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10 January 1984
SUPERSEDING
MIL-B-53003(ME)
22 June 1982

MILITARY SPECIFICATION

BOAT, BRIDGE ERECTION, TWIN JET, ALUMINUM HULL,

MODEL US CSB, MK-1 AND MK-2

This specification is approved for use by the USA Belvoir Research and Development Center, Department of the Army, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification establishes the requirements for manufacture and acceptance of the twin water jet bridge erection boat.

1.2 Classification. Boats procured under this specification may be of the following types:

Type I - Boats with partially closed cooling system.
(MK 1, TA 13222E0300)
Type II - Boats with totally closed cooling system.
(MK 2, TA 13226E0450)

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. Unless otherwise specified (see 6.2), the following specifications and standards of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation, form a part of this specification to the extent specified herein.

FEDERAL

QQ-S-781	- Strapping, Steel, and Seals.
UU-T-81	- Tags, Shipping and Stock.
PPP-B-601	- Boxes, Wood, Cleated-Plywood.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: USA Belvoir Research and Development Center, ATTN: STRBE-DS, Fort Belvoir, VA 22060 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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that supplements section 4 of the specification. (Bars indicate the minimum re-

PPP-B-621	- Boxes, Wood, Nailed and Lock-Corner.
PPP-B-636	- Boxes, Shipping, Fiberboard.

MILITARY

MIL-P-116	- Preservation, Method of.
MIL-T-704	- Treatment and Painting of Materiel.
MIL-E-10062	- Engine: Preparation for Shipment and Storage of.
MIL-G-20241	- Gasket Material, Wool Felt, Impregnated, Adhesive, Pressure-Sensitive.
MIL-S-81733	- Sealing and Coating Compound, Corrosion Inhibitive.

STANDARDS

MILITARY

MIL-STD-105	- Sampling Procedures and Tables for Inspection by Attributes.
MIL-STD-129	- Marking for Shipment and Storage.
MIL-STD-889	- Dissimilar Metals.
MIL-STD-1186	- Cushioning, Anchoring, Bracing, Blocking and Waterproofing; with Appropriate Test Methods.
MIL-STD-1188	- Commercial Packaging of Supplies and Equipment.
MIL-STD-1472	- Human Engineering Design Criteria for Military Systems.

MANUALS

TM 5-1940-277-10	- Operator's Manual.
TM 5-1940-277-20	- Organizational Maintenance Manual.
TM 5-1940-277-34	- Direct and General Support Maintenance Manual.
TM 5-2090-202-12 & P	- Cradle, Bridge Erection Boat, Twin Water Jet, Aluminum Hull.

2.1.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this specification to the extent specified herein.

DRAWINGS

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TA 13226E0300	- Boat, Bridge Erection, Twin Jet, Aluminum Hull, Model US CSB, MK1.
TA 13226E0450	- Boat, Bridge Erection, Twin Jet, Aluminum Hull, Model USCSB, MK 2.

(Copies of specifications, standards, and drawings required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting officer.)

2.2 Other publications. The following document(s) form a part of this specification to the extent specified herein. The issues of the documents which are indicated as DoD adopted shall be the issue listed in the current DoDISS and the supplement thereto, if applicable.

AMERICAN WELDING SOCIETY, INC. (AWS)

AWS B3.0 Welding Procedure and Performance Qualification

(Application for copies should be addressed to the American Welding Society, Inc., 2501 N.W. 7th Street, Miami, FL 33125.)

THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ANSI/ASME BPV-IX-ASME Boiler and Pressure Vessel Code, Section IX, Qualification Standard for Welding and Brazing Procedures.

(Application for copies should be addressed to the American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York NY 10017.)

(Industry association specifications and standards are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.)

2.3 Order of precedence. In the event of a conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence.

3. REQUIREMENTS

3.1 Description. The boat shall be in accordance with TA 13226E0300 or TA 13226E0450 (see 6.2). The boat is diesel powered and develops sufficient thrust to enable two boats to safely propel and maneuver a five-bay ribbon bridge raft with a class 60 load across a stream with currents up to 2-1/2 meters per second. The free running speed of the boat without load is approximately 25 statute miles per hour.

