MIL-I-17205C
16 November 1961
SUPERSEDING
MIL-I-17205B
21 October 1955

MILITARY SPECIFICATION

INSULATION CLOTH AND TAPE, ELECTRICAL, GLASS FIBER, VARNISHED

This specification has been approved by the Department of Defense and is mandatory for use by the Departments of the Army, the Navy, and the Air Force.

1. SCOPE

1.1 Scope. - This specification covers varnished glass fiber cloth and tape for electrical insulation.

1.2 Classification. - Insulation shall be of the following forms and grades, as specified (see 6.2):

Form C - Cloth:
- Grade O - Varnished with organic varnish - yellow.
- Grade S - Varnished with silicone varnish for use in motors, generators, and transformers.

Form T - Tape:
- Grade O - Varnished with organic varnish - yellow.
- Grade S - Varnished with silicone varnish for use in motors, generators, and transformers.

2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issue in effect on date of invitation for bids, form a part of this specification to the extent specified herein:

SPECIFICATIONS

FEDERAL
- PPP-B-636 - Boxes, Fiberboard.
- PPP-B-585 - Boxes, Wood, Wirebound.
- PPP-B-591 - Boxes, Fiberboard, Wood-Cleated.
- PPP-B-601 - Boxes, Wood, Cleated-Plywood.
- PPP-B-621 - Boxes, Wood, Nailed and Lock-Corner.
- PPP-B-576 - Box, Wood, Cleated, Veneer, Paper Overlaid.
- PPP-T-76 - Tape, Pressure Sensitive Adhesive, Paper, Water-Resistant.

MILITARY
- MIL-P-116 - Preservation, Methods of.
- MIL-L-10547 - Liners, Case, Waterproof.

STANDARDS

MILITARY
- MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.
- MIL-STD-129 - Marking for Shipment and Storage.

(Copies of specifications, standards, drawings, and publications required by contractors in connection with specific procurement functions should be obtained from the procuring 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. Unless otherwise indicated, the issue in effect on date of invitation for bids shall apply:

AMERICAN SOCIETY FOR TESTING MATERIALS
Methods of Test for Varnished Cotton Fabrics and Varnished Cotton Fabric Tapes Used for Electrical Insulation

(Application for copies should be addressed to the American Society for Testing Materials, 1916 Race Street, Philadelphia 3, Pa.)

OFFICIAL CLASSIFICATION COMMITTEE
Uniform Freight Classification Rules and Regulations.

(Application for copies should be addressed to the Official Classification Committee, 1 Park Avenue at 33rd Street, New York 16, N. Y.)

3. REQUIREMENTS

3.1 Unvarnished fabric. - The unvarnished fabric shall be made from glass fiber.

3.2 Varnished insulation. - The glass fiber fabric, when varnished, shall have a smooth, nontacky surface, free from wrinkles, creases, blisters, and other imperfections.

3.3 Varnish. - The varnish coating shall penetrate the fabric and shall adhere to the fabric.

3.3.1 Grade O. - In grade O material, a high temperature grade of baking organic varnish shall be used.

3.3.2 Grade S. - In grade S material, a baking type of silicone varnish shall be used.

3.4 Dimensional requirements. -

3.4.1 Thickness. - Unless otherwise specified in the contract or order, cloth and tape shall be furnished in the thicknesses shown in table I, as specified (see 6.2).

Table I - Thicknesses, forms C and T.

Nominal thickness		Tolerances
Grade O	Grade S	
Inch	Inch	Inch
-----	0.002	±0.0005
0.005	.004	± .0005
.007	.007	± .0010
.010	.010	± .0010

3.4.2 Width. -

3.4.2.1 Form C. - The nominal width of the cloth shall be 36 inches ±1 inch, and the minimum width, after trimming, shall not be less than 35 inches. Unless otherwise specified (see 6.2), cloth shall be furnished trimmed.

3.4.2.2 Form T. - Tape shall be furnished in the following nominal widths, as specified (see 6.2), with a tolerance of not greater than 1/32 inch:

Widths Inches
1/2
3/4
1
1-1/2

3.4.3 Length. -

3.4.3.1 Form C. - Cloth shall be furnished in 25 or 50-linear-yard rolls, as specified (see 6.2). The material shall not be spliced. Not over two pieces shall used in each multiple of 25 yards of linear length in any one roll.

