

INCH-POUND

MIL-F-19700A(SH)

12 November 1987

SUPERSEDING

MIL-F-19700(SHIPS)

8 May 1957

(See 6.6)

MILITARY SPECIFICATION**FASTENERS, SCREW THREADED, AND RELATED
ITEMS, NON-MAGNETIC**

This specification is approved for use within the Naval Sea Systems 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 describes the characteristics of nonmagnetic, screw threaded fasteners and related items that are dimensionally in conformance to recognized Military and industrial standards. The intent of this specification is to supplement, not supersede, the specifications normally used for the acquisition of threaded fasteners and related items.

1.2 Classification.

1.2.1 Classes. Screw threaded fasteners and related items shall be of the following classes, as specified (see 6.2.1):

- Class A - Nickel-copper-aluminum alloy.
- Class B - Silicon bronze alloy.
- Class C - Austenitic corrosion resisting steel.
- Class D - Aluminum alloy (6061).
- Class E - Phosphor bronze alloy.
- Class F - Aluminum bronze alloy.

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 20362-5101 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

DISTRIBUTION STATEMENT A Approved for public release; distribution unlimited

FSC 5315

MIL-F-19700A(SH)

1.2.2 Types. Fasteners and related items shall be of the following types, as specified:

Bolts:

- Type I - Round head.
- Type II - Hexagon head.
- Type III - Hexagon head, UNC-3A (for use with type V self-locking nuts).
- Type IV - Finned neck, countersunk, flat head.

Machine screws:

- Type I - Flat head, 82 degrees, cross recessed.
- Type II - Pan head, cross recessed.
- Type III - Fillister head, slotted and drilled.
- Type IV - Flat head, 82 degrees, slotted.
- Type V - Pan head, slotted.

Wood screws:

- Type I - Flat head, 82 degrees, cross recessed.
- Type II - Round head, cross recessed.
- Type III - Oval head, cross recessed.
- Type IV - Flat head, 82 degrees, slotted.
- Type V - Round head, slotted.
- Type VI - Oval head, slotted.

Lag screws:

- Type I - Square bolt head.
- Type II - Slotted countersunk head.

Studs:

- Type I - Full body.

Nuts:

- Type I - Hexagon, top chamfered, machine screw.
- Type II - Hexagon, regular finished.
- Type III - Hexagon, regular finished jam.
- Type IV - Square, regular.
- Type V - Hexagon, self locking nylon insert (class C material only).

Cap screws:

- Type I - Hexagon head.

Pins:

- Type I - Split cotter.

Washers:

- Type I - Metal, flat, plain, round.
- Type II - Spring, nonlink lock.
- Type III - Internal tooth, flat lock.
- Type IV - External tooth, flat lock.

MIL-F-19700A(SH)

1.2.2.1 For acquisition purposes, fasteners and related items shall be of the types, styles, and grades specified in the applicable acquisition specifications, as shown in table I (see 3.1.1). Both this specification number and the applicable acquisition specification number shall appear on the ordering data (see 6.2.1). The types listed above are used only to allow reference to fasteners meeting the requirements of both this specification and the acquisition specification.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

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

SPECIFICATIONS

FEDERAL

FF-B-561	- Bolts, (Screw), Lag.
FF-N-836	- Nut: Square, Hexagon, Cap, Slotted, Castle, Knurled, Welding and Single Ball Seat.
FF-P-386	- Pins, Cotter (Split).
FF-S-92	- Screw, Machine: Slotted, Cross-Recessed or Hexagon Head.
FF-S-111	- Screw, Wood.
FF-W-84	- Washers, Lock (Spring).
FF-W-92	- Washer, Flat (Plain).
FF-W-100	- Washer, Lock, Tooth.
QQ-C-465	- Copper-Aluminum Alloys (Aluminum Bronze) (Copper Alloy Numbers 606, 614, 630, and 642): Rod, Flat Products with Finished Edges (Flat Wire, Strip, and Bar), Shapes and Forgings.
QQ-N-286	- Nickel-Copper-Aluminum Alloy, Wrought (UNS N05500).
PPP-F-320	- Fiberboard, Corrugated And Solid, Sheet Stock (Container Grade), And Cut Shapes.
PPP-H-1581	- Hardware (Fasteners and Related Items), Packaging of.

MILITARY

MIL-S-1222	- Studs, Bolts, Hex Cap Screws, Socket Head Cap Screws and Nuts.
MIL-I-17214	- Indicator, Permeability; Low-Mu (Go-No Go).
MIL-L-19140	- Lumber and Plywood, Fire-Retardant Treated.

