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MIL-P-29191B(YD1)
3 June 1994

SUPERSEDING
MIL-P-29191A(YD)
13 January 1989

MILITARY SPECIFICATION

PLATFORM, PONTOON, WORKBOAT (OIL CONTAINMENT BOOM HANDLING)

This specification is approved for use by the Naval Facilities Engineering Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers one type and size workboat platform, for use in handling oil containment booms in harbors and inland waterways.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. The following specifications and standards form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

FEDERAL

PPP-B-601 - Boxes, Wood, Cleated-Plywood.
RR-C-271 - Chains and Attachments, Welded and Weldless.

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Beneficial comments (recommendations, additions, deletions) and any pertinent
*data which may be of use in improving this document should be addressed to: *
*Commanding Officer (Code 156), Naval Construction Battalion Center, *
*1000 23rd Avenue, Port Hueneme, CA 93043-4301, by using the Standardization *
*Document Improvement Proposal (DD Form 1426) appearing at the end of this *
*document or by letter. *
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AMSC N/A FSC 1945

MILITARY

MIL-P-116 - Preservation, Methods of.
MIL-V-173 - Varnish, Moisture and Fungus Resistant (For Treatment of Communications, Electronics, and Associated Equipment).
MIL-R-17343 - Rope, Nylon.
MIL-C-24667 - Coating System, Non-skid, For Roll or Spray Application (Metric).

STANDARDS

FEDERAL

FED-STD-595 - Colors Used in Government Procurement.

MILITARY

MIL-STD-129 - Marking for Shipment and Storage.

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Documents Order Desk, Bldg. 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.1.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

US COAST GUARD REGULATIONS (USCG)

USCG - Title 46, Code of Federal Regulation, Parts 24 and 25.

(Application for copies should be addressed to the Superintendent of Documents, US Government Printing Office, Washington, DC 20402.)

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

2.2 Non-Government publications. The following document(s) form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the issue of the DODISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of the documents which are current on the date of the solicitation (see 6.2).

AMERICAN BOAT AND YACHT COUNCIL (ABYC)

ABYC - Safety Standards for Small Craft.

(Application for copies should be addressed to the American Boat and Yacht Council, Inc., P.O. Box 747, Millersville, MD 21108.)

ASTM

D1974 - Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Shipping Containers.
D5118/D5118M - Standard Practice for Fabrication of Fiberboard Shipping Boxes.

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

NATIONAL MARINE MANUFACTURERS ASSOCIATION (NMMA)

NMMA Certification Handbook.

(Application for copies should be addressed to the National Marine Manufacturers Association, 401 North Michigan Avenue, Suite 1150, Chicago, IL 60611.)

(Non-Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other informational services.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Description. The workboat platform shall consist of two or three reinforced plastic, aluminum, or steel hulls on which a flat rectangular deck (platform) is mounted. The craft shall be propelled by two electric starting outboard engines mounted on the port and starboard hulls. The engines shall be operated from a stand-up console located on the starboard side of the platform deck. Unless otherwise specified (see 6.2), crafts over 12 feet wide shall be of modular design and construction to facilitate disassembly, fold-up, tilt-down, or other breakdown methods that will allow the craft (in a breakdown mode) to be transported over the road without a special permit (not more than 12 feet wide). The breakdown method shall be such as to permit disassembly (or assembly) of the craft by four men skilled in this type of work, in not more than 2 hours. The use of a small forklift or other piece of similarly rated weight-handling equipment to facilitate compliance with this time schedule will be permissible. However, the disassembly/assembly of the craft shall be possible using, in lieu of such equipment, as much additional manpower and/or time as considered reasonable by the contracting officer. The platform deck shall have quick-disconnect type hand rails along the port and starboard sides. There shall be not less than 50 cubic feet of below-deck storage space for ancillary equipment; this will be in addition to any below-deck storage required by the breakdown method utilized. The craft shall be certified by the NMMA. The craft shall be capable of transiting safely and efficiently while withstanding 3-foot waves, 2-knot current, and a 20-knot wind acting concurrently.

3.2 First article. When specified in the contract or purchase order (see 6.2), one complete workboat platform shall be subjected to first article inspection (see 4.3 and 6.4).

3.2.1 Test plan. When specified (see 6.2), a written first article test plan shall be submitted prior to scheduling the first article tests (see 4.6.1 and 6.4).