3.2 First article. The contractor shall furnish two boats within the time frame specified (see 6.2) for examination and testing to prove that his productions methods and choice of design detail will produce boats that comply with the requirements of the drawings and this specification. Examination and tests shall be as specified in Section 4. Unless otherwise specified, all examinations and tests shall be conducted by the contractor subject to surveillance and approval by the Government (see 6.3). When specified (see 6.2), the Government will conduct any or all of the first article examinations and tests as specified.

3.3 Material. Material shall be as specified on the drawings. All material shall be new and unused. Material shall be of uniform quality and first-class condition, sound, free of seams, cracks or other defects which may adversely affect the appearance, strength, endurance, or wear resistance of the finished parts and assemblies. Material not definitely specified shall be inherently corrosion resistant or treated to be resistant against the various forms of corrosion and deterioration that may be encountered in any of the applicable storage and operating environment to which it may be exposed.

3.3.1 Dissimilar metals. Dissimilar metals, as defined in MIL-STD-889 shall be electrically insulated from one another to minimize or prevent galvanic corrosion. Insulation may be provided by a barrier such as a corrosion inhibiting sealant conforming to MIL-S-81733 or chromate tape conforming to MIL-G-20241.

3.3.1.1 Identification of Materials and Finishes. The contractor shall identify the specific material, material finish or treatment used for components and sub-components, and shall make information available upon request to the contracting officer or designated representative.

3.3.2 Cleaning, treatment and painting of materiel. Cleaning, treatment and painting shall be in accordance with MIL-T-704, type B.

3.4 Reliability. The specified mean-time-between-failure (MTBF) shall be 90 hours when the boat is tested as specified in 4.5.2.7.

3.5 Performance. The boat shall be capable of obtaining a horizontal static towline pull of not less than 4,200 pounds forward and 2,200 pounds in reverse at full throttle (maximum engine rpm). The boat shall maintain the pull for 5 minute minimum. Under all test conditions specified herein, the coolant temperatures, the engine oil pressure, and any other instrumented function shall be within the ranges specified in the operator's manual. The hull, cooling systems, and fuel systems shall not leak as a result of tests specified herein. All operable features shall function without binding or interference of movement. Under all test conditions specified herein, the boat shall start, run, and stop without any component loosening, failing, or permanently deforming.

3.6 Drawings. The drawings forming a part of this specification are end product drawings. No deviation from the requirements shown on the drawings is permissible without prior approval of the contracting officer. Any data (e.g., shop drawings, layouts, flow sheets, processing procedures, etc.) prepared by the contractor or obtained from a vendor to support fabrication and manufacture of the production item shall be made available, upon request, for inspection by the contracting officer or his designated representative.

3.7 Government-furnished property. When specified (see 6.2), the following property in the quantities included will be furnished by the Government (see 6.4):

Item No.	Description	Identification	Quantity f/ea boat
1	Operation and Maintenance Publication Case	NSN 7520-00-559-9618	1
2	Preservation and De-preservation Guide for Marine Equipment	DA3256	1
3	Operatior's Manual, Boat, Bridge Erection, Twin Jet, Aluminum Hull	TM 5-1940-277-10	1
4	Organizational Maintenance Manual for Boat, Bridge Erection, Twin Jet, Aluminum Hull	TM 5-1940-277-20	1
5	Cradle, USCSB	NSN 2090-01-106-9789	1
6	Direct and General Support Maintenance Manual, Boat, Bridge Erection, Twin Jet, Aluminum Hull	TM 5-1940-277-34	1
7	Lubrication Order	LO 5-1940-277-1/2	1

3.8 Government-loaned property. When specified (see 6.2), the Government will loan to the contractor (see 6.5) the five-bay ribbon bridge components required to perform the rafting test (see 4.5.2.6).

3.9 Workmanship.

3.9.1 Fabrication and assembly requirements. Fabrication and assembly of the boat shall be in accordance with the drawings and specifications. Materials, manufacturing processes, and workmanship used shall provide an end product free of defects.

3.9.2 Welding. Quality of weldments is of utmost importance to produce satisfactory boats since they have to withstand not only the normal forces encountered in water, but also rigorous and continuous land transportation forces. The contractor shall assure that the welding types, sizes, and locations will be as specified on the drawings. All aluminum welding shall be Metal-Inert-Gas (MIG), Pulsed-Arc MIG or Tungsten-Inert Gas (TIG).