3.4.3.2 Form T. - Tape shall be furnished in 36- or 72-linear-yard rolls, as specified (see 6.2). The material shall not be spliced. Not over two pieces shall be used in each multiple of 36 yards of linear length in any one roll. Where the tape is required for application by hand (hand taping) it shall be put up in rolls over a suitable core of 1-1/2-inch inside diameter. When the tape is specified for machine taping, the overall diameter of the roll and the mandrel diameter of the cylindrical core shall be as specified (see 6.2).

3.4.4 Performance requirements. - The unvarnished and varnished cloth and tape shall conform to table II.

3.5 Workmanship. - The workmanship shall be first class in every respect.

4. QUALITY ASSURANCE PROVISIONS

4.1 The supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own or any other inspection facilities and services acceptable to the Government. Inspection records of the examination and tests shall be kept complete and available to the Government as specified in the contract or order. 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.

4.2 Sampling. -

4.2.1 Lot. - For purposes of sampling, a lot shall consist of all rolls of material of the same form, grade, and size manufactured in one production run.

4.2.2 Sampling for visual and dimensional examination. - A random sample of rolls of cloth or tape shall be selected from each lot of material offered for examination of visual and dimensional characteristics in accordance with Standard MIL-STD-105 at inspection level I and acceptable quality level = 2.5 percent defective.

4.2.3 Sampling for acceptance tests (except 4.6.3). - A random sample of rolls of cloth or tape shall be selected from each lot in accordance with the table for small sample inspection of Standard MIL-STD-105 at inspection level L-5 for lots of 180 and under, inspection level L-4 for lots of 181 to 800, and inspection level L-3 for lots over 800.

Table II - Performance requirements.

Grade	Form	Nominal thickness of varnished material	Nominal glass base fabric thickness[1/]	Tensile strength		Dielectric strength	
				Condition C-96/23/50		Condition C-96/23/0	Condition C-96/23/96
				Warp	Fill	Volts/mil	Volts/mil
				Pounds per inch width (min. avg.)	Pounds per inch width (min. avg.)	(Min. avg.)	(Min. avg.)
		Inch					
O	C	0.005	-----	100	70	1200	600
		.007	-----	100	70	1200	600
		.010	-----	150	100	1100	500
O	T	.005	-----	100	---	1200	600
		.007	-----	100	---	1200	600
		.010	-----	150	---	1100	500
S	C	.002	0.001	22	18	1800	600
		.004	.002	70	40	1400	1000
		.007	.003	100	70	1200	900
		.010	.004	150	100	1200	800
S	T	.002	.001	22	---	1200	600
		.004	.002	70	---	1400	1000
		.007	.003	100	---	1200	900
		.010	.004	150	---	1200	800

[1/] The values for nominal glass base fabric thicknesses are required thicknesses.

Table II - Performance requirements (cont'd.).

Grade	Form	Power factor at 60 cycles		Dielectric constant at 60 cycles		Effect of elevated temperatures (see 4.6.3)		
		Condition C-96/23/0	Condition C-96/23/96	Condition C-96/23/0	Condition C-96/23/96	Condition C-168/23/50	Condition E-168/130	Condition E-168/250
		(Max. avg.)	(Max. avg.)	(Max. avg.)	(Max. avg.)	Initial bent dielectric strength Volts/mil (min. avg.)	Percent retention (Min.)	Percent retention (Min.)
O	C	0.050 .050 .050	0.30 .30 .30	6.0 6.0 6.0	18.0 18.0 18.0	1050 1050 1000	65 65 65	-- -- --
O	T	----- ----- -----	---- ---- ----	--- --- ---	----- ----- -----	1050 1050 1000	65 65 65	-- -- --
S	C	0.020 .020 .020 .020	0.20 .20 .15 .20	3.5 4.5 4.5 4.5	4.5 6.0 6.0 6.0	1700 1300 1200 1200	-- -- -- --	75 75 75 75
S	T	----- ----- ----- -----	---- ---- ---- ----	--- --- --- ---	----- ----- ----- -----	1700 1300 1200 1100	-- -- -- --	75 75 75 75

4.2.4 Sampling for environmental tests. - Two samples selected from the first lot produced and thereafter from every 500 rolls subsequently produced shall be furnished for the tests in 4.6.3. Specimens shall be obtained from samples which have previously passed all other tests.

4.3 Examination. -

4.3.1 The sample rolls selected in accordance with 4.2.2 shall be visually and dimensionally examined to verify compliance with this specification. Any roll in the sample containing one or more visual or dimensional defects shall be rejected, and if the number of defective rolls in any sample exceeds the acceptance number for that sample, the lot represented by the sample shall be rejected.