3.3 Materials. Materials used shall be free from defects which would adversely affect the performance or maintainability of individual components or of the overall assembly. Materials not specified herein shall be of the same quality used for the intended purpose in commercial practice. Unless otherwise specified herein, all equipment, material, and articles incorporated in the work covered by this specification are to be new and fabricated using materials produced from recovered materials to the maximum extent possible without jeopardizing the intended use. The term "recovered materials" means materials which have been collected or recovered from solid waste and reprocessed to become a source of raw materials, as opposed to virgin raw materials. Unless otherwise specified, none of the above shall be interpreted to mean that the use of used or rebuilt products is allowed under this specification.

3.3.1 Polyester resin. Polyester resin shall be the manufacturer’s standard fire-retardant type, for use with the reinforcing material and the plastic foam specified.

3.3.2 Reinforcing material. Reinforcing material shall be either fiberglass cloth or a suitable synthetic fiber substitute. Synthetic fiber laminate shall have strength characteristics equivalent or superior to the fiberglass laminate it replaces.

3.3.3 Foam (hull buoyancy material). Foam shall be rigid, closed cell, oil-resistant polyurethane.

3.3.4 Metal. Metal used in the workboat platform shall have sufficient strength and geometric properties to withstand test loading without yielding. Additionally, all exposed metal surfaces shall be inherently resistant to or be provided with protection from a salt-water corrosive environment. Galvanic zinc anodes shall be provided as corrosion protection on steel hulls in addition to the painting specified in 3.12.

3.4 Design.

3.4.1 Overall characteristics.

Type:	Catamaran or trimaran.
Overall length:	33 feet, maximum.
Beam, launch mode:	16 feet, maximum.
Width, transport mode:	12 feet, maximum.
Hull length:	33 feet, maximum.
Payload capacity:	7,500 pounds (lb), minimum (excludes engines).
Open deck space:	330 square feet, minimum.
Freeboard (unloaded):	30 inches, maximum.
Freeboard (loaded with payload capacity:	24 inches, minimum.

Propulsion:	Two 175 horsepower (hp), outboard engines (minimum).
Weight:	To be kept to a minimum consistent with the type hull material and other design parameters specified herein; weight of basic craft (excluding engines, fuel tanks, batteries, and ancillary equipment) not to exceed 5,000 lb.

In addition to NMMA certification, the platform workboat shall conform to the ABYC standards (except toe rails conforming to A-18.4 shall not be required) and USCG standards for craft of this type.

3.4.2 Hulls. The hulls shall be flat-bottomed with a low draft-to-displacement ratio to permit operation in shallow water. Hulls shall have additional reinforcement at the transom to allow for mounting to the outboard engines, in the areas where the platform deck is to be attached, and in the bow to provide impact protection against floating and submerged objects. For laminated fiberglass hulls, the following shall apply as a minimum lamination schedule.

a. Gel coat.
b. 3/4 ounce per square foot mat.
c. 24 ounces per square yard woven roving.
d. 1-1/2 ounces per square foot mat.
e. 24 ounces per square yard woven roving.
f. 1-1/2 ounces per square foot mat.

In addition, hull areas requiring additional reinforcement shall include as a minimum:

g. 24 ounces per square yard woven roving.
h. 1-1/2 ounces per square foot mat.

The hull areas requiring reinforcement are at the discretion of the contractor. Recommended areas of reinforcement should include the outboard shear of both hulls from keel to 2 inches above the loaded waterline, and full depth from the bow to 1 foot aft of the first bulkhead (inboard and outboard).

3.4.2.1 Storage compartments. The hulls shall have self-draining storage compartments for below-deck storage of ancillary equipment. There shall be not less than a total of 50 cubic feet of below-deck storage space. This below-deck storage space does not include the space required for the outboard engines, but does allow for the storage of the batteries and fuel tanks. Storage compartments should be located as far outboard as possible, and should be accessible during boom deployment and operations. Access to each storage compartment shall be via a hatch cover of at least 18 by 24 inches, on the platform deck. Hatches protecting these spaces shall be weathertight, flush with the deck surface, and provided with recessed hasps and locks and drainage channels to maintain an unobstructed deck surface. Fuel tanks and batteries shall be located in separate compartments. Compartments containing fuel or batteries shall be vented so as to direct gases away from sources of ignition.

