

MIL-B-17397D
 29 August 1983
 SUPERSEDING
 MIL-B-17397C(YD)
 28 May 1976

MILITARY SPECIFICATION

BITTS, CLEATS, AND CHOCKS

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 bitts, cleats, and chocks of cast or fabricated steel for timber piers, wharves, and barges.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. Unless otherwise specified, the following specifications, standards, and handbooks 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.

SPECIFICATIONS

FEDERAL

UU-T-81 - Tags, Shipping and Stock.
 PPP-B-601 - Boxes, Wood, Cleated-Plywood.
 PPP-B-621 - Boxes, Wood, Nailed and Lock-Corner.

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MIL-T-704 - Treatment and Painting of Materiel.
 MIL-F-3541 - Fittings, Lubrication.
 MIL-E-15130 - Enamel, Ship Exterior, Alkyd, Haze.
 MIL-C-15203 - Coating Compound, Bituminous, Emulsion Type, Coal Tar Base.

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, Port Hueneme, CA 93043, 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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FSC 2040

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STANDARDS

MILITARY

- MIL-STD-129 - Marking for Shipment and Storage.
- MIL-STD-147 - Palletized Unit Loads
- MIL-STD-1188 - Commercial Packaging of Supplies and Equipment.

2.1.2 Government drawings. The following Government drawings form a part of this specification to the extent specified herein.

DRAWINGS

NAVAL FACILITIES ENGINEERING COMMAND (NAVFAC)

- 146608 - N. L. Equipment Pontoon Gear Chocks.
- 6028174 - Timber Pier Assemblies, 250 Foot and 500 Foot.

(Copies of specifications, standards, handbooks, drawings, and publications required by manufacturers 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 documents 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 SOCIETY FOR TESTING AND MATERIALS (ASTM)

- A7 - Steel for Bridges and Buildings.
- A27 - Mild- to Medium-Strength Carbon-Steel Castings for General Application
- A36 - Structural Steel.
- A53 - Steel Pipe/Tubing.
- A373 - Structural Steel for Welding.
- E94 - Radiographic Testing, Recommended Practice for
- E186 - Heavy Walled (2 to 4 1/2 inch (51 to 114 mm)) Steel Castings, Reference Radiographs for
- E280 - Heavy Walled (4 1/2 to 12 inch (114 to 305 mm)) Steel Castings, Reference Radiographs for

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

(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.

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3. REQUIREMENTS

3.1 Material. 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. None of the above shall be interpreted to mean that the use of used or rebuilt products are allowed under this specification unless otherwise specified.

3.1.1 Structural steel. The steel plates, bars, and structural shapes shall conform to ASTM A7, A36, or A373 as applicable.

3.1.2 Cast steel. Steel castings shall conform to ASTM A27, grade 70-36, class 1.

3.1.3 Steel pipe. Steel pipe shall be of the wall thickness and dimensions shown on the drawings and shall conform to ASTM A53.

3.2 First article. When specified (see 6.2), the contractor shall furnish a complete bitt, cleat, and chock for first article inspection and approval (see 4.2.1 and 6.3).

3.3 Construction. Bitts, cleats, and chocks as specified (see 6.2), shall be constructed as specified herein and in accordance with the applicable drawings listed in table 1. Bolts for the assembly of the item shall be included; bolts or fasteners for mounting the item on the deck of a pontoon assembly or waterfront structure shall not be included. Holes for bolts shall be cored or drilled.

TABLE 1. Drawings.

Description	Drawings
Bitt, double, low style with lip	6028174, sheet 2
Cleat, rope, 42 inch	
Chock, rope, closed, roller (MK. C26)	Figure 1
Chock, rope, open, 12 inch	146608

3.3.1 Double bitt. The bitt shall be as shown on NAVFAC Drawing No. 6028174, sheet 2, designated "Low double bitt with lip". Material shall be cast steel.

3.3.2 Cleat. The cleat shall be as shown on NAVFAC Drawing No. 6028174, sheet 2, designated "42-inch cleat". The material shall be cast steel.

3.3.3 Chocks. The 12-inch open chock shall be of welded structural steel as shown on NAVFAC Drawing No. 146608. The closed chock, with rollers, MK. C26, shown on figure 1, shall have a body of cast steel, riveted to a 3/4-inch

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thick structural steel plate to facilitate welding to a deck. Rollers shall be cast steel or machined from steel shafting and shall be bronze bushed with thrust washers. The chock opening shall be 6-5/8 inches wide by 5-1/2 inches high to accommodate 4-inch maximum diameter rope. Overall dimensions shall be 29 inches long and 8 inches wide. Lubrication shall be provided for the moving parts, by means of grease passages drilled in the pins and fitted with hydraulic lubrication fittings conforming to MIL-F-3541. Units shall be lubricated prior to delivery.

3.3.4 Dimensional tolerances. Dimensional tolerances for castings shall conform to table 3 of ASTM A27.

3.4 Cleaning, treatment, and painting. After inspection and examination, all exterior surfaces, except threaded parts, shall be cleaned, treated, and painted as described in 3.4.1 and 3.4.2.