4.3.1.1 General examination. - Approximately ten yards of material from each sample shall be unwound and given a thorough examination to ascertain that the material conforms to this specification.

4.3.2 Dimensional examination. -

4.3.2.1 Thickness. - The thickness shall be determined by the use of a dial type micrometer. (A 1-inch machinist's micrometer equipped with ratchet device may be used if the results are equivalent.) When a dial type micrometer is used, the lower or fixed anvil shall consist of a flat steel plate 2 inches in diameter; the upper or movable member shall consist of a foot having a flat steel face 1/4 inch in diameter and arranged so as to move with its face at all times parallel to the face of the anvil. The movable member shall be of such weight and attached to the operating rod of the micrometer in such a manner that 3 ounces of dead weight shall be applied to all thicknesses of samples being measured. The thickness shall be determined as the average of at least ten readings taken at intervals of approximately 1 foot along the length of the material. If the thickness, so determined, falls outside the specified tolerances, ten additional readings shall be taken from another section of the material and averaged with the previous readings. The maximum, minimum, and average values shall be recorded.

4.3.2.2 Width. - The width shall be determined by the use of a standard steel scale graduated to 1/64 inch. The fabric shall lie flat on a smooth surface at the time of measurement. In case of tape, at least ten measurements shall be made of width and the maximum, minimum, and average values recorded. The average value shall be taken as the tape width.

4.3.2.3 Length. - The length of the cloth and tape shall be suitably determined by unwinding and measuring one of the sample rolls selected in accordance with 4.2.2 and then it shall be weighed. The remainder of the sample shall then be weighed and the weight compared with the first roll.

4.4 Acceptance tests. - Each of the samples selected in accordance with 4.2.3 shall be subjected to the tests specified in 4.6, except 4.6.3. If any sample fails one or more of the tests, the lot represented shall be rejected.

4.4.1 Environmental tests. - Each of the samples selected in accordance with 4.2.4 shall be subjected to the tests in 4.6.3. Any failure of these tests shall be cause for suspension of further acceptance until the cause of failure has been determined, and the deficiency in all equipments has been corrected.

4.5 Conditioning of test specimens. -

4.5.1 Nomenclature. - The following letters shall be used to indicate the respective general conditioning procedures:

Condition C - Humidity conditioning.
Condition E - Temperature conditioning.

4.5.2 Designation. - The designations indicating conditioning of test specimens shall be as follows:

First: A capital letter indicating the general condition of the specimen, that is, humidity, and temperature conditioning.
Second: A number indicating in hours the duration of the conditioning.
Third: A number indicating in degrees centigrade the conditioning temperature.
Fourth: A number indicating relative humidity, whenever relative humidity is controlled. Relative humidity obtained over $CaCl_2$ shall be taken as zero.

The numbers shall be separated from each other by slant marks and from the capital letter by a dash. A sequence of conditions shall be denoted by use of a plus (+) sign between successive conditions:

Example:
Condition C-96/23/0 - The specimens shall be conditioned for a period of not less than 96 hours at a temperature of 23°C. (73.5° F.) over calcium chloride. The specimens shall be tested immediately after removal from the conditioning chamber.
Condition C-96/23/50 - The specimens shall be conditioned for a period of not less than

96 hours at a temperature of 23°C. (73.5° F.) and a relative humidity of 50 percent.

Condition C-96/23/96 - The specimens shall be conditioned for a period of 96 hours at a temperature of 23°C. (73.5°F.) and a relative humidity of 96 percent. The specimens shall be tested immediately after removal from the conditioning chamber.

Condition E-168/130 - The specimens shall be hung free in an oven of the forced draft type for a period of 168 hours at a temperature of 130°C. (266°F.). They shall then be removed from the conditioning chamber and allowed to cool to room conditions of 25°C. and a relative humidity of 50 percent prior to tests.

Condition E-168/250 - The specimens shall be hung free in an oven of the forced draft type for a period of 168 hours at a temperature of 250°C. (482°F.). They shall then be removed from the conditioning chamber and allowed to cool to room conditions of 23°C. and a relative humidity of 50 percent prior to tests.

4.6 Test procedures. -

4.6.1 Tensile strength. -

4.6.1.1 The tensile strength shall be determined on a pendulum type testing machine. The machine shall preferably be power-driven, and have a capacity not to exceed 500 pounds. If shall be graduated to read 1/2 pound or less per scale division.