3.4.2.2 Transverse bulkheads and storage compartment decks. The hulls shall have transverse bulkheads at the fore and aft ends of each storage compartment

and as may otherwise be required for the design being furnished. The transverse bulkheads shall run vertically from the bottom to the top of the hull. Each storage compartment shall have solid decking in its bottom which is attached to the hull on either side and the transverse bulkheads fore and aft. The effect of this requirement shall be to isolate the interior of the storage compartment from all in-place flotation, protecting the flotation from water intrusion. The transverse bulkheads and storage compartment decking shall be attached to the hulls by a material that shall be chemically cross-linked to the hull material for plastic reinforced hulls or by the manufacturer's standard method of attachment for steel or aluminum hulls. The method chosen shall provide a watertight seal.

3.4.2.3 Foam. Each hull shall be foamed to provide positive buoyancy with poured-in-place, closed cell, oil-resistant polyurethane foam having a density not exceeding 2.2 pounds per cubic foot. The hulls shall be foamed throughout to the bottom of the storage compartments, and to a height within 2 inches (nominal) of the top of the hull in those spaces between the storage compartments. A typical longitudinal section is depicted in Figure 1.

3.4.2.4 Lifting eyes. Each outboard hull shall have two lifting eyes recessed in the deck; one fore and one aft, with covers provided for the recesses to insure a continuous deck surface. Each lifting eye shall have a pull-out strength adequate to comply with the tests of 4.6.4 and 4.6.5.

3.4.2.5 Engine well. The engine well shall have a transverse bulkhead as described in 3.4.2.2 located a minimum of 15 inches forward of the transom. This bulkhead shall be the aft bulkhead of the battery or fuel storage compartment. The engine well shall be self-draining.

3.4.3 Platform deck. The platform deck shall be designed and constructed in a manner to pass the tests specified in 4.6.3 through 4.6.6, 4.6.9, and 4.6.10. The deck may be made from fiberglass, plywood, or other material conforming to above tests. The deck shall be flat and have no protrusions extending above its surface except for the operator's control station, the safety rails when they are in place, and as permitted under 3.4.3.5. Deck framing shall be aluminum for plastic and aluminum hulls, and steel for steel hulls. Filler metal for welded aluminum joints shall be compatible with the base alloy. Plywood, when used for the deck surface, shall be marine grade having a nominal thickness of not less than 5/8-inch and shall be faced with a high density cellulose fiber/resin overlay not less than 0.009-inch thick. Exposed edges of any recesses or openings cut into plywood decking shall be sealed or otherwise suitably protected against moisture penetration. Deck shall be able to accept slip-resistant coating as specified in 3.4.3.7.

3.4.3.1 Bumper system. A D-type or tapered D-type bumper system shall be installed along both sides and across the bow of the platform deck. The bumper shall be not less than 3 inches high and 3 inches wide and shall be made of EPDM rubber. The corner transition between front and sides shall be fitted with a molded transition piece. The shape of the bumper bore shall be determined by the contractor, but shall be of such design as to resist collapse upon impact. There shall be no gap between the edge of the deck and the beginning of the bumper radius. The bumper, in effect, shall be a smooth extension of the deck forming a radius over which the oil containment boom can be deployed without hooking or snagging.

3.4.3.2 Hand rails. The workboat platform shall have hand rails along the port and starboard sides of the platform deck and across the stern, with the exception of an opening wide enough to allow unimpaired deployment and retrieval of the boom over the stern. The opening in the stern hand rail shall be fitted with a detachable life line. The hand rails shall meet the requirements of A-18.6 of ABYC publications "Safety Standards for Small Craft" and shall be tested in accordance with 4.6.10. The hand rails shall be a minimum of 38 inches high and constructed of tubular metal meeting the requirements of 3.3.4.

3.4.3.3 Cleats. The workboat platform shall have four regular or flush deck-type cleats mounted in the platform deck under the hand rails (two portside and two starboard side). The cleat shall be sized to the craft requirements in accordance with 4.6.6. Regular cleat size shall not be less than 8 inches. Cleats shall be fabricated from brass or cast steel.

3.4.3.4 Towing device. The workboat platform shall be equipped with a towing device located near the stern at the center of the craft. The towing device shall be designed to withstand not less than six times the rated thrust of the craft-engine-propeller combination without failure, deformation, or cracking of the towing device or the area where it is mounted, in accordance with 4.6.9.