3.9.2.1 Certifications. All welders and welding operators, proposed welding processes and test specimen qualification shall be in accordance with the ASME Boiler and Pressure Vessel Code ANSI/ASME BPV-IX or with American Welding Society, Inc, AWS B3.0. The certification and qualification records shall be

kept up to date. Prior to fabrication, the contractor shall submit to the Contracting Officer for approval his proposed Welding Procedure Specification (WPS) that includes as a minimum:

- recommended voltages, amperages, and speeds for all welding.
- cleaning and preparation procedures.
- selection of filler wire.
- methods and frequency of inspections.
- description of allowed repairs.
- daily welding sample procedure.

3.9.2.2 Daily welding samples. Each welder shall weld a sample daily prior to his production welding. The test specimen shall consist of two sheet metal pieces butt welded together. The pieces shall be the same material as the boat skin (5083-0, .16 inches thick) and approximately 8 inches long. Width of the pieces shall be such that the contractor can do the bend test of 4.7.1. Cleaning, preparation and welding shall be as specified in the WPS.

3.9.3 Safety. All parts shall be clean, free from rust, tool marks, pits and other injurious defects. External surfaces shall be free of burrs, sharp edges and corners except where sharp edges or corners are required or where they are not detrimental to safety.

3.10 Human factors engineering. The boat shall conform with applicable portions of MIL-STD-1472.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsiblitity for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirments.

4.1.1 Component and material inspection. The contractor is responsible for insuring that components and materials used are manufactured, examined, and tested in accordance with referenced specifications, standards, and drawings.

4.2 Classification of inspections. Inspections are classified as follows:

a. First article inspection (see 4.3).
b. Quality conformance inspection (see 4.4)
c. Inspection of packaging (see 4.6).

4.3 First article inspection.

4.3.1 Examination. The first article boats shall be examined as specified in 4.5.1. Presence of one or more defects shall be cause for rejection.

4.3.2 Tests. Two first article boats shall be tested as specified in 4.5.2.2 through 4.5.2.7. Failure of any test shall be cause for rejection.

4.4 Quality conformance inspection.

4.4.1 Examination. Each boat shall be examined as specified in 4.5.1. Presence of one or more defects shall be cause for rejection.

4.4.2 Tests.

4.4.2.1 Sampling. Sampling for tests specified in 4.5.2.1 through 4.5.2.7 shall be in accordance with table 1.

TABLE 1. Test schedule.

FAT	Q.C.	TEST	TEST PARAGRAPH
X	X	Examination	4.5.1
X	X	Docking	4.5.2.2
X	X	Operation	4.5.2.3
X	X	Endurance 1/	4.5.2.4
X	X	Thrust Measurement	4.5.2.5
X		Rafting	4.5.2.6
X		Reliability 2/	4.5.2.7

1/ Operation time for tests 4.5.2.2 through 4.5.2.5 will be included in the endurance time.
2/ All operating time for tests 4.5.2.2 through 4.5.2.6 will be included in the reliability time.

4.4.2.2 Other tests. Boats not tested in accordance with 4.4.2.1 shall be tested as specified in 4.5.2.2.

4.5 Inspection procedure.

4.5.1 Examination. The boat shall be examined as specified herein for the following defects:

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101. Material not as specified.
102. Materials are not corrosion resistant or treated to be corrosion resistant for the applicable storage and operating environment.
103. Dissimilar metals, as defined in MIL-STD-889 are not effectively insulated from each other.
104. Contractor does not have documentation for identification of material, material finishes or treatments.

105. Lubricants not applied as specified.
106. Cleaning, treatment, and painting not as specified.
107. Government-furnished property not mounted as specified
108. Assembly not as specified.
109. Metal fabrication not as specified.
110. Welders not qualified as specified.
111. Welding not as specified
112. Torque not as specified.
113. Identification not as specified.
114. Dimensions not as specified.
115. Hydrojet buckets not adjusted as specified.
116. Warning and instruction plates not as specified.
117. Safety not as specified.