4.6.1.2 Specimens cut from the full width cloth samples or from sample rolls of tapes over 1 inch in width shall be 1 inch in width, having lengths not less than 2 inches in excess of the jaw clearance of the tensile tester. For tape having a nominal width of 1 inch or under, the specimens shall be of the original width, and shall be not less than 2 inches in excess of the jaw clearance of the tensile tester in length.

4.6.1.3 In the case of cloth subjected to condition C-96/23/50, five specimens shall be cut with the sides parallel to the warp threads and 5 with the sides parallel to the filling threads. In the case of tape subjected to condition C-96/23/50, five specimens shall be cut from each sample roll.

4.6.1.4 The ratio of the clearance distance between jaws to the width of the specimen shall be not less than 5 to 1 nor more than 10 to 1.

4.6.1.5 The rate of travel of the movable jaw shall be constant and preferably 12 inches per minute, but it may be within the limits of 11 to 13 inches per minute provided it is constant. All readings obtained when the specimen breaks at or in the jaws shall be disregarded.

4.6.1.6 The tensile strength in pounds per inch of width shall be determined from the average of the five tests in each direction.

4.6.2 Dielectric strength. -

4.6.2.1 Test equipment. - The test equipment shall consist of a high voltage transformer rate at not less than 2 kilovolt-amperes and the necessary auxiliary equipment for applying, controlling, and measuring the test voltage. The power supply shall consist of an alternating-current source having as nearly a true sine wave as possible at a frequency not exceeding 100 cycles per second (c.p.s.).

4.6.2.2 Voltage control. - The high-tension voltage taken from the secondary of the testing transformer shall be capable of being raised gradually from any point and in no case more than 500 volts at a step. The control may be made by generator field regulation with an induction regulator, or with a variable ratio autotransformer. Any method of controlling the voltage is satisfactory which does not distort the wave more than 10 percent from a sinusoidal shape.

4.6.2.3 Voltage measurement. - The voltage may be measured by any approved method which gives root-mean-square values, preferably by means of a voltmeter connected to a tertiary coil in the testing transformer, or to a separate stepdown instrument potential transformer. A voltmeter on the low tension side of the transformer is satisfactory if the ratio of the transformation does not change under any test condition. An electrostatic voltmeter properly calibrated in the high-tension of circuit is also satisfactory. A spark gap may be used to check the readings at very high potentials.

4.6.2.4 One-fourth inch diameter electrodes with edges rounded to 1/32 inch radius shall be used. To prevent flashover, rubber or silicone rubber gaskets shall be employed around the electrodes. The testing device shall be arranged so that the pressure between the electrodes shall be approximately 6 ounces. (Note. - Such a device is described in the appendix of A.S.T.M. Publication D295. Widths less than 1 inch may be tested if the use of proper precautions eliminates flash-over.)

4.6.2.5 The total area of the specimens of each sample of material subjected to conditions C-96/23/0 and C-96/23/96 shall be sufficient to permit making 10 tests after each condition. The specimens shall be representative of the material to be tested. The tests shall be made with the specimens in air at the conditioning temperature.

4.6.2.6 Starting at zero, the voltage shall be increased uniformly to breakdown at a rate of 500 volts per second. Ten tests shall be made for each condition and the average of these 10 readings in volts shall be recorded. By division by the average thickness determined as specified in 4.3.2.1, the average dielectric strength shall be calculated and reported in volts per mil.

4.6.3 Effect of elevated temperature. -

4.6.3.1 Two sets of five specimens each shall be used. In the case of cloth the specimens shall be cut with the sides parallel to the warp threads. The specimens shall be 1 inch in width except that tapes of narrower width shall be tested in full section. The length of the specimens shall be such as to permit five dielectric breakdown measurements to be made on each specimen and to permit attaching the specimens in suitable clips of the specimen holding fixture.

4.6.3.2 A suitable fixture shall be used for mounting the specimens vertically so the specimens are at least 4 inches from the walls of the oven at any point, to permit adequate circulation in all parts of the oven without the specimens touching each other during the aging period.

