

RR-S-331D
September 12, 1989
SUPERSEDING
RR-S-331C
15 August 1985

FEDERAL SPECIFICATION

SHOES: FOR WOOD PILES

This specification is approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers point-type and boot-type shoes for timber piles.

1.2 Classification.

1.2.1 Types and sizes. In accordance with this specification, shoes for timber piles will be of the following types and sizes as specified (see 6.2).

Type I - Point-type Shoe

- Size A - For piles with tip diameter 5 to 10 inches
- Size B - For piles with tip diameter 8 to 12 inches
- Size C - For piles with tip diameter 11 to 15 inches

Type II - Boot-type Shoe

- Size D - For piles with tip diameter 6 inches
- Size E - For piles with tip diameter 7 inches
- Size F - For piles with tip diameter 8 inches
- Size G - For piles with tip diameter 9 inches

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 93043-5000, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

FSC 5680

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Standards. The following 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).

Federal Standard

FED-STD-123 - Markings for Shipment (Civil Agencies)

Military Standards

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes
 MIL-STD-129 - Marking for Shipment and Storage
 MIL-STD-2073-1 - DoD Material Procedures for Development and Application of Packaging Requirements

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Naval Publications and Forms Center, (ATTN: NPODS), 5801 Tabor Avenue, Philadelphia, PA 19120-5099.)

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

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 is current on the date of the solicitation (see 6.2).

American Society for Testing and Materials (ASTM)

ASTM A 569 - Steel, Carbon (0.15 Maximum, Percent), Hot-Rolled Sheet and Strip, Commercial Quality
 ASTM D 3951- Commercial Packaging, Practice for

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

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

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2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein (except for associated detail specifications, specifications sheets or MS standards), the text of this specification takes precedence. Nothing in this specification, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Description.

3.1.1 Type I. Type I shoes for timber piles shall be fabricated of carbon steel. They shall be in agreement with Figure 1 and, unless otherwise specified, (see 6.2) shall comply with the requirements in table I. The lengths of the joints formed by the intersection of the sides shall not be less than one half of the height of the shoe and shall be welded as indicated in figure 1.

TABLE I. Point-type steel shoe for timber pile. 1/

Size	Dimensions				
	Pile tip diameter (inches)	Height (inches)	Width (inches)	Joint length (inches)	Thickness (inches)
A	5 to 10	9.0	9.5	4.5	3/16
B	8 to 12	11.0	11.0	5.5	3/16
C	11 to 15	13.0	13.5	6.5	3/16

1/ Dimensions shall be within 5 percent of values shown.

3.1.2 Type II. Type II shoes for timber piles shall be fabricated of carbon steel. They shall be in agreement with figure 2 and, unless otherwise specified (see 6.2), shall comply with the requirements in table II.

TABLE II. Boot-type steel shoe for timber pile. 1/

Size	Dimensions				
	Pile tip diameter (inches)	Top diameter (inches)	Bottom Diameter (inches)	Height (inches)	Thickness (inches)
D	6	6.0	5.625	3.375	3/16
E	7	7.0	6.625	3.500	3/16
F	8	8.0	7.625	3.625	3/16
G	9	9.0	8.625	3.750	3/16

1/ Dimensions shall be within 5 percent of values shown.

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3.2 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 are allowed under this specification.

3.2.1 Steel. Unless otherwise specified (see 6.2), steel used for type I and type II timber pile shoes shall conform to ASTM A 569.

3.3 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.

3.4 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 Finish. Unless otherwise specified (see 6.2), the shoes shall be cleaned and painted with at least one coat of paint. The color and paint shall be the manufacturers standard.

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

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4.1.1 Material inspection. The contractor is responsible for insuring that supplies and materials are inspected for compliance with all the requirements specified herein and in applicable referenced documents.

4.2 Sampling. Sampling and inspection procedures shall be in accordance with MIL-STD-105. The unit of product shall be pile shoes. All piles shoes offered for delivery at one time shall be considered a lot for the purpose of inspection (see 6.4).

4.2.1 Sampling for examination. (See 6.4.1.)

4.2.1 Sampling for tests. (See 6.4.2.)

4.3 Examination. Each pile shoe shall be examined for compliance with the requirements specified in section 3 of this specification, see table III. 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.

TABLE III. Classification of defects.

Paragraph	Defects
3.1.1 & 3.1.2	Dimensions not within 5 percent agreement of the stated values, or obviously of poor workmanship.
3.4	Steel obviously defective: warped, cracked.
3.4.2	Welds of poor quality showing craters, pock marks, undercuts, or extreme warpage.
3.4.3	Finish not in conformance with stated reference.

4.4 Preparation for delivery inspection. The preservation, packing, and marking of the item shall be inspected to verify conformance to the requirements of section 5.

5. PREPARATION FOR DELIVERY

5.1 Packing. Packing shall be level B or commercial as specified (see 6.2).

5.1.1 Level B. Pile shoes of like description shall be packed in accordance with level B requirements of MIL-STD-2073.

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5.1.2 Commercial. Pile shoes of like description shall be packed in accordance with ASTM D 3951.