STANDARDS

FEDERAL

FED-STD-151	- Metals; Test Methods.
FED-STD-H28	- Screw-Thread Standards for Federal Services.
FED-STD-H28/2	- Screw-Thread Standards for Federal Services Section 2 Unified Inch Screw Threads - UN and UNR Thread Forms.

MIL-F-19700A(SH)

MILITARY

- MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.
- MS16201 - Bolt, Lag, Cone Point, Countersunk Flathead, Slotted, Copper-Silicon Alloy, Nonmagnetic.
- MS16204 - Bolts, Finned Neck, Countersunk Flathead, UNC-2A, Non-Magnetic.
- MS16228 - Nut, Self-Locking, Hexagon - Thin, UNC 3B (Non Metallic Insert) Austenitic Corrosion Resistant Steel, Nonmagnetic, 250°F.

(Copies of specifications and standards 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 Other publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted shall be those listed in the issue of the DoDISS specified in the solicitation. Unless otherwise specified, the issues of documents not listed in the DoDISS shall be the issue of the nongovernment documents which is current on the date of the solicitation.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

- B18.2.1 - Square and Hex Bolts and Screws, Inch Series Including Hex Cap Screws and Lag Screws. (DoD adopted)
- B18.2.2 - Square and Hex Nuts. (DoD adopted)
- B18.5 - Round Head Bolts (Inch Series). (DoD adopted)
- B18.6.1 - Wood Screws (Inch Series). (DoD adopted)
- B18.6.3 - Machine Screws and Machine Screw Nuts. (DoD adopted)
- B18.8.1 - Clevis Pins and Cotter Pins. (DoD adopted)
- B18.21.1 - Lock Washers. (DoD adopted)
- B18.22.1 - Plain Washers. (DoD adopted)

(Application for copies should be addressed to the American National Standards Institute, 1430 Broadway, New York, NY 10018.)

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- A 342 - Standard Test Methods for Permeability of Feebly Magnetic Materials.
- A 380 - Standard Practice for Cleaning and Descaling Stainless Steel Parts, Equipment, and Systems. (DoD adopted)
- B 580 - Standard Specification for Anodic Oxide Coatings on Aluminum. (DoD adopted)
- F 467 - Standard Specification for Nonferrous Nuts for General Use. (Metric) (DoD adopted)
- F 468 - Standard Specification for Nonferrous Bolts, Hex Cap Screws, and Studs for General Use. (Metric) (DoD adopted)
- F 593 - Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs. (DoD adopted)
- F 594 - Standard Specification for Stainless Steel Nuts. (DoD adopted)

MIL-F-19700A(SH)

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

(Nongovernment standards and other publications are normally available from the organizations which prepare or which 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 specification and the references cited herein (except for associated detail specifications, specification sheets or MS standards), the text of this specification shall take precedence. Nothing in this specification, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 General. This specification describes the following requirements for nonmagnetic fasteners:

- (a) Materials (see 3.2).
- (b) Magnetic permeability (see 3.4).
- (c) Requirements of various combinations of fastener type and material class not specified elsewhere.

3.1.1 Other requirements. Other requirements for nonmagnetic fasteners shall be as specified in the applicable fastener specification referenced herein, and as shown in table I. These requirements shall include, but not be limited to, the following:

- (a) Dimensions and tolerances.
- (b) Shape geometry.
- (c) Thread form and limits of size.
- (d) Methods of inspection and tests.
- (e) Identification marking of fasteners.
- (f) Test reports and data requirements.

Fasteners shall meet all requirements of the applicable acquisition specifications, as well as the requirements specified herein. Except for the limitations placed on the alloys used, and the maximum magnetic permeability requirements, the fasteners shall be the same as the standard commercial items normally produced by industry.

MIL-F-19700A(SH)

TABLE 1. Applicable acquisition specifications and related ANSI standards for nonmagnetic fasteners.