3.4.3.5 Hand rail mountings and hinges. The hand rail mountings shall not extend beyond the radius formed by the platform deck bumper. Means shall be provided for pinning or otherwise securing the hand rails in the sockets in the launch mode.

3.4.3.6 Drainage. Recessed or flush fittings required by 3.4.2.1, 3.4.2.4, 3.4.3.3, and 3.4.3.5 shall be provided with a means of draining overboard any collected water.

3.4.3.7 Slip resistance. The platform deck shall have a slip-resistant surface which shall be applied as a grit-bearing epoxy coating. Slip-resistant coating shall be similar to MIL-C-24667, Type III, Composition L. Color is to be Dark Grey 36076, conforming to FED-STD-595.

3.4.4 Control console. An operator’s control console shall be provided. The control console shall measure not less than 38 inches high by 20 inches wide by 15 inches deep. The console shall be stowable, if necessary, for transport mode. The control console shall include, as a minimum (see 6.2):

a. Dual-console type engine controls with tilt and trim switch.
b. Steering controls with 18-inch stainless steel steering wheel.
c. Heavy-duty marine tachometer for each engine.
d. Engine hour meter for each engine.
e. Dual fuel gages.
f. High temperature alarm or temperature gage for each engine.

3.5 Navigation lights. The workboat platform shall be provided with navigation lights as close to the centerline of the vessel as practicable in accordance with international rules for class 2 craft. The navigation lighting system shall conform to USCG and NMMA requirements.

3.6 Spotlight. One variable direction, portable switch operated, 12-volt, sealed beam spotlight of not less than 35,000 candlepower shall be installed in the control console. The spotlight shall have a 15-foot stretch cord with a waterproof plug connected into a waterproof outlet.

3.7 Outboard engines. The workboat platform shall be provided with two commercial type electric starting, long shaft 175 hp (minimum) outboard engines. The engines shall be fitted with the manufacturer's recommended propeller, of proper size and pitch, to provide optimum thrust under a heavy load at low speed and not cavitate with a light load at high speed. Engines shall be equipped with electric trim and tilt, and appropriate independent steering mechanisms.

3.7.1 Charging system. An engine operated charging system shall be provided with sufficient amperage to charge the storage batteries for restarting the engines, provide power for radio operation, and lights during night operations.

3.8 Fuel tanks. As specified (see 6.2), two permanently installed USCG approved 18 or 27 gallon horizontal fuel tanks shall be provided. The tanks shall be vented as described in H-24 of ABYC publication "Safety Standards for Small Craft" and, if metallic, shall be bonded to a common ground in the vessel. If other than metallic tanks are provided, the metal fittings for fuel piping to the engine shall be bonded to a common ground. The underside of all metallic fuel tanks shall be undercoated with a suitable water-resistant mastic.

3.9 Batteries and cases. Two heavy-duty marine batteries with battery cases shall be provided and installed in accordance with ABYC E-10. Battery compartments shall be ventilated in accordance with ABYC H-2.

3.10 Ancillary/safety equipment. The following ancillary/safety equipment shall be provided:

2 each - USCG approved ring buoy with 50 feet of 1/4-inch floating line.
6 each - USCG approved life jacket.
1 each - USCG approved fire extinguisher (size recommended by contractor).
1 each - Compressed gas operated horn.
1 each - Boat hook.
2 each - 35-lb lightweight type fluked anchor, or similar type of equivalent rated holding power (approximately 1,200 lb in soft mud).
2 each - 200-foot length of anchor/mooring line conforming to 3.10.1.

3.10.1 Anchor/mooring line. The anchor/mooring line shall be a 200-foot length, 5/8-inch diameter nylon rope conforming to MIL-R-17343, connected with a 5/8-inch shackle conforming to RR-C-271, type IV, class 1, welded or peened shut, to a 6-foot length of 1/2-inch zinc-coated, welded, steel alloy chain conforming to RR-C-271, type 1, grade C, class 1. The nylon rope shall be furnished with a 5/8-inch rope thimble installed on the chain attachment end. The thimble shall be installed using a standard marine eye spliced of at least four full tucks plus two additional tapered tucks. The free end of the nylon rope shall be back spliced in a similar manner to prevent raveling. The free end of the anchor chain shall have a 1/2-inch anchor chain swivel conforming to RR-C-271, type VII, attached with a 1/2-inch connecting link conforming to RR-C-271, type II. An additional 5/8-inch shackle shall be provided for attachment of the chain to the anchor.