3.4.1 Cast construction. Bitts, cleats, and chocks of cast construction shall be cleaned to bare metal by sandblasting, and then given two coats of bituminous emulsion compound conforming to MIL-C-15203 for a total dry film thickness of not less than 20 mils. The compound shall be applied over clean, damp, steel surfaces which have been wet with clean water just prior to application of the compound.

3.4.2 Fabricated construction. Chocks of fabricated construction shall be cleaned, treated, and prime coated in accordance with MIL-T-704, type B, and then finished with two coats of paint conforming to MIL-E-15130, each finish coat to be applied to a dry film thickness of not less than 2.5 mils.

3.5 Workmanship.

3.5.1 Steel fabrication. Steel used in the fabrication of equipment shall be free from kinks and sharp bends. The straightening of material shall be done by methods that will not cause injury to the metal. Shearing and chipping shall be done neatly and accurately. All bends of a major character shall be made with controlled means in order to insure uniformity of size and shape.

3.5.2 Bolted connections. Bolt holes shall be accurately punched or drilled and shall have the burrs removed. Washers or lockwashers shall be provided in accordance with good commercial practice, and all bolts, nuts, and screws shall be tight.

3.5.3 Welding. Welding procedures shall be in accordance with a nationally 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.

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

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3.6 Identification marking. Equipment shall be marked with its noun name, mark number, and NSN as specified (see 6.2). The required marking shall be applied directly to the surface of the item by metal stamp, vibro peening, embossing, forging, casting, or molding. Where these methods are not practicable, the marking shall be applied directly to the item by stencil or on a cloth tag conforming to UU-T-81, type A, with wire. Marking on tags shall be waterproof.

3.7 Servicing and restoration. Each unit tested shall be serviced and restored to a service condition equal to the original condition of the unit, neglecting nominal wear incurred during the tests. The restoration shall include paint touchup or repainting, as required for delivery.

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 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 the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 Component and material inspection. Components and materials shall be inspected in accordance with all the requirements specified herein and in applicable referenced documents.

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

- a. First article inspection (see 4.2.1).
- b. Quality conformance inspection (see 4.2.2).

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

4.2.2 Quality conformance inspection. The quality conformance inspection shall include the examination of 4.3 and the packaging inspection of 4.4.

4.3 Examination. Each bitt, cleat, and chock 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.

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4.3.1 Radiographic examination. Unless otherwise specified (see 6.2), steel castings described in 3.1.2 shall be examined for internal defects by means of x-rays or gamma rays. The procedure shall be in accordance with ASTM E94, and types and degrees of discontinuities considered shall be judged by comparison with the reference radiographs of ASTM E186 or E280.

4.4 Packaging inspection. The packing, palletization, and marking of bitts, cleats, and chocks shall be inspected to verify conformance to the requirements of section 5.

5. PACKAGING

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

5.1.1 Level A. The bitts shall be shipped uncrated. The cleats and chocks shall be packed in palletized unit loads in accordance with MIL-STD-147. Where quantities are not sufficient to provide a suitable palletized load, the cleats and chocks shall be packed in close-fitting boxes conforming to PPP-B-621, class 2; or PPP-B-601, overseas type. The contents shall be anchored, blocked, and braced to prevent movement within the containers.

5.1.2 Level B. The bitts, cleats, and chocks shall be packed as specified for level A, except that the boxes shall be class 1 or domestic type, as applicable.

5.1.3 Commercial. The equipment shall be preserved in accordance with the contractor's standard practice in a manner to prevent deterioration and damage. Material shall be packed in accordance with MIL-STD-1188.

5.3 Marking. Marking for shipping and storage shall conform to MIL-STD-129.

6. NOTES

6.1 Intended use. The bitts, cleats, and chocks are used on timber piers, and on the deck of pontoon assemblies, as applicable, for purposes of snubbing, guiding, or belaying lines.

6.2 Ordering data. Acquisition documents should specify the following:

- a. Title, number, and date of this specification.
- b. When first article is required for inspection and approval (see 3.2, 4.2.1, and 6.3).
- c. Description of unit required (see 3.3).
- d. Identification marking required (see 3.6).
- e. When radiographic examination is required for castings (see 4.3.1).
- f. Level of packing required (see 5.1).

6.3 First article. When a first article inspection is required, the item will be tested and should be a first article sample, or it may be a standard production item from the contractor's current inventory as specified in 4.2.1. The first article should consist of one unit. The contracting officer should include specific instructions in acquisition documents regarding arrangements for examination, test, and approval of the first article.

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6.4 Data requirements. When this specification is used in an acquisition which incorporates a DD Form 1423, Contract Data Requirements List (CDRL) and invokes the provisions of paragraph 7-104.9(n) of the Defense Acquisition Regulations (DAR), the data requirements will be developed as specified by an approved Data Item Description (DD Form 1664) and delivered in accordance with the approved CDRL (DD Form 1423) incorporated into the contract. When the provisions of DAR 7-104.9(n) are not invoked, the data shall be delivered in accordance with the contract requirements.

Custodians:

Army - ME
Navy - YD

Preparing activity:

Navy - YD

Project No. 2040-0148

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, 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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