measurements. One surface profile measurement must be taken for every 200 square feet for the first 1000 square feet; for each additional 500 square feet or less, one profile measurement must be taken. Profile measurements must be taken in accordance with SFLC Std Spec 6310, paragraph 3.1.8.3 (Surface profile measurements). A "measurement" for surface profile is defined as follows:

- ASTM D4417, Method B: One profile measurement is the average (mean) of 10 individual readings.
- ASTM D4417, Method C: One profile measurement is the average (mean) of 2 individual readings.

3.3.3.1.2 Soluble salt conductivity measurements. 5 conductivity measurements must be taken every 1000 square feet. For submerged (immersed) applications conductivity measurements must not exceed 30 microsiemens/cm. For non-submerged (non-immersed) applications conductivity measurements must not exceed 70 microsiemens/cm. If a conductivity check fails, clean the surface in accordance with SFLC Std Spec 6310, paragraph 3.1.8.5 (Soluble salt removal).

3.3.3.1.3 Coating thickness measurements. Three area measurements must be taken for the first 1000 square feet; for each additional 1000 square feet, perform an additional area measurement. A "measurement" for coating thickness is defined as follows:

- SSPC-PA 2 defines an area measurement as 5 separate spot measurements randomly spaced throughout a 100 square foot area.
- SSPC-PA 2 defines a spot measurement as 3 gage readings and each new gage reading the probe must

be moved to a new location within a 1.5-inch diameter circle defining the spot.

3.4 Welding and brazing requirements. The Contractor must perform all welding and allied processes, and NDE in accordance with SFLC Std Spec 0740.

3.5 Environmental protection requirements. The Contractor must adhere to the following environmental protection requirements in accordance with the SFLC Stand Spec 0000:

3.5.1 USCG facilities. The Contractor must provide and maintain environmental protection as defined in SFLC Std Spec 0000 Appendix B, Requirements for Environmental Protection at USCG Facilities, during the performance of this availability. Contractor must plan for and provide environmental protective measures to control pollution that develops during normal practice, as well as plan for and provide environmental protective measures required to correct conditions that develop during the project. Contractor must comply with applicable Federal, state, and local laws, codes, ordinances, and regulations in their entirety. Any reference to a specific portion of a Federal, state, or local law, code, ordinance, or regulation in this or any other item must not be construed to mean that relief is provided from any other sections of the law, code, ordinance, or regulation.

3.5.1.1 USCG Generator status. The activity Generator Status for the Coast Guard Facility is Large Quantity Generator.

3.5.1.2 Plans and permits. The CG Facility has unit specific permits including the following:

- Spill Prevention Control and Countermeasures (SPCC) Plan: Unit has a SPCC Plan which requires certain unit-specific procedures be followed for the storage, inspection, and transfer of petroleum products in containers 55 gallons or greater.
- National Pollutant Discharge Elimination System (NPDES) Storm Water (SW) Permit: Unit has an NPDES SW permit which requires unit-specific procedures be followed for the storage and inspection of equipment and materials which may contribute contaminants to storm water discharges.
- Air Emission Permit: Unit has an Air Emission Permit which requires unit-specific procedures be followed for the emissions of VOCs and hazardous air pollutants.

3.5.2 Test and procedures. The Contractor is required to promptly conduct tests and procedures for the purpose of assessing whether operations are in compliance with applicable Environmental Laws. Analytical work must be done by qualified laboratories; and where required by law, the laboratories must be certified.

3.5.3 Regulatory notifications. The Contractor is responsible for all regulatory notification requirements in accordance with Federal, State and local regulations. In cases where the Coast Guard must also provide public notification, such as storm water permitting, the Contractor must coordinate with the Contracting Officer or COR, and if work is being performed at a USCG Facility, the local Facility Engineer or Engineering Officer. The Contractor must submit copies of all regulatory notifications to the Contracting Officer and the local Facility Engineer or Engineering Officer prior to commencement of work activities. Regulatory notifications must be provided for including but not limited to demolition, renovation, National Pollutant Discharge Elimination System (NPDES) defined site work, and remediation of controlled substances such as asbestos, hazardous waste, and lead paint.

3.5.4 Environmental manager. The Contractor must appoint in writing an Environmental Manager for the project, who is responsible for coordinating Contractor compliance with Federal, State, local, and station environmental requirements. The Environmental Manager must ensure compliance with Hazardous Waste Program requirements, including hazardous waste handling, storage, manifesting, and disposal; implement the Contractors' Environmental Management Plan; ensure that all environmental permits are obtained, maintained, and closed out; ensure compliance with Storm Water Program Management requirements; ensure compliance with Hazardous

Materials including storage, handling, and reporting requirements; as well as coordinate any remediation of regulated substances such as lead, asbestos, and polychlorinated biphenyl (PCB). This may be a collateral position; however the individual must be trained to accomplish the following duties; ensure waste segregation and storage compatibility requirements are met; inspect and manage Satellite Accumulation areas; ensure only authorized personnel add wastes to containers; ensure all Contractor personnel are trained in 40 CFR requirements and individual position requirements; coordinate removal of waste containers; and maintain the Environmental Records binder and required documentation, including environmental permits compliance and close-out.

3.5.5 HW disposal. Contractor must comply with SFLC Std Spec 0000 Appendix B, Requirements For Environmental Protection At USCG Facilities for HW disposal, and ensure that waste removals are conducted during normal business hours (0800-1600) on Monday through Friday (excluding holidays).

3.5.6 Additional Requirements. The Contractor must be aware of the following:

3.5.6.1 No Contractor or Subcontractor must have the authority to sign a Hazardous Waste Manifest using the Coast Guard facility's EPA Generator ID Number or remove contract generated hazardous waste from the Coast Guard facility without COR or KO-approval.

3.5.6.2 Local environmental regulations at the Government facilities may be more stringent. As with all environmental regulations, the Contractor must prepare for and comply with local and state regulations.

3.5.6.3 Coast Guard facilities do not maintain Facilities Response Plans (FRPs) per 33 CFR 154. Contractor must furnish the FRP when required for over-the-water liquids transfers to and from vessels, and is required for oil/fuel transfers to/from vessels for 250 barrels (10,500 gallons) or more.

3.6 Local Policy. The Contractor must refer to site (e.g., Base) Regulations and Instructions for details regarding local policies (e.g., crane services, parking, or facility usage).

3.6.1 The Contractor must obtain RapidGate Credentials for access to Base Portsmouth.

3.7 SFLC Standard Specification approved changes. Approved updates to the 2022 SFLC Standard Specifications will appear here.

3.8 Freeze protection. After the Arrival Conference, the Contractor must conduct a walkthrough with the COR and Ships Force (EO and/or MPA), to perform a joint inspection to identify compartments and systems that will require freeze protection. Within 7 days of completing this joint inspection, the Contractor must submit a CFR documenting their plan for freeze protection when temperatures are expected to drop below freezing. Freeze protection must include securing systems/components and auxiliary equipment and its piping exposed to freezing temperatures or if not protected must be completely drained. If necessary, drain connections may be broken to prevent damage due to freezing.

4. NOTES

4.1 QA inspection forms. QA inspection forms (QA-1 thru QA-5), required in SFLC Std Spec 6310 to be completed and submitted during preservation of "critical-coated surfaces", are provided at the end of this document.

QA-1 - QUALITY ASSURANCE INSPECTION FORM
(PRESERVATION CHECKLIST)

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE
LOCATION OF WORK (INCL. FRAME #'S)			**AREA (SQFT)**

CHECKPOINT 1 – COATING SYSTEM COMPLIANCE	
	Ensure all coatings are in compliance with SFLC Std Spec 6310, Appendix C.
CHECKPOINT 2 - PAINT STORAGE	
	Ensure all coatings are kept at a temperature of 65 to 85°F at all times, unless otherwise specified by the coating mfg.
CHECKPOINT 3 - AMBIENT CONDITIONS	
	Ensure surface and surrounding temperatures are each between 50 and 90°F for water-containing coatings, and 35 and 95°F for other coatings, unless otherwise specified by the coating manufacturer(s).
	Ensure maximum relative humidity (RH) is as follows, from surface preparations through final curing of topcoat: 50% for tanks, voids, and vent plenum; and 85% for all other areas, unless otherwise specified by manufacturer(s).
	Ensure surface temperature is at least 5°F above the dew point, unless otherwise specified by the coating mfg.
CHECKPOINT 4 - PRE-SURFACE PREPARATION	
	Remove surface contaminants (soluble salts, loose rust, mud, and marine growth) with low pressure fresh water wash down (maximum 5,000 psi). If oil and grease are present, perform solvent cleaning, as per SSPC SP-1.
	Verify equipment setup, blast media, and surface preparation methods match designated test coupon.
CHECKPOINT 5 - SURFACE PREPARATION	
	Verify environmental conditions (see CHECKPOINT 3).
	Ensure cleanliness of prepared surface is as per specification (i.e.: SSPC SP-11, SP-10, SP WJ-2…).
	Verify surface anchor profile using ASTM D4417-Methods B or C against SFLC Std Spec 6310. Conduct profile readings at a minimum of 5 locations for the first 1000-sqft area, and 2 locations for each succeeding 1000-sqft area.
	Measure soluble salt conductivity in accordance with SSPC-Guide 15. Conduct 5 measurements per each 1000-sqft area (max. threshold: 70 microsiemens/cm for non-submerged surfaces, 30 microsiemens/cm for submerged surfaces).
CHECKPOINT 6 - PRIMER COAT APPLICATION	
	Verify environmental conditions (see CHECKPOINT 3).
	Verify proper mixing and stand-in (induction) times.
	Ensure no paint is applied when the temperature is expected to drop to freezing before the paint has dried.
	Ensure surfaces are completely dry, unless otherwise allowed by the coating manufacturer(s).
	Verify wet film thickness (WFT) at random, to prevent under or over application. Verify final DFT.
	Brush out all runs, sags, drips, and puddles.
	Perform visual inspection for holidays and other defects.
CHECKPOINT 7 – STRIPE COAT APPLICATION	
	Verify environmental conditions (see CHECKPOINT 3).
	Ensure overcoating window is as per manufacturer's instructions.
	After primer coat (mist coat after inorganic zinc), brush-apply un-thinned coat of same primer paint over edges, weld seams, cut-outs, and areas of complex geometries @ 3-4 mils wet film thickness (WFT).
CHECKPOINT 8 – TOP COAT APPLICATION	
	Verify environmental conditions (see CHECKPOINT 3).
	Ensure overcoating window is as per manufacturer's instructions.
	Verify proper mixing and stand-in (induction) times, as applicable.
	Verify wet film thickness at random, to prevent under or over application.
	Brush out all runs, sags, drips, and puddles.
CHECKPOINT 9 – FINAL INSPECTION	
	Verify final system dry film thickness. Conduct 5 sets of 3 readings for each of the first 3 100-sqft areas, followed by 5 sets of 3 readings for each succeeding 1000-sqft area.
	Ensure that system cure is in accordance with manufacturer's recommendation for intended service.
	Ensure potable water tank exhaust ventilation is maintained continuously from and during coating application through final system cure, to exhaust all solvent to the atmosphere and to prevent solvent entrapment.
	For immersion coatings (including tank U/W body), record date and time of the following events: Final coat application: / ; Return to service or removal from environment controls: /
CHECKPOINT 10 – RECORD KEEPING	
	Complete, sign, and submit all provided QA Inspection Forms.

NAME OF QP-1/AMPP INSPECTOR	SIGNATURE	CERT. #	DATE / TIME
NAME OF CG REPRESENTATIVE	**SIGNATURE**	**UNIT**	**DATE/TIME**

QA-2 - QUALITY ASSURANCE INSPECTION FORM
(ENVIRONMENTAL READINGS)

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE

Use one sheet for each activity. Record conditions every four hours from before surface preparation to application of final coating system coat.

DATE & TIME	ACTIVITY (SURFACE PREPARATION, PRIMER COAT, BARRIER COAT, TOP COAT, ETC…)	LOCATION (FRAME & DECK, RELATION TO EQUIPMENT, ETC.)	TEMPERATURE				% REL. HUMID-ITY
			DEW PT.	SURFACE	AMBIENT	ΔT | DP - SURFACE |	

NAME OF QP-1/AMPP INSPECTOR	SIGNATURE	CERT. #	DATE / TIME
NAME OF CG REPRESENTATIVE	**SIGNATURE**	**UNIT**	**DATE/TIME**

QA-3a - QUALITY ASSURANCE INSPECTION FORM

(SURFACE PROFILE LOG FOR PROFILE MEASUREMENTS IAW ASTM D4417-METHOD-C)

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE
LOCATION OF WORK (FRAME REFERENCES)			**AREA (SQFT)**

SURFACE PREPARATION METHOD		PROFILE ACHIEVED (MILS)		
		MIN	MAX	MEAN
SSPC-SP-10/AMPP No. 2	☐			
SSPC-SP WJ-2/AMPP WJ-2	☐			
SSPC-SP-3	☐			
SSPC-SP-11	☐			
SSPC-SP-11 (inaccessible area)	☐			
Brush-blasting (non-metallic substrate)	☐			
ABRASIVE MANUFACTURER:		**ABRASIVE SIEVE SIZE:**		

PLACE SURFACE PROFILE REPLICA TAPES IN THE SPACES PROVIDED BELOW, TO SERVE AS PERMANENT QA RECORD. MAINTAIN A SEPARATE LOG FOR EACH LOCATION. WHEN AN AREA IS DIVIDED INTO SEPARATE SECTIONS, MAINTAIN A SEPARATE LOG FOR EACH SECTION.

Place Surface Profile Replica Tape Here	Place Surface Profile Replica Tape Here	Place Surface Profile Replica Tape Here
Reading (mils):	Reading (mils):	Reading (mils):
Place Surface Profile Replica Tape Here	Place Surface Profile Replica Tape Here	Place Surface Profile Replica Tape Here
Reading (mils):	Reading (mils):	Reading (mils):
Place Surface Profile Replica Tape Here	Place Surface Profile Replica Tape Here	Place Surface Profile Replica Tape Here
Reading (mils):	Reading (mils):	Reading (mils):
Place Surface Profile Replica Tape Here	Place Surface Profile Replica Tape Here	Place Surface Profile Replica Tape Here
Reading (mils):	Reading (mils):	Reading (mils):
Place Surface Profile Replica Tape Here	Place Surface Profile Replica Tape Here	Place Surface Profile Replica Tape Here
Reading (mils):	Reading (mils):	Reading (mils):
MEAN MIL READING (IAW ASTM D4417-METHOD C) FOR ABOVE 15 READINGS:		

NAME OF QP-1/AMPP INSPECTOR	SIGNATURE	CERT. #	DATE / TIME
NAME OF CG REPRESENTATIVE	**SIGNATURE**	**UNIT**	**DATE/TIME**

QA-3b - QUALITY ASSURANCE INSPECTION FORM

(SURFACE PROFILE LOG FOR PROFILE MEASUREMENTS IAW ASTM D4417-METHOD-B)

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE
LOCATION OF WORK (INCL. FRAME #'S)			**AREA (SQFT)**

SURFACE PREPARATION METHOD		PROFILE ACHIEVED (MILS)		
		MIN	MAX	MEAN
SSPC-SP-10/AMPP No. 2	☐			
SSPC-SP WJ-2/AMPP WJ-2	☐			
SSPC-SP-3	☐			
SSPC-SP-11	☐			
SSPC-SP-11 (inaccessible area)	☐			
Brush-blasting (non-metallic substrate)	☐			
ABRASIVE MANUFACTURER:		**ABRASIVE SIEVE SIZE:**		

RECORD MEASUREMENTS TAKEN IN THE SPACES PROVIDED BELOW, TO SERVE AS PERMANENT QA RECORD. MAINTAIN SEPARATE LOG FOR EACH LOCATION. WHEN AN AREA IS DIVIDED INTO SEPARATE SECTIONS, MAINTAIN A SEPARATE LOG FOR EACH SECTION.					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Reading (mils):					
Mean Mils Reading (IAW ASTM D4417-Method B for above 10 readings (by column):					
Mean Reading (mils)					

NAME OF QP-1/AMPP INSPECTOR	SIGNATURE	CERT. #	DATE / TIME
NAME OF CG REPRESENTATIVE	**SIGNATURE**	**UNIT**	**DATE/TIME**

QA-4 - QUALITY ASSURANCE INSPECTION FORM
(SURFACE SOLUBLE SALT CONDUCTIVITY LOG)

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE
LOCATION OF WORK (INCL. FRAME #'S)			**AREA (SQFT)**

SOLUBLE SALT CONDUCTIVITY MEASUREMENTS IAW SSPC-GUIDE 15.		
DATE	**TEST LOCATIONS**	**CONDUCTIVITY (MICROSIEMENS/CM)**

NAME OF QP-1/AMPP INSPECTOR	SIGNATURE	CERT. #	DATE / TIME
NAME OF CG REPRESENTATIVE	**SIGNATURE**	**UNIT**	**DATE/TIME**

QA-5 - QUALITY ASSURANCE DATA FORM
(COATING THICKNESS)

(Use one sheet for each sequence)

VESSEL NAME	HULL #	WORK ITEM #	WORK ITEM TITLE

COATING MFG	PRODUCT NAME	BATCH #	INDUCTION TIME	COATING SYSTEM SEQUENCE (PRIMER/TOUCHUP/3RD COAT, ETC.)

DRY FILM THICKNESS (DFT) MEASUREMENTS IAW SSPC-PA 2.						
SPOT	1	2	3	4	5	AVERAGE VALUE
*BASE METAL READING (BMR)						
*Required, If Magnetic Pull-Off (Type I/Banana) Gauge Is Used.						

LOCATION (FRAME REFERENCE):								
SPOT	1	2	3	4	5	OVERALL AVG. DFT	ADJUSTMENTS	
1							AVG. BMR	DEVIATION
2								
3						BEFORE ADJUSTMENTS	AFTER ADJUSTMENTS	
AVG.								

LOCATION (FRAME REFERENCE):								
SPOT	1	2	3	4	5	OVERALL AVG. DFT	ADJUSTMENTS	
1							AVG. BMR	DEVIATION
2								
3						BEFORE ADJUSTMENTS	AFTER ADJUSTMENTS	
AVG.								

LOCATION (FRAME REFERENCE):								
SPOT	1	2	3	4	5	OVERALL AVG. DFT	ADJUSTMENTS	
1							AVG. BMR	DEVIATION
2								
3						BEFORE ADJUSTMENTS	AFTER ADJUSTMENTS	
AVG.								

APPLICATION METHOD (AIRLESS, CONVENTIONAL SPRAY, ROLLED)	AVERAGE DFT

NAME OF QP-1/AMPP INSPECTOR	SIGNATURE	CERT. #	DATE / TIME
NAME OF CG REPRESENTATIVE	SIGNATURE	UNIT	DATE/TIME

4.2 Tank and Void Assessment form.

SFLC-ESD-25

PRINT RESET

TANK AND VOID ASSESSMENT FORM

GENERAL DATA Note: Use SFLC-ESD-29 for Compartments other than Tanks & Voids.					
Inspector's Name:		Organization:		Contact Info:	
Cutter Name:		Cutter Class:		Hull:	
Tank:		Service:		Tank Area:	Gallons:
Solid Balast:	Access Compt:		Date:	Assessment Reason:	

ACCESS DATA	
Manhole and cover condition:	Tank Penetration Condition:

VENT OVERFLOW DATA		
Present: ◯Yes ◯No	Check Valve Installed: ◯Yes ◯No	Check Valve Operates Properly: ◯Yes ◯No

LADDER DATA		
NR of Ladder(s) Present: ◯Yes ◯No	Ladder Damaged: ◯Yes ◯No	Ladder Material:

TANK LEVEL INDICATOR (TLI) DATA		
TLI Present in Tank: ◯Yes ◯No	TLI Damaged: ◯Yes ◯No	TLI Type:

SOUNDING TUBE DATA			
Sounding Tube Present in Tank: ◯Yes ◯No		Sounding Tube Damaged: ◯Yes ◯No	
Striker Plate Damaged (>50%): ◯Yes ◯No			

CATHODIC PROTECTION DATA		
Cathodic Protection in Tank: ◯Yes ◯No	Total Zincs:	Number of Zincs > 50% Depleted:

	1-6		**Cleanliness & Housekeeping**
Clean to light layer or residue		1-2 (G)	Comments:
Loose accumulation scale		3-4 (Y)	
Impending residue and sediments		5-6 (R)	

	%	**1-6**		**Coating Systems**
All Painted Surfaces			1-2 (G)	Comments:
			3-4 (Y)	
			5-6 (R)	

	%	**1-6**		**Structural**
Corrosion			1-2 (G)	Comments:
			3-4 (Y)	
			5-6 (R)	
Pitting & Grooving			1-2 (G)	Comments:
			3-4 (Y)	
			5-6 (R)	

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SFLC-ESD-25	**TANK AND VOID ASSESSMENT SHEET**
PRINT	

Structural Integrity Data							
Estimated Total Linear Feet of Structure Requiring Repair:				Estimated Total Square Feet of Plating Requiring Repair:			
Cracks/ Fractures Present:	◯ Yes	◯ No		Buckling/Deflections/ Distortions Present:	◯ Yes	◯ No	
Holes Present:	◯ Yes	◯ No		Material Wastage Present:	◯ Yes	◯ No	
All Welds Intact:	◯ Yes	◯ No		Structural Evaluation Recommended:	◯ Yes	◯ No	

PHOTOGRAPHS
Pictures Taken (enter quantity):
Note: To add pictures to this form, Work Station must have Adobe Acrobat (not Reader) installed. Add all photos and photo comments to a word document and save file. Open this form and click "Combine Files". Add the document with photos you've just saved and save as a new combined .pdf files.

Additional Comments:

WORK ITEM 1: Tanks (Aviation Fuel Stowage And Overflow), Clean And Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean, inspect and repair base metal in the following tank(s):

TABLE 1 - TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
JP-5 Drain	4-186-1-J	219	20
*JP-5 Overflow	4-186-2-J	610	40

*** Tank needing base metal repair**

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 113-001, Rev E, Tank Top PL & FR Fwd FR 101
Coast Guard Drawing 901 WMEC 113-002, Rev A, Tank Top PL & FR Aft 182
Coast Guard Drawing 901 WMEC 113-003, Rev G, Tank Top PL & FR, FR 101-182
Coast Guard Drawing 901 WMEC 116-001, Rev D, CVK Fwd 101 & G Long 2
Coast Guard Drawing 901 WMEC 116-002, Rev E, CVK Aft 182
Coast Guard Drawing 901 WMEC 116-003, Rev E, CVKFr 101-182 & G Long. 2&4
Coast Guard Drawing 901 WMEC 121-001, Rev D, Long Tank Bhds, Aft 182
Coast Guard Drawing 901 WMEC 122-001, Rev H, Transv Bhds 12 & 26
Coast Guard Drawing 901 WMEC 122-002, Rev G, Transv Bhds 47, 78 & 82
Coast Guard Drawing 901 WMEC 122-003, Rev G, Transv Bhds 103, 117
Coast Guard Drawing 901 WMEC 122-004, Rev F, Transv. Bhds. 165, 169, 151.6
Coast Guard Drawing 901 WMEC 122-005, Rev F, Transv Bhds 186 & 190
Coast Guard Drawing 901 WMEC 122-006, Rev F, Transv Bhds 196, 207, 228 & 242

COAST GUARD PUBLICATIONS

Coast Guard Technical Specification D-123-2048, Feb 2020, 270' WMEC A Class Fluid Handling Plan for Tank Inspections

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

OTHER REFERENCES

American Society for Testing and Materials (ASTM) A193 , June 2025, Standard Specification for Alloy-Steel and Stainless Steel Bolting for High Temperature or High Pressure Service and Other Special Purpose Applications

Naval Sea Systems Command (NAVSEA) Underwater Ship Husbandry Manuals (UWSH) S0600-AA-PRO-160, Jan 2011, Chapter 16, Cofferdams

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C-6183B, 2019, Cork and Rubber Composition Sheet; For Aromatic Fuel and Oil Resistant Gaskets

3. REQUIREMENTS

3.1 General. The Contractor must refer to the Coast Guard Drawings listed under Section 2 (References) for guidance in accomplishing this work.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The contractor must furnish and install all protective coverings to seal off and protect all non-affected vessel's components, equipment, and spaces near the work area against contamination during the performance of work. Upon completion of work, the contractor must remove all installed protective measures, inspect for the presence of contamination, and return all contaminated equipment, components, and spaces to original condition of cleanliness.

NOTE

Vessel may come in with less tank fluid contents than specified above. The Contractor is responsible for providing all materials, equipment and services necessary to comply with local environmental regulations.

3.1.4 Interferences. The contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following: up to a total of 400 gallons of fuel.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.1.4.1 The Contractor must follow the fluid handling plan in accordance with Coast Guard Technical Spec D-123-2048 when moving fluid between tanks to ensure adequate stability of the vessel.

3.1.5 Operational test, initial. Prior to commencement of work, the contractor must witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.2 Plug log. The Contractor must keep a written record of all plugs put in any tanks vents. A separate list must be kept for each tank being entered.

3.2.1 Ensure that all plugs are removed from each tank upon completion of work in the tank.

3.2.2 Ensure the plug log is available to the Coast Guard inspector when the inspector is performing his close-out inspection on each tank.

3.3 Cleaning requirements. The contractor must remove tank cover(s) and clean tank interior surfaces free of all foreign materials, such as residual water, sediment, sludge, rust, and bacterial growth, taking care not to damage the coating system (if applicable).

3.3.1 Remove cleaning media and residues continuously during the washing process. Wash the tank with high-pressure cold fresh water before it has a chance to dry after emptying. Do not use steam as it can damage the tank's coating.

3.3.2 Drain and dry the tank using a portable air-driven pump. When dry, and after final visual inspection, close the tank. Submit a CFR.

WARNING

Do not use the Fuel Service or Transfer systems to drain the water from the tank. Excessive fuel contamination will result.