3.11 Fungus resistance. When specified (see 6.2), electrical components and circuit elements, including terminal and circuit connections, shall be coated with varnish conforming to MIL-V-173, except that:

a. Components and elements inherently inert to fungi or in hermetically sealed enclosures need not be coated.
b. Current-carrying contact surfaces, such as relay contact points, shall not be coated.

When used, the varnish shall be applied by spray, brush, or a combination of both to give a minimum dry-film thickness of 1 mil to component or element surfaces previously cleaned and prepared so that the surfaces are free from all foreign matter which would interfere with the adherence or function of the varnish.

3.12 Cleaning, treatment, and painting. Surfaces normally painted on commercial vessels shall be cleaned, treated, and painted as specified herein. Surfaces to be painted shall be cleaned and dried to insure that they are free from contaminants such as oil, grease, welding slag and spatter, loose mill scale, water, dirt, corrosion product, or any other contaminating substances. As soon as practicable after cleaning, and before any corrosion product or other contamination can result, the surfaces shall be prepared or treated to insure the adhesion of the coating system. The painting shall consist of at least one coat of primer and one finish coat. The primer shall be applied to a clean, dry surface as soon as practicable after cleaning and treating. Painting shall be with manufacturer's current materials according to manufacturer's current processes and the total dry film thickness shall be not less than 2.5 mils over the entire surface. The paint shall be free from runs, sags, orange peel, or other defects. Unless otherwise specified (see 6.2), color of the finish coat of the platform deck, hulls, and control console shall be Grey 16187, conforming to FED-STD-595. Laminated type hulls shall be finished using the manufacturer's standard impregnated gel coat of the same color.

3.13 Workmanship. All parts, components, and assemblies of the workboat platform including castings, forgings, molded parts, stamping, bearings, seals, and machined surfaces shall be clean and free from sand, dirt, fins, pits, sprues, scale, and other harmful extraneous material. External surfaces shall be free from burrs, dents, chipped paint, and rough or sharp edges, and corners. Fasteners shall be tight without distorting the components being held. Operable components shall function without binding or causing interference of movement.

3.13.1 Steel fabrication. The steel used in fabrication shall be free from kinks, sharp bends, and other conditions which would be deleterious to the finished product. Manufacturing processes shall not reduce the strength of the steel to a value less than intended by the design. Manufacturing processes shall be done neatly and accurately. All bends shall be made by controlled means to insure uniformity of size and shape.

3.13.2 Threaded fasteners. Deck panels shall be secured to hulls using suitable carriage bolts or equivalent through-bolting. Self-tapping screws, lag bolts, insert anchor nuts, and similar fasteners susceptible to loosening by vibration will not be acceptable for panel-to-hull and panel-to-panel connections. Each bolt shall be equipped with a locknut, lockwasher, and castellated nut with cotter pin or other approved locking device (such as

locknut with nylon insert). Bolt holes shall be accurately punched or drilled and shall have the burrs removed.

3.13.3 Riveted connections. Rivet holes shall be accurately punched or drilled and shall have the burrs removed. Rivets shall be driven with pressure tools and shall completely fill the holes. Rivet heads, when not countersunk or flattened, shall be of approved shape and of uniform size for the same diameter of rivet. Rivet heads shall be full, neatly made, concentric with the rivet holes, and in full contact with the surface of the member. The rivets shall be so fabricated as to develop a joint strength not less than the design value.

3.13.4 Welding. Surfaces to be welded shall be free from foreign matter which would be injurious to the weld. Welding procedures shall be in accordance with the appropriate recognized welding code. The surface of parts to be welded shall be free from rust, scale, paint, grease, or other foreign matter. Welds shall be of sufficient size and shape to develop the full strength of the parts connected by the welds. Welds shall transmit stress without permanent deformation or failure when the parts connected by the weld are subjected to proof and service loadings.

3.13.5 Castings. All castings shall be sound and free from patching, misplaced coring, warping, or any other defect which reduces the casting's ability to perform its intended function.

3.13.6 Reinforced plastic. Hulls of reinforced plastic shall be free of bubbles, voids, and other defects in the lamination. The gel coat shall be of uniform color, smooth, and free of bumps, sags, or embedded foreign material.

3.14 Technical data. When specified (see 6.2.1 and 6.3), the following technical data shall be furnished by the contractor.

a. Production drawings.
b. Test plan.

