

MIL-W-5424B  
 26 March 1970  
 SUPERSEDING  
 MIL-C-5424A  
 21 June 1963

# MILITARY SPECIFICATION

## WIRE ROPE, STEEL, (CORROSION-RESISTING) FLEXIBLE, PREFORMED (FOR AERONAUTICAL USE)

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

### 1. SCOPE

- \* 1.1 Scope. This specification presents requirements for flexible, corrosion-resisting steel cable intended for aircraft structural applications.
- \* 1.2 Classification. Flexible, corrosion-resisting steel cable shall be furnished in one type only, designated as the preformed type.

### 2. APPLICABLE DOCUMENTS

- \* 2.1 The following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of the specification to the extent specified herein.

### SPECIFICATIONS

#### Federal

MM-L-736  
 MM-L-751  
 QQ-S-781  
 QQ-S-790

PPP-B-1055

Lumber And Timber: Hardwood  
 Lumber; Softwood  
 Steel Strapping, Flat  
 Steel Strapping, Round (Bare And  
 Zinc-Coated)  
 Barrier Material, Waterproof, Flexible

#### Military

MIL-B-121

Barrier Material, Greaseproofed,  
 Waterproofed, Flexible

### STANDARDS

#### Federal

FED-STD-151

Metals; Test Methods

#### Military

MIL-STD-129

Marking For Shipment And Storage

(Copies of specifications, standards, drawings, and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

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## 3. REQUIREMENTS

- \* 3.1 Material. The wire used in the fabrication of cable shall be manufactured of electric-arc furnace steel. The material shall conform to the following chemical composition limits:

Carbon	0.15 max
Manganese	2.00 max
Silicon	1.00 max
Phosphorous	0.045 max
Sulfur	0.030 max
Chromium	17.0-20.0
Nickel	8.0-12.0

- \* 3.1.1 Wire properties. Tensile strengths of wire and wire sizes necessary to meet the requirements of this specification shall be determined by the cable manufacturer.
- \* 3.1.2 Performing of wires and strands. The individual wires and strands composing the cable shall be preformed into the exact helical position they will have in the finished cable, so that if the cable is cut or severed there is no tendency for the normal diameter of the cable at the unseized ends to increase by more than the amount specified in Table I.
- \* 3.2 Joining. Splices in individual wires under 0.008 inch in diameter may be twisted. Wires 0.008 inch in diameter or larger shall be brazed or welded. Splices in individual wires in any layer of a strand shall not be closer than 20 feet except as specified in 3.2.1.
- \* 3.2.1 When a twist-off occurs during fabrication of the 7-wire inner layer of a 19-wire strand (see 3.4.3), splices and joints in individual wires may be as close as 18 inches.
- \* 3.3 Construction, dimensions, and physical properties. The type of construction for the respective diameter, the dimensional tolerances, and the physical properties shall be as specified in Table I.
- \* 3.4 Types of construction. Flexible steel cable covered by this specification shall be of 3 by 7, 7 by 7, 7 by 19, or 6 by 19 (IWRC) construction, according to the diameter of the cable, as specified in Table I.
- \* 3.4.1 3 by 7 construction. Cable of this construction shall consist of three strands of seven wires each laid together without a core. Each strand shall consist of a layer of six wires laid around a central wire in a left-hand direction. The three strands shall be laid together in a right-hand direction. The length of lay of the six outer wires in each strand shall not exceed 70 percent of the lay of the finished cable. The length of lay of the finished cable shall not be more than 7 times nor less than 5 times the nominal cable diameter.
- \* 3.4.2 7 by 7 construction. Cable of this construction shall consist of six outer strands of seven wires each laid around a core strand of seven wires. The six outer strands shall each consist of a layer of six wires laid around a central wire in a left-hand direction. The core strand shall consist of a layer of six wires laid around a central wire in a right-hand direction. The six outer strands shall be laid around the core strand in a right-hand direction. The length of lay of the outside six wires in each of the six outside