Type, in accordance with this specification	Specification to be used for acquisition of fasteners	Equivalent ANSI standard
Bolts: Type I Type II Type III Type IV	MIL-S-1222, type V MIL-S-1222, type II MIL-S-1222, type II (UNC-3A) MS16204	B18.5 B18.2.1 B18.2.1 ---
Machine screws: Type I Type II Type III Type IV Type V	FF-S-92, type III, style 2c FF-S-92, type III, style 9c FF-S-92, type I, style 5s FF-S-92, type I, style 2s FF-S-92, type I, style 9s	B18.6.3 B18.6.3 B18.6.3 B18.6.3 B18.6.3
Wood screws: Type I Type II Type III Type IV Type V Type VI	FF-S-111, type I, style 2c FF-S-111, type I, style 1c FF-S-111, type I, style 6c FF-S-111, type I, style 2s FF-S-111, type I, style 1s FF-S-111, type I, style 6s	B18.6.1 B18.6.1 B18.6.1 B18.6.1 B18.6.1 B18.6.1
Lag screws: Type I Type II	FF-B-561, type I or II, style 2 MS16201	B18.2.1 ---
Studs: Type I	MIL-S-1222, type I	---
Nuts: Type I Type II Type III Type IV Type V	FF-N-836, type II, style 13 MIL-S-1222, type I MIL-S-1222, type II FF-N-836, type I, style 1 MS16228	B18.2.2 B18.2.2 B18.2.2 B18.2.2 ---
Cap screws: Type I	MIL-S-1222, type I	B18.2.1
Pins: Type I	FF-P-386	B18.8.1
Washers: Type I Type II Type III Type IV	FF-W-92, type A, grade I FF-W-84, style 2 FF-W-100, type I, grade A FF-W-100, type II	B18.22.1 B18.21.1 B18.21.1 B18.21.1

MIL-F-19700A(SH)

3.2 Materials. Screw threaded fasteners and related items shall be manufactured from the materials specified in table II, and shall conform to the chemistry specified.

TABLE II. Specification class, chemical requirements, and material grade.

Class	Description	Chemical requirement	Material grade
Class A	Nickel-copper-aluminum	QQ-N-286	500
Class B	Silicon bronze	ASTM F 467, ASTM F 468	651, 655 or ¹ 661
Class C	Austenitic steel	ASTM F 593, ASTM F 594	¹ 316
Class D	Aluminum	ASTM F 467, ASTM F 468	6061 (T6)
Class E	Phosphor bronze	ASTM F 467, ASTM F 468	510
Class F	Aluminum bronze	QQ-C-465, alloy C63200	632

¹ Any material grade from the specific class is acceptable

3.2.1 Materials and manufacturing processes for fasteners. Fasteners, except externally-threaded, class A, shall be manufactured using processes specified in the applicable industry or Government standard as shown in table II.

3.2.2 Materials and manufacturing processes for fasteners (externally-threaded, class A). Externally-threaded, class A fasteners shall be fabricated by one of the procedures specified in MIL-S-1222 for material grade 500 fasteners.

3.3 Heat treatment. Unless otherwise specified (see 6.2.1), fasteners shall be heat-treated in accordance with the applicable document specified in table II.

3.4 Magnetic permeability. Fasteners shall be essentially nonmagnetic. The magnetic permeability shall not exceed 1.5 at 100 oersteds when tested as specified in 4.5.3.

3.4.1 Classes exempt from magnetic permeability testing. Classes A, B, D, E, and F fasteners need not be tested for permeability. These alloys are inherently nonmagnetic and little or no change in the permeability occurs as a result of the fabrication process.

3.4.2 Magnetic permeability report for class C fasteners. The magnetic permeability of class C fasteners shall be tested as specified in 4.5.3, and reported.

MIL-F-19700A(SH)

3.5 Mechanical properties. Fasteners shall conform to the mechanical requirements specified in the applicable documents listed in table I. If an applicable fastener specification does not define the mechanical requirements for a particular combination of fastener type and material class, certification shall be provided that the fastener stock material meets both the chemical and mechanical requirements in the applicable alloy specification specified in table II.

3.6 Protective coating or treatment.

3.6.1 Class C fasteners. Class C fasteners shall be descaled, cleaned, and passivated in accordance with ASTM A 380.

3.6.2 Class D fasteners. Class D fasteners shall be anodized in accordance with ASTM B 580, type D.

3.7 Dimensions. Fasteners shall meet the dimensions and tolerances specified in the detailed acquisition specifications or standards listed in table I (see 6.2.1).

3.8 Threads. Unless otherwise specified in the detailed acquisition specifications or standards listed in table I, or otherwise specified in the ordering data (see 6.2.1), screw threads shall be unified for class 2A/2B in accordance with FED-STD-H28 and FED-STD-H28/2.

3.9 Identification marking. Unless otherwise specified (see 5.1), identification marking of fasteners shall be accomplished only when required by the acquisition specifications and standards listed in table I.

3.10 Workmanship. Fasteners shall be of uniform quality and condition, free from rust and scale, and without broken, burred, or damaged threads.