3.4 Tank content and waste disposal. The contractor must dispose of tank contents and any cleaning fluids in compliance with all applicable Federal, state, and local laws, ordinances and regulations. Document a complete chain of custody record of the removed tank contents and generated wastes, from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

3.5 Inspection. The contractor must visually inspect all tank interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Submit a CFR including the following, as applicable:

- Tank structural condition.
- Inaccessible areas.
- Condition of tank coating, including measurements taken, percentage, location, and type of coating failure.
- Tank level indicator (TLI) and/or float switch condition.
- Sounding/vent tube and striker plate condition.

- Suction and discharge piping condition.
- Fastener material and condition.

3.6 Cofferdam repairs. The Contractor must fabricate and install a cofferdam in accordance with UWSH S0600-AA-PRO-160, and as follows:

3.6.1 Prior to cofferdam installation, provide the KO with individual diver certification documentation that each diver is trained and experienced in accordance with UWSH S0600-AA-PRO-160, Appendix E.

3.6.2 Maintain double-valve protection (two boundaries) using two of the following:
- Sea chest valve
- Internal blank-off
- External cofferdam, patch or plug

3.6.3 After all work is complete, turn over fabricated cofferdam(s) to the Coast Guard Property Administrator for disposition.

NOTE

A cofferdam is any device preventing water intrusion during maintenance and/ or repairs; including a plug, patch or containment structure.

3.7 Removal/Preparation. Prior to doing repairs, the Contractor must remove all Belzona/doubler plate material to properly prep the area for base metal repair.

3.8 Repair. Clad weld approx. 25 sq ft of base metal located in JP-5 Overflow Tank (4-186-2). Exact location to be designated by Coast Guard Inspector. Submit a CFR.

3.9 Pit measurement. The contractor must measure up to 10 “pits” within each tank as designated by the Coast Guard Inspector using a Contractor supplied ‘Pit Gauge’. The results of these measurements should also be included in the inspection report showing where pit measurements were taken and the depth of the pit.

3.10 Ultrasonic thickness (UT) measurement. The contractor must take a total of 20 UT measurements of tank plating in accordance with SFLC Std Spec 0740, Appendix C in locations designated by the Coast Guard Inspector and using drawings listed in Section 2 (References) as guidance. Submit a CFR.

3.11 Tank closing. The contractor must ensure that the tank(s) remain open for approximately 24 hours after completion of any authorized repair and preservation procedures. Notify the COR at least 24 hours prior to closing the tank(s). After satisfactory inspection by the Coast Guard Inspector and completion of all authorized repairs, close tank manhole cover(s) with new gasket material conforming to AMS-C-6183. Chase threads on bolts to ensure even installation of the access covers. Renew any damaged or non-CRES bolts with CRES (ASTM A193 Gr B8 or equal) bolts. Apply a thin layer of anti-seize compound to bolt threads. Existing undamaged fasteners meeting this specification may be reused. For purpose of bid, assume 100% of existing fasteners will require renewal.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.12 Operational test, post repairs. After completion of work, the contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

4. NOTES

4.1 Tank content removal. The Ship's force will pump down the tanks to the maximum extent possible with the installed pumping system.

4.2 Tank inspection. The Coast Guard Inspector will visually inspect the tank interior immediately prior to closing.

4.3 Refilling. After final visual inspection and tank closure, Ship's force will refill tank with JP-5 fuel. Recirculate the fuel until it is clear and bright and passes the MK I and MK III detector kit tests. Flush all lines, pipes, and fittings before placing the JP-5 system back in service.

WORK ITEM 2: Chain Lockers, Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the Chain Locker(s).

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 123-002, Rev D, Chain Lkr Bhds & Details

Coast Guard Drawing 901 WMEC 581-002, Rev C, Hawse & Chain Pipes

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General. The Contractor must refer to Coast Guard Drawing 901 WMEC 123-002 and 901 WMEC 581-002 for guidance in accomplishing this work item.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph(s):

- 3.5 (Ultrasonic thickness (UT) measurement).

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, (Interferences). Known interferences include, but are not limited to the following:

- Eductor strainer.
- Anchors and chains.
- Fluid contents of chain locker(s).
- Deck grating.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard Personnel perform an initial operational test of the bilge sensor(s)/alarm(s), as applicable, to demonstrate existing operational condition. Submit a CFR.

3.3 Cleaning tasks. The Contractor must refer to Coast Guard Drawing 901 WMEC 123-002 and 901 WMEC 581-002 for guidance and clean all interior surfaces free of all foreign materials, such as sediment or sludge. Remove all persistent residues, taking care not to damage the coating system. Remove cleaning media and residues continuously during the washing process. Remove any residual wash media and wipe up residual moisture with clean lint-free cloths. Collect, contain, and dispose of all wash media, residues, and cleaning materials in accordance with all Federal, state, and local regulations.

3.4 Inspection. The Contractor must visually inspect sounding tubes and the port and starboard chain locker surfaces, including the sump, bellmouths, hawse pipes, chain pipes, bottom grate and all structural members. Complete the "Tank and Void Assessment Form" (found in the Work Item titled "General Requirements") and submit via CFR. Electronic PDF version of this form will be furnished by the COR upon request. Include the following, as applicable:

- Structural condition
- Inaccessible areas
- Condition of coating system, including measurements taken, percentage, location, and type of coating failure.

3.5 Ultrasonic thickness (UT) measurement. The Contractor must take a total of 25 UT measurements of tank plating, in locations designated by the Coast Guard Inspector, in accordance with SFLC Std Spec 0740, Appendix C. Use Coast Guard Drawing 123-002 as guidance. Submit a CIR.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.6 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the bilge sensor(s)/alarm(s) to be in satisfactory operating condition. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 3: Tanks, MP Fuel Stowage and Overflow, Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the following tank(s):

TABLE 1 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Diesel Storage	4-82-1-F	3,971	200
Diesel Storage	4-82-2-F	3,971	200
Diesel Storage	4-103-0-F	12,993	350
Diesel Storage	4-207-1-F	8,373	300
Diesel Storage	4-207-2-F	8,373	300

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 113-001, Rev E, Tank Top PL & FR Fwd FR 101
Coast Guard Drawing 901 WMEC 113-002, Rev A, Tank Top PL & FR Aft 182
Coast Guard Drawing 901 WMEC 113-003, Rev G, Tank Top PL & FR, FR 101-182
Coast Guard Drawing 901 WMEC 116-001, Rev D, CVK Fwd 101 & G Long 2
Coast Guard Drawing 901 WMEC 116-002, Rev E, CVK Aft 182
Coast Guard Drawing 901 WMEC 116-003, Rev E, CVKFr 101-182 & G Long. 2&4
Coast Guard Drawing 901 WMEC 121-001, Rev D, Long Tank Bhds, Aft 182
Coast Guard Drawing 901 WMEC 122-001, Rev H, Transv Bhds 12 & 26
Coast Guard Drawing 901 WMEC 122-002, Rev G, Transv Bhds 47, 78 & 82
Coast Guard Drawing 901 WMEC 122-003, Rev G, Transv Bhds 103, 117
Coast Guard Drawing 901 WMEC 122-004, Rev F, Transv. Bhds. 165, 169, 151.6
Coast Guard Drawing 901 WMEC 122-005, Rev F, Transv Bhds 186 & 190
Coast Guard Drawing 901 WMEC 122-006, Rev F, Transv Bhds 196, 207, 228 & 242

COAST GUARD PUBLICATIONS

Coast Guard Technical Specification D-123-2048, Feb 2020, 270' WMEC A Class Fluid Handling Plan for Tank Inspections

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

OTHER REFERENCES

Federal Specification (Fed Spec) QQ-N-281, Oct 1985, Nickel-Copper Alloy Bar, Rod, Plate, Sheet, Strip, Wire, Forgings, and Structural and Special Shaped Sections

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C-6183B, 2019, Cork and Rubber Composition Sheet; for Aromatic Fuel and Oil Resistant Gaskets

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph(s):

- 3.9 (Ultrasonic thickness (UT) measurement).

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Fuel
- Piping
- Tank access cover

3.1.4.1 The Contractor must follow the fluid handling plan in accordance with Coast Guard Technical Spec D-123-2048 when moving fluid between tanks to ensure adequate stability of the vessel.

3.1.4.2 Remove up to a total of 10,000 gallons of fuel. Document a complete chain of custody record of the removed tank contents from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

3.1.4.3 Dispose of removed fluids in accordance with all applicable Federal, state, and local regulations.

3.1.4.4 Provide the following to support Coast Guard personnel to refuel equipment:

- boom around cutter

- tagout crane way equipment
- Oil transfer supervisor.

NOTE
Vessel may come in with less tank fluid contents than specified above. Initial and post repair operational tests apply only to tanks that possess TLIs. Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of the equipment listed below to demonstrate existing operational condition. Submit a CFR.

- TLI for tanks

3.3 Plug log. The Contractor must keep a written record of all plugs put in any tank vents. A separate list must be kept for each tank being entered.

3.3.1 Ensure that all plugs are removed from each tank upon completion of work in the tank.

3.3.2 The plug log must be available to the Coast Guard Inspector when the inspector is performing his close-out inspection on each tank.

3.4 Cleaning requirements. The Contractor must refer to the Coast Guard Drawings listed under Section 2 (References) for guidance in accomplishing this work. The Contractor must remove tank cover(s) and clean tank interior surfaces free of all foreign materials, such as residual fuel or water, sediment, sludge, rust, or biological growth, taking care not to damage the coating system (if applicable). Remove cleaning media and residues continuously during the washing process. Remove any residual wash media and wipe up residual moisture with clean lint-free cloths.

3.5 Tank content and waste disposal. The Contractor must dispose of residual tank contents and any cleaning fluids in compliance with all applicable Federal, state, and local laws, ordinances and regulations. Document a complete chain of custody record of the removed tank contents and generated wastes, from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

3.6 Inspection. The Contractor must visually inspect all tank interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Complete the “Tank and Void Assessment Form” (found in the Work Item titled “General Requirements”) and submit via CFR. Electronic PDF version of this form will be furnished by the COR upon request. Include the following, as applicable:

- Tank structural condition.
- Inaccessible areas.
- Condition of tank coating, including measurements taken, percentage, location, and type of coating failure (if tank interior surfaces are coated).
- Tank level indicator (TLI) and/or float switch condition, as applicable.
- Sounding/vent tube and striker plate condition (including vent check valve and waster piece).
- Suction and discharge piping condition.
- Fastener material and condition (correct fastener material is stainless steel).

3.7 Tank closing. The Contractor must ensure that the tank(s) remain open for at least 24 hours after completion of any KO-authorized repair and preservation procedures. Notify the COR at least 24 hours prior to closing the tank(s) and ensure tank closure is accomplished in the presence of the Coast Guard Inspector. After satisfactory inspection by the Coast Guard Inspector and completion of all authorized repairs, close tank manhole cover(s) with new gasket material conforming to AMS-C-6183. Chase threads on studs to ensure even installation of the access covers. Renew any damaged nuts.

3.7.1 The Contractor must renew 100% of nuts and washers.

3.8 Operational test, post repairs. After completion of work and in the presence of the Coast Guard Inspector, the Contractor must thoroughly test and demonstrate the equipment listed below to be in satisfactory operating condition. Submit a CFR.

- Designated tank TLIs
- Vent check valves

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.9 Ultrasonic thickness (UT) measurement. The Contractor must take a total of 50 UT measurements of tank plating in each tank in accordance with SFLC Std Spec 0740, Appendix C in locations designated by the Coast Guard Inspector. Submit a CIR.

3.9.1 In addition to the UT measurements, take up to 10 pit-depth measurements within each tank, using a suitable pit depth gauge.

4. NOTES

4.1 Tank content removal. The Ship's force will pump down the tanks to the maximum extent possible with the installed pumping system.

4.2 Tank inspection. The Coast Guard Inspector will visually inspect the tank interior immediately prior to closing.

4.3 Tank content restoration. The Ship's force will procure new fluids and refill all tanks at the appropriate time.

WORK ITEM 4: Tanks, MP Fuel Service, Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the following tank(s):

TABLE 1 - TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
EDG Day Tank	2-228-1-F	565	20
Diesel Service	4-165-3-F	2,692	200
Diesel Service	4-165-4-F	2,692	200

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 113-001, Rev E, Tank Top PL & FR Fwd FR 101
Coast Guard Drawing 901 WMEC 113-002, Rev A, Tank Top PL & FR Aft 182
Coast Guard Drawing 901 WMEC 113-003, Rev G, Tank Top PL & FR, FR 101-182
Coast Guard Drawing 901 WMEC 116-001, Rev D, CVK Fwd 101 & G Long 2
Coast Guard Drawing 901 WMEC 116-002, Rev E, CVK Aft 182
Coast Guard Drawing 901 WMEC 116-003, Rev E, CVKFr 101-182 & G Long. 2&4
Coast Guard Drawing 901 WMEC 121-001, Rev D, Long Tank Bhds, Aft 182
Coast Guard Drawing 901 WMEC 122-001, Rev H, Transv Bhds 12 & 26
Coast Guard Drawing 901 WMEC 122-002, Rev G, Transv Bhds 47, 78 & 82
Coast Guard Drawing 901 WMEC 122-003, Rev G, Transv Bhds 103, 117
Coast Guard Drawing 901 WMEC 122-004, Rev F, Transv. Bhds. 165, 169, 151.6
Coast Guard Drawing 901 WMEC 122-005, Rev F, Transv Bhds 186 & 190
Coast Guard Drawing 901 WMEC 122-006, Rev F, Transv Bhds 196, 207, 228 & 242

COAST GUARD PUBLICATIONS

Coast Guard Technical Specification D-123-2048, Feb 2020, 270' WMEC A Class Fluid Handling Plan for Tank Inspections

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

OTHER REFERENCES

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C6183, 2019, Cork and Rubber Composition Sheet; for Aromatic Fuel and Oil Resistant Gaskets

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph(s):

- 3.9 (Ultrasonic thickness (UT) measurement).

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the below-listed:

- Fuel
- Piping
- Tank access cover

3.1.4.1 The Contractor must follow the fluid handling plan in accordance with Coast Guard Technical Spec D-123-2048 when moving fluid between tanks to ensure adequate stability of the vessel.

3.1.4.2 The Contractor must remove up to a total of 2,000 gallons of fuel. Document a complete chain of custody record of the removed tank contents from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

3.1.4.3 Dispose of removed fluids in accordance with all applicable Federal, state, and local regulations (see 4.2 (Tank content restoration)).

NOTE
Vessel may come in with less tank fluid contents than specified above.
Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard Personnel perform an initial operational test of the equipment listed below to demonstrate existing operational condition. Submit a CFR.

- Designated tank TLIs

3.3 Plug log. The Contractor must keep a written record of all plugs put in any tanks vents. A separate list must be kept for each tank being entered.

3.3.1 Ensure that all plugs are removed from each tank upon completion of work in the tank.

3.3.2 Ensure the plug log is available to the Coast Guard inspector when the inspector is performing his close-out inspection on each tank.

NOTE

Initial and post repair operational tests apply only to tanks that possess TLIs.

3.4 Cleaning requirements. The Contractor must remove tank cover(s) and clean tank interior surfaces free of all foreign materials, such as residual fuel or water, sediment, sludge, rust, or biological growth, taking care not to damage the coating system (if applicable). Remove cleaning media and residues continuously during the washing process. Remove any residual wash media; and wipe up residual moisture with clean lint-free cloths. The Contractor must refer to the Coast Guard Drawings listed under Section 2 (References) for guidance in accomplishing this work.

3.5 Tank content and waste disposal. The Contractor must dispose of residual tank contents and any cleaning fluids in compliance with all applicable Federal, state, and local laws, ordinances and regulations. Document a complete chain of custody record of the removed tank contents and generated wastes, from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

3.6 Inspection. The Contractor must accomplish the following tasks:

3.6.1 Visually inspect all tank interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Complete the “Tank and Void Assessment Form” (found in the Work Item titled “General Requirements”) and submit via CFR. Electronic PDF version of this form will be furnished by the COR upon request. Include the following, as applicable:

- Tank structural condition.
- Inaccessible areas.
- Condition of tank coating, including measurements taken, percentage, location, and type of coating failure (if tank interior surfaces are coated).
- Tank level indicator (TLI) and/or float switch condition, as applicable.
- Sounding/vent tube and striker plate condition.
- Suction and discharge piping condition.
- Fastener material and condition (correct fastener material is stainless steel).

3.7 Tank closing. The Contractor must accomplish the following after completion of all KO-authorized repairs and/or preservation procedures:

3.7.1 For unpainted fuel tank(s) that are not ballasted, apply a heavy coat of lube oil to the entire tank interior(s).

3.7.2 Ensure that the tank(s) remain open for at least 24 hours. Notify the COR at least 24 hours prior to closing the tank(s) and ensure tank closure is accomplished in the presence of the Coast Guard Inspector. After satisfactory inspection by the Coast Guard Inspector and completion of all authorized repairs, close tank manhole cover(s) with new gasket material conforming to AMS-C-6183. Chase threads on studs to ensure even installation of the access covers. Renew any damaged or missing fasteners. Existing undamaged fasteners may be reused. For purpose of bid, assume 100% of existing fasteners will require renewal. Renew all Nylock hex nuts.

NOTES

For cutters with unpainted fuel tanks, the 24 hour tank opening period begins after completing the lube oil coating.

Coast Guard personnel will operate all shipboard machinery and equipment.

3.8 Operational test, post repairs. After completion of work and in the presence of the Coast Guard Inspector, the Contractor must thoroughly test and demonstrate the equipment listed below to be in satisfactory operating condition. Submit a CFR.

- Designated tank TLIs
- Vent check valves

3.9 Ultrasonic thickness (UT) measurement. The Contractor must take a total of 50 UT measurements of tank plating, in locations designated by the Coast Guard Inspector, in accordance with SFLC Std Spec 0740, Appendix C. Use Coast Guard Drawings 113-001, 113-002, 113-003, 116-001, 116-002, 116-003, 121-001, and 122-01 thru 06 as guidance. Submit a CIR.

3.9.1 In addition to the UT measurements, take up to 10 pit-depth measurements within each tank, using a suitable pit depth gauge.

4. NOTES

4.1 Tank content removal. The Ship's force will pump down the tanks to the maximum extent possible with the installed pumping system.

4.2 Tank content restoration. The Ship's force will procure new fluids and refill all tanks at the appropriate time.

WORK ITEM 5: Tanks, Potable Water, Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the following tank(s):

TABLE 1 - TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Potable Water	4-78-1-W	3,918	100
Potable Water	4-78-2-W	3,918	100
Potable Water	4-94-1-W	291	6

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 533-005, Rev J, H&C Potable Water System Mn Dk - A & D

Coast Guard Drawing 901 WMEC 533-006, Rev H, H & C Potable Water System, 01 Lvl & Abv A&D

Coast Guard Drawing 901 WMEC 533-007, Rev J, H & C Potable Water Blw Mn Dk

COAST GUARD PUBLICATIONS

Coast Guard Technical Specification D-123-2048, Feb 2020, 270' WMEC A Class Fluid Handling Plan for Tank Inspections

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

OTHER REFERENCES

American National Standards Institute/NSF International (ANSI/NSF) 61, 2015, Drinking Water System Components - Health Effects

American National Standards Institute/American Water Works Association (ANSI/AWWA) C652, 2011, Disinfection of Water-Storage Facilities

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, (Interferences). Known interferences include, but are not limited to the following:

- Fluid contents
- Piping
- RO system components
- Deck grating.

3.1.4.1 The Contractor must follow the fluid handling plan in accordance with Coast Guard Technical Spec D-123-2048 when moving fluid between tanks to ensure adequate stability of the vessel.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of the equipment listed below to demonstrate existing operational condition. Submit a CFR.

- TLI

3.3 Plug log. The Contractor must keep a written record of all plugs put in any tanks vents. A separate list must be kept for each tank being entered.

3.3.1 Ensure that all plugs are removed from each tank upon completion of work in the tank.

3.3.2 Ensure the plug log is available to the Coast Guard inspector when the inspector is performing his close-out inspection on each tank.

3.4 Tank content removal. The Contractor must remove and dispose of all fluids and/or residues in accordance with all applicable Federal, state, and local regulations. The Contractor must notify the Dockmaster prior to filling or draining the potable water tank(s), when this item is being executed in a drydock availability. The Contractor must refer to Coast Guard drawings 901 WMEC 533-005, 901 WMEC 533-006, and 901 WMEC 533-007 for guidance.

3.5 Tank cleaning. The Contractor must remove tank cover(s); clean tank interior surfaces free of all foreign materials, such as sediment, sludge and bacterial growth. Remove all persistent residues, taking

care not to damage any tank coating system. Remove cleaning media and residues continuously from the tank during the washing process. Remove any residual wash media and wipe up residual moisture with clean lint-free cloths. Collect, contain, and dispose of all wash media, residues, and cleaning materials in accordance with all Federal, state, and local regulations.

3.6 Inspection. The Contractor must visually inspect all tank interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Complete the "Tank and Void Assessment Form" (found in the Work Item titled "General Requirements") and submit via CFR. Electronic PDF version of this form will be furnished by the COR upon request. Include the following, as applicable:

- Tank structural condition.
- Inaccessible areas, if any.
- Condition of tank coating, including measurements taken, percentage, location, and type of coating failure.
- Tank level indicator (TLI) and/or float switch condition (if applicable).
- Sounding tube and striker plate condition.
- Suction and discharge piping condition.
- Fastener material and condition.

3.7 Tank closing. The Contractor must notify the COR at least 24 hours prior to closing the tank(s) and ensure tank closure is accomplished in the presence of the Coast Guard Inspector. After satisfactory inspection by the Coast Guard Inspector, and completion of all authorized repairs, close tank manhole cover(s) with new gasket material conforming to ANSI/NSF 61. Renew all stud cotton grommets (as applicable) upon reinstallation of manhole cover(s).

3.7.1 The Contractor must renew 100% of nuts and washers.

3.8 Tank disinfecting. After all other work involving the potable water system and tank closing have been completed, the Contractor must disinfect and treat the affected potable water tank(s) and associated disturbed piping and components, as necessary, to meet or exceed the requirements of AWWA C652. After tank disinfecting, remove and dispose of all treated water in accordance with all Federal, state and local regulations. Ensure that no one enters the tanks once disinfection is completed. Submit CFR providing confirmation that disinfection of tank(s) and associated potable water system disturbed piping and components has been completed and certifying that all sampling and testing is negative for coliform organisms.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.9 Operational test, post repairs. After completion of work and in the presence of the Coast Guard Inspector, the Contractor must thoroughly test and demonstrate the equipment listed below to be in satisfactory operating condition. Submit a CFR.

- TLI

4. NOTES

This section is not applicable to this work item.

WORK ITEM 6: Tanks, Ballast, Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the following tank(s):

TABLE 1 - TANKS

TYPE OF STRUCTURE	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Ballast	3-B-0-W	4,679	479
Ballast	4-75-1-W	1,327	145
Ballast	4-75-2-W	1,811	180
Ballast	4-103-1-W	7,960	670
Ballast	4-103-2-W	7,960	670
*Ballast	4-169-0-W	3,239	282
Ballast	4-228-1-W	3,521	319
Ballast	4-228-2-W	3,521	319
Ballast	4-242-0-W	2,989	239

*** Known sounding tube problems and Ladder INOP**

NOTE

Tanks also used for storing grey water – considered immediately dangerous to life and health (IDLH).

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 529-001, Rev N, Ballasting & Emer Bilge Drainage Sys Diagram

COAST GUARD PUBLICATIONS

Coast Guard Technical Specification D-123-2048, Feb 2020, 270' WMEC A Class Fluid Handling Plan for Tank Inspections

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

OTHER REFERENCES

ASTM International (ASTM) D1330, 2015, Standard Specification for Rubber Sheet Gaskets

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph(s):

- 3.9 (Ultrasonic thickness (UT) measurement).

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.1.4.1 The Contractor must follow the fluid handling plan in accordance with Coast Guard Technical Spec D-123-2048 when moving fluid between tanks to ensure adequate stability of the vessel.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of the equipment listed below to demonstrate existing operational condition. Submit a CFR.

- TLI's for tanks listed in paragraph 1.1

3.3 Plug log. The Contractor must keep a written record of all plugs put in any tanks vents. A separate list must be kept for each tank being entered.

3.3.1 Ensure that all plugs are removed from each tank upon completion of work in the tank.

3.3.2 The plug log must be available to the Coast Guard inspector when the inspector is performing his close-out inspection on each tank.

3.3 Content removal. The Contractor must remove access cover(s); remove and dispose of all fluids and/or residues in accordance with all applicable Federal, state, and local regulations. Plug all inlet and outlet piping in the tank to prevent contaminants from entering the tank. Use plugs with an attached lanyard, ring or other system that will ensure plugs are not lost in the pipe openings. Maintain a plug

accountability log outside the tank(s) to prevent any of the installed temporary plugs from being lost inside the tank or forgotten inside at tank closure.

3.4 Cleaning. The Contractor must clean the designated structure's (see paragraph 1.1 (Intent)) interior surfaces free of all foreign materials, such as sediment, sludge and fungal growth. Remove all persistent residues, taking care not to damage the tank coating system. Remove cleaning media and residues continuously from the compartment during the washing process. Remove any residual wash media and wipe up residual moisture with clean lint-free cloths. Collect, contain, and dispose of all wash media, residues, and cleaning materials in accordance with all Federal, state, and local regulations. The Contractor must refer to Coast Guard Drawing 901 WMEC 529-001 for guidance.

3.5 Inspection. The Contractor must visually inspect all interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Complete the "Tank and Void Assessment Form" (found in the Work Item titled "General Requirements") and submit via CFR. Electronic PDF version of this form will be furnished by the COR upon request. Include the following, as applicable:

- Structural condition.
- Inaccessible areas, if any.
- Condition of coating, including measurements taken, percentage, location, and type of coating failure.
- Tank level indicator (TLI) and/or float switch condition.
- Sounding tube and striker plate condition.
- Suction and discharge piping condition.
- Fastener material (stainless steel) and condition.
- Anodes (as applicable).

