

Sources Sought
135 FT Landing Craft Utility (LCU)
Propulsion Shafting

Description:

The Naval Surface Warfare Center, Carderock Division (NSWCCD) is issuing a Sources Sought Request from all interested parties that can provide the following propulsion shaft repair services. The LCU In-Service Engineering Agent/Planning Yard Code 834 of the Naval Surface Warfare Center, Carderock Division is not actively considering repairing or procuring shafting at this time. However, NSWCCD is interested in the identification of vendors capable of meeting the requirements for the purpose of providing a list of known vendors to NAVSUP and the Regional Maintenance Centers. Activities interested shall submit all documentation as required by NAVSEA Drawing 243-5110383 to demonstrate qualifications for the repair of LCU 1610 Class propulsion shafting. Documentation to be submitted includes, but is not limited to:

- Proof of a maintained quality system in accordance with the requirements of ISO 9002, Quality Systems, Model for Quality Assurance in Production, Installation, and Servicing or equivalent.
- Procedures for all inspection, test, repair processes, and associated qualification data; and subcontractor procedures and qualification data, in accordance with NAVSEA Drawing 243-5110383.

For activities interested, the subject drawing may be requested no later than 20 June 2013 from the LCU In-Service Engineering Agent/Planning Yard Code 834 of the Naval Surface Warfare Center, Carderock Division. Proof of Joint Certification Program (JCP) certification is required to receive the drawing and should be emailed to heather.rhoads@navy.mil at time of request.

All required documentation shall be submitted at one time; incomplete submissions will not be considered.

Propulsion Shafting Physical Description:

All dimensions provided are in the final machined condition.

1. Propeller Shaft: The shaft is sleeved in way of the aft bearing.
 - Quantity: Two per LCU
 - Length Overall: 29.5 inches
 - Flange Diameter: 9.75 inches
 - Flange Thickness: 1.5 inches
 - Nominal diameter: 5.5 inches

Propeller Shaft Sleeve:

- Length Overall: 19.06 inches
- O.D.: 5.500 inches [nominal]
- I.D.: 4.468 inches [nominal]

2. Outboard Shaft: This shaft is flanged on both ends.

- Quantity: Two per LCU
- Length Overall: 150 inches [nominal]
- Flange Diameter: 9.75 inches [both ends]
- Flange Thickness [forward end]: 1.5 inches
- Flange Thickness [aft end] 2.25 inches

3. Stern Tube Shaft: There are two sleeved areas: the first is at the region of the stern tube bearing and the second is at the region of the shaft seal. The aft end of the shaft is flanged and the forward end has a taper and two opposing keyways.

- Quantity: Two per LCU
- Length Overall: 125.25 inches
- Flange Diameter: 9.75 inches
- Flange Thickness: 1.5 inches
- Nominal diameter: 4.688 inches

Aft Sleeve:

- Length Overall: 37.75 inches
- O.D.: 5.50 inches [nominal]
- I.D.: 4.47 inches [nominal]

Forward Sleeve:

- Length Overall: 27.00 inches
- O.D.: 5.500 inches [nominal]
- I.D.: 4.47 inches [nominal]

4. Line Shaft: This shaft is tapered on both ends with opposing keys also on both ends. There is a journal for the steady bearing and another in way of the bulkhead seal between the forward and aft engine rooms.

- Quantity: One per LCU
- Length Overall: 124 inches
- Nominal Diameter: 3.875 inches

5. Materials:

- Shafts: Steel forgings in accordance with MIL-S-23284, Class 4.
- Sleeves: CRES 304
- Sleeve Overlays: Tungsten Carbide applied by HVOF process with hardness of HRC 60 (minimum)
- Clad Welds: NiCu

Repair of Existing Shafts:

The current condition of existing shafts includes fusion bonded coatings on all flanges. Bolt holes in the flanges have CRES 316L sleeves pressed into place and seam welded. Portions of the outboard shaft and stern tube shaft exposed to sea water and not protected by a sleeve or coating are painted. The line shaft is painted except on the steady bearing journal and the journal in way of the bulkhead seal.

The following items are to be accomplished as part of the repair:

1. Visual and dimensional inspection of as arrived condition with report of findings.
2. Removal of all sleeves and coatings, reducing the shafts to the base steel.
3. Restoration of base steel as required [e.g., restore/repair shaft taper/keyway]
4. Clad welding of all flanges and flange bolt holes with NiCu.
5. Stress relieving of shafting as required based on the type of repairs accomplished.
6. Manufacture and assembly of new sleeves.
7. Return shafting to drawing dimensions.
8. Portions of the outboard shaft and stern tube shaft that are not clad or covered by a sleeve are coated with glass reinforced plastic.
9. Performance of all non-destructive testing.
10. Preparation of a post repair report.

Processes/Procedures/Qualifications Required:

All work accomplished on the shafting shall be accomplished in accordance with NAVSEA Drawing 243-5110383. The following references apply:

1. MIL-STD-2191, Repair Welding, Weld Cladding, Straightening, and Cold Rolling of Main Propulsion Shafting
2. NAVSEA Tech Pub S9074-AQ-GIB-010/248, Requirements for Welding and Brazing Procedure and Performance Qualification
3. NAVSEA Tech Pub S9074-AS-GIB-010/271, Requirements for Nondestructive Testing Methods
4. MIL-STD-2199A, Coverings for Waterborne Main Propulsion Shafting on U.S. Naval Ships and Submarines
5. MIL-STD-1687A, Thermal Spray Processes for Naval Ship Machinery Applications

The vendor will be required to provide procedures and qualifications for processes including, but not limited to:

- (1) NiCu clad welding to carbon steel
- (2) Mechanical straightening of shafting
- (3) Stress relieving of shafting
- (4) Repair welding of shafting
- (5) HVOF thermal spray of sleeves

- (6) Liquid penetrant inspection
- (7) Magnetic particle testing
- (8) Visual inspection of welds and of base materials
- (9) Application of glass reinforced plastic coating

Synopsis Terms:

THIS IS A SOURCES SOUGHT SYNOPSIS ONLY. THIS IS NOT A NOTICE OF SOLICITATION ISSUANCE. This synopsis is issued solely for information and planning purposes – it does not constitute a Request for Proposal (RFP) or a promise to issue an RFP in the future. The purpose of this announcement is to conduct market research to assess if there is a reasonable expectation of receiving two or more technically acceptable, reasonably priced proposals in consideration of issuing a Request for Proposals.

This synopsis does not commit the government to contract for any supply or service whatsoever. It is the responsibility of the potential respondents to monitor this site for additional information pertaining to this potential requirement. The information provided in this Sources Sought Synopsis is subject to change and is not binding on the Government. Further, the release of the Sources Sought Synopsis should not be construed as such a commitment or as authorization to incur cost for which reimbursement would be required or sought. Respondents are advised that the U. S. Government will not pay for any information or administrative cost incurred in response to this Sources Sought Synopsis. All costs associated with responding to this Sources Sought Synopsis will be solely at the interested party's expense. Proprietary information shall not be included in any response to this Sources Sought Notice as support contractors may review and evaluate responses to this synopsis. Failure to respond to this Sources Sought Synopsis will not preclude participation in any future RFP, if issued.

Responses:

Responses to this synopsis in Microsoft Office 2000 compatible or Adobe PDF format are due no later than close of business 11 July 2013. Unclassified responses shall be submitted via e-mail to Heather Rhoads at heather.rhoads@navy.mil. Verbal questions will not be accepted. The Government does not guarantee that questions submitted after 27 June 2013 will be answered.