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 Responsibility for compliance. All items must meet all requirements of sections 3 and 5. The inspection 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 assuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling in quality conformance does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to acceptance of defective material.

MIL-F-19700A(SH)

4.2 Lot. A lot of screw threaded fasteners and related items shall be as specified in the applicable specifications listed in table I.

4.3 Sampling. Except for magnetic permeability (see 4.3.2), samples for acceptance inspection shall be selected in accordance with the requirements of the applicable specifications listed in table I.

4.3.1 Sampling for acceptance inspection. Where sampling is not covered by the applicable specification referenced in table I, samples shall be selected from each lot as follows:

- (a) Visual and dimensional tests - Samples shall be taken, at random, in accordance with inspection level I of MIL-STD-105.
- (b) Other tests - Samples shall be taken, at random, in accordance with inspection level S-1 of MIL-STD-105.

4.3.2 Sampling for magnetic permeability. For class C fasteners, samples shall be selected at random from each lot in accordance with inspection level S-3 of MIL-STD-105. Samples for magnetic permeability testing will not be required for classes A, B, D, E, and F fasteners if certification is provided that the composition meets the chemistry requirements of the applicable specifications listed in table II.

4.3.3 Sampling for chemical analysis. Samples for chemical analysis shall be selected in accordance with the applicable specifications listed in table I. Where such requirements are not specified, at least one sample shall be selected at random from each lot.

4.4 Acceptable quality levels (AQL). Acceptance and rejection shall be based on the specific requirements of the applicable specifications listed in table I. Where such requirements are not specified, the following shall apply:

- (a) Visual and dimensional tests - Lot acceptance shall be based on an AQL of 4.0 percent defective.
- (b) Other tests - Failure of any sample to conform to the applicable requirements specified herein shall be cause for rejection of the lot.

4.5 Methods of examination and test.

4.5.1 Examination. Samples selected in accordance with 4.3.1 shall be examined for conformance to the dimensional and workmanship requirements of the applicable specifications or standards listed in table I. Examination for dimensions shall consist of gauging or otherwise measuring the threads and tolerance dimensions as specified in the applicable acquisition specification.

4.5.2 Mechanical tests. Sample fasteners, selected in accordance with 4.3.1, shall be tested, as specified in the specifications listed in table I, to determine conformance to all the requirements of the referenced specification. The applicable fastener specification shall define the mechanical requirements

MIL-F-19700A(SH)

for a particular combination of fastener type and material class, and shall demonstrate conformance to the mechanical property requirements of the alloys listed in table II. When specified in the contract or order, a certificate of compliance shall be prepared (see 6.2.2).

4.5.3 Magnetic permeability tests. Each of the samples selected in accordance with 4.3.2 shall be tested for magnetic permeability in accordance with ASTM A 342, method 6, or by a go-no go permeability indicator of the type specified in MIL-I-17214. Permeability indications shall be made on the threaded as well as unthreaded portions of the fasteners.

4.5.4 Chemical analysis. The samples for chemical analysis shall consist of a suitable amount of chips, millings, or drillings taken from representative fasteners in the lot (see 4.3.3). The material shall be analyzed in accordance with FED-STD-151, and shall meet the applicable material specification requirements as shown in table II. Certified heat analysis, provided by the material manufacturer, is acceptable in place of product analysis if all fasteners in the lot are from the same heat.

4.6 Certificate of compliance. When specified in the contract or order, a certificate of compliance shall be prepared (see 6.2.2).

4.7 Rejected lots. Rejected lots may be resubmitted for inspection and tests, as applicable, providing the contractor has reprocessed the lot, and removed all nonconforming items.

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

5. PACKAGING

(The packaging requirements specified herein apply only for direct Government acquisition. For the extent of applicability of the packaging requirements of referenced documents listed in section 2, see 6.5.)

5.1 Preservation, packing, and marking. Unless otherwise specified in the applicable acquisition specification (see table I), fasteners shall be preserved level A, B, or commercial (level C) packed level A, B, or commercial (level C) as specified (see 6.2.1), and marked including bar coding and other ordering data options in accordance with PPP-H-1581. In addition, for Navy acquisitions, the following applies:

(a) Navy fire-retardant requirements.

1. Lumber and plywood. Unless otherwise specified (see 6.2.1), all lumber and plywood including laminated veneer material used in shipping container and pallet construction, members, blocking, bracing, and reinforcing shall be fire-retardant treated material conforming to MIL-L-19140 as follows:

MIL-F-19700A(SH)

- Level A and B - Type II - weather resistant.
Category I - general use.
- Level C - Type I - non-weather resistant.
Category I - general use.