TABLE I - CONSTRUCTION AND PHYSICAL PROPERTIES

Nominal Diameter of Cable	Construction	Tolerance on Diameter (Plus only)	Allowable Increase in Diameter at Unseized End (Max)	Breaking Strength of Cable (Min)	Weight per 100 Ft (Approx)
Inches		Inch	Inch	Pounds	Pounds
1/32	3 by 7	0.006	0.006	110	0.16
3/64	7 by 7	0.008	0.008	270	0.42
1/16	7 by 7	0.010	0.009	480	0.75
3/32	7 by 7	0.012	0.010	920	1.60
1/16	7 by 19	0.010	0.009	480	0.75
3/32	7 by 19	0.012	0.010	920	1.60
1/8	7 by 19	0.014	0.011	1,760	2.90
5/32	7 by 19	0.016	0.017	2,400	4.50
3/16	7 by 19	0.018	0.019	3,700	6.50
7/32	7 by 19	0.018	0.020	5,000	8.60
1/4	7 by 19	0.018	0.021	6,400	11.00
9/32	7 by 19	0.020	0.023	7,800	13.90
5/16	7 by 19	0.022	0.024	9,000	17.30
3/8	7 by 19	0.026	0.027	12,000	24.30
7/16	6 by 19 (IWRC)	0.030	0.030	16,300	35.60
1/2	6 by 19 (IWRC)	0.033	0.033	22,800	45.80
9/16	6 by 19 (IWRC)	0.036	0.036	28,500	59.00
5/8	6 by 19 (IWRC)	0.039	0.039	35,000	71.50
3/4	6 by 19 (IWRC)	0.045	0.045	49,600	105.20
7/8	6 by 19 (IWRC)	0.048	0.048	66,500	143.00
1	6 by 19 (IWRC)	0.050	0.050	85,400	187.00
1 1/8	6 by 19 (IWRC)	0.054	0.054	106,400	240.00
1 1/4	6 by 19 (IWRC)	0.057	0.057	129,400	290.00
1 3/8	6 by 19 (IWRC)	0.060	0.060	153,600	330.00
1 1/2	6 by 19 (IWRC)	0.062	0.062	180,500	420.00

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strands and the outside six wires in the core strand shall not exceed 60 percent of the lay of the finished cable. The length of lay of the finished cable shall not be more than 8 nor less than 6 times the nominal cable diameter.

- \* 3.4.3 7 by 19 construction. Cable of this construction shall consist of six outer strands of nineteen wires each laid around a core strand of nineteen wires. The six outer strands shall each consist of a layer of six wires laid around the seven wire strand in a left-hand direction. The core strand shall consist of a layer of six wires laid around a central wire in a right-hand direction and a layer of twelve wires laid around the seven wire strand in a right-hand direction. The six outer strands shall be laid around the core strand in a right-hand direction. The length of lay of the inside layer of six wires in each of the six outer strands and the one core strand shall not exceed 60 percent of the lay of the outside layer of twelve wires in each strand. The length of lay of the outside layer of twelve wires in each of the six outside strands and the one core strand shall not exceed 50 percent of the lay of the finished cable. The length of lay of the finished cable shall not be more than 8 times nor less than 6 times the nominal cable diameter.
- \* 3.4.4 6 by 19 (IWRC) construction. Cable of this construction shall consist of six strands of 19 wires each (not including filler wires), laid right regular lay around a 7 by 7 independent wire rope core. The 7 by 7 independent wire rope core shall consist of cable or wire rope of six strands of seven wires each, twisted or laid right-hand lay around a strand core consisting of seven wires. The length of lay of the finished cable shall be not more than eight times nor less than six times the nominal cable diameter.

3.5 Cable lengths. The cable shall be furnished in minimum lengths of 1000 feet, except that 20 percent of the cable on the order may be furnished in lengths of 500 to 1000 feet (see 6.2).

- \* 3.6 Lubrication. A suitable type of friction-preventive compound having noncorrosive properties shall be applied during construction of the cable as follows:
  - a. Friction-preventive compound shall be continuously applied to each wire as it is formed into a strand so that each wire is completely coated.
  - b. Friction-preventive compound shall be continuously applied to each strand as it is formed into a cable so that each strand is completely coated.

NOTE: The wires may be lead coated to aid lubrication.

- \* 3.7 Endurance. Cable of the sizes in Table II shall resist the endurance test at the specified loads and for the specified number of reversals without failure and the breaking strength of the cable after endurance test shall be not less than the specified minimum values.
- \* 3.8 Stretch limit. The maximum allowable percent stretch shall not exceed (two) percent when the cable is loaded to (60) percent of minimum breaking strength as specified in 4.3.6.
- \* 3.9 Proof test. Cables shall withstand the proof testing specified in 4.3.6.

