

MIL-I-17214B
7 November 1984
SUPERSEDING
MIL-I-17214A
4 December 1952
(See 6.3)

MILITARY SPECIFICATION

INDICATOR, PERMEABILITY; LOW-MU (GO-NO GO)

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers a low-mu permeability indicator, of the go-no go type; for use in determining the permeability of feebly magnetic materials in all forms used in ship construction.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. Unless otherwise specified, 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.

* SPECIFICATIONS

FEDERAL

PPP-B-566	- Box Folding, Paperboard.
PPP-B-636	- Boxes, Shipping, Fiberboard.
PPP-B-640	- Boxes, Fiberboard, Corrugated, Triple-Wall.
PPP-B-676	- Boxes, Setup.

* STANDARD

MILITARY

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

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, Naval Sea Systems Command, SEA 5523, Department of the Navy, Washington, DC 20362 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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(Copies of specifications and standards required by contractors in connection with specific acquisition functions should be obtained from the contracting agency or as directed by the contracting officer.)

2.2 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 Material and design. The material and design shall be such that the permeability indicator conforms to all of the performance requirements of this specification. The magnet shall be Alnico No. 5, or equivalent.

3.2 General characteristics. The indicator shall perform equally as well on plates, sheets, bars, rods, and irregular-shaped objects and shall be capable of indicating the permeability of individual items or components of complex equipments and structures. It shall be unaffected by position of operation and shall be portable, light-weight, simple to operate and rugged enough for ship and field use.

3.2.1 Recovered materials. Unless otherwise specified herein, all equipment, material, and articles incorporated in the products covered by this specification shall be new and shall be fabricated using materials produced from recovered materials to the maximum extent practicable 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 is allowed under this specification unless otherwise specifically specified.

* 3.3 Permeability levels. The indicator shall be capable of differentiating materials of four different normal permeability levels, 1.2, 1.6, 2.0, and 2.5 (air = 1.0) when tested as specified in 4.3.2.

* 3.4 Dimensions. The over-all dimensions shall be approximately 5 (127 millimeters (mm)) by 1 (25 mm) by 1-1/4 (32 mm) inches when inspected as specified (see 4.3.1).

3.5 Case. Each indicator shall be furnished a snug-fitting case to protect it from damage when not in use. Proper provisions shall be made for stowing of the inserts.

* 3.6 Marking. Each indicator shall have stamped, engraved, or otherwise placed upon it, the words "Property of US Government" and the manufacturer's serial number and applicable military specification with appropriate revision letter (for example MIL-I-17214B).

* 3.7 Operating instructions. Instructions for the use of the indicator shall accompany each instrument, and shall be permanently fixed to the inside of the case lid. Instructions placed upon the indicator shall be capable of being read by an individual having 20/20 vision without the aid of an optical device.

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3.8 Workmanship. The indicator shall be free from all imperfections which may impair its serviceability. All moving parts shall be free-moving and shall not bind.

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 that supplies and services conform to prescribed requirements.

4.2 Inspection and test. Each indicator shall be subjected to the inspection and test specified in 4.3, and the results compared with specification requirements. Failure to conform to the specification requirements shall be counted as a defect and the indicator shall be rejected.

4.2.1 Packaging inspection. Sample packages and packs and the inspection of the preservation, packing and marking for shipment and storage shall be in accordance with the requirements of section 5 and the documents specified therein.

4.3 Test procedures.

* 4.3.1 Visual and dimensional inspection. Each sample indicator shall be examined to verify compliance with 3.1, 3.2, 3.4, 3.5, 3.6, 3.7 and 3.8.

4.3.2 Functional test. Each sample indicator shall be tested with a series of known standards (at least five) of permeability ranging from 1.1 to 2.6 to verify compliance with 3.3.

* 5. PACKAGING

(The packaging requirements specified herein apply only for direct Government acquisition.)

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

5.1.1 Level A. Each indicator with inserts and carrying case (see 3.5), shall be individually unit packed in a snug fitting paperboard folding or setup box conforming to PPP-B-566 or PPP-B-676 respectively. Noncorrosive cushioning media shall be applied within the carrying case to provide physical protection and to prevent movement of the parts. Sealing and closure, as applicable, of unit containers shall conform to the applicable box specification or appendix thereto.

5.1.2 Commercial. Commercial preservation shall be as specified by the contracting agency (see 6.2).

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

5.2.1 Level A. Indicators preserved as specified in 5.1 shall be packed in fiberboard containers conforming to class weather resistant of PPP-B-636 or class 2 of PPP-B-640. Containers shall be closed and waterproofed in accordance with the applicable container specification or appendix thereto, with method V closure applicable to PPP-B-636 containers. Containers shall be reinforced with pressure sensitive filament reinforced type or nonmetallic banding in lieu of metal strapping.

5.2.2 Level B. Indicators preserved as specified in 5.1 shall be packed as specified for level A except that the containers shall conform to the domestic type or class and reinforcement is not required. Containers shall be closed in accordance with the applicable container specification or appendix thereto with method I closure applicable to PPP-B-636 boxes.

5.2.3 Commercial. Commercial packing shall be as specified by the contracting agency (see 6.2).

5.3 Marking. In addition to any special marking required (see 6.2), interior unit packs and exterior shipping containers shall be marked in accordance with MIL-STD-129.

6. NOTES

6.1 Intended use. Equipment acquired to this specification is intended to be used where determination of permeability of material in the range 1.2 to 2.5 is required for go-no go basis.

6.2 Ordering data. Acquisition documents should specify the following:

- (a) Title, number, and date of this specification.
- (b) Whether domestic or overseas packing is required (see 5.2).
- (c) Levels of preservation and packing required (see 5.1 and 5.2).
- (d) Commercial preservation and packing requirements (see 5.1.2 and 5.2.3).
- (e) Special marking required (see 5.3).

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6.3 Changes from previous issue. The margins of this specification are marked with asterisks to indicate where changes (additions, modifications, corrections, deletions) from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

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(Project 6635-0124)

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TO DETACH THEM

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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