3.6 Renew. Remove and replace the entirety of sounding tube in ballast tank (4-169-0). As applicable, remove and replace entirety or section of ladder that is broken. Location is designated as "bottom rung" of ladder.

3.7 Closing. The Contractor must ensure that the compartment(s) remain open for at least 24 hours after completion of any KO-authorized tank repairs and preservation. Notify the COR at least 24 hours prior to closing the compartment(s) and ensure tank closure is accomplished in the presence of the Coast Guard Inspector. After satisfactory inspection by the Coast Guard Inspector, and completion of all authorized repairs, close the manhole cover(s) with new gasket material conforming to ASTM D1330 and new cotton grommets on each stud (as applicable).

3.7.1 The Contractor must renew 100% of nylon insert/nylock nuts and washers.

NOTE
Coast Guard personnel will operate all shipboard machinery and equipment.

3.8 Operational test, post repairs. After completion of work and in the presence of the Coast Guard Inspector, the Contractor must thoroughly test and demonstrate the equipment listed below to be in satisfactory operating condition. Submit a CFR.

- TLIs

3.8.1 Hydrostatic test. After all authorized repairs, the Contractor must hydrostatically test all new and disturbed piping and components of the sounding tube system in accordance with SFLC Std Spec 0740, Appendix C, Hydrostatic Test. Ensure zero leakage from or permanent deformation of pressure-containing parts by repairing all leaks, deformations, and discrepancies. Submit a CFR.

3.9 Ultrasonic thickness (UT) measurement. The Contractor must take a total of 100 UT measurements of tank plating, in locations designated by the Coast Guard Inspector, in accordance with SFLC Std Spec 0740, Appendix C. Use Coast Guard Drawing 529-001 as guidance. Submit a CIR.

3.9.1 In addition to the UT measurements, take a total of 20 pit-depth measurements, using a suitable pit depth gauge.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 7: Voids, Accessible, Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the following void(s):

TABLE 1 - VOIDS

TYPE OF STRUCTURE	LOCATION	CAPACITY - 95% (GALLONS)
Transducer Well	4-75-0-Q	1,200
Void	4-12-0-W	7,330

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 529-001, Rev N, Ballasting & Emer Bilge Drainage Sys Diagram

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

OTHER REFERENCES

ASTM International (ASTM) D1330, 2015, Standard Specification for Rubber Sheet Gaskets

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of the TLI's for tanks listed in paragraph 1.1 (Intent), to demonstrate existing operational condition. Submit a CFR.

3.3 Cleaning and inspection requirements. The Contractor must refer to Coast Guard Drawing 901 WMEC 529-001 for guidance. to accomplish the following tasks:

3.3.1 Content removal. The Contractor must remove and dispose of all fluids and/or residues in accordance with all applicable Federal, state, and local regulations.

3.3.2 Cleaning. The Contractor must remove access cover(s). Clean the designated structure's interior surfaces free of all foreign materials, such as sediment, sludge and fungal growth. Remove all persistent residues, taking care not to damage the tank coating system. Remove cleaning media and residues continuously from the compartment during the washing process. Remove any residual wash media and wipe up residual moisture with clean lint-free cloths. Collect, contain, and dispose of all wash media, residues, and cleaning materials in accordance with all Federal, state, and local regulations.

3.3.3 Inspection. The Contractor must visually inspect all interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Complete the "Tank and Void Assessment Form" (found in the Work Item titled "General Requirements") and submit via CFR. Electronic PDF version of this form will be furnished by the COR upon request. Include the following, as applicable:

- Structural condition.
- Inaccessible areas, if any.
- Condition of coating, including measurements taken, percentage, location, and type of coating failure.
- Tank level indicator (TLI) and/or float switch condition.
- Sounding tube and striker plate condition.
- Suction and discharge piping condition.
- Fastener material and condition.

3.4 Closing. The Contractor must ensure that the compartment(s) remain open for approximately 24 hours after completion of the tasks specified above. Notify the COR at least 24 hours prior to closing the compartment(s) and ensure tank closure is accomplished in the presence of the Coast Guard Inspector. After satisfactory inspection by the Coast Guard Inspector, and completion of all authorized repairs, close

the manhole cover(s) with new gasket material conforming to ASTM D1330 and cotton grommets on the studs (as applicable). The Contractor must renew up to 100% of missing or damaged nuts and washers.

NOTE
Coast Guard personnel will operate all shipboard machinery and equipment.

3.5 Operational test, post repairs. After completion of work and in the presence of the Coast Guard inspector, the Contractor must thoroughly test and demonstrate the TLI's for tanks listed in paragraph 1.1 (Intent), to be in satisfactory operating condition. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 8: Tanks, Dirty Oil and Waste, Clean and Inspect

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the following tank(s):

TABLE 1 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)
Oily Waste Holding	4-165-1-F	1,450	100
Waste Oil Holding	4-169-1-F	1,574	100

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 113-003, Rev G, Tank Top Pl & Fr, Fr 101-182

Coast Guard Drawing 901 WMEC 123-007, Rev C, Tank (4-169-1-W) Modification Incidental to OWS Installation

Coast Guard Drawing 901 WMEC 262-001, Rev K, Lube Oil Sys Diag

Coast Guard Drawing 901 WMEC 801-010, Rev D, Inboard Profile

COAST GUARD PUBLICATIONS

Coast Guard Technical Specification D-123-2048, Feb 2020, 270' WMEC A Class Fluid Handling Plan for Tank Inspections

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

OTHER REFERENCES

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C6183, 2019, Cork and Rubber Composition Sheet; For Aromatic Fuel and Oil Resistant Gaskets

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph(s):

- 3.10 (Ultrasonic thickness (UT) measurement).

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.1.4.1 The Contractor must follow the fluid handling plan in accordance with Coast Guard Technical Spec D-123-2048 when moving fluid between tanks to ensure adequate stability of the vessel.

3.2 The Contractor must remove up to a total of 2,000 gallons of waste oil and oily water, to facilitate gas-freeing. Dispose of removed fluids in accordance with all applicable Federal, state, and local regulations.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.3 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard Personnel perform an initial operational test of the equipment listed below to demonstrate existing operational condition. Submit a CFR.

- TLI's for tank(s) listed in paragraph 1.1 (Intent)

3.4 Plug log. The Contractor must keep a written record of all plugs put in any tanks vents. A separate list must be kept for each tank being entered.

3.4.1 Ensure that all plugs are removed from each tank upon completion of work in the tank.

3.4.2 Ensure the plug log is available to the Coast Guard inspector when the inspector is performing his close-out inspection on each tank.

NOTE

Vessel may come in with less tank fluid contents than specified above.

3.5 Cleaning requirements. The Contractor must remove tank cover(s) and clean tank interior surfaces free of all foreign materials, such as sediment or sludge, taking care not to damage the coating system (if applicable). The Contractor must use Coast Guard drawings 901 WMEC 262-001 and 901 WMEC 801-010 for guidance while accomplishing this work item. Remove cleaning media and residues continuously during the washing process. Remove any residual wash media and wipe up residual moisture with clean lint-free cloths.

3.6 Tank content and waste disposal. The Contractor must dispose of tank contents and all cleaning fluids in compliance with all applicable Federal, state, and local laws, ordinances and regulations. Document a complete chain of custody record of the removed tank contents and generated wastes, from the vessel to the point of final destination or delivery. Submit document to the COR upon completion of work.

3.7 Inspection. The Contractor must visually inspect all tank interior surfaces, including, but not limited to bulkheads, floor and overhead plating, structural members, manhole cover surfaces, fasteners and gasket seating surfaces. Complete the "Tank and Void Assessment Form" (found in the Work Item titled "General Requirements") and submit via CFR. Electronic PDF version of this form will be furnished by the COR upon request. Include the following, as applicable:

- Tank structural condition.
- Inaccessible areas.
- Condition of tank coating, including measurements taken, percentage, location, and type of coating failure.
- Tank level indicator (TLI) and/or float switch condition.
- Sounding tube and striker plate condition.
- Suction and discharge piping condition.
- Fastener material and condition (correct fastener material is stainless steel).

3.8 Tank closing. The Contractor must ensure that the tank(s) remain open for at least 24 hours after completion of all authorized repair and preservation procedures. Notify the COR at least 24 hours prior to closing the tank(s) and ensure tank closure is accomplished in the presence of the Coast Guard Inspector. After satisfactory inspection by the Coast Guard Inspector and completion of all authorized repairs, close tank manhole cover(s) with new gasket material conforming to AMS-C-6183.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.9 Operational test, post repairs. After completion of work and in the presence of the Coast Guard Inspector, the Contractor must thoroughly test and demonstrate the equipment listed below to be in satisfactory operating condition. Submit a CFR.

- TLI's for tank listed in paragraph 1.1 (Intent)

3.10 Ultrasonic thickness (UT) measurement. The Contractor must take a total of 20 UT measurements of tank plating, in locations designated by the Coast Guard Inspector, in accordance with SFLC Std Spec 0740, Appendix C. Use Coast Guard Drawing 262-001 as guidance. Submit a CIR.

3.10.1 In addition to the UT measurements, take a total of 10 pit-depth measurements, using a suitable pit depth gauge.

4. NOTES

4.1 The Coast Guard Inspector will visually inspect the tank interior immediately prior to closing.

WORK ITEM 9: Propulsion Shafting, Strain Gauge Alignment, Dockside, Check

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform strain gauge alignment checks during dockside availability.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 243-001, Rev L, Shafting Arrangement

Coast Guard Drawing 901 WMEC 243-005, Rev D, Sftg Align Anal and Procs

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep. The Contractor must provide the services of a Qualified Technical Representative who is familiar with the strain gauge alignment method to accomplish the following on site:

- Advise on manufacturer's proprietary system information.
- Assist with proper alignment, clearances, and repair methods associated with stern tube modification and propulsion shaft system removal and installation.

- Ensure compliance with manufacturer's procedures and standards during system disassembly, inspection, and reassembly as applicable.

3.1.2.1 Ensure the Tech Rep has experience with the system/equipment stated above and demonstrated on their résumé.

3.1.2.2 Submit the name and résumé of the Tech Rep to the COR at the Arrival Conference.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Mechanical seal
- Bulkhead seal

3.2 Definitions and standard units. For the purposes of this specification and any reports generated, the following definitions apply.

3.2.1 Optimal alignment. Defined as a state of shaft alignment (through all phases of bearing wear down) where:

- Bearing loads are within a satisfactory range
- Bending stresses are minimal
- Gear box bearing loads (Fwd and Aft) always remain positive and are near equal at midlife wear
- Shaft slope through long bearings matches the bearing slope within a reasonable range
- Horizontal loads are minimized

NOTE

"Optimal alignment" is the goal when components are being moved or relocated e.g. foundations altered, chockfast poured, new strut being installed, new stern tube installed, etc.

3.2.2 Acceptable alignment. Defined as a state of achievable shaft alignment where components are constrained (movement/relocations not within work scope) but:

- Current bearing loads are within a satisfactory range and if possible remain satisfactory though continued bearing wear down
- Horizontal loads are minimized

NOTE

"Acceptable alignment" is the goal whenever "Optimal alignment" cannot be achieved because the scope of associated work does not provide for relocation of components necessary.

3.2.3 Standard units. All reports, correspondences, and discussions must be in Standard/US Customary Units and not in SI/Metric Units.

3.3 Strain gauge alignment check. The Contractor must perform the specified actions in Table 1 below using Coast Guard Drawings 901 WMEC 243-001 and 901 WMEC 243-005 as guidance.

TABLE 1 - TASKS

#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	REQUIREMENTS	
				PARAGRAPH	OTHER
1a	Strain Gauge Alignment Check	1	Port Shaftline	3.3.1 3.3.1.1 3.3.1.2 3.3.2 3.3.3	Accomplish prior to performing any hot work and/or structural modifications.
1b	Strain Gauge Alignment Check	1	Stbd Shaftline	3.3.1 3.3.1.1 3.3.1.2 3.3.2 3.3.3	Accomplish prior to performing any hot work and/or structural modifications.

3.3.1 Shaft alignment check by strain gage method. The Contractor must furnish all necessary equipment and install sufficient strain gages, measure strains, and calculate vertical and horizontal reactions using the strain gage measurement method. Perform the strain gage measurements under the direct supervision of personnel experienced in and regularly engaged in shaft alignment by the strain gage method.

3.3.1.1 Install strain gages internally to measure all internal bearing reactions.

3.3.1.2 All strain gages must remain at the same locations throughout all required inspections. Do not duplicate cost of installation if strain gauges are already installed from previous evolutions.

3.3.2 Alignment check prerequisites, afloat. The Contractor must ensure the following conditions are met for the afloat alignment check:

- All shaft components are installed.
- Vessel is in the water for at least 24 hours before alignment inspection.
- All permanent ballast are in place.
- Fuel, water, and temporary ballast tanks are filled to normal operating levels, generally half to 75% capacity.
- Vessel is on an even keel.
- All major machinery weighing over 500 pounds is either installed or simulated by equivalent weights appropriately located
- The shafts must be free to rotate and the stern tube face seal must not be any tighter than necessary

NOTE

Small boats are not considered major machinery and therefore do not need to be simulated by equivalent weights in their absence.

3.3.3 Strain gauge report. The Contractor must submit a written report of results via CFR with the following information to the COR within 24 hours after alignment check:

- All specified (i.e. external and/or internal) bearing reactions

- Deviation from specified bearing reactions in Figure A5.4 of Coast Guard Drawing 901 WMEC 243-005
- A description of the alignment procedures used to obtain the bearing loads
- Strain gauge locations
- Bearing locations and reactions in shaft modeling
- Detail dimensions and configuration of the shaft model
- All mathematics values used in the shaft model such as material properties, spring constant, thermal growth effects, bearing offsets, all concentrated weights, etc
- All assumptions applied in the shaft model
- All constant values used in the shaft model
- Any indication of misalignment

Any recommended corrective procedures. The recommended corrective procedures must include, but not be limited to:

- New bearing off-sets to achieve an Optimal alignment (as defined in 3.2.1)
- Other alternative to achieve an Optimal alignment
- Detailed procedures to achieve shaft alignment
- Table of calculated bearing wear down analysis based on prior strain gauge reports (furnished upon request by COR)

3.3.4 Strain gauge report analysis. The Contractor must provide comparative analysis of strain gauge reports as follows. This analysis may be furnished with the Strain Gauge Report described in paragraph 3.3.3.

4. NOTES

4.1 Results submittal. The COR will forward a copy of each strain gauge report to the MECPL Engineering Branch.

WORK ITEM 10: Circuit Breakers (400 HZ), Inspect and Test

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and test the designated 400HZ circuit breakers listed in Table 1.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 314-002, Rev G, 400 Hz MG Wiring Diagram

Coast Guard Drawing 901 WMEC 314-003, Rev L, 400 Hz MG Schematic Diagram

Coast Guard Drawing 901 WMEC 320-011, Rev N, 400 Hz Distr IWD

Coast Guard Drawing 901 WMEC 320-031, Rev B, 400 Hz Distr IWD

Coast Guard Drawing 901 WMEC 320-035, Rev AR, As Built Electrical One-Line Diagram

Coast Guard Drawing 901 WMEC 324-008, Rev J, 400Hz Switchboard Arrangement and Details

Coast Guard Drawing 901 WMEC 324-009, Rev G, 400Hz Swbd EWD

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 2823B, Manufacturer's Instruction Book-SWBS Group(s) 324-426, Section A; Aug 2015; Switchboard, 400 Hz

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

OTHER REFERENCES

American National Standards Institute (ANSI) C37.50, 2018, Low Voltage AC Power Circuit Breakers Used in Enclosures, Test Procedures

National Electrical Manufacturers Association (NEMA) Std, pub. No. AB4, 2017, Guidelines for Inspection and Preventative Maintenance of Molded Case Circuit Breakers used in Commercial and Industrial Application

Underwriters Laboratories Inc. (UL) 489, Oct 2016, Molded Case Circuit Breaker

Underwriters Laboratories Inc. (UL) 1066, Apr 2012, Low-Voltage AC and DC Power Circuit Breakers Used in Enclosures

3. REQUIREMENTS

3.1 General. The Contractor must refer to the Coast Guard drawings listed in Section 2 (References) for guidance in accomplishing this work item.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, (Interferences). Known interferences include, but are not limited to the following:

- Electric Panels and panel covers
- Live circuits.

3.2 Circuit breaker inspection preparation. The Contractor must provide skilled technicians, portable instrument standards and all necessary equipment to inspect and test circuit breakers designated in this work item. The Contractor may remove the circuit breaker from the vessel to a shore side facility. If this is done the Contractor must exercise extreme care in transporting and reinstalling the circuit breakers to original operating conditions on the switchboard.

3.2.1 The Contractor must notify the COR 48 Hours prior to start work on this item.

3.2.2 Prior to any wiring disconnection and removal of circuit breakers, the Contractor must record all wiring information, trip setting adjustments, and equipment locations necessary for use in later reinstallation. Retain all mounting and connecting hardware for later reuse. Submit a CFR.

3.2.3 Coordinate the disconnection and removal of the circuit breakers listed in the table below with the Coast Guard Inspector to ensure orderly shutdown of equipment. Providing temporary circuit breakers or temporarily relocating circuit breakers from non-essential circuits to essential circuits (same frame size and trip settings) are acceptable strategies to minimize outage durations. When power interruption is expected to exceed 15 minutes, secure uninterruptable power supplies and supported loads.

3.3 Inspection requirements. The Contractor must inspect all circuit breakers listed under Table 1 below, including associated wire connectors, screws and plating. Submit a CFR.

3.3.1 Initial conditions. The circuit breaker to be operationally assessed is assumed to be off with power available.

3.3.2 Manual operations. For a circuit breaker with mechanical closing and opening controls on the frame, perform the following:

3.3.2.1 Manually turn the circuit breaker on. Verify the circuit breaker handle is positioned to ‘on’. Confirm that circuit breaker position indicating light is on for the Motor Generator set only.

3.3.2.2 Manually turn the circuit breaker off. Verify the circuit breaker handle is positioned to 'off'. Confirm that circuit breaker position indicating light is off for the Motor Generator set only.

3.3.2.3 Reenergize any circuit breaker control circuits that were de-energized.

3.4 Restoration. Perform the following:

3.4.1 Ensure the circuit breaker is off.

3.4.2 If not already accomplished, remove the circuit breaker control power transformer secondary winding fuses and disconnect any temporary control power supply.

3.5 Removal. The Contractor must perform the following:

3.5.1 Record. Prior to the removal of each circuit breaker listed in Table 1 below, record location (position or circuit identifier), wiring information, and if adjustable, as found pickup and time delay settings. Retain all mounting and connecting hardware for later reuse. Submit a CFR with all recorded data to the Coast Guard Inspector.

3.5.2 Disconnect. Disconnect and remove the circuit breakers listed in the table below.

3.5.3 Inspect. Inspect the primary and secondary disconnects in the switchboard for wear and erosion. Check the torques of all primary disconnect studs to the bus work or power cable lugs. Inspect for broken control wiring lugs and check the tightness of wiring at the secondary disconnect terminal blocks. Renew any broken lugs and tighten any loose connections to wiring or bus.

3.5.4 Cover. Temporarily cover or insulate switchboard openings created by the removal of circuit breakers to prevent personnel contact with energized conductors and to block the entry of debris from other ongoing industrial activities.

3.6 Shop work. The Contractor must perform the following, and submit a CFR:

3.6.1 Cleaning and lubrication. Clean circuit breaker internals with manufacturer's approved solvents and lint free cloths. Do not use high pressure air or wire brushes. Lubricate all components in accordance with manufacturer's instructions.

3.6.2 Pre-inspection. Perform the inspections and take the measurements described below. Report all results, including any adjustments made.

3.6.2.1 Remove and inspect the arc chutes. Note if an arc chute is severely burned, cracked, or excessively eroded.

3.6.2.2 Visually inspect all primary intermediate (if installed), main, and arcing contacts for erosion and evidence of overheating. Inspect associated insulators for cracks and degradation. Determine whether the condition of one or more contacts or insulators meets the criteria for renewal in accordance with manufacturer's guidelines.

3.6.2.3 Set up the circuit breaker for maintenance or slow closing. Check alignment and measure the contact force, spring tension, air gap, and wipe on each contact in accordance with manufacturer's instructions and make adjustments, as necessary, to set these values within specification.

3.6.2.4 Check contact closure sequencing to ensure that the differences in the making of the arcing contacts on the same pole and between poles is within manufacturer's tolerances. Also verify that the opening sequencing is satisfactory in the same manner.

3.6.2.5 Reinstall the arc chutes and torque all fasteners in accordance with manufacturer's instructions.

3.6.2.6 Inspect the primary and secondary disconnects (stabs) for wear and erosion. For a circuit breaker with finger type primary disconnects, check that the proper force is applied when a dummy bar, representative of the mating stationary disconnect, is inserted.

3.6.2.7 Inspect mechanical linkages, bearings, pawls, gears, cams, rollers, rods, and shafts for excessive wear and damage. Identify incorrectly assembled components. Note all missing and improperly installed fasteners.

3.6.2.8 Inspect electrical switches, solenoids, relays, wiring, and motors for excessive wear and damage. Perform an insulation resistance check of all control wiring using a 500 VDC test voltage. Isolate and identify any wiring or component with insulation resistance of less than 1 MΩ to ground.

3.6.2.9 For a circuit breaker equipped with a spring charging motor, verify that the motor cutoff switch is aligned in accordance with manufacturer's instructions.

3.6.3 Testing. After satisfactory visual inspection and completion of any authorized repair work, test each circuit breaker listed in Table 1 below as directed in this section using ANSI/NEMA AB 4 – Section 6, ANSI C37.50, UL 489 and UL 1066 as guidance. Submit CFR.

3.6.3.1 Perform the following tests:

- Mechanical operation.
- Insulation resistance.
- Individual pole resistance (milivolts drop)
- Inverse-time over-current trip (not applicable to non-automatic switches)
- Instantaneous over-current trip.
- Rated hold-in current.

3.6.3.2 Short-time over-current trip. This test is applicable only if the circuit breaker is equipped with a short-time delay trip. The operation of the short-time delay unit should be within 90% and 125% of the over-current setting of the circuit breaker as shown on the manufacturer's time-current curves.

3.6.3.3 Ground fault trip. The circuit breaker should not be equipped with a ground fault trip. If such is installed, submit a CFR noting the discrepancy.

3.6.3.4 Dielectric test. Perform a dielectric test on each 480 or 600 volt rated circuit breaker where the case was opened for repair or the circuit breaker was obtained through non-OEM authorized supply channels. The dielectric test should be conducted at an AC test voltage of 1568 (480 volt rating) or 1760 volts (600 volt rating) or at 2500 volts DC for 1 minute withstand. Conduct the dielectric test for each of the following conditions:

- Each pole (line to load terminal) with the circuit breaker open.
- Each pair of line to line terminals with the circuit breaker closed.

- Each line terminal to ground with the circuit breaker open.
- Each pole to ground with the circuit breaker closed.

3.6.3.5 For each circuit breaker accessory, perform the applicable tests of ANSI/NEMA AB 4, Section 7. Review the Table 1 for each circuit breaker and submit a CFR for model number discrepancies as well as any missing or extra accessory. When performing ANSI/NEMA AB 4, Section 7.3, use a variable voltage control power source and voltmeter to measure dropout and pickup voltages of the under-voltage release coil. Dropout voltage must be between 15% and 60% of the coil voltage rating; pickup must occur between 30% and 85%.

3.6.3.6 Record the following data for each circuit breaker that was tested:

- Circuit breaker model and serial number.
- Circuit identifier or position.
- Test data and results.
- Test technician name and date of test.
- Name and address of testing facility.

3.6.3.7 Update the label on the circuit breaker case, as necessary, so that it accurately describes the circuit breaker configuration and installed accessories. Apply a sticker showing the name of the testing laboratory along with the date of the test.

3.7 Reinstallation. The Contractor must perform the following:

3.7.1 Vacuum out the circuit breaker enclosure and completely remove any foreign material.

3.7.2 Lubricate primary and secondary disconnects in accordance with manufacturer's instructions.

3.7.3 Reinstall and reconnect each circuit breaker using information retained above.

3.7.4 Perform an energized operational test of all affected circuit breakers in the presence of the Coast Guard Inspector. Verify that all accessory devices are functioning. Submit CFR.

TABLE 1 – SWITCHBOARD CIRCUIT BREAKER LIST

QUANTITY	CIRCUIT BREAKER TYPE	SERVICE
1	AQB-A250	1SF-2SF Bus Tie
1	AQB-A250	2SF-3SF Bus Tie
1	AQB-A250	3SF-1SF Bus Tie
1	AQB-A250	NR 1 Motor Generator Set
1	AQB-A250	NR 3 Motor Generator Set
1	AQB-A250	LAMP TACTAS
1	AQB-A101	400 Hz Elex panel (02-97-1) Sonar & Command Support Center
1	AQB-A101	400 Hz Elex panel (02-75-1) Sonar & Command Support Center
1	AQB-A101	400 Hz Elex panel (02-57-1) IC Gyro
1	AQB-A101	400 Hz Elex panel (3-65-2) Communication center support
4	AQB-A101	Spare

3.8 Circuit breaker reinstallation. After all testing is complete; the Contractor must reinstall circuit breakers using previously recorded wiring information to its original operating condition and in accordance with TP 2823B.

3.9 Operational test post repairs. After completion of all work, the Contractor must witness an operational test (by Coast Guard personnel) of all designated circuit breakers to prove satisfactory operating condition. Submit a CFR.

3.9.1 Operate each circuit breaker "ON" and "OFF" several times to exercise the circuit breaker and ensure that mechanical linkages are free from binding.