4.6.3.3 With 5 of the test specimens in position, the specimen holding fixture shall be placed in the oven which was previously brought up to the required baking temperature, T. The oven shall be electrically heated and equipped with an efficient means of circulating air through the heated chamber with an air velocity of at least 1 foot per second. The baking temperature, T, shall be 130° ±3°C. for grade O material, 250° ± 5°C. for grade S, material. The specimens shall be baked for 7 days at the temperature, T, previously indicated. The baked specimens shall be removed from the mounting fixture, care being taken not to damage the varnished surfaces, and be cooled to 23°C. at 50 percent relative humidity for not less than 1 hour.

4.6.3.4 The specimens shall be bent 180 degrees around a mandrel 0.125 inch in diameter and then allowed to straighten. Five short time dielectric breakdown tests, using 1/4-inch diameter electrodes, shall be made on each of the aged specimens, with the electrodes positioned on those areas which were bent 180 degrees around the mandrel. The dielectric breakdown tests shall be conducted using the basic test method specified in 4.5.2. The average of the 25 readings (5 on each of 5 specimens) in volts shall be called aged bent dielectric breakdown.

4.6.3.5 The second set of 5 specimens shall be subjected to condition C-168/23/50. The specimens shall then be bent, allowed to straighten, and tested for dielectric breakdown in the same manner as specified in 4.6.3.4. The average of the 25 readings (5 on each of 5 specimens) in volts shall be called initial bent dielectric breakdown. The initial bent dielectric strength shall be determined by dividing the initial bent dielectric breakdown by the average thickness determined as specified in 4.3.2.1 and shall be expressed in volts per mil.

4.6.3.6 The percent retention of dielectric breakdown shall be calculated by dividing the aged bent dielectric breakdown by the initial bent dielectric breakdown and multiplying by 100, recorded, and designated "percent retention".

4.6.4 Power factor and dielectric constant. -

4.6.4.1 Test equipment. - The test equipment shall be suitable for measurement of the power factor and dielectric constant by the bridge method.

4.6.4.2 Bridge methods. - The bridge circuit used in this method shall be a type suitable for the measurements of power factor and dielectric constant at a frequency of 60 c.p.s. Five bridge arrangements which have been found satisfactory for the purpose intended are the "Conjugate Schering Bridge", "High Voltage Schering Bridge", "Parallel Resistance Bridge", "Series Resistance Bridge", and "Transformer Bridge". It is not intended, however, that the use of other types of bridges of equal precision and convenience shall be excluded.

4.6.4.3 Sensitivity. - The method used shall have an accuracy of determination of dielectric constant of plus or minus 5 percent and an accuracy of determination of power factor of plus or minus 5 percent. The accuracies are conditioned upon the precision of measurement of the dimensions of the specimen. Consequently, care should be exerted in the application of electrodes, disposition of the component parts of test circuits, and calibration of standard resistors and capacitors.

4.6.4.4 Preparation of samples. - Test specimens shall be tested after being subjected to conditions C-96/23/0 and C-96/23/96. Foil electrodes shall be applied to top and bottom of the conditioned cloth sample, using a very thin film of petrolatum and rolling to exclude air. The following electrodes have been found satisfactory, if suitable corrections are made for edge effects: One electrode shall be foil, 3 inches in diameter, on one surface of the specimen; the electrode on the other surface shall be of foil, 2 inches in diameter.

4.7 Inspection of preparation for delivery. - Sample packages and packs shall be selected and

inspected in accordance with Specification MIL-P-116 to verify conformance with section 5.

5. PREPARATION FOR DELIVERY

5.1 Packaging. -

5.1.1 Level A. - Cloth rolls shall be individually wrapped in minimum 25-pound (24 x 36-500) basis-weight kraft paper and securely taped with gummed kraft tape. Each wrapped roll shall be completely circled with the kraft tape at a minimum of four places equidistant along its length, with the tape overlapping itself at least 2 inches. Rolls of tape shall be individually wrapped in kraft paper, or foil, or individually packaged in paperboard folding or set-up boxes. Twenty of these unit packages each containing one roll shall be overpacked in a fiberboard box conforming to Specification PPP-B-636. Alternatively, 20 of the individually wrapped rolls of tape may be placed end to end, overwrapped in 25-pound (24 x 36-500) basis-weight kraft wrapping paper, and securely taped with kraft tape.

