

MIL-P-24691/1  
 23 September 1987  
 SUPERSEDING  
 MIL-T-20157C  
 22 July 1964  
 (See 6.3)

## MILITARY SPECIFICATION

### PIPE AND TUBE, CARBON STEEL, SEAMLESS

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

#### 1. SCOPE

1.1 Scope. This specification covers seamless carbon steel pipe and tube for various services such as oil, water, steam and gas for use at temperatures not over 775 degrees Fahrenheit ( $^{\circ}$ F).

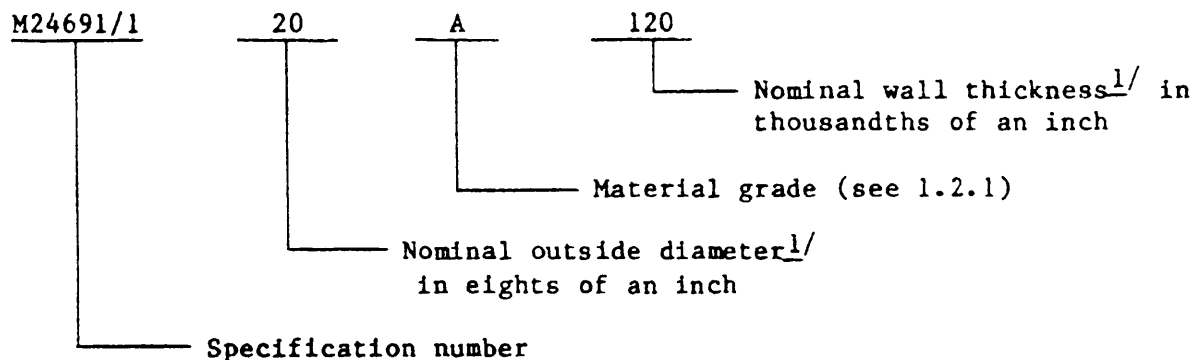
#### 1.2 Classification.

1.2.1 Grades. Pipe and tube covered by this specification shall be one of the following grades identified in ASTM A 106, as specified (see 6.2):

Grade A - Low carbon

Grade B - Medium carbon

#### 1.2.2 Part number.



<sup>1/</sup> Pipe outside diameters and wall thickness (schedule) shall be selected from those shown in ANSI B36.10.

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

FSC 4710

DISTRIBUTION STATEMENT A Approved for public release; distribution unlimited

MIL-P-24691/1

## 2. APPLICABLE DOCUMENTS

### 2.1 Government document.

2.1.1 Specification. The following specification forms a part of this specification to the extent specified herein. Unless otherwise specified, the issues of this document shall be that listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and the supplement thereto, cited in the solicitation.

#### SPECIFICATION

##### MILITARY

MIL-P-24691 = Pipe and Tube, Carbon, Alloy and Stainless Steel, Seamless and Welded, General Specification for.

(Copies of specifications 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 SOCIETY FOR TESTING AND MATERIALS (ASTM)

- A 106 - Standard Specification for Seamless Carbon Steel Pipe for High-Temperature Service. (DoD adopted)
- A 450 - Standard Specification for General Requirements for Carbon, Ferritic Alloy, and Austenitic Alloy Steel Tubes. (DoD adopted)
- A 530 - Standard Specification for General Requirements for Specialized Carbon and Alloy Steel Pipe. (DoD adopted)

(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. Pipe and tube furnished under this specification shall be acquired to ASTM A 106 with the following additional requirement. The general requirements of MIL-P-24691 and ASTM A 530 form a part of this specification.

3.2 Flaring. When tubing versus piping is ordered, the flaring test of ASTM A 450 shall be performed.

### 4. QUALITY ASSURANCE PROVISIONS

4.1 The quality assurance provisions shall be in accordance with MIL-P-24691 and as specified herein.

4.2 Quality conformance provisions. Table I shall be used to determine location of quality conformance provisions.

TABLE I. Summary of quality conformance inspections.

| Characteristic        | Requirement specification    | Sampling specification | Examination or test specification |
|-----------------------|------------------------------|------------------------|-----------------------------------|
| Group A               |                              |                        |                                   |
| Dimensions            | MIL-P-24691                  | MIL-P-24691            | MIL-P-24691                       |
| Finish                | MIL-P-24691                  | MIL-P-24691            | MIL-P-24691                       |
| Marking               | MIL-P-24691                  | MIL-P-24691            | MIL-P-24691                       |
| Workmanship           | ASTM A 106                   | MIL-P-24691            | MIL-P-24691                       |
| Group B               |                              |                        |                                   |
| Hydrostatic test      | ASTM A 106 and<br>ASTM A 530 | MIL-P-24691            | ASTM A 106                        |
| Ultrasonic inspection | MIL-P-24691/1                | MIL-P-24691            | MIL-P-24691                       |
| Group C               |                              |                        |                                   |
| Chemical analysis     | ASTM A 106                   | MIL-P-24691            | ASTM A 530                        |
| Mechanical properties | ASTM A 106                   | MIL-P-24691            | ASTM A 530                        |
| Flattening            | ASTM A 106                   | MIL-P-24691            | ASTM A 530                        |
| Bending               | ASTM A 106                   | MIL-P-24691            | ASTM A 106                        |
| Flaring               | MIL-P-24691/1                | MIL-P-24691            | ASTM A 450                        |

### 5. PACKAGING

5.1 Preservation, packaging, packing and marking shall be in accordance with MIL-P-24691.

### 6. NOTES

6.1 Intended use. Seamless carbon steel pipe and tube is used as pressure pipe to convey oil, steam, water or gas. Pipe covered by this specification is intended for use at temperatures not over 775°F.

MIL-P-24691/1

6.2 Ordering data. In addition to the ordering data of MIL-P-24691, acquisition documents should specify the following:

- (a) Grade required (see 1.2).
- (b) Quantity required.

6.3 Supersession. This specification supersedes MIL-T-20157 as follows:

| <u>MIL-T-20157, types</u> | <u>MIL-P-24691/1 grades</u> |
|---------------------------|-----------------------------|
| A, B, C, D                | A                           |
| E                         | B                           |

6.4 Subject term (key word) listing.

Flaring  
Gas  
Oil  
Pressure pipe  
Steam  
Water

Custodians:

Army - ME  
Navy - SH

Preparing activity:

Navy - SH  
(Project 4710-0849)

Review activities:

Army - GL, MR, AR, EA, MI  
Navy - AS  
DLA - CS

User activity:

Navy - MC

**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



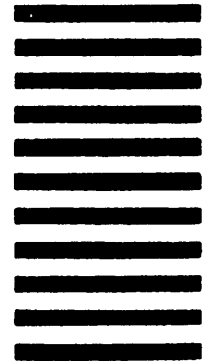
NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED STATES

**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



## STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

|                                                               |  |                                                                                                                                                             |  |
|---------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1. DOCUMENT NUMBER<br>MIL-P-24691/1                           |  | 2. DOCUMENT TITLE<br>PIPE AND TUBE, CARBON STEEL, SEAMLESS                                                                                                  |  |
| 3a. NAME OF SUBMITTING ORGANIZATION                           |  | 4. TYPE OF ORGANIZATION (Mark one)                                                                                                                          |  |
| b. ADDRESS (Street, City, State, ZIP Code)                    |  | <input type="checkbox"/> VENDOR<br><input type="checkbox"/> USER<br><input type="checkbox"/> MANUFACTURER<br><input type="checkbox"/> OTHER (Specify) _____ |  |
| 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.)

DD FORM 1426  
82 MAR

PREVIOUS EDITION IS OBSOLETE.