5.2 Marking.

5.2.1 Military agencies. Shipments to military agencies shall be marked in accordance with MIL-STD-129.

5.3.2 Civil agencies. Shipments to civil agencies shall be marked in accordance with FED-STD-123.

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 pile shoes are intended for use with timber piles to alleviate pile splitting or brooming.

6.2 Ordering data. Purchasers should select the preferred options permitted herein and include the following information in acquisition documents:

- 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 2.2).
- c. Type, size, and thickness required (see 1.2.1).
- d. When type I is to be other than specified in table I (see 3.1.1).
- e. When type II is to be other than specified in table II (see 3.1.2).
- f. If material requirement is other than that specified (see 3.2.1).
- g. When painting is to be other than specified (see 3.5).
- h. Level of packing required (see 5.1).

6.3 Data requirements. When this specification is used in an acquisition and data are required to be delivered, the data requirements should be developed as specified by an approved Data Item Description (DD Form 1664) and delivered in accordance with the approved Contract Data Requirements List (CDRL), incorporated into the contract. When the provisions of DOD FAR Supplement, Part 27, Sub-Part 27.475-1 (DD Form 1423) are invoked and the DD Form 1423 is not used, the data should be delivered by the contractor in accordance with the contract or purchase order requirements.

6.4 Sampling.

6.4.1 Sampling for examination. Recommended inspection level is S-2 and the Acceptable Quality Level (AQL) is 4.0 percent defective (see 4.2).

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6.4.2 Sampling for tests. Recommended inspection level is S-2 and the Acceptable Quality Level (AQL) is 4.0 percent defective (see 4.2).

MILITARY INTEREST:

Custodian

Navy - YD

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS

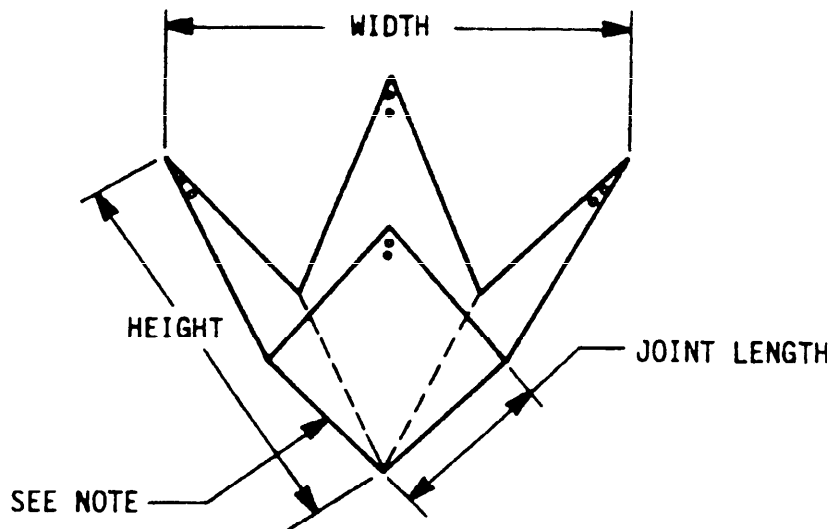
PREPARING ACTIVITY:

Navy - YD

Project 5680-0171

Orders for this publication are to be placed with General Services Administration, acting as an agent for the Superintendent of Documents. See section 2 of this specification to obtain extra copies and other documents referenced herein.

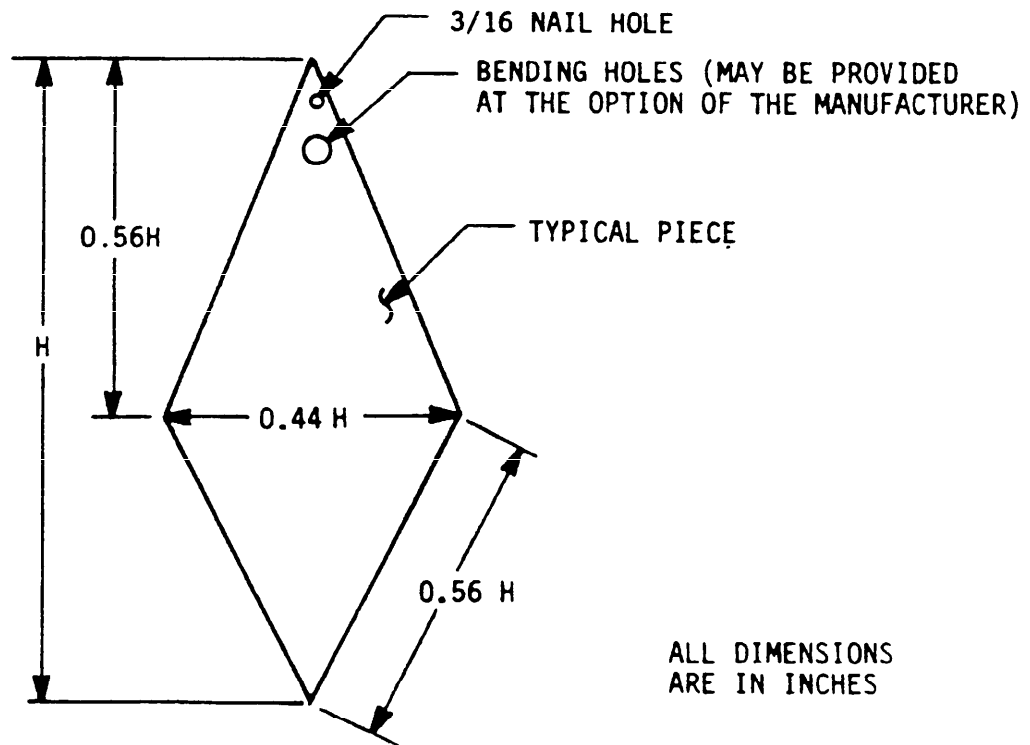
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NOTE:

COMPLETE PENETRATION REQUIRED,
JOINT PREPARATION OPTIONAL.

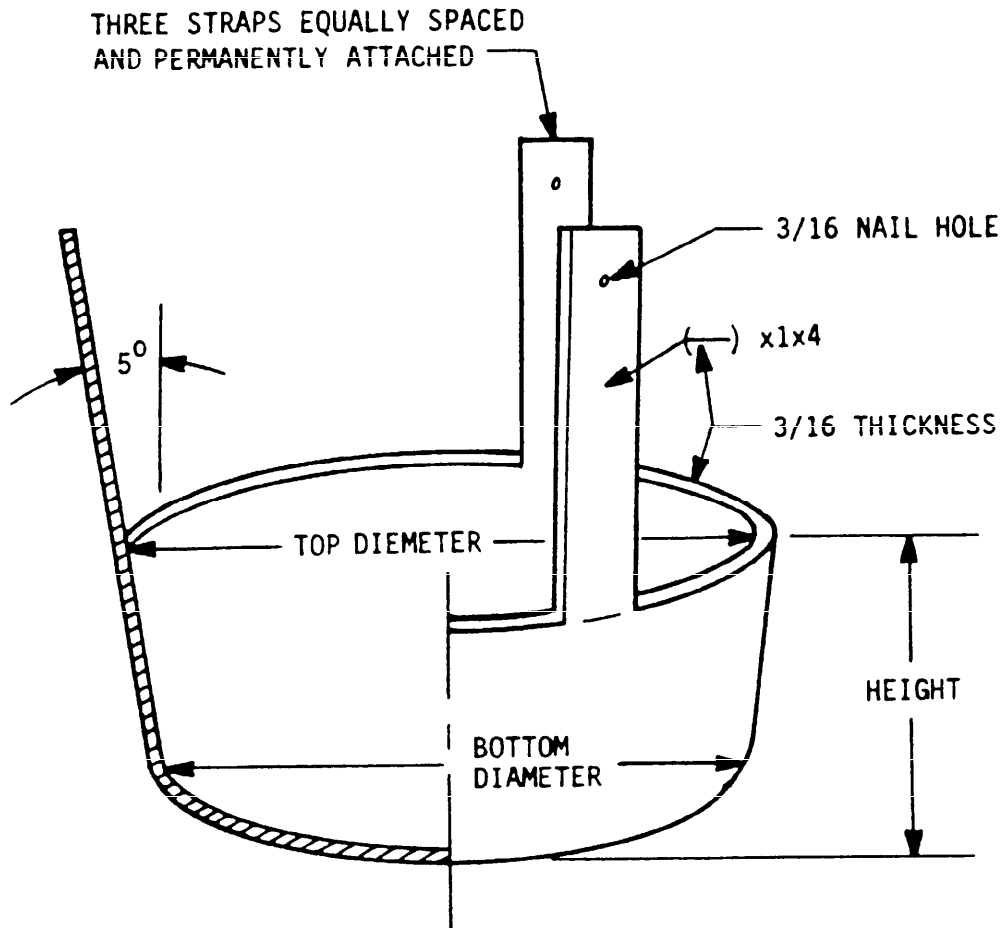
TWO BENT OR FOUR IDENTICAL 3/16 OR 1/4
PLATES CONTINUOUSLY WELDED ALONG JOINTS



ALL DIMENSIONS
ARE IN INCHES

Figure 1. Point-type pile shoe.

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ALL DIMENSIONS ARE IN INCHES

Figure 2. Boot-type pile shoe.

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

1. DOCUMENT NUMBER
RR-S-331D2. DOCUMENT TITLE
FEDERAL SPECIFICATION - SHOES: FOR WOOD PILLS

3a. NAME OF SUBMITTING ORGANIZATION

4. TYPE OF ORGANIZATION (Mark one)

 VENDOR USER MANUFACTURER OTHER (Specify): _____

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

B. 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 1420
82 MAR

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T ALONG THIS LINE

(TO DETACH THIS FORM)

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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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