5.1.2 Level C. - Packaging shall be in accordance with commercial practice.

5.2 Packing. -

5.2.1 Level A. - Cloth rolls and tape, packaged as specified (see 5.1 and 6.2), shall be packed in containers conforming to any one of the following specifications at the option of the supplier:

Specification	Type or class
PPP-B-576	Class 2
PPP-B-585	Class 3 use
PPP-B-591	Overseas type
PPP-B-601	Overseas type
PPP-B-621	Class 2
PPP-B-636	Class 2

Shipping containers shall have case liners conforming to Specification MIL-L-10547. Case liners shall be closed and sealed in accordance with the appendix to Specification MIL-L-10547. Case liners for class 2 fiberboard boxes conforming to Specification PPP-B-636 may be omitted, provided all corners and edge seams and manufacturer's joint are sealed with minimum 1-1/2 inch wide tape conforming to Specification PPP-T-76. Boxes shall be closed, strapped or banded in accordance with the applicable box specification or appendix thereto. The gross weight of wood or wood-cleated boxes shall not exceed 200 pounds.

5.2.2 Level B. - Cloth rolls and tape, packaged as specified (see 5.1 and 6.2), shall be packed in containers conforming to any of the following specifications at the option of the supplier:

Specification	Type or class
PPP-B-576	Class 1
PPP-B-585	Class 1 or 2 use
PPP-B-591	Domestic type
PPP-B-601	Domestic type
PPP-B-621	Class 1
PPP-B-636	Class 1

Container closures shall be as specified in the applicable container specification or appendix thereto. The gross weight of wood or wood-cleated containers shall not exceed 200 pounds.

5.2.3 Level C. - Cloth rolls and tape, packaged as specified (see 5.1 and 6.2), shall be packed in containers of the type, size, and kind commonly used for the purpose, in a manner that will insure safe delivery and acceptance at destination. Shipping containers shall comply with the Uniform Freight Classification Rules and Regulations or rules and regulations of other freight carriers, as applicable to the mode of transportation.

5.3 Marking. - In addition to any special marking specified in the contract or order or herein, each unit and intermediate package and shipping container shall be marked in accordance with Standard MIL-STD-129.

6. NOTES

6.1 Intended use. - The insulation is intended for use in coils of electrical and electronic equipment such as motors, generators, and transformers. The 0.002-inch thick grade S material should be limited to applications where a considerable effect of high humidity on electrical properties and a low dielectric strength at elevated temperatures can be tolerated.

6.1.1 Grade O material classifies as class B insulation from the standpoint of temperature limit (130°C.).

6.1.2 Grade S material classifies as class H insulation from the standpoint of temperature limit (200°C.).

6.2 Ordering data. - Procurement documents should specify the following:

(a) Title, number, and date of this specification.
(b) Form and grade required (see 1.2).
(c) Thickness of cloth and tape (see 3.4.1).
(d) Width of tape (see 3.4.2.).
(e) Length of cloth and tape (see 3.4.3).
(f) Overall diameter of the roll and mandrel diameter of cylindrical core when tape is specified for machine taping (see 3.4.3.2).

(g) Level of preservation and packaging and level of packing required (see 5.1 and 5.2).

Notice. - When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

Custodians:
Army - Sig
Navy - Ships
Air Force - DAY

Preparing activity:
Navy - Ships
(Project 703-43)

SPECIFICATION ANALYSIS SHEET

Form Approved
Budget Bureau No. 119-R004

INSTRUCTIONS

This sheet is to be filled out by personnel either Government or contractor, involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity *(as indicated on reverse hereof)*.

SPECIFICATION

ORGANIZATION *(Of submitter)*	CITY AND STATE

CONTRACT NO.	QUANTITY OF ITEM PROCURED	DOLLAR AMOUNT
		$

MATERIAL PROCURED UNDER A

☐ DIRECT GOVERNMENT CONTRACT ☐ SUBCONTRACT

1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?

A. GIVE PARAGRAPH NUMBER AND WORDING.

B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES.

2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID

3. IS THE SPECIFICATION RESTRICTIVE?

☐ YES ☐ NO IF "YES", IN WHAT WAY?

4. REMARKS *(Attach any pertinent data which may be of use in improving this specification. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity)*

SUBMITTED BY *(Printed or typed name and activity)*	DATE

DD FORM 1426 REPLACES NAVSHIPS FORM 4863 WHICH IS OBSOLETE PLATE NO. 15419

MENT OF THE NAVY

POSTAGE AND FEES PAID
NAVY DEPARTMENT

OFFICIAL BUSINESS

Commander
Naval Ship Engineering Center
Code 6124, Center Building
Prince George's Center
Hyattsville, Maryland 20782

PLATE NO. 15419 (BACK