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TABLE II - BREAKING STRENGTH AFTER ENDURANCE TEST

Cable Diameter	Tension <u>1</u> /	Number of Reversals	Breaking Strength (Min)
Inch	Pounds		Pounds
3/64 7 by 7	3.0	70,000	135
1/16 7 by 7	5.0	70,000	240
3/32 7 by 7	9.0	70,000	460
1/16 7 by 19	5.0	70,000	240
3/32 7 by 19	9.0	70,000	460
1/8 7 by 19	18.0	70,000	880
5/32 7 by 19	24.0	150,000	1,200
3/16 7 by 19	37.0	150,000	1,850
7/32 7 by 19	50.0	150,000	2,500
1/4 7 by 19	64.0	150,000	3,200
9/32 7 by 19	78.0	130,000	3,900
5/16 7 by 19	90.0	130,000	4,500
3/8 7 by 19	120.0	130,000	6,000

1/ Tension is equal to half of weight which includes idler sheave and hanger as shown in Figure 2.

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- \* 3.10 Identification of product. In addition to the requirements of Section 5, the product shall be identified in accordance with the requirements below.
- \* 3.10.1 Each manufacturing reel shall be given a significant number by the manufacturer. When the manufacturing reel is cut into specified lengths for shipping reels, each shipping reel shall be marked with the number of the manufacturing reel, starting from the head end and numbering each shipping reel consecutively.
- \* 3.10.2 Each manufacturer shall identify every cable he manufactures by use of color coding of one outer strand continuously in the cable. One color will be assigned to each manufacturer by the preparing activity.
- \* 3.11 Workmanship and finish. All details of workmanship and finish shall be in accordance with the best practice for high quality aircraft cable consistent with the requirements of this specification. The finished cable shall be uniform in construction and securely laid, free from kinks, loose wires, loose strains, or other defects.

#### 4. QUALITY ASSURANCE PROVISIONS

- \* 4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier 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 Product qualification. Each manufacturer desiring to furnish cable which satisfies this specification shall subject his product to a one-time qualification test. This qualification test shall consist of two parts. First, the endurance test as specified in 4.3.3 shall be performed at -65° Fahrenheit (F). Then, providing the qualification sample passes the endurance test, the breaking strength after endurance test shall be performed as specified in 4.3.4. Each size cable for which qualification is desired must pass the qualification test. Subsequent to satisfaction of this one-time test, only the acceptance tests outlined in the following paragraphs are required.
- \* 4.2 Classification of tests. All the tests required herein for the testing of cable are classified as acceptance tests, for which necessary sampling techniques and methods of testing are specified.
- \* 4.2.1 Sampling. When conducting the tests specified herein, with the exception of examination of product, one sample not less than 30 feet in length for sizes listed in Table I, and not less than 10 feet in length for other sizes, shall be taken, after any discard has been removed, from the head or starting end of the first manufacturing reel for each lot of cable.
- \* 4.2.2 Lot. A lot shall consist of not more than 20,000 feet of cable of the same construction and diameter produced continuously by one machine or one series of progressive processing machines.