4.5.2 Tests.

4.5.2.1 Conditions. The boats shall be prepared for testing and operated in accordance with TM5-1940-277-10, Operator's Manual. The boats shall be maintained in accordance with TM5-1940-277-34, Direct and General Support Maintenance Manual.

4.5.2.2 Dock. Launch the boat and secure it to the dock. Start the engines and bring to idle speed. Check engine instruments, alarm systems, electric bilge pump, and lights for operation. After engine temperature readings are stable, operate in forward gear at 2,000 rpm for not less than 30 minutes. Inspect the engine cooling systems, fuel systems, the bilge and the hull for leakage. Check the engine oil pressures and coolant temperatures. Nonconformance to 3.5 shall constitute failure of this test.

4.5.2.3 Operation. The crew should be two men. Cast off and take the boat into an unrestricted area. Maneuver the boat in acccordance with 4.5.2.4. for one complete cycle. Observe the reaction of the boat to throttle and helm changes and check engine oil pressures and coolant temperatures for conformance to the Operator's Manual. At the end of the trial run, stop the port engine, disconnect the portside batteries, and restart the port engine by activating the paralleling and starter switch for the port engine. Start the starboard engine in the same manner using opposite procedure. Inability to start either engine within 5 minutes by paralleling, or nonconformance to 3.5 shall constitute failure of this test.

4.5.2.4 10 hours endurance. Test the boat through the sequence of maneuvers a, b, and c in 4.5.2.4.1 until a total of ten hours has been accumulated.

4.5.2.4.1 Procedure.

a. (1) Run straight until maximum speed is attained.
(2) Execute a sudden 90° port turn and run 1 minute at 2,000 rpm.
(3) Execute a sudden 90° port turn and run up to maximum rpm.
(4) Execute a sudden 90° port turn and run 1 minute at 2,000 rpm.
(5) Execute a sudden 90° port turn and run up to maximum rpm.

(6) Execute a sudden 90° starboard turn and run 1 minute at 2,000 rpm.
(7) Execute a sudden 90° starboard turn and run up to maximum rpm.
(8) Execute a sudden 90° starboard turn and run 1 minute at 2,000 rpm.
(9) Execute a sudden 90° starboard turn and run until maximum rpm is attained.

b. (1) Execute a sudden hard over starboard turn after maximum rpm has been attained on a straight run and continue in a circle for two complete circles.
(2) Repeat the above maneuver with a hard over port turn.

c. Run a tight figure-eight pattern at maximum rpm for 5 minutes.

d. Inspect the boat at the end of each day. Failure to conform to 3.5 shall constitute failure of this test.

e. Determine and record maximum free running speed.

4.5.2.5 Thrust measurement. Measure the forward and reverse thrust as specified in 4.5.2.5.1. The conditions will be as follows:

a. Water depth shall be 12 foot minimum.
b. The trim of the boat will be level fore and aft and on even keel during the test.
c. For the reverse thrust test, connect the line to the bow stem for level trim.
d. The crew will be two inspectors and one boat operator.
e. The boat will carry full fuel tanks and all defined loose equipment, e.g., lifebelt, boathook, etc.
f. The towline will be rigged to fixed bollard.
g. The dynamometer will be of the clock type with a maximum reading of 5,000 pounds, calibrated in increments of not more than 100 pounds.
h. The test will be done when the engine temperatures have reached a steady state.
i. If any adjustments to the power system are required either in water or on land, the boat will be retested.

4.5.2.5.1 Thrust measurement test. The boat shall be tied to a fixed bollard with a line connected to the stern towing bit. The line shall include a dynamometer. Operate both engines simultaneously in forward gear at increasing speeds until maximum rpm is reached. Reverse thrust shall be measured by securing the line to the bow stem and operating the boat in reverse at maximum rpm. Full thrust in both directions shall be maintained for a full 5 minutes. Inability to obtain the towline pull specified in 3.5 shall constitute failure of this test.