3.15 Identification plate. The contracting officer will furnish the required identification plates to the government inspector. The contractor will be required to stamp the necessary data in the blank spaces thereon and securely affix said plates in a conspicuous place on each unit, assembly or subassembly, and parts as directed by the Government inspector. Nonferrous screws, rivets, or bolts of not less than 1/8-inch in diameter shall be used to affix the plates. Nomenclature shall be "WORKBOAT PLATFORM".

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase 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 this specification where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items shall meet all requirements of sections 3 and 5. The inspections set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

4.2 Classification of inspections. The inspection requirements specified herein are classified as follows:

a. First article inspection (see 4.3).
b. Quality conformance inspection (see 4.4).

4.3 First article inspection. The first article inspection shall be performed on one workboat platform when a first article is required (see 3.2 and 6.2). This inspection shall include the examination of 4.5 and the tests of 4.6. The first article may be either a first production item or a standard production item from the supplier's current inventory provided the workboat platform meets the requirements of the specification and is representative of the design, construction, and manufacturing techniques applicable to the remaining workboat platforms to be furnished under the contract.

4.4 Quality conformance inspection. The quality conformance inspection shall include the examination of 4.5, the tests of 4.6, and the packaging inspection of 4.7. This inspection shall be performed on the samples selected in accordance with 4.3.

4.5 Examination. Each workboat platform shall be examined for compliance with the requirements specified in section 3 of this specification. Any redesign or modification of the contractor's standard product to comply with specified requirements, or any necessary redesign or modification following failure to meet specified requirements shall receive particular attention for adequacy and suitability. This element of inspection shall encompass all visual examinations and dimensional measurements. Noncompliance with any specified requirements or presence of one or more defects preventing or lessening maximum efficiency shall constitute cause for rejection.

4.6 Tests. The first article shall receive the tests of 4.6. Each production unit shall receive the test of 4.6.2. Failure to pass any test shall constitute cause for rejection.

4.6.1 Test plan. A written test plan for the performance of the tests of 4.6.2 through 4.6.10 shall be prepared and submitted to the Government contracting officer by the contractor at least two weeks prior to the commencement of tests as specified in the contract. The test plan shall include, but not be limited to, the following:

a. Calendar schedule for performance of the tests.
b. Location and brief description of facilities to be used for the tests.
c. Procedure outline for performance of each of the tests.

d. Description of instrumentation to be used to measure parameters required by the tests.
e. List of equipment and personnel involved and a schematic illustration of their deployment and utilization for each of the tests.

4.6.2 General. A compliance check for presence of all accessories specified, and compatibility with stated required certifications shall be made.

4.6.3 Mechanisms and accessories. All mechanisms, mechanical and electrical, shall be operated to determine acceptability of smooth operation. Accessories mounted on brackets shall be removed and relocated on the brackets to determine acceptability of mounting configuration.

4.6.4 Hoist and shock test. A payload of 6,000 lb (excluding engines) shall be distributed uniformly over the boat deck space except as required to maintain access to lifting eyes. The boat shall then be hoisted by the lifting eyes to a height of 5 feet above the surface of the water and held for a minimum of 3 minutes. After this time the boat shall free-fall onto the water surface. The test shall be repeated five times. Any damage to the platform, hull/platform connection, foldup/locking devices, lifting eyes, or area around the lifting eyes, or permanent deformation shall constitute failure of the test. To avoid damage to outboard engines during this test, the exhaust and cooling water inlet and outlet ports shall be plugged. As an alternative, an equivalent load may be mounted to the transom in place of the outboard engines, provided the load distribution on the transom is equivalent to that of the engines.

4.6.5 Torsional test. With the boat resting on a hard, level surface and engines removed, a load of 6,000 lb shall be distributed uniformly over the boat deck space. Using one lifting eye, one corner of the boat shall then be hoisted to a height of 3 feet above the surface and held for a minimum of 5 minutes. This test shall be repeated for each of the remaining three corners. Any damage to the platform, foldup/locking devices, or permanent deformation shall constitute failure of the test.

4.6.6 Cleat load test. One side of the (unloaded) boat shall be hoisted to a height of 3 feet above the surface of the water, utilizing the two mooring cleats on that side of the boat, and held for a period of not less than 3 minutes. Any damage to the cleat, platform deck, or permanent deformation shall constitute failure of the test.