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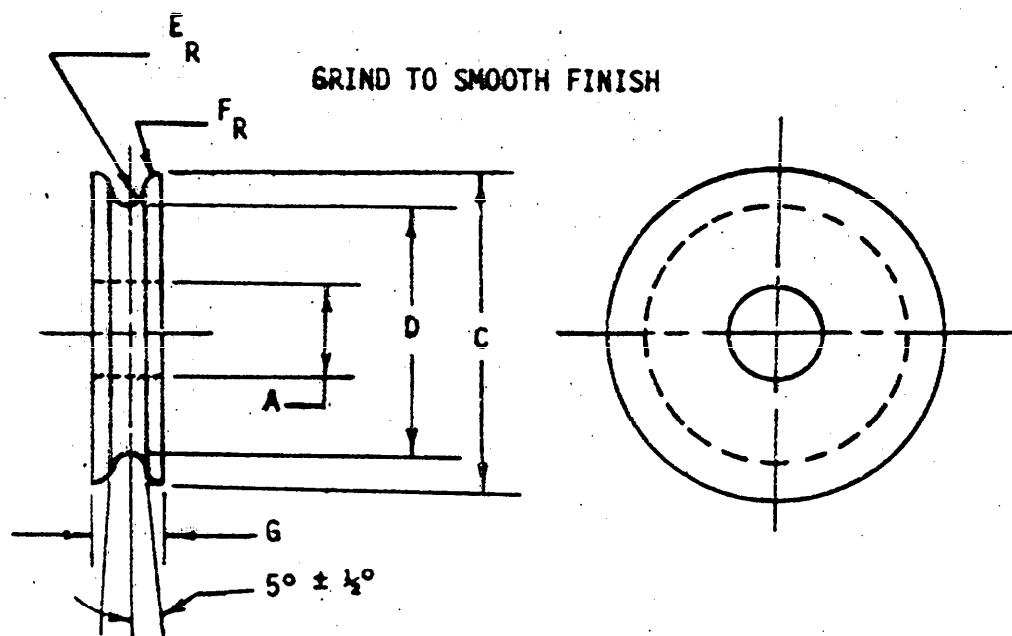
\* 4.3 Test methods.

- \* 4.3.1 Examination of product. All cable shall be examined for workmanship and finish to determine compliance with the requirements of 3.11. For this purpose the cable shall travel no faster than 100 feet per minute and shall be stopped for closer inspection when deemed necessary. This inspection shall take place at the time the cable is wound on shipping reels. Any discard from the head end of the manufacturing reel shall be removed prior to winding of the shipping reels.
- \* 4.3.2 Breaking strength. One specimen shall be prepared from each sample of cable selected. The length of the specimen shall be not less than 2 feet. Where necessary, swaged terminals and accompanying hardware may be used to facilitate installation of the specimen in the jaws of the testing machine. The distance between the jaws of the testing machine with the sample in place ready for testing, shall be not less than 10 inches. The breaking strength shall be determined by use of a tensile testing machine in accordance with the applicable requirements of Method 211, FED-STD-151.
- \* 4.3.3 Endurance. One endurance test specimen shall be prepared from each sample taken from each lot of cable of the diameters shown in Table II. It shall be tested at room temperature. The number of reversals, and the tension in the cable for the endurance test shall be as indicated in Figure 2 and Table II for each size of cable. The total travel of the cable in one direction shall be 13-1/2 inches. The test pulleys shall be made of steel and shall conform to the dimensions shown in Figure 1 and Table III. The application of lubricant to the endurance test sample, in addition to the lubricant applied during the manufacture of the cable shall not be permitted either before or during the endurance test.
- \* 4.3.4 Breaking strength after endurance test. The breaking strength after endurance test shall be determined by the method specified for determining the breaking strength of cable except that the specimen for this test shall be so selected as to determine the breaking strength of a portion of the cable that has been subjected to bending by contact with a test pulley.
- \* 4.3.5 Lubrication. The amount of friction-preventive compound adhering to the outside of the finished cable shall be such that a white cloth, which has been rubbed once over a one-foot length of cable, will show a noticeable amount of the compound.
- \* 4.3.6 Stretch and proof test. For sizes 1/32 through 5/16 inch diameter one specimen from each sample of cable selected as in 4.2.1 shall be tested for determining the percent stretch. The total length of the cable specimen to be tested shall be not less than 20 inches. Where necessary, swaged terminals and accompanying hardware may be used to facilitate installation of the specimen in the jaws of the testing machines. The amount of stretch shall be determined on a tension testing machine in accordance with FED-STD-151. The specimen shall be loaded to 1 percent minimum breaking strength shown in Table I to strengthen the cable. While the specimen is under tension and adequate gauge length shall be marked off on the cable between the jaws of the testing machine. The specimen shall then be gradually loaded to 60 percent of minimum breaking strength and measured for elongation under load. From these data, the percent stretch shall be calculated using the formula below:

$$\text{Percent Stretch} = \frac{\text{Elongation Under Load} \times 100}{\text{Original Length}}$$



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NOTE: "A" SUPPORT PULLEYS ON SUITABLE BALL OR ROLLER BEARINGS OR SHAFT EXTENSION SUPPORTED ON SUITABLE BALL OR ROLLER BEARINGS.