3.9.2 Perform a direction of rotation test on each new and disturbed three phase motor circuit.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 11: Vent Ducts, Engine Room, Commercial Cleaning

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the designated shipboard ventilation systems.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 512-009, Rev E, Vent 01 Lvl and Above Fr 103-140 A&D

Coast Guard Drawing 901 WMEC 513-005, Rev F, Vent, ER & ECC – Plan, Sect & Elev A & D

Coast Guard Drawing 901 WMEC 514-001, Rev L, HVAC Sys Diag

Coast Guard Drawing 901 WMEC 514-011, Rev H, HVAC Main Deck Fr 82-117 A&D

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 5100 (SFLC Std Spec 5100), 2022, Clean Shipboard Ventilation Systems

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.3.1 Install filter medium at the terminal ends of all supply vent ducting to prevent any residual foreign mater from blowing into the engine room spaces.

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, (Interferences). Known interferences include, but are not limited to the following:

- Ducting screens.
- Dishwasher/laundry ducting.
- Ceiling tiles and supports.
- Overhead sheathing.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of the ventilation systems included in this work item, to demonstrate existing operational condition. Submit a CFR.

3.3 Cleaning requirements. The Contractor must clean and inspect the following ventilation systems, shown on Coast Guard Drawings 901 WMEC 512-009, 901 WMEC 513-005, 901 WMEC 514-001, and 901 WMEC 514-011 in accordance with SFLC Std Spec 5100. Submit a CFR.

TABLE 1 – ENGINE ROOM

VENTILATION SYSTEM	TYPE
01-106-1	Supply
01-106-2	Supply

3.3.1 The Contractor must clean the ventilation systems listed in Table 1 in accordance with SFLC Std Spec 5100. The Contractor is not expected to clean the exhaust stack plenum area.

3.3.1.1 Clarification to SFLC Std Spec 5100 paragraph 3.4.2.2: The fan blades and fan motor housing must be cleaned to the same standard as the ducting, as defined in paragraph 3.4.2 of SFLC Std Spec 5100.

NOTE

Past experience has shown that the engine room exhaust ventilation systems have accumulated oils and greases and systems are coated with a very sticky and very thick sludge. Take this into consideration in the bid.

3.3.2 Prior to reassembling the vent systems, visually inspect the systems in the presence of the Coast Guard Inspector. Verify that the vent systems are clean and oil and build up free. The Contractor must use

video probe equipment to allow viewing the internal surfaces of all vent ducting. Perform additional inspections as specified in SFLC Std Spec 5100 and submit CFR.

3.3.3 After cleaning, reassemble vent ducting using new gaskets and fasteners.

3.4 Notification. The Contractor must give written notification to the COR 48 hours before starting ventilation cleaning work.

NOTE
Coast Guard personnel will operate all shipboard machinery and equipment.

3.5 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the ventilation systems disturbed to be in satisfactory operating condition. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 12: Vent Ducts, Galley, Commercial Cleaning

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the designated shipboard ventilation systems.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 512-009, Rev E, Vent 01 Lvl and Above Fr 103-140 A&D

Coast Guard Drawing 901 WMEC 514-001, Rev L, HVAC Sys Diag

Coast Guard Drawing 901 WMEC 514-005, Rev J, HVAC Fan Rooms Mn Dk – A&D

Coast Guard Drawing 901 WMEC 514-011, Rev H, HVAC Mn Dk Fr 82-117 A&D

Coast Guard Drawing 901 WMEC 514-012, Rev J, HVAC Mn Dk Fr 117-165A&D

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 5100 (SFLC Std Spec 5100), 2022, Clean Shipboard Ventilation Systems

OTHER REFERENCES

MIL-STD-769, Insulation Requirements for U.S. Naval Vessels

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, (Interferences). Known interferences include, but are not limited to the following:

- Ducting screens.
- Dishwasher/laundry ducting.
- Ceiling tiles and supports.
- Overhead sheathing.
- Insulation

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard Personnel perform an initial operational test of the ventilation systems included in this work item, to demonstrate existing operational condition. Submit a CFR.

3.3 Cleaning requirements. The Contractor must clean and inspect the following ventilation systems, shown on Coast Guard Drawings 901 WMEC 512-009, 901 WMEC 514-001, 901 WMEC 514-005, 901 WMEC 514-011, and 901 WMEC 514-012, in accordance with SFLC Std Spec 5100. Submit a CFR.

TABLE 1 – SYSTEM LOCATION

VENTILATION SYSTEM	TYPE
02-117-4	Exhaust
1-117-1	Supply
1-129-2-Q	Exhaust

3.3.1 The Contractor must clean the ventilation systems listed in Table 1 in accordance with SFLC Std Spec 5100.

3.3.1.1 Clarification to SFLC Std Spec 5100 paragraph 3.4.2.2: The fan blades and fan motor housing must be cleaned to the same standard as the ducting, as defined in paragraph 3.4.2 of SFLC Std Spec 5100.

3.3.2 Prior to reassembling the vent systems, visually inspect the systems in the presence of the Coast Guard Inspector. Verify that the vent systems are clean and oil and build up free. The Contractor must use video probe equipment to allow viewing the internal surfaces of all vent ducting. Perform additional inspections as specified in SFLC Std Spec 5100 and submit CFR.

3.3.3 After cleaning, reassemble vent ducting using new gaskets and fasteners.

3.4 Additional requirements. In addition to the above, the Contractor must accomplish the following:

3.4.1 Notification. Give written notification to the COR, 48 hours before starting ventilation cleaning work.

3.4.2 Additional protective covering. In addition to providing protective covering as specified in SFLC Std Spec 5100, subsection 3.1.2 (Protective measures), provide additional protective covering for all food preparation and serving surfaces in the immediate work area, as applicable, to prevent contamination.

3.4.3 Renew. Renew approximately 40 linear feet of the 1-129-2-Q exhaust vent ducting (12”x4”) from FR 138 to FR 172 or as designated by the Coast Guard Inspector.

3.4.3.1 Install new elastomeric closed cell foam insulation material over the renewed and removed ventilation in accordance with MIL-STD-769.

3.4.3.2 Leak test. After completing all authorized mechanical (i.e. threaded, bolted, etc.) joint repairs, the Contractor must test the affected piping system's operation using the system fluid at normal operating pressure. Ensure zero visible leakage from or deformation of mechanical parts by repairing all leaks and discrepancies. Submit a CFR.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.5 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the ventilation systems included in this work item to be in satisfactory operating condition. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 13: Vent Ducts, Laundry Exhaust, Commercial Cleaning

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the designated shipboard ventilation systems.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 514-001, Rev L, HVAC Sys Diag

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 5100 (SFLC Std Spec 5100), 2022, Clean Shipboard Ventilation Systems

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- Ducting screens.
- Dishwasher/laundry ducting.
- Ceiling tiles and supports.
- Overhead sheathing.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard Personnel perform an initial operational test of the ventilation systems included in this work item, to demonstrate existing operational condition. Submit a CFR.

3.3 Cleaning requirements. The Contractor must clean and inspect the following ventilation systems, shown on Coast Guard Drawing 901 WMEC 514-001, in accordance with SFLC Std Spec 5100. Submit a CFR.

TABLE 1 – SYSTEM LOCATIONS

VENTILATION SYSTEM	TYPE	LOCATION
02-53-1	Supply	Laundry (1-47-1-Q) Pilot House (2-48-0-C)
02-56-2	Exhaust	Laundry (1-47-1-Q)

3.4 Notification. The Contractor must give written notification to the COR, 48 hours before starting ventilation cleaning work.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.5 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the ventilation systems included in this work item to be in satisfactory operating condition. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 14: Vent Ducts, All Other, Commercial Cleaning

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to clean and inspect the designated shipboard ventilation systems.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 512-001, Rev H, Vent, Hld & 1st Platf Fwd 47 A&D

Coast Guard Drawing 901 WMEC 512-002, Rev J, Vent, Hld Aft 169 A&D

Coast Guard Drawing 901 WMEC 512-003, Rev J, Vent 1st Platf Aft 207, A&D

Coast Guard Drawing 901 WMEC 512-005, Rev M, Vent, Mn Dk Fwd 47 A&D

Coast Guard Drawing 901 WMEC 512-008, Rev L, Vent Mn Dk Aft 186 A&D

Coast Guard Drawing 901 WMEC 512-009, Rev E, Vent 01 Lvl & Above Fr 103-140 A&D

Coast Guard Drawing 901 WMEC 512-015, Rev D, Magazine Vent'l ReCirc System

Coast Guard Drawing 901 WMEC 512-016, Rev B, Magazine Vent'l Purge System

Coast Guard Drawing 901 WMEC 512-018, Rev -, Anchor Windlass & Bosun Workshop Vent Mods

Coast Guard Drawing 901 WMEC 512-019, Rev -, Ventilation Mods to Refridgerated & Dry Stores

Coast Guard Drawing 901 WMEC 512-021, Rev -, HVAC Mods to Systems Serving the 76MM Gun, Mag, & Control Booth

Coast Guard Drawing 901 WMEC 512-022, Rev -, Ventilation Modifications Incdt Talon Helo Grid Instl

Coast Guard Drawing 901 WMEC 512-023, Rev H, Vent Mods to Steering Gear Room 3-228-0-E

Coast Guard Drawing 901 WMEC 514-001, Rev L, HVAC Sys Diag

Coast Guard Drawing 901 WMEC 514-004, Rev J, HVAC 1st Platf Fr 47-82 A&D

Coast Guard Drawing 901 WMEC 514-005, Rev J, HVAC Fan Room Mn Dk A&D

Coast Guard Drawing 901 WMEC 514-006, Rev H, HVAC Fan Rm 02 Lvl – A&D

Coast Guard Drawing 901 WMEC 514-007, Rev G, HVAC Hold Dk, Fr 47-48 A&D

Coast Guard Drawing 901 WMEC 514-008, Rev K, HVAC 1st Platf, Fr 165-186 A&D

Coast Guard Drawing 901 WMEC 514-009, Rev G, HVAC 1st Platf, Fr 186-207 A&D

Coast Guard Drawing 901 WMEC 514-010, Rev H, HVAC Mn Dk Fr 47-82 A&D

Coast Guard Drawing 901 WMEC 514-011, Rev H, HVAC Main Deck Fr 82-117 A&D

Coast Guard Drawing 901 WMEC 514-012, Rev J, HVAC Mn Dk Fr 117-165 A&D

Coast Guard Drawing 901 WMEC 514-013, Rev H, HVAC 01 Lvl, FWD 82 A&D

Coast Guard Drawing 901 WMEC 514-014, Rev F, HVAC 01 Lvl, Fr 82-103 A&D

Coast Guard Drawing 901 WMEC 514-015, Rev J, HVAC 02-106-0-Q A&D

Coast Guard Drawing 901 WMEC 514-016, Rev E, HVAC PH & Wea Dk, 02 Lvl A&D

Coast Guard Drawing 901 WMEC 514-017, Rev J, HVAC Snsr Rm/CSC, 02 LVL - A&D

Coast Guard Drawing 901 WMEC 514-026, Rev H, HVAC Main Deck Fr 165-186 A&D

Coast Guard Drawing 901 WMEC 514-027, Rev E, Fan Room Arrgt 02-45-0-Q

Coast Guard Drawing 901 WMEC 514-046, Rev – HVAC Modifications to Commissary Stores (4-169-0-A) to Provide Air Cond.

Coast Guard Drawing 901 WMEC 514-048, Rev – Ventialtion Mods to Snsr Rm & CSC 02 Lvl & Abv

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 5100 (SFLC Std Spec 5100), 2022, Clean Shipboard Ventilation Systems

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, (Interferences). Known interferences include, but are not limited to:

- Ducting screens.

- Dishwasher/laundry ducting.
- Ceiling tiles and supports.
- Overhead sheathing.

NOTE
Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard Personnel perform an initial operational test of the ventilation systems included in this work item, to demonstrate existing operational condition. Submit a CFR.

3.3 Cleaning requirements. The Contractor must clean and inspect the following ventilation systems, shown on Coast Guard Drawings 901 WMEC 512-001, 901 WMEC 512-002, 901 WMEC 512-003, 901 WMEC 512-005, 901 WMEC 512-007, 901 WMEC 512-008, 901 WMEC 512-009, 901 WMEC 512-013, 901 WMEC 512-015, 901 WMEC 512-016, 901 WMEC 512-018, 901 WMEC 512-019, 901 WMEC 512-021, 901 WMEC 512-022, 901 WMEC 512-023, 901 WMEC 512-029, 901 WMEC 514-001, 901 WMEC 514-004, 901 WMEC 514-005, 901 WMEC 514-006, 901 WMEC 514-007, 901 WMEC 514-008, 901 WMEC 514-009, 901 WMEC 514-010, 901 WMEC 514-011, 901 WMEC 514-012, 901 WMEC 514-013, 901 WMEC 514-014, 901 WMEC 514-015, 901 WMEC 514-016, 901 WMEC 514-017, 901 WMEC 514-027, 901 WMEC 514-046, and 901 WMEC 514-048, in accordance with SFLC Std Spec 5100. Submit a CFR.

TABLE 1 – SYSTEM LOCATIONS

VENTILATION SYSTEM	TYPE
3-157-2	Exhaust
2-208-1	Supply
1-16-1	Exhaust
1-25-2	Recir
1-44-2	Supply
1-46-2	Exhaust
1-49-1	Recir
1-121-1	Recir
1-211-2	Exhaust
01-104-2	Supply
02-53-1	Supply
02-55-2	Recir
02-56-1	Supply
02-58-2	Exhaust
02-75-1	Recir
02-79-2	Recir
02-84-2	Recir
02-107-1	Exhaust
02-108-1	Supply
02-117-1	Recir
02-117-2	Recir

3.3.1 The Contractor must clean the ventilation systems listed in Table 1 in accordance with SFLC Std Spec 5100.

3.3.1.1 Clarification to SFLC Std Spec 5100 paragraph 3.4.2.2: The fan blades and fan motor housing must be cleaned to the same standard as the ducting, as defined in paragraph 3.4.2 of SFLC Std Spec 5100.

3.3.2 Prior to reassembling the vent systems, visually inspect the systems in the presence of the Coast Guard Inspector. Verify that the vent systems are clean and oil and build up free. The Contractor must use video probe equipment to allow viewing the internal surfaces of all vent ducting. Perform additional inspections as specified in SFLC Std Spec 5100 and submit CFR.

3.3.3 After cleaning, reassemble vent ducting using new gaskets and fasteners.

3.4 Notification. The Contractor must give written notification to the COR, 48 hours before starting ventilation cleaning work.

NOTE
Coast Guard personnel will operate all shipboard machinery and equipment.

3.5 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate the ventilation systems included in this work item to be in satisfactory operating condition. Submit a CFR.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 15: Commissary Hoist, Inspect and Service

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect and service the Commissary Hoist system.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 123-001, Rev C, Dumbwaiter TRK & FDN FR 165

Coast Guard Drawing 901 WMEC 572-001, Rev G, Svce Hoist Instl A&D

Coast Guard Drawing 905 WMEC 801-018, Rev G, Booklet of General Notes and Details

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 2721, May 2016, SWBS 572, Dumbwaiter

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 3020 (SFLC Std Spec 3020), 2022, Overhaul AC Electrical Motors

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2022, Auxiliary Machinery Systems

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph:

- 3.2. Table 2, Task 1 (Operate and Inspect - initial).

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, (Interferences).

3.1.5 Special requirements for various components. If a repair task specified in paragraph 3.2 below, or any related subsequent repairs associated with this work item, requires work to be performed on one or more of the special component types listed in the first column of Table 1 below, the Contractor must perform all work on those components in accordance with the corresponding Appendix and paragraph of SFLC Std Spec 5000 listed in the second column of Table 1 below. The Contractor must refer to the Coast Guard drawings listed in Section 2 (References) for guidance in accomplishing this work item.

TABLE 1 – COMPONENTS WITH SPECIAL REQUIREMENTS

COMPONENT	APPENDIX & PARAGRAPH
Fastener assemblies	D2.1
Wire rope assemblies	D2.2
Brakes and clutches	D2.3
Open gearing and gear reducers	D2.4

3.2 Repairs or other maintenance. The Contractor must perform the tasks listed in Table 2 below in accordance with Coast Guard Drawing 901 WMEC 572-001 and TP 2721; and using SFLC Std Spec 5000 as guidance. Refer to paragraph 3.2 of SFLC Std Spec 5000 for definitions of task types (e.g. "Service and Inspect"). Submit CFR(s) for all tasks unless otherwise specified in Other column, to document all inspections, to recommend additional repairs, and to document completed maintenance and repair tasks.

TABLE 2 – MAINTENANCE REQUIREMENTS

				ADDITIONAL REQUIREMENTS	
#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND/OR PARA. FROM SFLC STD SPEC 5000	OTHER
1	Operate and Inspect (initial)	1	Commissary Hoist	3.2.1 (Operate and inspect)	Submit a CIR.
2	Operational Test	1	Carriage Broken Rope Safety Device Assembly	N/A	Test in accordance with referenced Coast Guard TP. Accomplish after Service and Inspect task
3	Weight Test	1	Commissary Hoist	3.2.8 (Operational and weight testing)	Weight test in accordance with referenced Coast Guard TP. Static Load Test Weight: 2000 (+100 -0)

				ADDITIONAL REQUIREMENTS	
#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND/OR PARA. FROM SFLC STD SPEC 5000	OTHER
					lbs. Dynamic Load Test Weight: 1500 (+75 -0) lbs. Rated Load Test Weight: 1000 (+50 -0) lbs.
4	Fabricate and Install	1	Label plates	B-2.9 (Label plates)	System: Commissary Hoist Static Load Test Weight: 2000 lbs. Dynamic Load Test Weight: 1500 lbs Rated Load Test Weight: 1000 lbs
5	Service and Inspect	1	Head Sheave Assembly	3.2.2 (Service and inspect)	N/A
6	Service and Inspect	1	Deflection Sheave Assembly	3.2.2 (Service and inspect)	N/A
7	Service and Inspect	2	Carriage Guide Roller and Side Roller Assemblies	3.2.2 (Service and inspect)	N/A
8	Service and Inspect	1	Carriage Sheave Assembly	3.2.2 (Service and inspect)	N/A
9	Service and Inspect	1	Carriage Broken Rope Safety Device Assembly	3.2.2 (Service and inspect)	N/A
10	Service and Inspect	1	Slack Rope Safety Device Assembly	3.2.2 (Service and inspect)	N/A
11	Service and Inspect	1	Wire Rope Drum and Drum Shaft Assembly	3.2.2 (Service and inspect)	N/A
12	Service and Inspect	1	Sprockets and Sprocket Shaft Assemblies, Roller Chain, and Chain Tension Assembly	3.2.2 (Service and inspect)	N/A
13	Service and Inspect	1	Electric Disk Brake	D-2.3 (Brakes and clutches)	Renew friction discs.
14	Service and Inspect	1	Main Deck Door Assembly	3.2.2 (Service and inspect)	N/A
15	Service and Inspect	1	Main Deck Control Station	3.2.2 (Service and inspect)	N/A
16	Service and Inspect	1	Main Deck Door Switch Assembly	3.2.2 (Service and inspect)	N/A
17	Service and Inspect	1	Hold Level Door Assembly (Currently DNE)	3.2.2 (Service and inspect)	N/A
18	Service and	1	Hold Level Deck	3.2.2 (Service	N/A

				ADDITIONAL REQUIREMENTS	
#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	APPENDIX AND/OR PARA. FROM SFLC STD SPEC 5000	OTHER
	Inspect		Control Station	and inspect)	
19	Service and Inspect	1	Hold Level Deck Door Switch Assembly	3.2.2 (Service and inspect)	N/A
20	Service and Inspect	All	Guide Rail Assemblies	3.2.2 (Service and inspect)	N/A
21	Service and Inspect	1	Carriage Assembly	3.2.2 (Service and inspect)	N/A
22	Service and Inspect	1	Up Over Travel Limit Switch Assembly	3.2.2 (Service and inspect)	N/A
23	Service and Inspect	1	Down Stop Limit Switch Assembly	3.2.2 (Service and inspect)	N/A
24	Service and Inspect	1	Up Stop Limit Switch Assembly	3.2.2 (Service and inspect)	N/A
25	Service and Inspect	1	Slack Rope Safety Device Limit Switch Assembly	3.2.2 (Service and inspect)	N/A
26	Service and Inspect	1	Worm Gear Reducer	D-2.4 (Open gearing and gear reducers)	N/A
27	Service and Inspect	1	Electric Motor	N/A	Perform initial inspection only in accordance with SFLC Std Spec 3020 section 3.3.
28	Service and Inspect	1	Electric Motor Controller Assembly	N/A	Clean interior of controller cabinet. Inspect interior components for burnt spots, fraying, overheating, damage, loose connections. Tighten any loose connections.
29	Renew	1	Wire Rope Assembly	D-2.2 (Wire rope assemblies)	Submit pull test certification documents supplied with wire rope assembly to COR.
30	Groom and Lubricate	1	Commissary Hoist Assembly	3.2.6 (Groom and lubricate)	N/A
31	Operational test - final	1	Commissary Hoist	3.2.1 (Operate and Inspect)	N/A

4. NOTES

This section is not applicable to this work item.

WORK ITEM 16: Anchor Chains and Ground Tackle, Inspect and Repair

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to perform inspection, preservation and repairs to the anchor chain assemblies (port and starboard), including associated ground tackle.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 581-001, Rev G, Anchor Handling A & D

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

OTHER REFERENCES

American Bureau of Shipping (ABS) Approved Chain, Accessory and Bar Manufacturing Facilities List, Oct 2016

Federal Specification (Fed Spec) RR-C-271, Rev E, Mar 2016, Chains and Attachments, Carbon and Alloy Steel

MIL-DTL-23549, Sep 2016, Grease, General Purpose

MIL-C-24633, Oct 2014, Chain, Stud Link, Anchor, Low Alloy Steel, Flash Butt Welded

The Society for Protective Coatings (SSPC)/NACE International (NACE) Joint Surface Preparation Standard SSPC-SP 6/NACE No. 3, 2007, Commercial Blast Cleaning

The Society for Protective Coatings (SSPC) Surface Preparation Specification No. 1 (SSPC-SP 1), 2016, Solvent Cleaning

The Society for Protective Coatings (SSPC)/NACE International (NACE) Joint Surface Preparation Standard SSPC-SP 10/NACE No. 2, 2007, Near-White Metal Blast Cleaning

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph(s):

- 3.2.3 (Inspections).

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, (Interferences). Known interferences include, but are not limited to the following:

- Port and starboard anchors.

3.2 Required work particulars. The Contractor must use the chain description (see 4.1 (Component characteristics)) and Coast Guard Drawing 901 WMEC 581-001 for guidance, for accomplishing the tasks specified below for each anchor chain assembly and associated ground tackle.

3.2.1 Removal. Disconnect and remove the anchor and anchor chain assembly and fake out the chain on the drydock floor or in a suitable location, to facilitate the performance of the tasks specified herein.

NOTE

The use of Coast Guard equipment (e.g. anchor windlass) for off-loading and on-loading of anchors and anchor chain is authorized. Coast Guard personnel will operate all Government equipment.

3.2.2 Pre-inspection surface preparation.

3.2.2.1 Pressure wash the anchors, anchor chains and other components with fresh water and a fire hose to remove any mud, salts, or other contaminants adhering to the chain.

3.2.2.2 Prepare the anchors and all shots of chain (including swivel shot and pelican hooks) to a "Commercial Blast" standard, in accordance with SSPC-SP 6.

3.2.2.3 Prepare the pelican hook foundations and cats paw chain stoppers to a "Near White Blast" in accordance with SSPC-SP 10/NACE No.2.

3.2.3 Inspections. Perform the following inspections and submit a CIR:

3.2.3.1 Visual inspection. Visually inspect the following:

- All swivels, outboard swivel shots, pelican hook and shackles, and cats paw (if applicable).
- Entire length of Shot 1, Shot 2, Shot n-1, and Shot n.
- Hawse pipe deck bolsters and hawse pipe covers.
- Chain pipe deck bolsters and chain pipe covers.

- Anchor shackles and pins.

NOTES

1. For the purpose of reference in this item, the shots will be referred to by numbers. Mark each shot with a removable tag. Moving inboard from the anchor, the shots will be referred to as follows: ANCHOR, Shot 1, Shot 2, Shot 3...Shot n-2, Shot n-1, Shot n, and BITTER END. These shot numbers are designated in the order existing prior to work, and will not change - although the shot order itself will change.

2. Number n in the paragraph above is equal to the number of shots per chain.

3. Hawse and chain pipe bolster and cover inspections must be performed with the anchor chain removed.

3.2.3.2 Measurements – and condemning criteria.

3.2.3.2.1 Determine the suitability for continued service of the anchor chain assembly, by checking wire diameter dimension, using information provided in Table 1 (Dimensions for Condemning Anchor Chain) as guidance, as applicable. Gage the wire diameter of ten links per shot of chain, ensuring that each link must be separated by approximately 10% of the shot length.

NOTE

For commercial grade chain, use 90 percent of the link diameter for condemning criteria.

3.2.3.2.2 If a Change Request has been released, perform six-link dimension, as specified in "Note 2" in Table 1 (Dimensions for Condemning Anchor Chain).

NOTE

Change Request will only be authorized to perform six link inspection only if ship's force has reported that the anchor chain has been jumping the capstan.

TABLE 1 - DIMENSIONS FOR CONDEMNING ANCHOR CHAIN

SIZE OF CHAIN (INCHES)	90 PERCENT OF LINK DIAMETER(1) (INCHES)	SIX-LINK DIMENSION(2) (INCHES)
1	0.90	26-3/4
1-1/8	1.013	30-1/16
1-1/4	1.125	33-7/16
1-3/8	1.238	36-3/4
1-1/2	1.35	40-1/8
1-5/8	1.463	43-7/16
1-3/4	1.575	46-13/16
1-7/8	1.688	50-1/8
2	1.80	53-1/2
2-1/8	1.913	56-13/16
2-1/4	2.025	60-3/16
2-3/8	2.138	63-1/2
2-1/2	2.25	66-7/8
2-5/8	2.363	70-3/16
2-7/8	2.475	73-9/16
3	2.558	76-7/8

1. Use a micrometer, caliper or GO/NO-GO gage* to check wire diameter dimension. Gage is to be made by Contractor/repair facility in accordance with the dimensions shown in Table 1 above. Check the diameters at right angles to the link. When measuring with a micrometer or caliper take one-half the sum of the two diameters as representing the line diameter.