4.6.7 Operating test. The workboat platform shall be assembled in less than 2 hours as required by 3.1, deployed and subjected to an in-water compliance check for mechanism, control, gage, and engine operation. Included in this test shall be seaworthiness, handling of the boat, and a static thrust test of the engine/propeller combination.

4.6.8 Towing device. The contractor shall demonstrate to the Government representatives the ability of the towing device to sustain six times the rated thrust of the boat-engine-propeller combination for 5 minutes without causing visible damage to the hull structure in the areas around the connections to the hull or to any other area of the towing device.

4.6.9 Handrail strength test. Handrails installed for service shall be tested with a 400 lb static load applied horizontal, perpendicular, and at a 45 degree angle to the platform deck. Damage to the handrails, mountings, or platform deck at mounting points which impairs serviceability shall be cause for rejection.

4.6.10 Post-test examination. The workboat platform shall be examined after testing has been completed. Any visible damage, permanent deformation, connection failure, or loosening of connections of any subsystem or component shall constitute failure of this examination.

4.7 Packaging inspection. The preservation, packing, and marking of each complete workboat shall be inspected to verify conformance to the requirements of section 5.

5. PACKAGING

5.1 Preservation. Preservation shall be level A or commercial as specified (see 6.2).

5.1.1 Level A.

5.1.1.1 Disassembly. Disassembly shall be the minimum necessary to safeguard parts known to be subject to damage or loss, and to accomplish reduction in cube. Bolts, nuts, screws, pins, and washers removed shall be reinstalled in one of the mating parts and secured to prevent their loss.

5.1.1.2 Methods of preservation. Cleaning processes, drying procedures, preservatives, and methods of preservation specified in the following paragraphs are listed in MIL-P-116 and shall conform to the requirements of MIL-P-116 and any applicable specifications.

5.1.1.3 Unpainted and uncoated surfaces. Unpainted and uncoated exterior ferrous metal surfaces of the workboat and accessories shall be coated with type P-1 preservative.

5.1.1.4 Outboard motor. With the engine running smoothly at approximately 1,500 revolutions per minute (rpm), P-10 preservative shall be sprayed into the carburetor throat(s) until the engine chokes to a stop. The carburetors and cooling system shall be drained dry. A waterproof tag shall be attached in a conspicuous location indicating "ENGINE PRESERVATIVE; DO NOT CRANK OR RUN".

5.1.1.5 Fuel tanks. The fuel tanks shall be drained of all fuel and dried. The interior of the tanks shall be coated with type P-10 preservative in a manner to insure thorough coating of all surfaces. The fuel lines, if detachable, shall be packaged in a fiberboard box conforming to ASTM D5118, class weather-resistant, and cushioned to prevent movement.

5.1.1.6 Batteries. Each battery shall be placed inside the battery case and cushioned to prevent movement.

5.1.1.7 Anchor and mooring line. The anchor and mooring line shall be coiled or hanked and secured with cotton cord or twine.

5.1.1.8 Spotlight and navigation lights. The spotlight and navigation lights, if removed, shall be packaged in fiberboard boxes conforming to ASTM D5118, class weather-resistant, and cushioned to prevent movement. The boxes shall be closed and sealed in accordance with ASTM D1974, Sealing Method B.

5.1.1.9 Life jackets and ring buoys. The life jackets and ring buoys shall be packed in close-fitting fiberboard boxes conforming to ASTM D5118, class weather-resistant, and cushioned to prevent movement. The boxes shall be closed and sealed in accordance with ASTM D1974, Sealing Method B.

5.1.1.10 Fire extinguisher and compressed gas operated horn. The fire extinguisher and horn shall be packaged in fiberboard boxes as specified in 5.1.1.9. Unpainted exterior metal surfaces of fire extinguishers requiring the application of a contact preservative in accordance with MIL-P-116 shall be coated with type P-1 preservative.

5.1.1.11 Technical publications. Technical publications, where furnished, shall be packed in accordance with MIL-P-116, Method IC-1 or IC-3.

5.1.2 Commercial. Each complete workboat platform shall be preserved in accordance with the contractor's standard practice in a manner to prevent deterioration and damage. The equipment shall be lubricated for operational service as required in the operator's manual.