MATERIAL: TOOL STEEL.

HEAT TREAT: HARDEN TO ROCKWELL C60 MINIMUM.

FIGURE 1. DIMENSIONS of TEST PULLEYS USED IN STANDARD ENDURANCE TEST



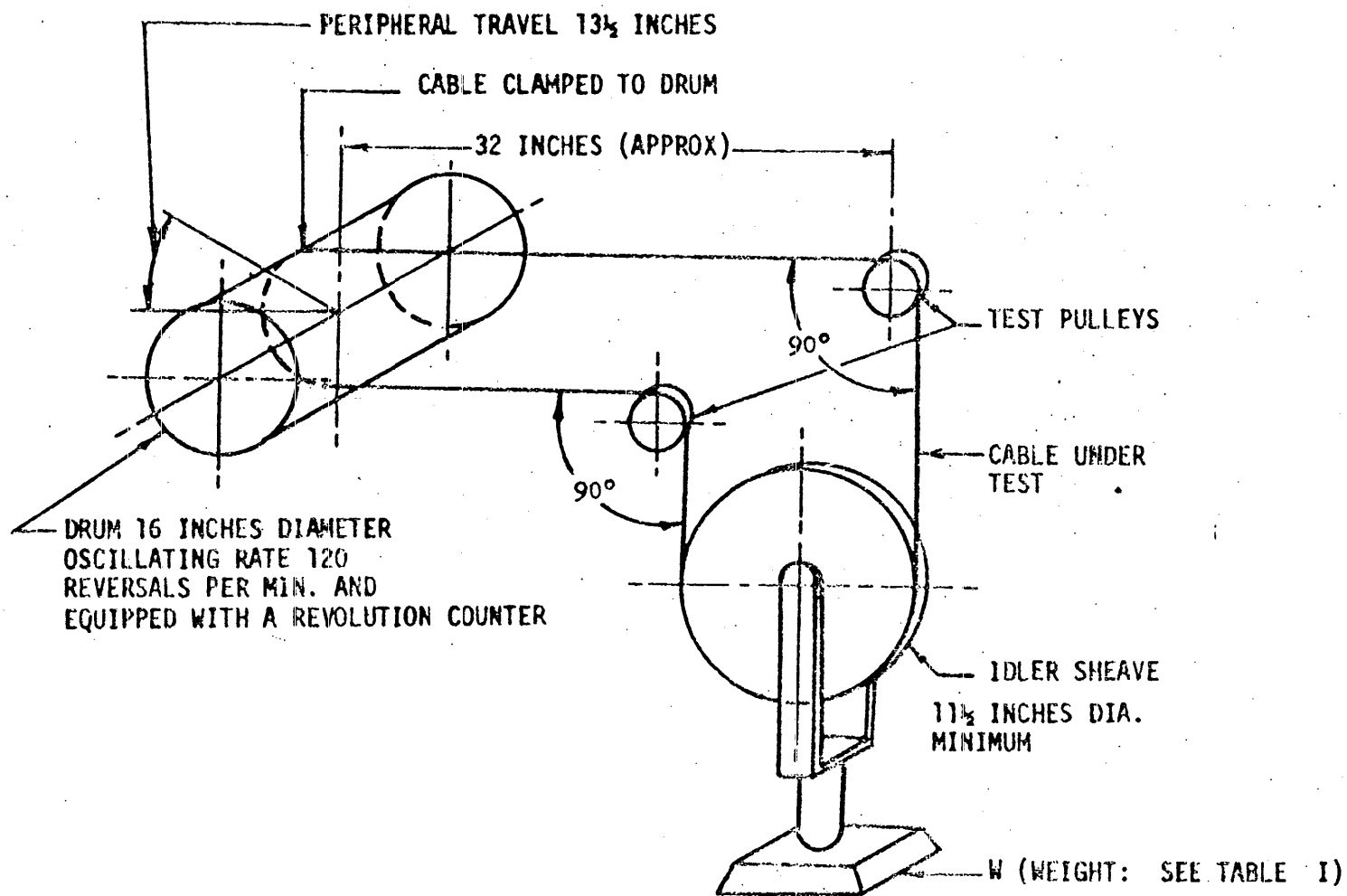


FIGURE 2. DIAGRAM of ENDURANCE TESTING MACHINE AND CONDITIONS of TEST

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TABLE III - DIMENSIONS OF STEEL PULLEYS USED IN ENDURANCE TESTS

Cable Diameter	Pulley Ratio $\frac{1}{\text{D}}$	PULLEY DIMENSIONS				
		$C \pm 1/64$	$D \begin{smallmatrix} +.005 \\ -.000 \end{smallmatrix}$	$E_R \begin{smallmatrix} +.002 \\ -.000 \end{smallmatrix}$	$F_R$	$G \pm 1/64$
Inch		Inches	Inches	Inch	Inch	Inch
3/64 7 by 7	12.0	1	.562	.025	1/16	3/8
1/16 7 by 7	12.0	1	.750	.036	1/16	3/8
3/32 7 by 7	12.0	1 7/16	1.124	.052	1/16	3/8
1/16 7 by 19	7.0	1 1/16	.438	.036	1/16	3/8
3/32 7 by 19	7.0	3 1/32	.656	.052	1/16	3/8
1/8 7 by 19	7.0	1 1/4	.875	.069	1/16	3/8
5/32 7 by 19	9.5	2	1.484	.086	1/16	3/8
3/16 7 by 19	9.5	2 3/8	1.781	.102	1/16	1/2
7/32 7 by 19	9.5	2 3/4	2.078	.118	1/16	1/2
1/4 7 by 19	9.5	3 1/8	2.375	.134	1/16	1/2
9/32 7 by 19	9.5	3 1/2	2.671	.150	1/16	1/2
5/16 7 by 19	9.5	3 7/8	2.969	.167	1/16	9/16
3/8 7 by 19	9.5	4 5/8	3.563	.200	1/16	9/16

$\frac{1}{\text{D}}$  Ratio of pulley diameter "D" to nominal wire rope diameter.

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Results of stretch test shall meet the requirements specified in 3.8. For sizes 1/32 through 5/16 inch diameter, the following proof test shall also be made: Using the same specimen used in the stretch test or a similarly prepared specimen, increase the load gradually to 80 percent of the minimum required breaking strength of the cable as specified in Table III. The load shall be applied for a minimum of 5 seconds. At the end of the above tests, the cable fittings shall be removed and the entire cable shall be completely unwound and every wire inspected. A suitable electronic device capable of detecting the breaking of individual wires during proof testing may be used instead of unwinding the cable. The failure of any wire shall be cause for rejection of the lot.