2. Take six-link measurements with a load applied to the chain in order to take all slack out of the chain. Use a bar gauge to check the six-link dimension. When the gauge will not fit over six links, the chain has been stretched beyond allowable limit. Measure six links for the entire length of each shot, measuring from every third link.

***When using a GO/NO-GO gage, a failed check is to be verified by measuring with a micrometer or caliper. Measure the diameter at right angles and take one-half the sum of the two diameters as representing the link diameter. Take measurements on clean, bare metal.**

3.2.4 Detachable link assemblies maintenance.

NOTE

Detachable link components are not interchangeable.

3.2.4.1 Renew all detachable link taper pin hairpins and taper pin plugs.

3.2.4.2 Assemble detachable links, swivels and shackles. Coat all mating surfaces of detachable links with molybdenum disulfide grease (MIL-DTL-23549).

3.2.4.3 Change the relative position of the shots, as designated by the Coast Guard Inspector, to distribute the wear on the chain, ensuring that shots are rotated end for end upon reinstallation, as follows: ANCHOR, Shot 3... Shot n-2, Shot n-1, Shot n, Shot 1, Shot 2, BITTER END.

3.2.4.4 Renew shackle at bitter end of chain.

3.2.5 Chain renewal. If a Change Request has been released, renew designated section of chain with material conforming to MIL-C-24633. See paragraph 4.2 (Supply Information).

3.2.6 Surface coating. Using the coating system specified for "Anchor/Anchor Chain" in SFLC Std Spec 6310, Appendix A (Cutters and Boats Exterior Painting Systems), do the following:

3.2.6.1 Perform solvent cleaning of all surfaces specified to be coated (see below), in accordance with SSPC-SP 1.

3.2.6.2 Coat the anchors white (17925).

3.2.6.3 Color-coat the following shots:

- Shot n-1: Black (17038).
- Shot n: Black (17038).
- Shot 1: Yellow (13538).
- Shot 2: Red (11105).

3.2.6.4 Color coat/mark all detachable links, adjacent chain links, shackles, and swivels as follows and in accordance with attached Figure "Painting and Markings On Mooring Chain".

3.2.6.4.1 Remove all existing stainless steel wire prior to the installation of new markings.

3.2.6.4.2 Paint first shot detachable link (15 fathom mark) red (11105).

3.2.6.4.3 Paint second shot detachable link (30 fathom mark) white (17925).

3.2.6.4.4 Paint third shot detachable link (45 fathom mark) blue (15182).

3.2.6.4.5 Repeat pattern of red, white and blue for all subsequent detachable links up to the next to last shot.

3.2.6.4.6 The first link on each side of the 15 fathom detachable link must be painted white (17925). The first link at each side of the detachable link must also be marked by one turn of stainless steel wire around the stud. The first two links on each side of the 30 fathom (second shot) detachable link must be painted white (17925). The second link at each side of the detachable link must also be marked by two turns of wire around the stud. Repeat pattern for all subsequent shots up to the next to last shot.

3.2.6.5 Preserve the following pieces of ground tackle using the coating system specified for "Fittings" in SFLC Std Spec 6310, Appendix A (Cutters and Boats Exterior Painting Systems). Color-coat as follows:

3.2.6.5.1 Pelican hooks and pelican hook foundations: Black (17038).

3.2.6.5.2 Cats-paw chain stoppers: Spar (10371).

3.2.6.5.3 Hawse pipe deck bolsters and hawse pipe covers: Spar (10371).

3.2.6.5.4 Chain pipe deck bolsters and chain pipe covers: Spar (10371).

3.2.7 Chain restowing. When directed by the Coast Guard Inspector, reassemble the anchor and anchor chain; restow the anchor chain in its chain locker, free for running, with the anchor properly housed and secured with the chain stopper set.

3.2.7.1 Lead the bitter ends down and through the deck bolts in the chain locker and secure to the chain locker pad eye.

3.2.7.2 Back out the chains to ensure the chain stopper is set properly.

3.2.7.3 Ensure that:

- the bitter ends of the chain are securely fastened in the chain locker with new bitter end shackles, conforming to Fed Spec RR-C-271, Type IV-A, Class 3, Grade A.
- the ground tackle is kept ready for use.
- nothing interferes with a readiness to veer or slip the anchors.
- the detachable links located just inboard of the riding stopper and the detachable link tool set are readily accessible for use in slipping the anchor chains in an emergency.
- the anchor has a crown buoy attached, with sufficient length of rope to facilitate indicating the depths of water in which moored.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.3 Operational test, post repairs. After completion of work, the Contractor must, in the presence of the Coast Guard Inspector, thoroughly test the anchor chain assembly to prove satisfactory operating condition, by releasing the chain stoppers and lowering both anchors under power to the drydock floor (or waterline, as applicable), letting out one additional shot, and raising again to ensure chains run on the wildcats without binding.

3.3.1 Correct any discrepancies, house the anchors and set the anchor chain pelican hooks.

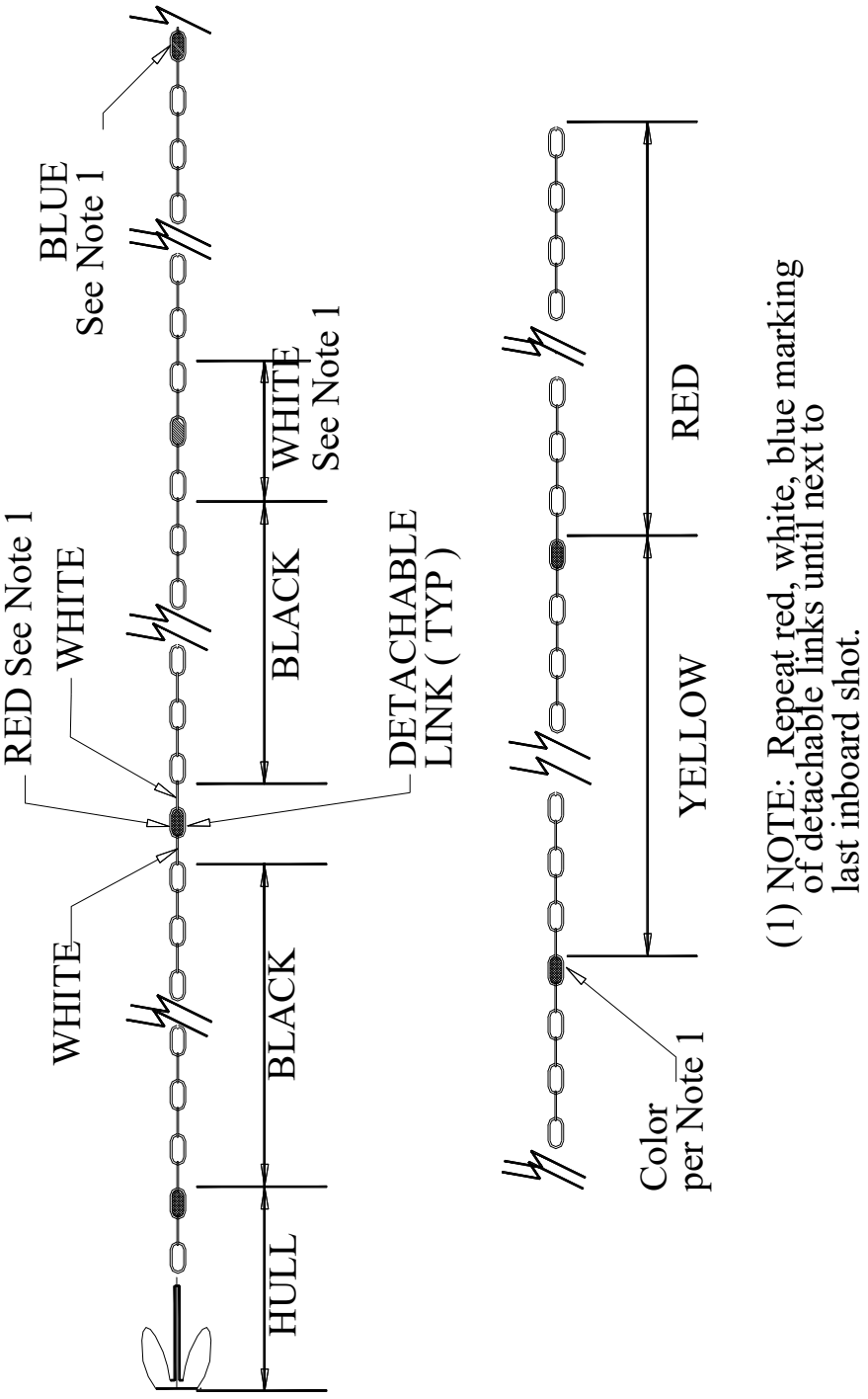
3.3.2 Submit a CFR.

3.4 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces to match existing adjacent surfaces, in accordance with SFLC Std Spec 6310, (Touch-ups and minor coating repairs).

4. NOTES

4.1 Component characteristics. Each anchor weighs 4,000 pounds and each chain is 1-1/2 inch Die-Lock, with a length of 8 shots. All shots of anchor chain include the corresponding detachable link(s).

PAINTING AND MARKINGS ON MOORING CHAIN



(1) NOTE: Repeat red, white, blue marking of detachable links until next to last inboard shot.

4.2 Supply information. An ABS approved list of chain manufacturers may be found at the following website: http://ww2.eagle.org/en/rules-and-resources/approved-manufacturers-and-products.html

WORK ITEM 17: Anchor Windlass, Overhaul (OPTIONAL)

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to overhaul the port and starboard anchor windlasses.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 185-004, Rev E, Anchor Windlass Fdn

Coast Guard Drawing 901 WMEC 581-001, Rev G, Anchor Handling A & D

Coast Guard Drawing 901 WMEC 581-004, Rev J, Anchor Windlass Arrangement and Details

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 2721, May 2016, Manufacturer's Instruction Book - SWBS 581, Section A, Windlass, Anchor

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 3020 (SFLC Std Spec 3020), 2022, Overhaul AC Electrical Motors In-Shop

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2022, Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

OTHER REFERENCES

MIL-PRF-17672E, Oct 2012, Hydraulic Fluid, Petroleum, Inhibited

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraphs:

- 3.2 Work particulars, Task 1
- 3.2 Work particulars, Task 4
- 3.2 Work particulars, Task 5
- 3.2 Work particulars, Task 7
- 3.2 Work particulars, Task 8
- 3.2 Work particulars, Task 9
- 3.2 Work particulars, Task 10
- 3.2 Work particulars, Task 11
- 3.3 Operational and Weight Test

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, (Interferences). Known interferences include, but are not limited to the following:

- Anchor
- Anchor chain

3.2 Work particulars. The Contractor must perform the work described herein in accordance with SFLC Std Spec 5000 (see paragraph 4.1 (Paragraph number relationships)), SFLC Std Spec 3020, TP 2721, and using Coast Guard Drawings 901 WMEC 185-004, 901 WMEC 581-001 and 901 WMEC 581-004 as guidance.

TABLE 1 - TASKS

#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	REQUIREMENTS	
				APPENDIX PARA. FROM SFLC STD SPEC 5000	ADDITIONAL REQUIREMENTS/CLARIFICATIONS
1	Operate and Inspect	2	Anchor Windlass and Capstan Assembly	3.2.1 (Operate and Inspect)	Accomplish prior to repairs. Submit (CIR).
2	OP and Weight Test	2	Anchor Windlass and Capstan Assembly	3.2.8 (Operational and weight testing) B2.5 (Anchor windlass) B2.6 (Capstans)	Accomplish after repairs. The following tests are required: **Static Load Test** (Conditional; see 3.3.1) **No Load Test** (see 3.3.2) **Load Test (Capstan)** (see 3.3.3) **Wildcat Operational Test** (B2.5.2 of Std Spec 5000) Submit CFR. If pier restrictions prohibit testing IAW Std Spec 5000, Contractor must submit a

#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	REQUIREMENTS	
				APPENDIX PARA. FROM SFLC STD SPEC 5000	ADDITIONAL REQUIREMENTS/CLARIFICATIONS
					CFR for an alternative method of proof testing.
3	Fabricate and Install	2	Label plate	B2.9 (Label plates)	System: Anchor Windlass
4	Service and Inspect; Preserve	2	Motor Speed Reducer (210 and 270A only) and Main Reduction Gear Box	D2.4 (Open gearing and gear reducers)	Submit A CIR.
5	Disassemble and Inspect; Preserve	2	Main shaft assembly	3.2.3 (Disassemble and inspect) 3.2.4 (Preservation)	Submit A CIR.
6	Service and Inspect	2	Electric Motor	N/A	Perform initial inspection in accordance with SFLC Std Spec 3020 section 3.3. Lubricate motor bearings. Lubricate motor/speed reducer coupling (210 only).
7	Disassemble and Inspect	2	Disc Brake Assembly	D2.3 (Brakes and clutches) D2.3.1	Submit A CIR. Renew friction discs and stationary discs.
8	Disassemble and Inspect	2	Band Brake Assembly	D2.3 (Brakes and clutches)	Submit A CIR. Renew band brake lining.
9	Disassemble and Inspect; Preserve	2	Band Brake Hand-Wheel, Bevel Gear Stand (WMEC 210 and WMEC 270 only), and Linkage Assembly	3.2.3 (Disassemble and inspect) 3.2.4 (Preservation)	Submit A CIR.
10	Disassemble and Inspect; Preserve	2	Clutch Mechanism	3.2.3 (Disassemble and inspect) 3.2.4 (Preservation)	Submit A CIR.
11	Disassemble and Inspect; Preserve	2	Local Windlass and Capstan Controller	3.2.3 (Disassemble and inspect) 3.2.4 (Preservation)	Submit A CIR.
12	Renew	All	Bearings and Gaskets/Seals	N/A	N/A
13	Renew	All	Windlass Foundation Sealant	N/A	3M #101 (Black) or equal. Accomplish boundary tightness test in accordance with paragraph 3.4 of this Work Item.
14	Renew	All	100% of fasteners that attach each windlass assembly to the deck	D2.1 (Fastener assemblies)	Torque fasteners using TP 2721 as guidance.
15	Preserve; NDE	2	Anchor Windlass Foundation	N/A	SFLC Std Spec 6310, Appendix A, “Machinery, Deck” Option IV Finish coat color: Select to match

#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	REQUIREMENTS	
				APPENDIX PARA. FROM SFLC STD SPEC 5000	ADDITIONAL REQUIREMENTS/CLARIFICATIONS
					surrounding surfaces. Weld joints to NDE: All foundation welds.
16	Groom and Lubricate	2	Anchor Windlass Assembly	3.2.6 (Groom and lubricate)	Lubricate Anchor Windlass assembly using TP 2721 as guidance.
17	Clean and Inspect	All	Wildcat Bushings	N/A	Inspect upon disassembly of main shaft assembly (270 and 210B Model C18L137E windlasses only. Bushings are included in overhaul kit for all other windlasses)
18	Flush	All	Wildcat Bushings	N/A	Flush wildcat bushings in accordance with 3.5 below.

3.3 Operational and Weight Test. When referred to in Table above, the Contractor must accomplish the following procedures for testing. If the Cutter's deck fittings will be used in the rigging of test weights, ensure that Work Item "Towing Bitts, Chocks, and Fairleads; Inspect and Test" is accomplished prior to rigging test weights. Contractor must submit, via CIR, a Critical Lift Plan that includes arrangements/geometries of weight handling equipment (and all other data required by any pertinent local instructions) for approval.

3.3.1 Static Load Test. If a Change Request has been approved for repair or modification of structural members, the anchor windlass assembly must be subjected to a static test by placing a loop of line over the capstan head at midheight and 90 degrees to its axis to produce bending moment only. Using the capstan head as a bitt, a load of 67,500 lbs must be applied and held for a minimum of 10 minutes. Do not operate Anchor Windlass during this test, and do not use the Anchor Windlass to rig test weight into place. Remove the test weight. Verify no permanent deformation or damage to any components.

3.3.2 No Load Test. The anchor windlass assembly must be run without load at each rated speed for ten minutes in each direction to determine that no abnormal heat, wear or noise develops. Note, when brake repair has been accomplished an inspection of brake assembly is to be accomplished after no load test to ensure proper installation.

3.3.3 Load Test (Capstan). Conduct capstan load test by warping the vessel in accordance with SFLC Std Spec 5000 paragraph B2.6. The Contractor may, if pier restrictions prevent capstan operational test in accordance with SFLC Std Spec 5000 paragraph B2.6, perform one of the following instead of warping the vessel:

3.3.3.1 Conduct rated load test by pulling against a dynamometer and bitt. Tail the line until the dynamometer registers the required pull of 10,000 lbs without stalling the capstan.

3.3.3.2 Lash 6,000 lbs from the anchor (to make up the difference between Capstan Rated Load and the weight of the Anchor), and perform SFLC Std Spec 5000 paragraph B2.5.2 "Wildcat Operational Test" to simulate rated load on capstan.

3.4 Boundary test, generic. The Contractor must verify the integrity of all boundaries affected by this work item using one of the methods described in SFLC Std Spec 0740, Appendix C. Submit a CFR. Ensure joint between windlass mounting flange and foundation is watertight.

3.5 Wildcat bushing flush. The Contractor must flush port and stbd anchor windlass wildcat bushings as follows:

3.5.1 Remove a wildcat grease fitting. Establish containment/collection measures to capture flushed grease and hydraulic fluid.

3.5.2 Pump hydraulic fluid, 2135-TH per MIL-PRF-17672 (or equal) into the grease port.

3.5.3 With the wildcat disengaged, operate the anchor windlass at various speeds while continuing to pump hydraulic fluid into the grease port until grease runs from the bushing.

3.5.4 Inspect the discharged grease and hydraulic fluid for bronze particles. Submit a CFR.

4. NOTES

4.1 Paragraph number relationships. The appendix and paragraph number for each appendix and paragraph listed in Section 3 relates directly to the identical appendix and sub-paragraph number in SFLC Std Spec 5000.

4.2 Overhaul kit. An overhaul kit is not available for this model anchor windlass.

WORK ITEM 18: Towing Bitts, Chocks, and Fairleads; Inspect and Test

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to inspect the below designated class-applicable mooring and towing deck fittings:

270A CLASS DECK FITTINGS

DRAWING ITEM NO.	DESCRIPTION	QTY
1	10” Bitt Chock (steel)	11
2	18” Cleat (steel)	6
3	6-1/2” x 14” Chock (steel)	15
4	6” x 12” Chock (steel)	1

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 582-001, Rev F, Mooring & Towing Ftgs – A&D

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, (Interferences).

NOTE
Periodic load test of the bitts, cleats and chocks is not required.

3.2 Inspection particulars. The Contractor must accomplish the following for each of the class-applicable components designated in paragraph 1.1 (Intent) herein, using Coast Guard Drawing 901 WMEC 582-001 as guidance:

3.2.1 Visual. Visually inspect the component for excessive damage, wear, corrosion, coating condition, and any coating failures. Submit a CFR.

3.2.2 NDI. Perform NDI of the component, associated welds (including but not limited to deck mounting and foundation welds), and applicable mounting hardware in accordance with SFLC Std Spec 0740, Appendix C. Submit a CFR.

3.3 Touch-up preservation. The Contractor must prepare and touch-up coat all disturbed surfaces to match existing adjacent surfaces, in accordance with SFLC Std Spec 6310, (Touch-ups and minor coating repairs).

4. NOTES

This section is not applicable to this work item.

WORK ITEM 19: Warping Capstan, Overhaul

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to overhaul the warping capstan assembly.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	**Electric brake	PN: J199133	1 ea.	
N	Oil seal	PN: J17E0078	1 ea.	
N	**Thrust bearing assy	PN: J05A0269	1 ea.	
N	**Spherical roller bearing	PN: J05A0270	1 ea.	
N	Gasket cork	PN: J05C0080	1 ea.	
N	**Shim	PN: JR1406903	1 ea.	
N	**Roller bearing	PN: J056A0021	1 ea.	
N	**Tapered roller bearing	PN: J05A0268	1 ea.	
N	**Grease fitting	PN: JA2001402	1 ea.	
N	**Gearbox vent	PN: J11C0033	1 ea	
N	**Locknut	PN: J41NTE-164	1 ea	
N	**Lock washer	PN: J199132	1 ea	
N	**Spacer	PN: J199135	1 ea	
N	**Motor A/C	NSN: 6105-01-685-6254 PN: 15A00117-000	1 ea.	$28,771.00

****New or refurbished equipment that the Government may provide for installation in place of existing equipment.**

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 185-003, Rev C, Capstan Foundation

Coast Guard Drawing 901 WMEC 582-002, Rev F, Capstan Arrangement and Details

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 2721, May 2016, SWBS 582, Section A, Technical Manual for Warping Capstan Model No. 3404-EC

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 3020 (SFLC Std Spec 3020), 2022, Overhaul AC Electrical Motors In-Shop

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2022, Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph:

- 3.2 Work particulars, Task 1
- 3.2 Work particulars, Task 4
- 3.2 Work particulars, Task 5

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Work particulars. The Contractor must perform the work described herein in accordance with SFLC Std Spec 5000 (see paragraph 4.1 (Paragraph number relationships)), SFLC Std Spec 3020, TP 2721 and as shown on Coast Guard Drawings 901 WMEC 185-003 and 901 WMEC 582-002.

TABLE 1 – TASK TABLE

#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	REQUIREMENTS	
				APPENDIX PARA. FROM SFLC STD SPEC 5000	ADDITIONAL REQUIREMENTS/ CLARIFICATIONS
1	Operate and Inspect	1	Warping Capstan Assembly	3.2.1 (Operate and Inspect)	Accomplish prior to repairs. Submit (CIR).
2	Op and Weight Test	1	Warping Capstan Assembly	3.2.8 (Operational and weight testing) B2.6 (Capstans)	Accomplish after repairs. The following tests are required: **Static Load Test** (Conditional;

#	TASK TYPE	QTY	COMPONENT OR ASSEMBLY	REQUIREMENTS	
				APPENDIX PARA. FROM SFLC STD SPEC 5000	ADDITIONAL REQUIREMENTS/ CLARIFICATIONS
					see 3.3.1) **No Load Test** (see 3.3.2) **Rated Load Test** (see 3.3.3) **Torsion Test** (see 3.3.4): 10,000 lbs Submit CFR. If pier restrictions prohibit testing IAW Std Spec 5000, Contractor must submit a CFR for an alternative method of proof testing.
3	Fabricate and Install	1	Label plate	B2.9 (Label plates)	System: Capstan
4	Service and Inspect; Preserve	1	Gear Box and Motor Speed Reducer	D2.4 (Open gearing and gear reducers)	Submit a CIR.
5	Disassemble and Inspect; Preserve	1	Capstan Head shaft assembly	3.2.3 (Disassemble and inspect) 3.2.4 (Preservation)	Submit a CIR.
6	Service and Inspect	1	Electric Motor Assembly	Perform per SFLC Std Spec 3020	Perform initial inspection in accordance with SFLC Std Spec 3020 section 3.3. Lubricate motor bearings.
7	Disassemble and Inspect	1	Brake Assembly	D2.3 (Brakes and clutches)	Renew friction disks and stationary disks.
8	Renew	All	Seals, Bearings, Shims, Grease Fitting, Gearcase vent	N/A	
9	Renew	All	Capstan Foundation Sealant	N/A	3M #101 (Black) or equal. Accomplish boundary tightness test in accordance with paragraph 3.4 of this Work Item.
10	Renew	All	100% of fasteners attaching capstan assembly to foundation	D2.1 (Fastener assemblies)	Torque fasteners using TP 2721 as guidance.
11	Preserve; NDE	1	Warping Capstan Assembly and Foundation	N/A	SFLC Std Spec 6310, Appendix A, “Machinery, Deck” Option IV Finish coat color: Select to match surrounding surfaces. Weld joints to NDE: All foundation welds.
12	Groom and Lubricate	1	Warping Capstan Assembly	3.2.6 (Groom and lubricate)	Lubricate Capstan assembly using TP 2721 as guidance.

3.3 Operational and Weight Test. When referred to in Table above, the Contractor must accomplish the following procedures for testing. If the Cutter's deck fittings will be used in the rigging of test weights, ensure that Work Item "Towing Bitts, Chocks, and Fairleads; Inspect and Test" is accomplished prior to rigging test weights.

3.3.1 Static Load Test. If a Change Request has been approved for repair or modification of structural members, the capstan must be subjected to a static test by placing a loop of line over the capstan head at midheight and 90 degrees to its axis to produce bending moment only. Using the capstan head as a bitt, a load of 67,500 lbs must be applied and held for a minimum of 10 minutes. Do not operate Capstan during this test, and do not use the Capstan to rig test weight into place. Remove the test weight. Verify no permanent deformation or damage to any components.

3.3.2 No Load Test. The capstan must be run without load at each rated speed for ten minutes in each direction to determine that no abnormal heat, wear or noise develops. Note, when brake repair has been accomplished an inspection of brake assembly is to be accomplished after no load test to ensure proper installation.

3.3.3 Rated Load Test. Conduct capstan load test by warping the vessel in accordance with SFLC Std Spec 5000 paragraph B2.6. The Contractor may, if pier restrictions prevent capstan operational test in accordance with SFLC Std Spec 5000 paragraph B2.6, perform the following instead of warping the vessel:

3.3.3.1 Conduct rated load test by pulling against a dynamometer and bitt. Tail the line until the dynamometer registers the required pull of 10,000 lbs without stalling the capstan.

3.3.4 Torsion Test. With the capstan rigged as for developing normal line pull each capstan brake must be subject to a static test for at least 10 minutes. The load must be applied using several turns of line around the head to produce a torque with the capstan shaft as the axis. The brake must hold the load. The required torsional load may be generated using chain falls rigged to cutter's bitts or using weights rigged to a crane on the pier or other rigging arrangements as approved by the COR.