4.5.2.6 Rafting. A five bay ribbon bridge raft shall be assembled consisting of three interior bays and two ramp bays. Secure two boats to the raft in accordance with TM 5-1940-277-10 and maneuver as depicted in figure 1 at full throttle (when possible) for a total of 50 hours. A description of the operational sequence of events is as follows:

1. Move the transporting convoy from the storage area to the launch site with the required interior bays and ramp bays.
2. Launching the boat.
3. Launch and assemble the required interior bays and ramp bays to form a raft.
4. Secure the boat to the raft.
5. Maneuver the boat/raft combination as shown in figure 1, at full throttle and observe the following procedures;

   (a) Two landings per hour will be made by beaching the ramp where it is possible to on load and off load.
   (b) The period between landings will be spent running the course, as shown in figure 1, by alternately executing starboard or port turns (on succeeding runs), and returning to the landing site.

6. At conclusion of daily testing, retrieve the bays and boats.
7. Failure to conform to 3.5 shall constitute a failure of this test.

4.5.2.7 Reliability. Using the MTBF specified in 3.4, two initial production boats shall be tested as specified in 4.5.2.1 thru 4.5.2.6. Occurrence of 6 or more failures constitutes failure of this test. A failure is defined as any malfunction which cannot be crew corrected within five minutes by adjustment, repair, or replacement action using controls, on-board equipment tools or parts, and which causes or may cause:

a. Failure to commence operation, cessation of operation, or degradation of performance below level specified in 3.5.
b. Damage to the boat(s) by continued operation.
c. Safety hazards to personnel.

Malfunctions which would not affect mission performance will not be considered failures.

4.5.2.7.1 Test plan.

a. Decision risks - 20%
b. Discrimination ratio - 2.0
c. θ_0 - 90 hours
d. θ_1 - 45 hours
e. Test duration - 351 hours. Each boat shall operate not less than 165 hours.
f. Reject if 6 or more failures as specified in 4.5.2.7.
g. Accept if 5 or less failures as specified in 4.5.2.7.
h. Repeat 4.5.2.1 through 4.5.2.6 until a decision is made.

4.6 Inspection of packaging.

4.6.1 First article pack inspection.

4.6.1.1 Examination. The first article pack shall be examined for the defects specified in 4.6.2.3. Presence of one or more defects shall be cause for rejection.

4.6.1.2 Test. The first article pack shall be subjected to the guided-impact test (railroad car) specified in MIL-STD-1186, Appendix A.

4.6.2 Quality conformance inspection of pack.

4.6.2.1 Unit of product. For the purpose of inspection, a completed pack prepared for shipment shall be considered a unit of product.

4.6.2.2 Sampling. Sampling for examination shall be in accordance with MIL-STD-105.

4.6.2.3 Examination. Samples selected in accordance with 4.6.2.2 shall be examined for the following defects. Acceptable quality level (AQL) shall be 2.5 percent defective.

118. Materials, methods, or containers not as specified. Each incorrect material, method, or container shall be considered one defect.
119. Disassembly not as specified.
120. Bolts, nuts, screws, pins, and washers not installed in mating parts and secured to prevent loss.
121. Unpainted exterior metal surfaces not coated with preservatives as specified.
122. Engine, components, and accessories not preserved as specified.
123. Engine crankcase and transmission not filled to operating level with preservative lubricating oil and tagged as specified.
124. Electrolyte, when furnished, not packed and secured as specified.
125. Boat hook not placed and secured as specified.
126. Rope not coiled, secured, and stowed as specified.
127. Anchor light and bow light mast not placed and secured.
128. Drain plug not removed, secured, and tagged as specified.
129. Spotlight not properly secured.
130. Ring buoy not placed and secured in the brackets provided.
131. Fire extinguisher not placed and secured in its mounting bracket.
132. Repair parts, when furnished, not preserved as specified.
133. Technical publications not preserved as specified.
134. Consolidation not as specified.
135. Boat not secured in cradle, if furnished, as specified.
136. Cradle not provided with provisions for securing to carrier as specified.
137. Cradle not provided with lifting and handling provisions as specified.
138. Depreservation guide not prepared and attached as specified.
139. Marking missing, illegible, incorrect, or incomplete.
140. Engine coolant warning tags not attached as specified.

4.7 Welding inspection.

4.7.1 Daily samples. The daily welding samples shall be subjected to simple bend testing over a mandrel. The specimen shall be bent 180 degrees so that the weld will be approximately at the center of the bending. The specimen shall be firmly clamped on one end so that there will be no sliding of the specimen during bending. The testing apparatus shall be in accordance with the bending fixtures shown in the ASME Code BPV-IX, or the AWS B3.0, or the contractor may design his own testing jig. The daily welding samples are acceptable if the specimen does not show cracks or does not break. If the specimen fails to pass, that welder shall weld new specimens until he passes the test.