- \* 4.4 Rejection and retest. The failure of any specimen shall be cause for rejection of the lot represented by the sample. The manufacturer may sample each length of cable comprising the rejected lot and subject three specimens from these samples to retest. Lengths of cable shown to conform to all of the requirements of this specification on retest may be submitted for acceptance.

- \* 4.5 Examination of the preparation for delivery. The preservation, packaging, and marking shall be examined for conformance with Section 5 and 3.11.

## 5. PREPARATION FOR DELIVERY

5.1 Preservation and packaging. Preservation and packaging shall be Level A or C as specified (see 6.2).

- \* 5.1.1 Preservation and packaging, Level A. The cable shall be wound, one size on a reel, on reels constructed to the dimensions specified in Table IV. Before starting to wind the cable on a reel, a layer of waterproof barrier-material, conforming to PPP-B-1055 and then a layer of greaseproof paper, conforming to MIL-B-121, Grade A, shall be applied to the barrel of the reel and the inside of the flanges against which the cable will subsequently rest. After the cable is wound on the lined reel, a layer of greaseproof paper, MIL-B-121, Grade A, then a layer of waterproof paper, conforming to MIL-B-121, Grade A, then a layer of waterproof barrier material, conforming to PPP-B-1055 shall be applied and fastened by three or more wooden strips and two metal straps. The metal straps shall conform to QQ-S-781 or QQ-S-790.

5.1.2 Preservation and packaging, Level C. Preservation and packaging shall be in accordance with manufacturer's commercial practice in a manner to insure carrier acceptance and safe delivery to destination.

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

- \* 5.2.1 Overseas packing (Level A). When overseas packing is specified, each packaged reel shall be lagged with a layer of lumber in such a manner that the waterproof barrier-material is not exposed to forces which may cause mechanical damage. The lumber shall conform to MM-L-736 or MM-L-751.