3.4 Boundary test, generic. The Contractor must verify the integrity of all boundaries affected by this work item using one of the methods described in SFLC Std Spec 0740, Appendix C. Submit a CFR.
Ensure joint between warping capstan mounting flange and foundation is watertight.

4. NOTES

4.1 Paragraph number relationships. The appendix and paragraph number for each appendix and paragraph listed in Section 3 relates directly to the identical appendix and sub-paragraph number in SFLC Std Spec 5000.

WORK ITEM 20: Tanks, Aviation Fuel Storage, Preserve, Partial (OPTIONAL)

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and coat the following tank(s) in locations designated by the Coast Guard Inspector, up to the percentage of surface area indicated:

TABLE 1 – TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)	% OF TANK COATING TO REPAR
JP-5 Drain	4-186-1-J	219	20	33
JP-5 Overflow	4-186-2-J	610	40	33

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 542-1, Rev J, JP-5 System Diagram

Coast Guard Drawing 901 WMEC 542-2, Rev H, JP-5 System – A&D

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2022, Temporary Hull Accesses

OTHER REFERENCES

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C6183, 2013, Cork and Rubber Composition Sheet; For Aromatic Fuel And Oil Resistant Gaskets

3. REQUIREMENTS

3.1 General. The Contractor must refer to Coast Guard Drawings 901 WMEC 542-1 and 901 WMEC 542-2 for guidance.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, (Interferences). Known interferences include, but are not limited to the following:

- TLIs
- Piping
- Tight corners
- Tank contents.

3.2 Temporary access openings. Due to limited access to work areas, the Contractor may, with express permission of the KO (via submission of a CFR), cut access holes to facilitate accomplishment of the work specified herein. Perform all work required to open and close the access openings in accordance with SFLC Std Spec 8636.

3.3 Operational test – initial. Prior to commencement of work, the Contractor must witness Coast Guard Personnel perform an initial operational test of all designated tank TLIs to demonstrate existing operational condition. Submit a CFR.

3.4 Surface preservation. The Contractor must remove and retain the tank manhole cover(s). Prepare and coat the designated tank interior surfaces, using the system specified for "Tanks and Voids (Fuel/JP-5 Tanks, Service, Storage, Overflow, Drain, Option I or Option II)" in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Power tool clean all affected surfaces to “bare metal”, in lieu of using abrasive blasting, and feather edges of existing intact coating to the prepared areas, in order to provide a smooth transition with the new paint. Select finish/top coat color to match existing adjacent surfaces.

3.5 In-process quality control measures. The Contractor must abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for “critical-coated surfaces). Surfaces being preserved are considered “critical-coated surfaces”.

4. NOTES

4.1 Tank content removal. The Ship's force will pump down the tanks to the maximum extent possible with the installed pumping system.

4.2 Tank inspection. The Coast Guard Inspector will visually inspect the tank interior immediately prior to closing.

4.3 Refilling. After final visual inspection and tank closure, Ship's force will refill tank with JP-5 fuel. Recirculate the fuel until it is clear and bright and passes the MK I and MK III detector kit tests. Flush all lines, pipes, and fittings before placing the JP-5 system back in service.

WORK ITEM 21: Tanks, Ballast, Preserve, Partial (OPTIONAL)

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and coat part of the surfaces of the following tank(s) up to the percentage indicated, in locations designated by the Coast Guard Inspector:

TABLE 1 – TANKS

TYPE OF STRUCTURE	LOCATION	CAPACITY - 95% (GALLONS)	LOW SUCTION (GALLONS)	% OF TANK COATING REPAIR
Ballast	3-B-0-W	4,679	479	33
Ballast	4-75-1-W	1,327	145	33
Ballast	4-75-2-W	1,811	180	33
Ballast	4-103-1-W	7,960	670	33
Ballast	4-103-2-W	7,960	670	33
Ballast	4-169-0-W	3,239	282	33
Ballast	4-228-1-W	3,521	319	33
Ballast	4-228-2-W	3,521	319	33
Ballast	4-242-0-W	2,989	239	33

NOTE

Tanks also used for storing grey water – considered immediately dangerous to life and health (IDLH).

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 529-001, Rev N, Ballasting & Emer Bilge Drainage Sys Diagram

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2022, Temporary Hull Accesses

OTHER REFERENCES

ASTM International (ASTM) D1330, 2010, Standard Specification for Rubber Sheet Gaskets

3. REQUIREMENTS

3.1 General. The Contractor must accomplish the work specified herein for all tanks listed in paragraph 1.1 (Intent). The Contractor must refer to Coast Guard Drawing 901 WMEC 529-001 for guidance.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Temporary access openings. Due to limited access to work areas, the Contractor may, with express permission of the KO (via submission of a CFR), cut access holes to facilitate accomplishment of the work specified herein. Perform all work required to open and close the access openings in accordance with SFLC Std Spec 8636.

3.3 Surface preservation. The Contractor must remove and retain the manhole covers for all tanks listed under paragraph 1.1 (Intent); prepare and coat designated interior tank surfaces (see paragraph 1.1 (Intent)) using the system specified in “Tanks and Voids (Grey Water, Sewage, and CHT Tanks), Option II, in SFLC Std Spec 6310 Appendix B (Cutter Boat Interior Painting Systems). Power tool clean all affected surfaces to “bare metal”, in lieu of using abrasive blasting; and feather edges of existing intact coating to the prepared areas in order to provide a smooth transition with the new paint. Select top coat color to match existing adjacent surfaces.

3.4 In-process quality control measures. The Contractor must abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for “critical-coated surfaces). Surfaces being preserved are considered “critical-coated surfaces”.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 22: Chain Lockers, Preserve, Partial (OPTIONAL)

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to preserve 33% of the Chain Locker surfaces, as designated by the Coast Guard Inspector.

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 123-002, Rev D, Chain Lkr Bhds & Details

Coast Guard Drawing 901 WMEC 581-002, Rev C, Hawse & Chain Pipes

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2022, Temporary Hull Accesses

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not Applicable

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, (Interferences). Known interferences include, but are not limited to the following:

- Eductor strainer.
- Anchors and chains.

3.2 Temporary access openings. Due to limited access to work areas, the Contractor may, with express permission of the KO (via submission of a CFR), cut access holes to facilitate accomplishment of the work specified herein. Perform all work required to open and close the access openings in accordance with SFLC Std Spec 8636.

3.3 Surface preservation. The Contractor must notify the Coast Guard Inspector 48 hours prior to beginning surface preparation. Remove access cover(s) and prepare and coat 33% of the port and starboard chain locker surfaces, including the sump, bellmouths, hawse pipes, chain pipes, bottom grate and all structural members, as designated by the Coast Guard Inspector, using the system specified for "Chain Lockers", in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Select finish/top coat color to match existing adjacent surfaces.

3.4 Inspection. After surface preparation and before paint application, the Contractor must perform a visual inspection of all prepared surfaces and sounding tubes in accordance with Coast Guard Drawing901 WMEC 123-002 and 901 WMEC 581-002. Submit a CFR.

3.5 In-process quality control measures. The Contractor must abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for "critical-coated surfaces). Surfaces being preserved are considered "critical-coated surfaces".

4. NOTES

This section is not applicable to this work item.

WORK ITEM 23: Tanks, Dirty Oil and Waste, Preserve, Partial (OPTIONAL)

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and coat the following tank(s) in locations designated by the Coast Guard Inspector, up to the percentage of surface area indicated:

TABLE 1 – TANKS

TYPE OF TANK	LOCATION	*CAPACITY - 95% (GALLONS)	% OF TANK COATING REPAIR	LOW SUCTION (GALLONS)
Oily Waste Storage Tank	4-165-1-F	1,450	33	100
Waste Oil Holding	4-169-1-F	1,574	33	100

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 233-005, Rev Z, Piping Schematic (Fuel Oil System)

Coast Guard Drawing 901 WMEC 801-020, Rev G, Booklet of General Plans

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2022, Temporary Hull Accesses

OTHER REFERENCES

Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) C6183B, 2019, Cork and Rubber Composition Sheet; For Aromatic Fuel and Oil Resistant Gaskets

3. REQUIREMENTS

3.1 General. The Contractor must accomplish the following for all tanks listed in paragraph 1.1 (Intent). The Contractor must refer to Coast Guard Drawings 901 WMEC 233-005 and 901 WMEC 801-020 for guidance.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not Applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Temporary access openings. With express permission of the KO via submission of a CFR and in accordance with SFLC Std Spec 8636, the Contractor may perform all work required to cut open and close temporary access openings to facilitate accomplishment of the work specified herein.

3.3 Surface preservation. The Contractor must remove and retain the tank manhole cover(s). Prepare and coat the designated tank interior surfaces, using the system specified for "Tanks and Voids (Fuel/JP-5 Tanks, Service, Storage, Overflow, Drain, Option I or Option II)" in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Power tool clean all affected surfaces to “bare metal”, in lieu of using abrasive blasting, and feather the edges of existing intact coating to the prepared areas, in order to provide a smooth transition with the new paint.

3.4 In-process quality control. The Contractor must abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for “critical-coated surfaces).

4. NOTES

This section is not applicable to this work item.

WORK ITEM 24: Tanks, Potable Water, Preserve, Partial (OPTIONAL)

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to prepare and coat a portion of the surfaces of the following tank(s) as designated:

TABLE 1 - TANKS

TYPE OF TANK	LOCATION	CAPACITY - 95% (GALLONS)	% OF TANK COATING REPAIR	LOW SUCTION (GALLONS)
Potable Water	4-78-1-W	3,918	33	100
Potable Water	4-78-2-W	3,918	33	100
Potable Water	4-94-1-W	291	33	6

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 533-005, Rev J, H&C Potable Water System Mn Dk - A & D

Coast Guard Drawing 901 WMEC 533-006, Rev H, H & C Potable Water System, 01 Lvl & Abv A&D

Coast Guard Drawing 901 WMEC 533-007, Rev J, H & C Potable Water Blw Mn Dk

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 8636 (SFLC Std Spec 8636), 2022, Temporary Hull Accesses

OTHER REFERENCES

American National Standards Institute/NSF International (ANSI/NSF) 61, 2015, Drinking Water System Components - Health Effects

American National Standards Institute/American Water Works Association (ANSI/AWWA) C652, 2011, Disinfection of Water-Storage Facilities

3. REQUIREMENTS

3.1 General. The Contractor must refer to Coast Guard drawings 901 WMEC 533-005, 901 WMEC 533-006, and 901 WMEC 533-007 for guidance.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Temporary access openings. With express permission of the KO via submission of a CFR and in accordance with SFLC Std Spec 8636, the Contractor may perform all work required to cut open and close temporary access openings to facilitate accomplishment of the work specified herein.

3.3 In-process quality control measures. The Contractor must abide by all the safety, preservation, and quality control requirements specified in SFLC Std Spec 0000, paragraph 3.2.4.2 (In-process QC measures for “critical-coated surfaces”). Surfaces being preserved are considered “critical-coated surfaces”.

3.4 Surface preservation. The Contractor must remove and retain the tank manhole cover(s). Prepare and coat the designated tank interior surfaces, using the system specified for "Tanks and Voids (Potable Water Tanks)" in SFLC Std Spec 6310, Appendix B (Cutter and Boat Interior Painting Systems). Power tool clean all affected surfaces to “bare metal”, in lieu of using abrasive blasting; and feather edges of existing intact coating to the prepared areas, in order to provide a smooth transition with the new paint. Select finish/top coat color to match existing adjacent surfaces.

3.4.1 The Contractor must ensure heated air is used if necessary to maintain the proper temperature during application and cure. Ventilation must be a continuous airflow with a minimum of one complete air change every four (4) hours.

3.4.2 The Contractor must ensure tanks are cured in accordance with the manufacturer’s instructions for NSF/NEHC certification under the same conditions before being filled.

NOTE

Typical curing times are at least 7 days, and range up to 14 days or longer, depending on the paint selected, amount of surface area covered, and environmental conditions. See paint manufacturer's recommendations for specific application.

CAUTION

Verify application and cure requirements with paint manufacturer prior to paint purchase and application. Lack of attention to environmental conditions can adversely impact paint system cure, cause unnecessary contract time delays, and negatively impact crew health and vessel habitability when tanks are put back into service.

DO NOT assume paint Product Data Sheet to be accurate. Contact paint manufacturer directly to verify, as formulations change and new application information may be available.

3.4.3 The Contractor must ensure freshly painted potable water tanks are rinsed at least twice with freshwater before being disinfected and put into service.

4. NOTES

This section is not applicable to this work item.

WORK ITEM 25: Anchor Windlass, Replace

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to remove two (2) existing Anchor Windlasses and Wildcat Hand Brake, two (2) motor control panels, two (2) remote control j-boxes and associated cables. Replace with two (2) Anchor Windlasses and Wildcat Hand Brakes, two (2) motor control panels, two (2) remote control J-boxes. The work area(s) primarily include: Anchor Windlass Room and Bosn's Workstation (1-12-0-Q) and Forecastle weather deck.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
Y	Anchor Windlass Assembly Port (A-Class)	NSN: 3950-01-F25-7136 PN: VAW-1.50-30E-36-A-P	1 ea.	222,000.00
Y	Anchor Windlass Assembly Stbd (A-Class)	NSN: 3950-01-F25-7137 PN: VAW-1.50-30E-36-A-S	1 ea.	222,000.00
N	Motor Controllers	NSN: 6110-01-F25-7212 PN: ACS880-01-052A-5	2 ea.	5,000.00
N	Junction box enclosure with pushbutton control pendant.	NSN: 0000-XF-C39-6480 PN: SCE-10086ELJSS6	2 ea.	2,000.00
N	Cable, Electrical	NSN: 6145-01-F25-7423 PN: 37-103-312VFD	238 ft.	4,798.08

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 136-001, Rev N, 01 Level Pl & Fr Fwd 101

Coast Guard Drawing 901 WMEC 185-004, Rev E, Anchor Windlass Fdn

Coast Guard Drawing 901 WMEC 185-025, Rev -, Anchor Windlass Foundation & Structural Mods

Coast Guard Drawing 901 WMEC 302-008, Rev A, 270 WMEC S&A Anchor Windlass Controls, Wiring Diagram

Coast Guard Drawing 901 WMEC 320-013, Rev C, Anchor Windlass Elec Arr & Wiring Det "A" Class MEP.

Coast Guard Drawing 901 WMEC 512-005, Rev M, Vent, Mn Dk Fwd 47 A&D

Coast Guard Drawing 901 WMEC 581-001, Rev H, Anchor Handling A & D

Coast Guard Drawing 901 WMEC 581-004, Rev L, Anchor Windlass Arrangement and Details

Coast Guard Drawing 901 WMEC 581-005, Rev-, Port Anchor Windlass, WMEC 270 A-Class, 1-1/2-inch Chain, Vertical, Model VAW-1.50-30E-36-A-P, General Arrangement

Coast Guard Drawing 901 WMEC 581-006, Rev-, Stbd Anchor windlass, WMEC 270 A-Class, 1-1/2-inch Chain, Vertical, Model VAW-1.50-30E-36-A-S, General Arrangement

Coast Guard Drawing 901 WMEC 581-008, Rev -, Anchor Windlass Upgrade Installation

Coast Guard Drawing 901 WMEC 582-001, Rev F, Mooring & Towing Ftgs – A&D

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 2721, May 2016, Manufacturer's Instruction Book - SWBS 581, Section A, Windlass, Anchor

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 0850 (SFLC Std Spec 0850), 2022, General Requirements for Drawing Preparation

Surface Forces Logistics Center Standard Specification 3041 (SFLC Std Spec 3041), 2022, Shipboard Electric Cable Test

Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2022, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation

Surface Forces Logistics Center Standard Specification 5000 (SFLC Std Spec 5000), 2022, Auxiliary Machine Systems

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

OTHER REFERENCES

Electrical Plant Installation Standard Methods for Surface Ships and Submarines, MIL-STD-2003B-2020.

Recommended Practices for Electrical Installations on Shipboard IEEE STD-45 (Series)

Rules for Building and Classing Marine Vessels (ABS/MVR) – Part 4, Vessel Systems and Machinery

The Society for Protective Coatings (SSPC)/NACE International (NACE) Joint Surface Preparation Standard SSPC-SP 6/NACE No. 3, 2007, Commercial Blast Cleaning

The Society for Protective Coatings (SSPC)/NACE International (NACE), 2007, Joint Surface Preparation Standard SSPC-SP 10/NACE No.2, Near-White Blast Cleaning

Title 46, Code of Federal Regulations (46CFR), Subchapter J, Electrical Engineering

3. REQUIREMENTS

3.1 General

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph(s):

- 3.3.1.1 Foundation and Bolt Pattern verification

3.1.2 Tech Rep.

Not Applicable

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, (Interferences). Known interferences include, but are not limited to the following:

- Sheathing
- Bulkhead insulation
- Overhead insulation
- Ventilation ductwork
- Electrical wiring
- Electrical lighting

3.2 Removal.

3.2.1 Anchor Chains, remove and inspect. The Contractor must perform the following to remove and inspect the anchors and anchor chains, using Coast Guard Drawing 901 WMEC 581-001 as guidance:

3.2.1.1 Disconnect and remove the anchor and anchor chain assembly and fake out the chain on the drydock floor or in a suitable location, to facilitate the performance of the tasks specified herein. Submit a CFR

NOTE

The use of Coast Guard equipment (e.g. anchor windlass) for off-loading and on-loading of anchors and anchor chain is authorized. Coast Guard personnel will operate all Government equipment.

3.2.1.2 Inspections and condemning criteria. Determine the suitability for continued service of the anchor chain assembly by checking wire diameter dimension, using information provided in Table 1 (Dimensions for Condemning Anchor Chain) as guidance. Gage the wire diameter of ten links per shot of chain, ensuring that each link is separated by approximately 10% of the shot length.

NOTE

For commercial grade chain, use 90 percent of the link diameter for condemning criteria.

3.2.1.3 6-link dimension check. If a Change Request has been released, perform six-link dimension, as specified in "Note 2" in Table 1 (Dimensions for Condemning Anchor Chain).

TABLE 1 - DIMENSIONS FOR CONDEMNING ANCHOR CHAIN

SIZE OF CHAIN (INCHES)	90 PERCENT OF LINK DIAMETER(1)	SIX-LINK DIMENSION(2)

	(INCHES)	(INCHES)
1-1/2	1.35	40-1/8

1. Use a micrometer, caliper or GO/NO-GO gage* to check wire diameter dimension. Gage is to be made by Contractor/repair facility in accordance with the dimensions shown in Table 1 above. Check the diameters at right angles to the link. When measuring with a micrometer or caliper take one-half the sum of the two diameters as representing the line diameter.
2. Take six-link measurements with a load applied to the chain in order to take all slack out of the chain. Use a bar gauge to check the six-link dimension. When the gauge will not fit over six links, the chain has been stretched beyond allowable limit. Measure six links for the entire length of each shot, measuring from every third link.

***When using a GO/NO-GO gage, a failed check is to be verified by measuring with a micrometer or caliper. Measure the diameter at right angles and take one-half the sum of the two diameters as representing the link diameter. Take measurements on clean, bare metal.**

3.2.2 Anchor Windlass removals. The Contractor must disconnect and remove the existing port and starboard anchor windlass and associated components located on the 01-level and Anchor Windlass Room (1-12-0-Q) including wildcat handbrake assemblies, control panels (local and remote) and associated power and control cabling in accordance with Coast Guard Drawing 901 WMEC 320- and using Coast Guard Drawings 901 WMEC 581-001, 901 WMEC 581-004, 901 WMEC 581-008, and TP 2721 as guidance.

3.2.2.1 Retain anchor windlass components. Retain the anchor windlass components identified in Table 2 below and turn over to Coast Guard Property Administrator as Mandatory Turn-in items. Disassemble electric motor and speed reducer from each main windlass assembly using Coast Guard Drawing 901 WMEC 581-004, 901 WMEC 581-008, and TP 2721 as guidance. Disassemble disk brake from electric motor using TP 2721 as guidance. Upon removal from motor, dispose of disk brake assembly. Contractor must ensure all parts are properly packed and shipped as applicable and notify the Coast Guard item manager to receive items being returned to the Coast Guard warehouse.

TABLE 2 – 270A CLASS ANCHOR WINDLASS COMPONENTS TO BE REMOVED AND RETAINED

COMPONENT	DWG 901 WMEC 581-004 PC NUMBER	NSN/ACN	QTY
Anchor Windlass Assembly	1 (plus all internal components and external attachments assembled including:) Capstan head Wildcat Main shaft Planetary gear assembly Clutch mechanism Band brake assembly minus the handbrake control stand and handwheels and linkage Bull and pinion gear assembly Clutch handwheel	3950-01-F25-7232	2 ea (1 port, 1 stbd)
Electric Motor	141	6105-01-662-3403	2 ea
Speed Reducer	53	3010-01-121-0149	2 ea

3.2.3 Electrical removals. The Contractor must remove existing 60AT/150AF circuit breaker No. 5 supplying Anchor Windlass No. 2, Ship Service Switchboard 2S and existing 60AT/150AF circuit

breaker No. 25 supplying Anchor Windlass No. 1, Ship Service Switchboard 1S in accordance with Coast Guard Drawing 901 WMEC 320-013.

3.2.4 Foundation removals/modifications. The Contractor must remove the following, using Coast Guard Drawing 901 WMEC 185-025 as guidance:

3.2.4.1 Reduction gear. Remove existing reduction gear and motor foundation from overhead space. Remove bridge girder and restore longitudinal in accordance with Plan View 11-A, Elevation 15-C and Elevation 22-C of Coast Guard Drawing 901 WMEC 185-025.

3.2.4.2 Brake handwheel. Remove bracket that currently supports the brake handwheel.

3.2.4.3 Master switch. Remove the master switch and all associated cabling. Remove the master switch foundation deck ring. Patch the deck opening using 901 WMEC 136-001 as guidance.

3.2.4.4 Longitudinal girder. Remove designated sections of longitudinal bridge girder.

3.3 Installations.

3.3.1 Inspection. The Contractor must inspect the following:

3.3.1.1 Foundation and Bolt Pattern verification. The Contractor must verify that the existing deck opening, foundation and bolt pattern align with the windlasses to be installed, using Coast Guard Drawings 901 WMEC 185-004, 901 WMEC 581-001, 901 WMEC 581-005, 901 WMEC 581-006, and 901 WMEC 581-008 as guidance. Contractor must ensure that the chain line over the cat's paw and to chain pipe and hawse pipe is maintained in accordance with Coast Guard Drawing 901 WMEC 185-004 and 901 WMEC 581-001. Additionally, ensure bolt circle is properly indexed to ensure chain will not foul the chain stripper. Verify trueness of the mounting surface in accordance with 901 WMEC 185-004 General Note 4. Submit a CIR.

NOTE

Potential growth as described below must be taken into consideration when planning this Work Item to ensure all work can be completed within the Period of Performance.

If a Change Request has been authorized and released, the Contractor must, as designated on the Change Request:

- Weld repair and redrill anchor windlass mounting holes
- Crop and relocate or modify windlass foundation
- Skim cut foundation mounting surface to restore surface finish and/or trueness
- Crop and relocate or modify cat's paw and foundation
- Modify 01 level deck support structure for manual brake linkage

NOTE

Modification of the Anchor Windlass mounting flange to suit conditions on the vessel is not authorized.

3.3.1.2 Brake Stand Mounting Holes. The Contractor must inspect the mounting holes in the Government furnished brake stand to verify size of mounting holes is 11/16 in. Mounting holes must be reamed to proper size if they are found to be too small.

3.3.1.3 Vent Ducting. The Contractor must visually inspect the overhead vent ducting on the Port side near the windlass assembly. If the ducting is found to require rerouting to accommodate the new windlass assembly, the Contractor must submit a CFR.

3.3.2 Foundational Installations.

3.3.2.1 Flange plate installation. The Contractor must install a 3 inch x 5/8 inch flange plate to the bracket between the transverse beam and the chain pipe deck bolster, in accordance with Coast Guard Drawing 901 WMEC 136-001 Elevation 63-C

3.3.2.2 Brake miter gearbox foundation installation. The Contractor must install the foundation to the brake miter gearbox in accordance with Coast Guard Drawing 901 WMEC 185-025 Verify that the gearboxes are full upon installation.

3.3.2.3 Controller foundation installations. The Contractor must fabricate and install new port and starboard anchor windlass controller foundations for the anchor windlass controllers and remote-control boxes and pendant stowage boxes in accordance with Coast Guard Drawing 901 WMEC 185-025 and TP 2721.

3.3.3 Anchor Windlasses installation. The Contractor must install the new port and starboard anchor windlasses to existing foundations with new hardware using Coast Guard Drawings 901 WMEC 185-004, 901 WMEC 581-005, 901 WMEC 581-006, 901 WMEC 581-008, and TP 2721 as guidance.

3.3.4 Electrical installation. The Contractor must perform the following electrical installations in accordance with 46CFR, Subchapter J, IEEE-Std-45 and ABS MVR – Part 4, as well as MIL-STD-2003B-2020, and SFLC Standard Spec 3042.

3.3.4.1 The Contractor must install the new local controllers, remote control boxes with pendants in accordance with Coast Guard Drawings 901 WMEC 302-008, 901 WMEC 581-005, 901 WMEC 581-006, 901 WMEC 320-013, and TP 2721.

3.3.4.2 The Contractor must install the port and starboard remote-control boxes and pendant to new foundations on the house front, Frame 47, 01 Level in accordance with Coast Guard Drawing 901 WMEC 320-013.

3.3.4.3 The Contractor must install new 70AT/150AF circuit breakers to replace circuit breakers removed in paragraph 3.2.3 in accordance with 901 WMEC 320-013.

3.3.4.4 The Contractor must perform cable installation, penetrations and testing in accordance SFLC Standard Specifications 3041, 3042 and MIL-STD-2003B-2020 for all cable installed and impacted by this removal and installation.