2. Fiberboard. Unless otherwise specified (see 6.2.1), fiberboard used in the construction of class-domestic, non-weather resistant fiberboard, and cleated fiberboard boxes shall meet the flame spread index and specific optic density requirements of PPP-F-320 and amendments thereto.

6. NOTES

6.1 Intended use. The fasteners described by this specification are generally used for corrosion-resistant, nonmagnetic applications. Fasteners ordered to this specification and to the applicable acquisition specification should conform to the requirements of both specifications. Should there be a conflict between the requirements in the two specifications, this specification should take precedence.

6.2 Ordering data.

6.2.1 Acquisition requirements. Acquisition documents should specify the following:

- (a) Title, number, and date of this specification.
- (b) Class of material (see 1.2.1) and heat treatment (see 3.3).
- (c) Title, number, and date of the applicable acquisition specifications or standards listed in table I (see 1.2.2.1).
- (d) Type, style, and grade of fastener, as given in the applicable acquisition specifications listed in table I (not the type numbers used in this specification).
- (e) Quantity, expressed in pieces of each item.
- (f) Size and length of fastener (see 3.7).
- (g) Thread series and class of fit (see 3.8).
- (h) When fire-retardant requirements are not required (see 5.1).
- (i) Level of packaging and packing required (see 5.1).

6.2.2 Data requirements. When this specification is used in an acquisition and data are required to be delivered, the data requirements identified below shall 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 specified below shall be delivered by the contractor in accordance with the contract or purchase order requirements. Deliverable data required by this specification are cited in the following paragraphs.

MIL-F-19700A(SH)

<u>Paragraph no.</u>	<u>Data requirement title</u>	<u>Applicable DID no.</u>	<u>Option</u>
4.5.2, 4.6	Certificate of compliance	DI-E-2121	---

(Data item descriptions related to this specification, and identified in section 6 will be approved and listed as such in DoD 5010.12-L., AMSDL. Copies of data item descriptions required by the contractors in connection with specific acquisition functions should be obtained from the Naval Publications and Forms Center or as directed by the contracting officer.)

6.2.2.1 The data requirements of 6.2.2 and any task in sections 3, 4, or 5 of this specification required to be performed to meet a data requirement may be waived by the contracting/acquisition activity upon certification by the offeror that identical data were submitted by the offeror and accepted by the Government under a previous contract for identical item acquired to this specification. This does not apply to specific data which may be required for each contract regardless of whether an identical item has been supplied previously (for example, test reports).

6.3 Standardization. Fastener specifications and standards have been issued to limit the variety of fasteners used in designs for nonmagnetic equipment. The acquisition of fasteners is limited to the types and sizes shown on the specifications and standards referenced in this specification, where practicable.

6.4 Subject term (key word) listing.

- Bolts
- Cap screws
- Lag screws
- Machine screws
- Magnetic permeability
- Nuts
- Pins
- Studs
- Washers
- Wood screws

6.5 Sub-contracted material and parts. The packaging requirements of referenced documents listed in section 2 do not apply when material and parts are acquired by the contractor for incorporation into the equipment and lose their separate identity when the equipment is shipped.

6.6 Changes from previous issue. Asterisks are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Preparing activity:
Navy - SH
(Project 5315-N001)

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.

(Fold along this line)

(Fold along this line)

DEPARTMENT OF THE NAVY

COMMANDER
NAVAL SEA SYSTEMS COMMAND (SEA 5523)
DEPARTMENT OF THE NAVY
WASHINGTON, DC 20362-5101

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 12503 WASHINGTON D C

POSTAGE WILL BE PAID BY THE DEPARTMENT OF THE NAVY

COMMANDER
NAVAL SEA SYSTEMS COMMAND (SEA 5523)
DEPARTMENT OF THE NAVY
WASHINGTON, DC 20362-5101

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL*(See Instructions - Reverse Side)***1. DOCUMENT NUMBER**
MIL-F-19700A(SH)**2. DOCUMENT TITLE** FASTENERS, SCREW THREADED, AND RELATED ITEMS,
NON-MAGNETIC**3a. NAME OF SUBMITTING ORGANIZATION****4. TYPE OF ORGANIZATION (Mark one)**☐ **VENDOR**☐ **USER**☐ **MANUFACTURER**☐ **OTHER (Specify):** _____**b. ADDRESS (Street, City, State, ZIP Code)****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)**

TO DETACH THIS FORM, CUT ALONG THIS LINE.)