4.7.2 Production welding. Production welding sampling and inspection shall be in accordance with the contractor WPS. Acceptance shall be in accordance with the applicable welding drawing referenced on the engineering detail drawings.

5. PACKAGING

5.1 First article pack. Unless otherwise specified (see 6.2), the contractor shall furnish a first article pack for examination and test within the time frame specified (see 6.2) to prove prior to starting production packaging, that the applied preservation, packing, and marking comply with the packaging requirements of this specification. Examination shall be as specified in Section 4 and shall be subject to surveillance and approval by the Government (see 6.6). The first article pack may be accomplished utilizing either the first article model boat or production boat. If a first article model boat is utilized, any preservation and packing shall be removed by the contractor at no expense to the Government, when requested by the Government, to facilitate the comparison between the first article model boat and production boats.

5.2 Preservation. Preservation shall be level A or C as specified (see 6.2).

5.2.1 Level A.

5.2.1.1 Dissassembly. The cab shall be removed, further disassembly shall be confined to those items or parts vulnerable to damage or loss, or necessary to accomplish the preservation specified herein. Bolts, nuts, screws, pins, and washers removed shall be reinstalled in mating parts and secured to prevent loss.

5.2.1.2 Matchmarking. Removed items or parts shall be matchmarked when necessary to facilitate reassembly. Matchmarking information shall be on tags conforming to UU-T-81, Type A, Grade Optional and the tags attached to mating parts. Information on the tags shall be applied with waterproof ink.

5.2.1.3 Preservatives. Preservative specified shall conform to the applicable specifications listed in and shall be applied in accordance with MIL-P-116.

5.2.1.4 Unprotected surfaces. Unpainted exterior metal surfaces of items, accessories, or equipment requiring the application of a contact preservative in accordance with MIL-P-116 shall be coated with Type P-1 preservative.

5.2.1.5 Engines. The engines, components, and accessories shall be preserved in accordance with MIL-E-10062, level A, as specified for type III classification, except the dry-charged batteries shall be consolidated as specified in 5.2.1.16, and the battery acid shall be packed and marked separately. In the MK 1 boats, the fresh water systems shall be filled with antifreeze and water. In the MK 2 boats, all cooling systems shall be filled with antifreeze and water. Warning tags shall be per MIL-E-10062.

5.2.1.6 Boat hook. The boat hook shall be placed in the engine compartment or secured in a manner to prevent pilferage or loss.

5.2.1.7 Rope. Each length of rope shall be coiled and the coil secured with not less than three evenly spaced ties of cotton tape. The coils of rope shall be consolidated as specified in 5.2.1.16. The ends of all rope will be appropriately finished to prevent unraveling.

5.2.1.8 Navigation light mast. The navigation light mast shall be secured in the lowered position.

5.2.1.9 Drain plug. The drain plug shall be removed and secured to prevent movement. A tag conforming to UU-T-81, Type A shall be attached in a conspicious location in the cockpit indicating: "Drain plug removed; install before placing boat in water."

5.2.1.10 Spotlight. The spotlight shall be removed, placed in a close-fitting box conforming to PPP-B-636, Class Weather Resistant, Style Optional, and cushioned or secured within the box to prevent movement and damage. Box closure and sealing shall be as specified for method V in the appendix to the box specifications.

5.2.1.11 Pushing knees. The pushing knees shall remain installed.

5.2.1.12 Fire extinguisher. The portable fire extinguisher shall be placed in a close-fitting box conforming to PPP-B-636, Class Weather Resistant, Style Optional, and cushioned or secured as applicable to prevent movement and damage. Box closure and sealing shall be as specified for method V in the appendix to the box specification.

5.2.1.13 Repair parts and tools. When furnished, repair parts and tools shall be preserved in accordance with the preservative application criteria and applicable methods of preservation of MIL-P-116.

5.2.1.14 Technical publications. Technical publications shall be preserved in accordance with MIL-P-116, Method IC-1 or IC-3 and consolidated as specified in 5.2.1.16.