3.3.4.5 Furnish and install new cable tags in accordance with paragraph 5.6 of MIL-STD-2003, Section 4 of 5, and as shown on Coast Guard Drawing 901 WMEC 320-013.

3.3.5 Label Plates for Anchor Windlass.

3.3.5.1 Test label plates. The contractor must fabricate a new 3 inch by 5-inch label plate from 1/16” thick minimum anodized-hydrated aluminum sheet for each windlass, using printed black lettering for the titles as applicable. Stamp, engrave, etch, or print the test information onto the label plate; system name,

contractor name, date of test, and weight values specified in the work item. Affix in plain view the label plate onto the equipment that was tested using a suitable adhesive. Refer to SFLC Std Spec 5000), paragraph B2.9.

3.3.5.2 Electrical equipment label plates. Furnish and install new electrical label plates as shown on Coast Guard Drawing 901 WMEC 320-013.

3.3.5.3 Safety labels. Furnish and install new electrical (safety labels) as shown on Coast Guard Drawing 901 WMEC 302-008.

3.3.6 Chain restowing. When directed by the Coast Guard Inspector, reassemble the anchor and anchor chain; restow the anchor chain in its chain locker, free for running, with the anchor properly housed and secured with the chain stopper set.

3.3.7 Placard installation. The Contractor must install Government furnished placards to both the port and starboard side for the lubrication chart and EOP, in accordance with Coast Guard Drawings 901 WMEC 581-005, 901 WMEC 581-006.

3.4 Redlined drawing deliverable(s). The Contractor must “red-line” Coast Guard Drawings 901 WMEC 136-001, 901 WMEC 185-004, 901 WMEC 185-025, 901 WMEC 302-008, 901 WMEC 320-013, 901 WMEC 512-005, 901 WMEC 581-001, 901 WMEC 581-004, 901 WMEC 581-005, 901 WMEC 581-006, and 901 WMEC 581-008 as applicable to reflect any work or deviations specified in this work item in accordance SFLC Std Spec 0850.

3.4.1 Preliminary/draft submission. No later than 24 hours after completion of this work item, submit a draft copy of the "red-lined" drawing(s) to the COR for review and approval.

3.4.2 Final submission. No later than 10 calendar days after receiving Coast Guard comments or completion of the availability, whichever occurs first, incorporate all comments and deliver one set of the final red-lined drawing(s) to the COR.

3.5 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector, and demonstrate operation of all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

3.6 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, (Touch-ups and minor coating repairs.)

3.7 Boundary test, generic. The Contractor must verify the integrity of all boundaries affected by this work item using one of the methods described in SFLC Std Spec 0740, Appendix C. Submit a CFR.

- Focsle deck repair in way of master switch removal
- Windlass mounting flange to foundation interface
- Deck penetrations for cabling

NOTE

Oil level for the reduction gearbox should sit between ½ inch to ¾ inch from the bottom of the sight glass.

3.8 Windlass and gearboxes, lubricate and fill.

3.8.1 The Contractor must fill each planetary reduction gearbox with 7 gallons each of Mobilgear 600XP 220 synthetic gear oil.

3.8.2 The Contractor must fill bevel gear brake gearbox underneath the handwheel with Mobilgear 600XP 220 synthetic gear oil.

3.8.3 The Contractor must fill the Hub City Bevel Gearbox, Model number 88, with 5 pints of Mobilgear 600XP 220 synthetic gear oil.

3.8.4 The Contractor must fill the Hub City Bevel Gearbox, Model number 600, with 1.5 pints of Mobilgear 600XP 220 synthetic gear oil.

NOTE:

A light coat of Marine Grade anti-seize lubricant, P/N 34395 must be applied to the 12 button head socket cap screws and handwheel shaft while installing the handwheel and bolt, lock washer and flat washers connecting the handwheel to the shaft. There is no torque value, and all fasteners must be tightened hand-tight.

3.8.5 Clutch Exercise and Lubrication. The Contractor must exercise (engage & disengage) and lubricate the clutch in accordance with TP (TBD). Removal of clutch handwheel and capstan cover is required to access clutch lube points.

3.9 Testing. The Contractor must perform the following tests once assembly of the new anchor windlasses has been fully completed, per the following and in accordance with Coast Guard Drawing 901 WMEC 581-008 and SFLC Std Spec 5000.

NOTE:

For A-class drawing 901 WMEC 581-008, the static load test is currently listed at 110,000 lb. 64,200 lb is the correct weight for static load testing, and this drawing will be updated.

3.9.1 Static Load Test (A-Class only). The Contractor must static test each anchor windlass at a load of 64,200 lbs for a duration no less than 10 minutes. Ensure that the test load is looped over the capstan head at midheight at a 90 degree angle to ensure no torsional load is placed on the machinery, and the pull direction is longitudinal (through the bow chock).

3.9.1.1 Visual inspection and NDE. Upon removal of the static load, the Contractor must perform visual inspection and NDE of the following components to ensure no cracks or deformation in accordance with SFLC Std Spec 0740, Appendix C and using Coast Guard Drawings 901 WMEC 136-001, 901 WMEC 185-025 and 901 WMEC 582-001 as guidance. If selected NDE method requires coating removal, perform subsequent touch-up preservation in accordance with SFLC Std Spec 6310, (Touch-ups and minor coating repairs). Submit a CFR.

NOTE

Common NDE methods not requiring coating removal include, but are not limited to the following:

a. Radiographic Testing (RT).

b. Ultrasonic Testing (UT).

c. Eddy Current Testing (ET).

3.9.1.1.1 Cutters bull nose chock and its associated welds (including but not limited to deck mounting and foundation welds).

3.9.1.1.2 Modified longitudinal L3-1/2 (port and stbd) of the anchor windlass foundations, including both the beam and attachment welds.

3.9.1.1.3 Reinforced chocks, port and stbd, including all attachment welds, installed in 3.3.2.1.

3.9.2 No Load Test. Operation of each device at no load in each direction for at least one-half hour. The following must be checked and demonstrated, during operation:

3.9.2.1 Operation of each mechanical brake, including brake band contact.

3.9.2.2 Operation of each automatic brake that sets under loss of power.

3.9.2.3 Operation of each clutch mechanism.

3.9.2.4 Operation of all control systems and speed control devices.

3.9.2.5 Motor performance data including voltage and amperage across all phases, and RPM.

3.9.2.6 Demonstration of all control functions, including emergency stop.

3.9.3 Wildcat Operational Test. Perform wildcat operational test in accordance with SFLC Std Spec 5000 paragraph B2.5.2.

3.9.4 Anchor Windlass Rated Load Test. Each anchor windlass must be operated with a rated load test weight of 8,040 lbs (equating to 60 fathoms of anchor chain) lashed to the 4,000 lb anchor to validate requirements of general note 12 of Coast Guard Drawings 901 WMEC 581-005 and 901 WMEC 581-006. The following must be checked and demonstrated, during operation:

3.9.4.1 Operation of each automatic brake that sets under loss of power.

3.9.4.2 Operation of all control systems and speed control devices.

3.9.4.3 Motor performance data including voltage and amperage across all phases and RPM.

3.9.4.4 Demonstration of all control functions, including emergency stop.

3.9.5 Overload Test. Each anchor windlass must be operated with a wildcat overload test weight of 16,080 lbs (equating to 120 fathoms of anchor chain) lashed to the 4,000 lb anchor to validate requirements of general note 13 of Coast Guard Drawings 901 WMEC 581-005 and 901 WMEC 581-006 a minimum of three complete cycles or a minimum of 10 minutes, and through as wide a range as practicable; make sure that the wildcat is stopped at least twice in each direction every cycle. The Contractor must verify the following:

3.9.5.1 The wildcat lifts the load (at no specified speed), without tripping electrical overloads.

3.9.5.2 The wildcat electric brake stops and holds the load without slipping.

3.9.5.3 No permanent deformation, damage to, or overheating of any components.

3.9.5.4 Proper operation of all controls.

3.9.5.5 No unusual vibration or noise is emitted from any component and there is no binding or misalignment.

3.9.6 Capstans. With the vessel waterborne and while the Coast Guard Inspector warps the vessel forward a minimum of 30 feet, then aft a minimum of 30 feet three complete cycles, the Contractor must verify the following:

- Verify that the capstan will warp the vessel.
- Verify proper operation of all controls and sensors.
- Verify the brake sets and releases properly.
- Verify no permanent deformation, damage to, or overheating of any components.

3.9.7 Anchor Drop Test. The Contractor must conduct Anchor Drop Test using the new port and starboard anchor windlasses. Submit a CFR.

3.9.7.1 Coordinate the brake-controlled anchor free fall with the Coast Guard Inspector.

3.9.7.2 Prepare the anchor for free fall in accordance with posted operating procedures.

3.9.7.3 Free fall the anchor by slowly releasing the brake.

3.9.7.3.1 Disengage the wildcat in accordance with posted operating procedures.

3.9.7.3.2 Control the fall of the anchor with the brake.

3.9.7.3.3 Allow the anchor to fall just above the water line.

3.9.7.4 Lift the anchor chain.

3.9.7.4.1 Engage the wildcat in accordance with posted operating procedures.

3.9.7.5 Secure the anchor chain in accordance with posted operating procedures.

3.9.7.6 Secure the anchor windlass in accordance with posted operating procedures.

4. NOTES

4.1 Standard Configuration Change Form. The Coast Guard Inspector or COR will complete the Standardized Configuration Change Form SFLC-ESD-47-Rev1 (available at link below or CG Portal -> SFLC -> SFLC Directives SFLC -> Forms Library -> SFLC-ESD 47_Rev1_Standardized_Configuration_Change) upon completion of this installation, and e-mail completed and signed form to D05-DG-SFLC-ESD-SSB-CMS-CDMM-MECPL@uscg.mil.

https://cg.portal.uscg.mil/units/sflc/SFLCDirectivesLibrary/SFLC-ESD-47_Rev1_Standardized_Configuration_Change.pdf

WORK ITEM 26: Engine Room Fan Controllers, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to remove existing Engine Room Fan Controllers located in Passageway (Compartment 01-93-0-L) and replace with government furnished Intech Marine Services (IMS) Fan Controllers.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
Y	Intech Marine Services Custom Engine Room Fan Controller	NSN: 6110-01-721-8667 PN: IMS-23-1344	2 ea.	6,755.00

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 320-035, Rev AV, As-Built Electrical One-Line Diagram

Coast Guard Drawing 901 WMEC 320-075, Rev B, Electrical One-Line Diagram (WMEC 901 Only)

Coast Guard Drawing 901 WMEC 801-004, Rev L, General Arrangement 01 Level

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 2819, SWBS 302, Feb 2009, Motor Controllers (270 WMEC)

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SLFC Std Spec 0740), 2022, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 3041 (SFLC Std Spec 3041), 2022, Shipboard Electrical Cable Test

Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2022, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

OTHER REFERENCES

None

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

None.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, (Interferences).

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness Coast Guard personnel perform an initial operational test of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR

3.3 Electrical work. The Contractor must accomplish all electrical work in accordance with SFLC Std Spec 3042, and test cables in accordance with SFLC Std Spec 3041. Utilize the existing wire ways for new cable runs as much as possible

3.4 Removal of controllers. The Contractor must electrically disconnect and remove Engine Room Fan Controllers for vent fan motors S01-106-1 and S01-106-2 located in Passageway (Compartment 01-93-0-L), as designated by the Coast Guard Inspector and using Coast Guard drawings 901 WMEC 320-035, 901 WMEC 320-075, 901 WMEC 801-004 and Tech pub 2819.

3.4.1 Dispose of removed controllers in accordance with all Federal, State, and local regulations.

3.5 Welding. Contractor must modify the mounting brackets for the original controllers as required to accommodate the new IMS-23-1344 Engine Room Fans Controllers.

3.6 Installation of Controllers. The Contractor must install and electrically wire the two newly installed government furnished IMS fan controllers for vent fan motors S01-106-1 and S01-106-2 located in Passageway (Compartment 01-93-0-L), as designated by the Coast Guard Inspector and using Coast Guard drawings 901 WMEC 320-035, 901 WMEC 320-075 and Tech pub 2819.

3.7 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, (Touch-ups and minor coating repairs.).

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.8 Operational test, post repairs After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

3.8.1 The Contractor must complete and submit test memo provided in paragraph 4.1 Test Memo.

3.8.2 In the event any issues are identified during testing, the Contractor must provide details of troubleshooting and repairing via CFR.

4.NOTES

4.1 Standard Configuration Change Form. The Coast Guard Inspector or COR will complete the Standardized Configuration Change Form SFLC-ESD-47-Rev1 (available at link below or CG Portal -> SFLC -> SFLC Directives -> SFLC Forms Library -> SFLC-ESD-47_Rev1_Standardized_Configuration_Change) upon completion of this installation, and e-mail completed and signed form to D05-DG-SFLC-ESD-SSB-CMS-CDMM-MECPL@uscg.mil.

https://cg.portal.uscg.mil/units/sflc/SFLCDirectivesLibrary/SFLC-ESD-47_Rev1_Standardized_Configuration_Change.pdf

4.2 Test memo. See below for test memo referenced in paragraph 3.8.1.

1. Pre-Installation Checks

    a. Ensure electrical wiring for power supply is properly connected to motor controller in accordance with applicable drawings listed in section 2 (References).

    b. Confirm correct installation of the Controllers.

    c. SAT/UNSAT:

    d. Comments: _____

2. Power-Up Sequence:

    a. Close breaker energizing the engine room fan controller.

    b. Ensure the power/stop light indicators are illuminated, indicating power is supplied to the controller.

    c. SAT/UNSAT: _____

    d. Comments: _____

3. Safety Interlock System:

    a. With the interlock engaged ensure the power and stop indicators are illuminated.

b. Disengage the interlock and ensure the controller power and stop light indicators are distinguish.

c. Open the controller and check voltage on the input side of the starter, verify the voltage is zero.

d. Close the controller and engage the interlock and ensure power light is illuminated.

e. SAT/UNSAT: _____

f. Comments: _____

4. Start/Stop Functionality:

a. Ensure the controller power and stop light indicators are illuminated.

b. Press the start push button and verify stop indicator light distinguish. Ensure the ventilation starts promptly and the slow indicator light illuminate.

c. Press the stop pushbutton switch and verify that the fan motor stops smoothly. Ensure the slow indicator distinguishes and the stop indicator is illuminated.

d. SAT/UNSAT: _____

e. Comments: _____

5. Speed Control:

a. Start the fan controller and ensure the fan is running in slow.

b. Test the manual speed control by adjusting the slow/fast switch.

i. Turn the manual speed in the slow direction and ensure the fan motor slows down.

ii. Turn the manual speed in the fast direction and ensure the fan motor speeds up.

c. Confirm that the corresponding light indicators for slow/fast speed illuminate accordingly.

d. Stop fan motor.

e. SAT/UNSAT: _____

f. Comments: _____

6. Control Mode Switching:

a. Ensure the power is on and the fan motor is in stop.

b. Alternate the local/remote switch between local and remote.

c. Place the fan motor in local and verify that the controller seamlessly switches to local control and the local indicator light illuminate.

d. Place the fan motor in remote and verify that the controller seamlessly switches to remote-control, and the remote indicator light illuminate.

e. In remote mode, ensure the controller responds to commands from the remote controller.

f. Switch fan motor to local control and verify the local indicator illuminate.

g. SAT/UNSAT: _____

h. Comments: _____

7. Emergency Stop:

a. Verify the fan motor is still running.

b. Press the emergency stop button.

c. Ensure the motor stops immediately, and the stop light indicator is illuminated.

d. SAT/UNSAT: _____

e. Comments: _____

8. Documentation:

a. Record all test results, including any anomalies or issues encountered during testing.

b. Use the below Comments to provide any additional information.

c. Comments: _____

WORK ITEM 27: Head & Shower, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew the Head and Shower sections identified in Table 1 and the valves/fixtures identified in Table 2.

TABLE 1 – HEAD/SHOWER TO BE RENEWED

DESCRIPTION	LOCATION	DRAWING
Decon Head & Shower	01-89-2-L & 01-92-4	901-WMEC 644-002

TABLE 2 – VALVES/FIXTURES TO BE RENEWED

DESCRIPTION Size/ Type/ Valve #	LOCATION	DRAWING	MATERIAL	CONNECTION/ RATED PRESSURE CLASS #	INDUSTRY STANDARD
Shower Enclosure	01-92-4	901-WMEC 644-001	Fiberglass Reinforced Plastic	N/A	Stanley Plastics Shower No. SP 725
Shower Controls and Heads	01-92-4	901-WMEC 644-001	Brass Chrome Plated	N/A	See Drawing 644-001

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 634-001, Rev G, Deck Covering Schedule

Coast Guard Drawing 901-WMEC 644-001, Rev E; Plumbing Fixtures List

Coast Guard Drawing 901-WMEC 644-002, Rev A; Chemical, Biological & Radiological Decontamination Station

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

Surface Forces Logistics Center Standard Specification 6341 (SFLC Std Spec 6341), 2022, Install Interior Deck Covering Systems

OTHER REFERENCES

None.

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Known interferences include, but are not limited to the following:

- F/W Washdown Piping
- Bulkheads
- Toilet
- Doors
- Deck Drains
- Clothing Locker
- Berthing Furnishings

3.2 Renewal. The Contractor must renew Shower identified in Table 1 and all valves/fixtures identified in Table 2. Additional renewal of bulkheads/joiner panels will need to be replaced due to water tight integrity. Submit CFR.

3.3 Decking. The Contractor must install a new deck covering system for 01-89-2-L in accordance with 901 WMEC 634-001.

3.3.1 Removal. The Contractor must remove and dispose of the existing deck covering materials to expose the deck surfaces. Take precautions not to penetrate the deck.

3.3.2 Inspections. After surface preparation, and before surface coating, the Contractor must visually inspect the following surfaces for metal fatigue, corrosion, and all other irregularities. Submit a CFR.

3.3.3 Surface preservation. The Contractor must coat the exposed deck surface, in accordance with SFLC Std Spec 6341, using the system specified in Appendix B, for "Decks, Metal Interior and Non-Skid Areas (Metal Decks – in preparation for application of deck coverings)".

NOTE
Coast Guard personnel will operate all shipboard machinery and equipment.

3.4 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

3.5 Touch-up preservation, general. The Contractor must prepare and coat all new and disturbed exterior and interior surfaces, as applicable, to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs.)

4. NOTES

This section is not applicable to this work item.

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WORK ITEM 28: Potable Water System Piping, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew designated Potable Water piping, located on the Focsle (01-48-2).

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 533-006, Rev. H, H & C Potable Water System, 01 LVL & ABV A & D

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

OTHER REFERENCES

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS), SP-58, 2018, Pipe Hangers and Supports – Materials, Design, Manufacture, Selection, Application and Installation

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, (Interferences).

3.2 Fluid handling. The Contractor must remove and dispose of removed fluids from the affected piping system, in accordance with all applicable Federal, state, and local regulations.

WARNING

Do not drain ANY fluids, including fresh water, into any space, bilge, or exterior location.

3.3 Piping renewal particulars. The Contractor must accomplish the following tasks, as designated by the Coast Guard Inspector, using Coast Guard Drawings 901 WMEC 533-006 as guidance:

- Renew (2) ¾" hose bib connections and associated piping

3.3.1 Pipe hangers. Furnish, fit, and install new pipe hangers in accordance with MSS SP-58.

3.3.2 Pipe flushing. The Contractor must flush all new and disturbed piping with clean fresh water until all debris is removed but no longer than five minutes. Ensure flushing fluid is directed to move scale and foreign debris away from installed machinery to prevent possible damage upon operational testing. Submit a CFR documenting date and time of flushing process and level of pipe cleanliness.

3.3.2.1 Dispose of flushing fluid in accordance with all applicable Federal, state, and local regulations.

WARNING

Do not drain ANY Fluids (including fresh water) into any space, bilge, or exterior location.

3.4 Testing. After all work has been completed, the Contractor must, in the presence of the Coast Guard Inspector, accomplish the following tasks, and submit a CFR:

3.4.1 Leak test. After completing all authorized mechanical (i.e. threaded, bolted, etc.) joint repairs, the Contractor must test the affected piping system's operation using the system fluid at normal operating pressure. Ensure zero visible leakage from or deformation of mechanical parts by repairing all leaks and discrepancies. Submit a CFR.

3.4.2 Hydrostatic test. After all authorized repairs, the Contractor must hydrostatically test all new and disturbed piping and components of the Potable Water system in accordance with SFLC Std Spec 0740, Appendix C, Hydrostatic Test. Ensure zero leakage from or permanent deformation of pressure-containing parts by repairing all leaks, deformations, and discrepancies. Submit a CFR.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.4.3 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

3.5 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, (Touch-ups and minor coating repairs.)

4. NOTES

This section is not applicable to this work item.

11100_SteelPlate_ESD_0723_FLT
S26_004_11100_Steel_GAS_0326_904

WORK ITEM 29: Structural Bulkhead Plating, 3/16 in Steel Plate, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew steel bulkhead plating in Ordnance Workshop (2-40-1-Q).

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 122-002, Rev H, Transv Bhds 47, 78 & 82

Coast Guard Drawing 901 WMEC 665-005, Rev H, Ordnance Workshop – A&D

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

OTHER REFERENCES

MIL-STD-769, Insulation Requirements for U.S. Naval Vessels

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences). Including, but not limited to:

- Wire Runs
- Electronic Racks
- Ventilation
- Insulation
- IC Gyro

3.2 Renewal. The Contractor must renew 48 sq ft of 3/16 in. steel plating and associated gun-mount brackets, as designated by the Coast Guard Inspector using Coast Guard Drawings 901 WMEC 122-002 and 901 WMEC 665-005 as guidance and SFLC Std Spec 0740.

3.2.1 Install new elastomeric closed cell foam insulation material over the renewed bulkhead surfaces and interference insulation in accordance with MIL-STD-769.

3.3 Testing. After all work has been completed, the Contractor must, in the presence of the Coast Guard Inspector, accomplish the following tasks, and submit a CFR:

3.3.1 Hydrostatic test. After all authorized repairs, the Contractor must hydrostatically test all new and disturbed components in accordance with SFLC Std Spec 0740, Appendix C, Hydrostatic Test. Ensure zero leakage from or permanent deformation of pressure-containing parts by repairing all leaks, deformations, and discrepancies. Submit a CFR.

3.3.2 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Submit a CFR.

3.4 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, paragraph 3.1.13 (Touch-ups and minor coating repairs.)

4. NOTES

This section is not applicable to this work item.

S_16701_ESD_0423_SWIT
S26_005_16701_GAS_0326_904

WORK ITEM 30: Watertight Doors and Scuttles, Internal, DC Deck and Below, Renew

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to renew watertight doors and scuttles identified in Table 1.

TABLE 1 – WATERTIGHT DOORS AND SCUTTLE LOCATIONS

DESCRIPTION	LOCATION	DRAWING
FQAWTS 01-27-1; 18" DIA Flush Quick-Acting Watertight Scuttle, Steel including coaming	Focsle 76 Man Gun Control Booth 1-26-1-C (Served)	901 WMEC 167-001 901 WMEC 801-004
QAWTD 1-26-2; 26" x 66" Quick-Acting Watertight Door, Steel, including coaming.	Anchor Windlass Rm & Bosuns Workshop 1-12-0-Q (Served)	901 WMEC 167-001
QAWTD 1-47-2; 26" x 66" Quick-Acting Watertight Door, Steel, including coaming.	Passageway 1-26-2-L (Served)	901 WMEC 167-001
FQAWTS 1-49-2; 18" DIA Flush Quick-Acting Watertight Scuttle, Steel.	Passageway 1-47-0-L	901 WMEC 167-001

1.2 Government-furnished property.

None.

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901-WMEC 167-001,Rev AA, List of Structural Closures

Coast Guard Drawing 901 WMEC 801-004, Rev L, General Arrangement 01 Level

NAVSEA Drawing 167-7379842, Rev A, Procedure & Welding Sequence for Non-Ballistic, Watertight & Airtight Quick Acting or Individually Dogged Personnel Doors

COAST GUARD PUBLICATIONS

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

OTHER REFERENCES

Commercial Item Description (CID) A-A-59316, 2016, Abrasive Materials; for Blasting

Military Specification MIL-A-22262B, March 1996, Abrasive Blasting Media Ship Hull Blast Cleaning

NAVSEA Drawing 167-7379842, Rev A, Procedure & Welding Sequence for Non-Ballistic, Watertight & Airtight Quick Acting or Individually Dogged Personnel Doors

The Society for Protective Coatings (SSPC)/NACE International (NACE) 2007, Joint Surface Preparation Standard SSPC-SP 10/NACE No. 2, Near-White Metal Blast Cleaning

The Society for Protective Coatings (SSPC) Surface Preparation Standard No. 11 (SSPC-SP 11), 2013, Power-Tool Cleaning to Bare Metal

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, paragraph 3.3.5 (Interferences).

3.2 Removal and installation. The Contractor must accomplish the following tasks for each door and scuttle, designated in Table 1:

- Crop, remove, and dispose of the door/scuttle, including its coaming.
- Inspect adjacent deck structure for straightness. Submit CFR with repair plan for any warped or twisted deck structure resulting in a gap greater than 1/16” between the deck plating and new hatch frame.
- Install a new GFP door/scuttle in place of the removed. Use NAVSEA Drawing 167-7379842 and manufacturer instructions as guidance for installation.
- Perform all necessary modifications to ensure the renewed door/scuttle properly fits on its corresponding enclosure.
- Provide and install new door/scuttle gaskets, and fasteners, as required.
- To achieve satisfactory latch operating condition and at the Coast Guard Inspector's direction, relocate, adjust, fabricate and install new securing latches to the closure or ship's structure.

NOTE

1. Testing fit-up of new door frames in structural cutout and balanced welding operations are crucial to ensuring proper alignment. Satisfactory operation of closure should be checked prior to, during, and after welding. Welding should be staggered around frame perimeter and on both sides of the closure to minimize distortion.