5.2 Packing. Packing shall be level A, B, or commercial as specified (see 6.2).

5.2.1 Level A.

5.2.1.1 Outboard motors. Each outboard motor shall be packed in a close-fitting box conforming to PPP-B-601, class overseas. The motor shall be cushioned, blocked, and braced to prevent movement and damage within the container. The box shall be provided with skids and secured in the workboat storage space, or shipped separate from, but at the same time as, the workboat.

5.2.1.2 Consolidated packing. Small components such as publications, fire extinguisher, spotlight and navigation lights, horn, life jackets, ring buoys, and batteries shall be packed in close-fitting boxes conforming to PPP-B-601, overseas type. The contents shall be blocked and braced to prevent movement. Strapping of the boxes is not required. The batteries, horn, and fire extinguisher shall be packed separate from other components to permit removal during shipment or in storage when required.

5.2.1.3 Workboat platform. Each workboat platform shall be shipped uncrated in a manner which will insure arrival at destination in satisfactory condition. The consolidated containers and other components shall be secured in the storage space of the workboat platform and blocked and braced to prevent movement and damage. Components, except those in consolidated containers which cannot be placed in the storage space, shall be boxed in the same type of boxes as specified for outboard motors in 5.2.1.1 and shipped separate from, but at the same time as, the workboat platform.

5.2.2 Level B. The outboard motors, workboat platform, and other components shall be packed as specified for level A, except boxes conforming to PPP-B-601 shall be domestic type.

5.2.3 Commercial. Each complete workboat platform shall be packed to insure arrival at destination in a satisfactory condition and ensure carrier acceptance and delivery at lowest rating from the supplier to the initial destination.

5.3 Marking. In addition to any special marking required in the contract, marking shall be in accordance with MIL-STD-129.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The workboat platform described in this specification is intended for use in deploying and handling oil containment booms in harbors and inland waterways.

6.2 Acquisition requirements. Acquisition documents should specify the following:

a. Title, number, and date of this specification.
b. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.1 and 2.2).
c. When crafts over 12 feet wide shall be of modular design and construction (see 3.1).
d. When a first article sample is required for inspection and approval (see 3.2, 4.3, and 6.4).
e. When technical data is required (see 3.2.1, 3.14, and 4.6.1).
f. Additional controls required, other than minimum (see 3.4.4).
g. Size of fuel tanks (18 or 27 gallon (see 3.8).
h. When treatment for fungus resistance is required (see 3.11).
i. When color of finish coat is other than specified (see 3.12).
j. Level of preservation, and level of packing required (see 5.1 and 5.2).

6.3 Consideration of data requirements. The following data requirements should be considered when this specification is applied on a contract. The applicable Data Item Descriptions (DIDs) should be reviewed in conjunction with the specific acquisition to ensure that only essential data are requested/ provided and that the DIDs are tailored to reflect the requirements of the specific acquisition. To ensure correct contractual application of the data requirements, a Contract Data Requirements List (DD Form 1423) must be prepared to obtain the data, except where DOD FAR Supplement 227.405-70 exempts the requirement for a DD Form 1423.

Reference paragraph	DID number	DID title	Suggested tailoring
3.2.1, 4.6.1 & 3.14	DI-T-5204	Test Plan.	
3.14	DI-E-7031	Drawings, Engineering and Associated Lists.	

The above DIDs were those cleared as of the date of this specification. The current issue of DOD 5010.12-L, Acquisition Management Systems and Data Requirements Control List (AMSDL), must be researched to ensure that only current, cleared DIDs are cited on the DD Form 1423.

6.4 First article. When first article inspection is required, the contracting officer should provide specific guidance to offerors whether the items(s) should be a preproduction sample, a first article sample, a first production item, a sample selected from the first production items, a standard production item from the contractor's current inventory, and the number of items to be tested as specified in 4.6. The contracting officer should also include specific instructions in acquisition documents regarding arrangements for examinations, approval of first article test results, and disposition of first articles. Invitations for bids should provide that the Government reserves the right to waive the requirement for sample for first article inspection to those bidders offering a product which has been previously acquired or tested by the Government, and that bidders offering such products, who wish to rely on such production or test, must furnish evidence with the bid that prior Government approval is presently appropriate for the pending contract. Bidders should not submit alternate bids unless specifically requested to do so in the solicitation.

6.5 Subject term (keyword) listing.

Catamaran
Floating barrier handling
Multihull
Oil spill
Utility boat

Preparing Activity:
Navy - YD1

(Project 1945-N070)