5.2.1.15 Other componenets. Other components not specifically mentioned herein requiring protection from corrosion or physical or mechanical damage shall be preserved as specified for components of similar design and construction.

5.2.1.16 Consolidation. The removed cab shall be secured to the floor of the front compartment. Loose components such as the dry-charged batteries, spotlight, ring buoy, fire extinguisher, and any disassembled item or part shall be consolidated in one or more close-fitting boxes conforming to PPP-B-621, Class 2, Style Optional; or PPP-B-601, Overseas Type, Style I or J. The contents shall be cushioned, blocked, braced, or anchored as applicable to prevent movement or damage. When repair parts and tools are shipped with the boat, they shall be packed in a separate box as specified herein and the box shall be secured to the box containing the consolidated components. The boxes shall be placed and secured in the boat in the most convenient location that will not interfere with shipping. Securing shall be accomplished by the use of strapping conforming to QQ-S-781, Class 1, Type I or II, Finish B.

5.2.2 Level C.

5.2.2.1 Engines. The engines, components, and accessories shall be preserved in accordance with MIL-E-10062, Level C, as specified for alternate preservation and packaging. The dry charged batteries shall be consolidated as specified in 5.2.1.16, and the battery acid shall be packed amd marked separately. In the MK 1 boats, the fresh water systems shall be filled with antifreeze and water. In the MK 2 boats, all cooling systems shall be filled with antifreeze and water. Warning tags shall be per MIL-E-10062.

5.2.2.2. Other components. Components of the boat, other than the engines (see 5.2.2.1), shall be preserved in accordance with MIL-STD-1188. The bow compartment shall be utilized to the greatest extent for the placement and securement of loose compartments.

5.3 Packing. When a boat cradle is furnished (see 3.7, 6.2f and 6.4) the boat shall be placed in the cradle and secured as specified in TM 5-2090-202-12 & P. When a boat cradle is not furnished, the contractor shall provide a means for shipping the boat, including lifting, securing, and handling provisions, that meets common carrier acceptance and will provide safe delivery to destination without damage to the boat. A boat prepared for shipment which passes the test specified in 4.6.1.2 shall be considered as meeting these requirements.

5.4 Depreservation guide. A depreservation guide shall be prepared and placed in a waterproof envelope marked "Depreservation Guide" and the envelope secured in a conspicious location on the boat. Unless otherwise specified (see 6.2), DA Form 3256, "Preservation and Depreservation Guide for Marine Equipment," shall be used (see 6.7).

5.5 Marking. Marking for shipment and storage shall be in accordance with MIL-STD-129.

6. NOTES

6.1 Intended use. The boats are intended for pushing maneuvering components of military floating bridges and rafts.

6.2 Ordering data. Acquisition document should specify the following, as applicable:

a. Title, number, and date of this specification.
b. Type of boats being procured (see 1.2).
c. Date of issue of DoDISS applicable to this contract and exceptions thereto (see 2.1.1).
d. Time frame required for submission of first article model (see 3.2).
e. When the Government will conduct any or all of the first article model examination and tests, the contracting officer should specify which examination and tests shall be conducted by the contractor (see 3.2).
f. When Government will furnish the property listed in 3.7.
g. When Government will loan the property stated in 3.8.
h. When a first article pack is not required (see 5.1).
i. Time frame required for submission of the first article pack (see 5.1).
j. Level of preservation required (see 5.2).
k. When other than DA Form 3256 shall be used (see 5.4).

6.3 First article model. Any changes or deviation of production boats from the approved first article model during production will be subject to the approval of the contracting officer. Approval of the first article model will not relieve the contractor of his obligation to furnish the production boats conforming to this purchase description.

6.4 Government-furnished property. When specified, the contracting officer should arrange to furnish the property specified in 3.7.

6.5 Government-loaned property. The contracting officer should arrange to loan the property specified in 3.8.

6.6 First article pack. Any changes or deviation of first article packs from the approved first article pack will be subject to the approval of the contracting officer. Approval of the first article pack will not relieve the contractor of his obligation to preserve, pack, and mark the boats in accordance with this specification.