2. Where possible, the doors should be closed and dogged during welding.

3. Geometric dimensioning and tolerance variances and minor hardware differences are to be expected with the Government-furnished closures. These variances and differences are not limited to the following: location and physical size of the hinge assemblies; location, physical size, and number of flush mounted pockets; location, size, and orientation of securing devices.

3.2.1 Grab handle installation. If a Change Request has been authorized and released, and as designated by the Coast Guard Inspector, the Contractor must fabricate and weld-install a suitable "grab handle' on the coaming of a new door.

NOTE

Grab handle may be attached vertically on the door framing to assist members going through a scuttle.

3.2.2 Knife edge alignment check. Perform string test in accordance with Figure 5-A of NAVSEA Drawing 167-7379842. Submit CFR indicating satisfactory alignment.

3.2.3 Preservation. The Contractor must preserve both sides of the new door/scuttle assembly, including all disturbed surfaces, to match existing adjacent surfaces as follows:

CAUTION

Do not paint knife-edges, gaskets, or any moving parts; including dogs, nuts, wedges, spindles, yokes, packing, connecting rods and hinge pins.

3.2.3.1 Top side surfaces: The Contractor must prepare and coat top side surfaces using the system specified for "Decks, Metal Interior and Non-Skid Areas (Steel Decks - Dry Areas and Low Wear Areas)" in SFLC Std Spec 6310, Appendix B (Cutter and Boats Interior Painting Systems).

3.2.3.2 Bottom side surfaces. The Contractor must prepare and coat bottom side surfaces using the system specified for "Door, Joiner, Option I" in SFLC Std Spec 6310, Appendix B (Cutter and Boats Interior Painting Systems).

3.2.4 Testing. Upon complete renewal of each structural closure, the Contractor must perform the following boundary tests and submit a CFR in accordance with SFLC Std Spec 0740, Appendix C:

- Chalk test
- Water hose test

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.3 Operational test, post repairs. After completion of work and in the presence of the Coast Guard Inspector, the Contractor must thoroughly test and demonstrate the equipment listed below to be in satisfactory operating condition. Submit a CFR. Ensure the following:

- Closures are properly secured, so as to prevent accidental or unintentional movement.
- Securing latches adequately engage closures and positively lock into place without excessive force or manipulation by the operator.

4. NOTES

4.1 Damage control markings. Coast Guard personnel will apply appropriate damage control decals onto all newly installed closure(s).

S_25600_CDG_0326_SWIT
S25_003_25600_GAS_0426_904

WORK ITEM 31: Shaft Seal Seawater Cooling System Configuration, Restore

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to restore port and stbd Shaft Seal Seawater Cooling System configuration, located in Reefer/Dry Stores (Compartment 4-169-0-A).

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
N	Flow Switch	NSN: 5930-01-043-0942	2 ea.	456.62
N	Meter, Impeller Type, Liquid	NSN: 6680-01-727-4949 PN: G2P10NQ9GMA	2 ea.	800.00
N	*** Drive Clamp Ring Assembly	PN: H-44789	2 ea.	

*****Government-furnished property, which is to be supplied by either the vessel or the C4IT ServiceCenter**

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 256-002, Rev U, Mn and Aux SW Cooling Sys A&D

Coast Guard Drawing 901 WMEC 256-005, Rev B, Cooling Water Piping Mods Incidental to Stern Tube

Coast Guard Drawing 901 WMEC 256-012, Rev -, Shaft Seal Vent Line Modification

Coast Guard Drawing 901 WMEC 256-013, Rev C, Mn and Aux SW Cooling Sys Diag

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 3231A, Oct 2019, Manufacturer's Instruction Book-SWBS Group(s) 242-245, Chapter 243, Section A, Stern Tube Seal, MX9, US-71996

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

OTHER REFERENCES

ASTM International (ASTM) F683, 2014, Standard Practice for Selection and Application of Thermal Insulation for Piping and Machinery

ASTM International (ASTM) F992, 2017, Standard Specification for Valve Label Plates

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS), SP-58, 2018, Pipe Hangers and Supports – Materials, Design, Manufacture, Selection, Application and Installation

Naval Sea Systems Command (NAVSEA) Underwater Ship Husbandry Manuals (UWSH) S0600-AA-PRO-160, Nov 2011, Chapter 16, Cofferdams

3. REQUIREMENTS

3.1 General.

3.1.1 CIR.

None.

3.1.2 Tech Rep.

Not applicable.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, paragraph 3.3.3 (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, (Interferences). Known interferences include, but are not limited to the following:

- Piping
- Deck Plating
- Gratings
- Insulation

3.1.5 Cofferdam installation and removal. The Contractor must fabricate and install a cofferdam on the port and stbd stern tubes in accordance with UWSH S0600-AA-PRO-160, and as follows:

3.1.5.1 Prior to cofferdam installation, provide the KO with individual diver certification documentation that each diver is trained and experienced in accordance with UWSH S0600-AA-PRO-160, Appendix E.

CAUTION

Contractor must make sure that inflatable seals are inflated to obtain 2 valve protection for sea connected system.

3.1.5.2 Maintain double-valve protection (two boundaries) using two of the following:

- Internal blank-off
- External cofferdam, patch or plug

- Shaft seal assembly inflatable seal

NOTE

A cofferdam is any device preventing water intrusion during maintenance and/ or repairs; including a plug, patch or containment structure. For purposes of this Statement of Work, a shaft wrapping falls under the definition of a cofferdam.

3.2 Fluid handling. The Contractor must remove and dispose of removed fluids from the affected piping system, in accordance with all applicable Federal, state, and local regulations.

WARNING

Do not drain ANY fluids, including fresh water, into any space, bilge, or exterior location.

3.3 Shaft Seal System renewal particulars. The Contractor must accomplish the following tasks, as directed by the Coast Guard Inspector and in accordance with Coast Guard Drawings 901 WMEC 256-005 and 901 WMEC 256-012, and using Coast Guard Drawings 901 WMEC 256-002 and 901 WMEC 256-013 as guidance. All fittings and fasteners within the section of renewed piping must also be renewed as well.

- Install (2) Government furnished digital flow meters for shaft cooling system.
- Crop and renew 20 linear feet of 1 inch IPS 90/10 CuNi ASW Piping (pc P-2) and any associated fittings, flanges and gaskets.
- Renew (2) 0-60 psi pressure gauge, 4 1/2" dial for shaft cooling system (pc G-1).
- Crow and renew 10 linear feet of 1/4"OD x .035" thick 70/30 CuNi tubing for shaft cooling system (pc P-1) and any associated fittings.
- Renew (2) 1" Hays Mesurflo flow control valve for shaft cooling system (pc F-6).
- Crop and renew (2) flow switches for shaft cooling system.
- Change out Drive Clamp Rings and torque to proper specification (124 ft-lbs).

3.3.1 Pipe hangers. Furnish, fit, and install new pipe hangers in accordance with MSS SP-58.

3.3.2 Pipe labeling. The Contractor must label affected piping as follows:

3.3.2.1 Stencil the following onto the pipe surfaces:

- Name of the piping system service.
- Destination, where feasible.
- Direction of flow, indicated by an arrow three inches long pointing away from the lettering (for reversible flow, point an arrow away from each end of the lettering).

3.3.2.2 Ensure all lettering and arrow(s) are as follows:

- In general, black color except white for dark-colored piping.
- Applied in conspicuous locations and preferably near control valves.

3.3.3 Valve labeling. The Contractor must renew all missing and damaged valve label plates, and install new valve label plates on new valves, in accordance with ASTM F992.

3.3.4 Pipe flushing. The Contractor must flush all new and disturbed piping with clean fresh water until all debris is removed but no longer than five minutes. Ensure flushing fluid is directed to move scale and foreign debris away from installed machinery to prevent possible damage upon operational testing. Submit a CFR documenting date and time of flushing process and level of pipe cleanliness.

3.3.4.1 Dispose of flushing fluid in accordance with all applicable Federal, state, and local regulations.

WARNING

Do not drain ANY Fluids (including fresh water) into any space, bilge, or exterior location.

3.4 Testing. After all work has been completed, the Contractor must, in the presence of the Coast Guard Inspector, accomplish the following tasks:

3.4.1 Hydrostatic test. After all authorized repairs, the Contractor must hydrostatically test all new and disturbed components in accordance with SFLC Std Spec 0740, Appendix C, Hydrostatic Test. Ensure zero leakage from or permanent deformation of pressure-containing parts by repairing all leaks, deformations, and discrepancies. Submit a CFR.

3.4.2 Leak test. After completing all authorized mechanical (i.e. threaded, bolted, etc.) joint repairs, the Contractor must test the affected piping system's operation using the system fluid at normal operating pressure. Ensure zero visible leakage from or deformation of mechanical parts by repairing all leaks and discrepancies. Submit a CFR.

3.4.3 Alignment of Seat. Align each seat to run true with its associated shaft, as shown on TP 3231, Figure 6.2, and as follows:

- Attach a dial indicator to indicate either the face of the seat, aft side of the face carrier, or the flat side of the forward main clamp ring near the butt joint.

NOTE

This will indicate relative misalignment of the seat in relation to the stationary face insert as the shaft rotates.

- Engage turning gear to rotate the shaft.
- Adjust the alignment bolts and drive bolts to have a total indicator reading of 0.002" while the shaft is rotating. Take readings for three complete revolutions of the shaft. Submit a CFR.
- Once alignment is complete, lock the alignment bolts with their locking nuts while the shaft is rotating and the indicator is still installed. Recheck alignment after locking. Submit a CFR.
- Disengage turning gear and install splash guard onto the face carrier.

3.4.4 Inflatable seal air test. Conduct the inflatable seal pressure drop test as follows:

- Operate the inflatable seal and increase pressure to 45 PSI.
- Visually inspect to ensure all pipe joints are tight.
- With seal inflated to 45 PSI, shut off all supply valves, and monitor air leakage. Ensure that pressure does not drop more than 3 PSI in 15 minutes. Correct any discrepancy noted. Submit a CFR.

WARNING

Do not rotate shaft while testing inflatable seal!

3.4.5 Inflatable seal water leakage test. After the vessel is waterborne conduct the inflatable seal water leakage test as follows:

- Operate inflatable shaft at normal pressure in accordance with manufacturer's instructions.
- Slowly open the seal drain valve and drain the seal cavity.
- Once seal cavity is drained, measure the seal leakage, which shall not exceed one pint per minute. Take corrective action if the leakage exceeds one pint per minute. Submit a CFR.
- Align the seal water flush lines for normal operation.

NOTE

Coast Guard personnel will operate all shipboard machinery and equipment.

3.4.6 Operational test, post repairs. After completion of work, the Contractor must thoroughly test, in the presence of the Coast Guard Inspector and demonstrate all items or shipboard devices that have been disturbed, used, repaired, altered, or installed to be in satisfactory operating condition. Record the flow as measured on the newly installed flowmeters and report the value to SES. Submit a CFR.

3.5 Shaft Seal Vent Line. The Contractor must verify that the shaft seal vent line is in accordance with Coast Guard Drawing 901 WMEC 256-012. Submit a CFR.

3.6 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, (Touch-ups and minor coating repairs.)

4. NOTES

4.1 After completion of work, the PE must report the flowmeter reading for cooling water flow through each shaft seal during Contractor’s operational test.

WORK ITEM 32: Auxiliary Saltwater Pumps, Replace

1. SCOPE

1.1 Intent. This work item describes the requirements for the Contractor to remove the existing auxiliary saltwater pumps and motors (located in the Auxiliary Machinery Space Number 2 (3-82-0-E) and replace with new centrifugal pumps and motors, including all associated system interfaces and piping modifications.

1.2 Government-furnished property.

MTI	ITEM DESCRIPTION	NSN/PN	QTY	ESTIMATED COST ($/UNIT)
Y	Auxiliary Saltwater Pump	PN: Durco MK3 Pump 2K6X4V-13RV-CD4 NSN: 4320-99-602-2262	2 ea	$42,000.00

2. REFERENCES

COAST GUARD DRAWINGS

Coast Guard Drawing 901 WMEC 185-015, Rev J, Aux Mchry Space No2 Fnds

Coast Guard Drawing 901 WMEC 256-002, Rev T, Mn and Aux SW Cooling Sys A&D

Coast Guard Drawing 901 WMEC 256-004, Rev A, Aux. Salt Water Mods.

Coast Guard Drawing 901 WMEC 256-013, Rev A, Mn and Aux SW Cooling Sys Diag

Coast Guard Drawing 901 WMEC 320-002, Rev T, Power System Feeders IWD

Coast Guard Drawing 901 WMEC 320-003, Rev U, Power System Hold

Coast Guard Drawing 901 WMEC 320-035, Rev AR, As-Built Electrical One-Line Diagram

COAST GUARD PUBLICATIONS

Coast Guard Technical Publication (TP) 4432, 10 Oct 2024, Seawater Cooling Pump, Model-DURCO MK 3 – Installation, Operation Maint & User Instructions

Surface Forces Logistics Center Standard Specification 0000 (SFLC Std Spec 0000), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 0740 (SFLC Std Spec 0740), 2022, Welding and Allied Processes

Surface Forces Logistics Center Standard Specification 0850 (SFLC Std Spec 0850), 2022, General Requirements for Drawing Preparation

Surface Forces Logistics Center Standard Specification 3041 (SFLC Std Spec 3041), 2022, General Requirements

Surface Forces Logistics Center Standard Specification 3042 (SFLC Std Spec 3042), 2022, Shipboard Electrical Cable Removal, Relocation, Splice, Repair, and Installation

Surface Forces Logistics Center Standard Specification 6310 (SFLC Std Spec 6310), 2022, Requirements for Preservation of Ship Structures

OTHER REFERENCES

ASTM International (ASTM) D1330, 2010, Standard Specification for Rubber Sheet Gaskets

Manufacturers Standardization Society of the Valve and Fittings Industry (MSS), SP-58, 2018, Pipe Hangers and Supports – Materials, Design, Manufacture, Selection, Application and Installation

Naval Sea Systems Command (NAVSEA) Underwater Ship Husbandry Manuals (UWSH) S0600-AA-PRO-160, Jan 2011, Chapter 16, Cofferdams

3. REQUIREMENTS

3.1 General.

3.1.1 CIR. The Contractor must submit a CIR for the inspections listed in the following paragraph(s):
3.3.2 Cleaning and inspection

3.1.2 Tech Rep.

None.

3.1.3 Protective measures. The Contractor must furnish and install all protective measures in accordance with SFLC Std Spec 0000, (Vessel component, space, and equipment protection).

3.1.4 Interferences. The Contractor must handle all interferences in accordance with SFLC Std Spec 0000, (Interferences). Known interferences include, but are not limited to the following:

- Deck plates and grating
- Gauge lines
- Piping and hoses
- Fire pump
- Gate valves
- Structural supports
- Electrical Cables
- Cable Racks
- Wire ways
- Fuel Tanks

3.1.5 Cofferdam repairs. The Contractor must fabricate and install a cofferdam in accordance with UWSH S0600-AA-PRO-160, and as follows:

3.1.5.1 Prior to cofferdam installation, provide the KO with individual diver certification documentation that each diver is trained and experienced in accordance with UWSH S0600-AA-PRO-160, Appendix E.

3.1.5.2 Maintain double-valve protection (two boundaries) using two of the following:

- Sea chest valve
- Internal blank-off
- External cofferdam, patch or plug

3.1.5.3 For sea valve maintenance, notify the COR at least 24 hours prior to removing the sea valve. Install an external patch and an internal gasketed blank immediately after the sea valve is removed.

3.1.5.4 After all work is complete, turn over fabricated cofferdam(s) to the Coast Guard Property Administrator for disposition.

NOTE

A cofferdam is any device preventing water intrusion during maintenance and/ or repairs; including a plug, patch or containment structure.

3.2 Operational test, initial. Prior to commencement of work, the Contractor must witness an operational pre-test (by Coast Guard personnel) of all items or shipboard devices to be disturbed, used, repaired, or altered, to demonstrate existing operational condition. Submit a CFR.

3.3 Requirements. The Contractor must remove existing Auxiliary Saltwater Pumps (see paragraph 1.1 (Intent)), shown on Coast Guard Drawing 901 WMEC 256-002 or 905 WMEC 256-004.

3.3.1 Removal. Secure, isolate, and remove Auxiliary Saltwater Pumps. Install blank flanges and gaskets, in accordance with (ASTM) D1330, over the piping system openings and valves using Coast Guard Drawing 901 WMEC 256-013 as guidance, then secure with at least two bolts 180-degrees apart to provide a watertight seal. Ensure blank flanges are installed immediately after the auxiliary saltwater pumps are removed. Contractor must turn the old pump and motor over to the Coast Guard Property Administrator to return to Supply (see paragraph 4.2).

3.3.2 Cleaning and inspection. After removing the ASW pumps, visually inspect foundation. Submit a CIR for any repairs required.

3.3.3 Installation. The Contractor must install the new Government Furnished auxiliary saltwater pumps, using Coast Guard Drawings 901 WMEC 256-002 and 901 WMEC 256-013 as guidance.

NOTE

Coast Guard Personnel will operate all vessel equipment and machinery.

3.3.4 Foundation modification. The Contractor must furnish and install all material necessary to modify and lower the former auxiliary saltwater pumps foundation by approximately 10-inches to accept the installation of the new auxiliary saltwater pumps to align with suction and discharge piping using Coast Guard Drawing 901 WMEC 185-015 as guidance

3.3.4.1 The above modifications serve as a general guideline for location of the new auxiliary saltwater pumps for bidding purposes. Due to variations in configuration among the vessels in the class, the Contractor must perform a shipcheck to verify and refine the necessary modifications.

3.3.5 Piping modification. The Contractor must furnish and install all material necessary to modify suction and discharge piping to fit the new auxiliary saltwater pumps using Coast Guard Drawing 901 WMEC 256-002 as guidance.

3.3.5.1 Renew. Remove and install new 10-inch suction line piping from outboard ASW Pump. Suction line to be replaced is 4 linear feet and includes one 90-degree elbow. Use Coast Guard Drawing 901 WMEC 256-002 as guidance.

3.3.6 Fastener renewal. Contractor must upgrade and renew fastener hardware to 316 Stainless steel cap screws and hex nuts during assembly.

3.4 Electrical wiring renewal. The Contractor must renew electrical power cable from auxiliary saltwater pumps to auxiliary saltwater pump controllers in accordance with SFLC Std Spec 3041 using Coast Guard Drawings 901 WMEC 320-002, 901 WMEC 320-003 and 901 WMEC 320-035 as guidance. Existing wireways must be utilized for new cable runs as much as possible.

3.5 Hydrostatic test. After all authorized repairs, the Contractor must hydrostatically test all new and disturbed piping and components of the auxiliary saltwater pumps system in accordance with SFLC Std Spec 0740, Appendix C, Hydrostatic Test. Ensure zero leakage from or permanent deformation of pressure-containing parts by repairing all leaks, deformations, and discrepancies. Submit a CFR.

3.6 Leak test. After completing all authorized mechanical (i.e. threaded, bolted, etc.) joint repairs, the Contractor must test the seawater system's operation using the system fluid at normal operating pressure. Ensure zero visible leakage from or deformation of mechanical parts by repairing all leaks and discrepancies. Submit a CFR.

3.7 Alignment check. Prior to energizing the auxiliary saltwater pump the Contractor must perform a final pump and motor alignment check in accordance with TP 4432. Submit CFR.

3.7.1 Contractor must verify proper electric motor rotation prior to installing flex coupling to ensure no pump damage occurs.

CAUTION

If pump is rotated incorrectly pump damage will occur.

3.7.2 Upon final satisfactory pump and motor alignment check the Contractor must install the coupling, provided with the pump assembly, between the motor and pump in accordance with TP 4432.

3.8 Operational test, post repairs. After completion of work, the Contractor must witness an operational test (by Coast Guard personnel) of all other items or shipboard devices (besides the new auxiliary saltwater pumps) that have been disturbed, used, repaired, altered, or installed, to prove that they are in satisfactory operating condition. Submit a CFR.

3.9 Pipe flushing. The Contractor must flush all new and disturbed piping with clean fresh water until all debris is removed but no longer than five minutes. Ensure flushing fluid is directed to move scale and foreign debris away from installed machinery to prevent possible damage upon operational testing. Submit a CFR documenting date and time of flushing process and level of pipe cleanliness.

3.9.1 Dispose of flushing fluid in accordance with all applicable Federal, state, and local regulations.

3.10 Redlined drawing deliverable(s). The Contractor must "red-line" the below listed Coast Guard drawings to reflect the work or deviations specified in this work item in accordance SFLC Std Spec 0850.

- 901 WMEC 185-015, Aux Mchry Space No2 Fnds
- 901 WMEC 256-002, Mn and Aux SW Cooling Sys A&D
- 901 WMEC 256-013, Mn and Aux SW Cooling Sys Diag

3.10.1 Preliminary/draft submission. No later than 24 hours after completion of this work item, submit a draft copy of the "red-lined" drawing(s) to the COR for review and approval.

3.10.2 Final submission. No later than 10 calendar days after receiving Coast Guard comments or completion of the availability, whichever occurs first, incorporate all comments and deliver one set of the final red-lined drawing(s) to the COR.

3.11 Operational test, post installation. After completion of work, the Contractor must thoroughly test both auxiliary saltwater pumps in the presence of the Coast Guard Inspector and demonstrate each pump can provide required pressure and motor is within limits.

NOTE

This test must be performed while vessel is waterborne.

Coast Guard personnel will operate all shipboard machinery and equipment including valve line-ups.

3.11.1 Pump performance test.

3.11.1.1 Clean ASW pump suction strainers prior to accomplishing test.

3.11.1.2 Temporarily install compound gauges on suction side of ASW pumps at test connections (see Detail 31-A of 901 WMEC 256-013).

3.11.1.3 Ensure all auxiliary systems served by the ASW system including pump bleed lines are isolated (ASW-3-90-6 and ASW-3-92-2 (A-Class) or ASW-3-93-8 and ASW-3-92-8 (B-Class) closed) and 8" overboard discharge valve ASW-3-95-6 (A-Class) or ASW-3-95-8 (B-Class) is fully open.

3.11.1.4 Energize No.1 ASW Pump and ensure No.2 ASW Pump is isolated and secured.

3.11.1.5 Measure overboard discharge flow rate using a calibrated flowmeter (should be approximately 900 GPM with valve fully open) and record in Pump Performance Data Sheet.

3.11.1.6 Record pump suction (temporary gauge installed in 3.10.1.2) and discharge (gauge G10) pressures.

3.11.1.7 Measure and record electric motor voltages, amperage and motor shaft RPM.

3.11.1.8 Throttle ASW-3-95-6 (A-Class) or ASW-3-95-8 (B-Class) in 10% increments and repeat data collection steps 3.10.1.5 through 3.10.1.7 until pump is dead headed.

3.11.1.9 Repeat with No.1 ASW Pump isolated and secured and No.2 ASW Pump energized.

3.11.2 System operational test.

3.11.2.1 With ASW system aligned for normal operations, operate each ASW pump separately and verify satisfactory cooling capacity to all connected systems.

3.12 Touch-up preservation. The Contractor must prepare and coat all new and disturbed surfaces to match existing adjacent surfaces in accordance with SFLC Std Spec 6310, (Touch-ups and minor coating repairs.)

- Auxiliary saltwater pumps foundation
- Auxiliary saltwater pumps piping
- Any and all other disturbed areas

3.13 Pipe labeling. The Contractor must accomplish the following:

3.13.1 Stencil the following onto the pipe surfaces:

- Name of the piping system service.
- Destination, where feasible.
- Direction of flow, indicated by an arrow three inches long pointing away from the lettering (for reversible flow, point an arrow away from each end of the lettering).

3.13.2 Ensure all lettering and arrow(s) are as follows:

- In general, black color except white for dark-colored piping.
- Applied in conspicuous locations and preferably near control valves.

4. NOTES

4.1 Disposition of removed pumps. The Coast Guard Property Administrator must return the old pump and motor to SFLC Supply and contact Item Manager to request due in. The ASW pump must be marked with NIIN 4320-01-122-3852 and the ASW motor must be marked with NIIN 6105-01-516-1889.

4.2 Standard Configuration Change Form. The Coast Guard Inspector or COR must complete the Standardized Configuration Change Form SFLC-ESD-47-Rev1 SFLC - SFLC-Forms Library - Forms (sharepoint-mil.us) upon completion of this installation, and e-mail completed and signed form to D05-DG-SFLC-ESD-SSB-CMS-CDMM-MECPL@uscg.mil.

PUMP PERFORMANCE TEST DATA SHEET (SHEET 1 OF 2)

NO.1 ASW PUMP (AUXILIARY MACHINERY SPACE NO.2 3-82-0-E)								
Valve Position	Flow Rate (GPM)	Suction (psi)	Discharge (psi)	Motor Data				
				Voltage			Amperage	RPM
				AB	BC	CA		
Fully Open								
10% Closed								
20% Closed								
30% Closed								
40% Closed								
50% Closed								
60% Closed								
70% Closed								
80% Closed								
90% Closed								
Fully Closed								

Test Equipment	Test Instrument	Calibration Due Date
	Pump Discharge Gauge	
	Pump Suction Gauge	
	Flowmeter	
	Voltmeter	
	Ammeter	
	Tachometer	
Certification of Test Results	Contractor Signature Date	COR Date

PUMP PERFORMANCE TEST DATA SHEET (SHEET 2 OF 2)

NO.2 ASW PUMP (AUXILIARY MACHINERY SPACE NO.2 3-82-0-E)								
Valve Position	Flow Rate (GPM)	Suction (psi)	Discharge (psi)	Motor Data				
				Voltage			Amperage	RPM
				AB	BC	CA		
Fully Open								
10% Closed								
20% Closed								
30% Closed								
40% Closed								
50% Closed								
60% Closed								
70% Closed								
80% Closed								
90% Closed								
Fully Closed								

Test Equipment	Test Instrument	Calibration Due Date
	Pump Discharge Gauge	
	Pump Suction Gauge	
	Flowmeter	
	Voltmeter	
	Ammeter	
	Tachometer	
Certification of Test Results	Contractor Signature Date	COR Date