6.7 DA Form 3256. The contracting officer should arrange to furnish DA Form 3256 when requested by the contractor.

Custodian:
Army - ME

Preparing activity:
Army - ME

Project 1940-A058

X-4138

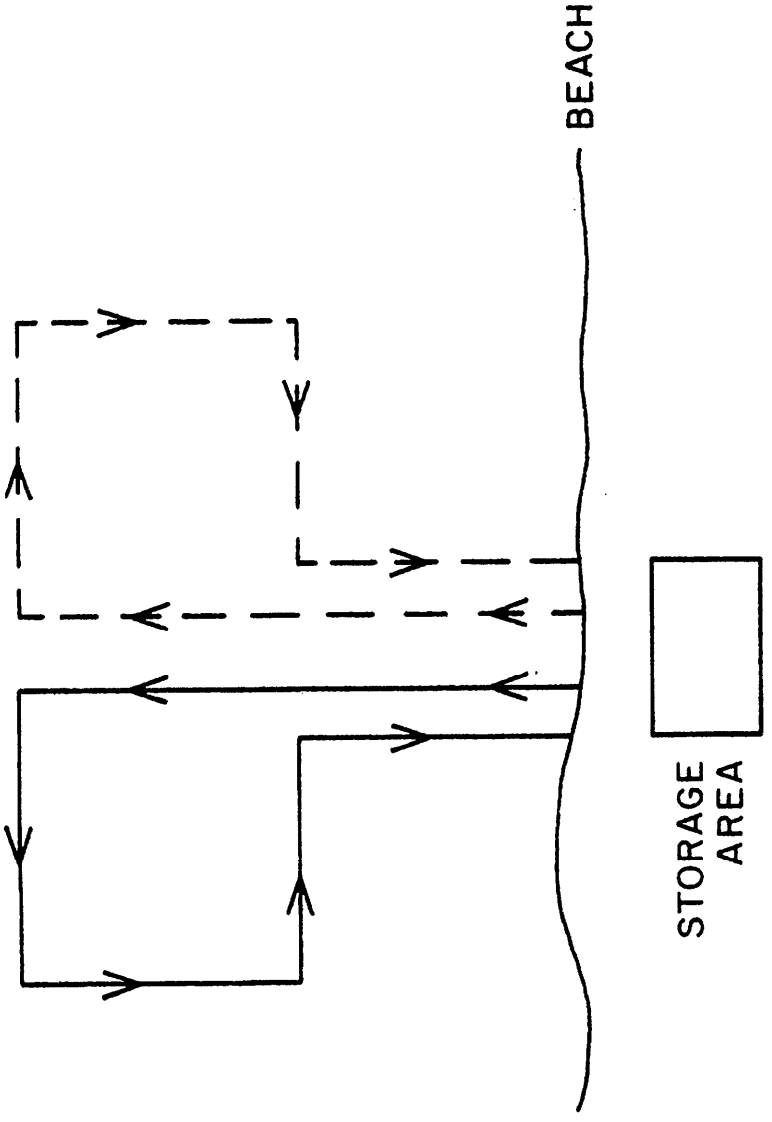

FIGURE I. RAFTING OPERATIONS.

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions – Reverse Side)

1. DOCUMENT NUMBER
MIL-B-53003A(ME)

2. DOCUMENT TITLE
Boat, Bridge Erection, Twin Jet, Aluminm Hull, Model US CSB, MK-1 and MK-2

3a. NAME OF SUBMITTING ORGANIZATION

b. ADDRESS *(Street, City, State, ZIP Code)*

4. TYPE OF ORGANIZATION *(Mark one)*

- ☐ VENDOR
- ☐ USER
- ☐ MANUFACTURER
- ☐ OTHER *(Specify)*: _____

5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wording:

c. Reason/Rationale for Recommendation:

6. REMARKS

7a. NAME OF SUBMITTER *(Last, First, MI)* – Optional

b. WORK TELEPHONE NUMBER *(Include Area Code)* – Optional

c. MAILING ADDRESS *(Street, City, State, ZIP Code)* – Optional

8. DATE OF SUBMISSION *(YYMMDD)*

DD FORM 1426, 82 MAR

PREVIOUS EDITION IS OBSOLETE.

INSTRUCTIONS: In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge *(DO NOT STAPLE)*, and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

NOTE: This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document*(s)* or to amend contractual requirements.

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