5.2.2 Domestic packing (Levels B and C). For domestic packing, no additional packing is necessary.

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TABLE IV - REELS FOR CABLE

Dia of Cable	Dia of Head	Traverse or Distance Between Heads	Dia of Drum	Dia of Arbor Hole	Dia of Head	Traverse or Distance Between Heads	Dia of Drum	Dia of Arbor Hole
1000 feet					3000 feet			
Inch	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches
1/32	12	4	8	1-1/8	12	4	8	1-1/8
1/16	12	4	8	1-1/8	12	4	8	1-1/8
5/64	12	4	8	1-1/8	16	4	10	1-1/8
3/32	12	4	8	1-1/8	16	4	10	1-1/8
7/64	16	4	10	1-1/8	18	7	12	2-1/8
1/8	16	4	10	1-1/8	18	7	12	2-1/8
9/64	16	7	12	1-1/8	16	10	8	1-1/8
5/32	16	7	12	1-1/8	16	10	8	1-1/8
3/16	18	7	12	2-1/8	18	10	8	2-1/8
7/32	18	7	10	2-1/8	22	10	10	2-1/8
1/4	18	10	10	2-1/8	24	10	10	2-1/8
5/16	18	10	10	2-1/8	24	16	10	2-1/8
3/8	22	10	10	2-1/8	32	16	16	2-1/8
7/16	24	12	10	2-1/2	50	12	26	5
1/2	24	14	10	2-1/2	50	12	26	5
9/16	26	14	11	2-1/2	50	14	30	5
5/8	32	18	18	3	50	16	30	5
3/4	32	22	18	3	50	22	30	5
7/8	50	12	30	5	50	30	30	5
1	50	14	30	5	60	24	30	5
5000 feet					10,000 feet			
Inch	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Inches
1/32	12	4	8	1-1/8	16	4	10	1-1/8
1/16	16	4	10	1-1/8	18	7	12	2-1/8
5/64	18	7	12	2-1/8	16	10	8	1-1/8
3/32	18	7	12	2-1/8	16	10	8	1-1/8
7/64	16	10	8	1-1/8	18	10	8	2-1/8
1/8	16	10	8	1-1/8	24	10	10	2-1/8
9/64	24	10	10	2-1/8	24	16	10	2-1/8
5/32	24	10	10	2-1/8	24	16	10	2-1/8
3/16	24	10	10	2-1/8	24	16	10	2-1/8
7/32	24	10	10	2-1/8	32	20	16	3-1/8
1/4	32	18	16	2-1/8	36	22	18	3-1/8
5/16	32	18	16	2-1/8	36	22	18	3-1/8
3/8	32	20	16	2-1/8	50	16	26	3-1/8
7/16	50	14	26	5	50	26	26	5
1/2	50	16	26	5	50	28	26	5
9/16	50	20	30	5	60	22	30	5
5/8	50	26	30	5	60	30	30	5
3/4	60	24	30	5	60	34	30	5
7/8	60	28	30	5	68	38	30	5
1	60	36	30	5	76	40	30	5

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- \* 5.3 Marking of shipments. Each shipping reel shall be marked in accordance with the requirements of MIL-STD-129. The following information shall be included.

Stock No. or other identification number as specified in the purchase document 1/

WIRE ROPE, STEEL (CORROSION-RESISTING) FLEXIBLE, PREFORMED (FOR AERONAUTICAL USE) (MIL-W-5424)

Size

Name of manufacturer (if not same as contractor)

Name of contractor

Contract or Order No.

- 1/ The contractor shall enter the Federal Stock No. specified in the purchase document or as furnished by the procuring activity. When the Federal Stock No. is not provided or available from the procuring activity, leave space therefor and enter the stock No. or other identification when provided by the procuring activity.

## 6. NOTES

6.1 Intended use. The cable covered by this specification is intended for general aircraft use where high resistance to corrosion is required.

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

a. Title, number and date of this specification.

b. Size and quantity of cable to be furnished.

c. Where minimum lengths greater than 1,000 feet are required; or where lengths between 500 and 1,000 feet are not desired, the lengths to be furnished shall be specified by the procuring activity (see 3.5).

d. Selection of applicable levels of packaging and packing required (see Section 5).

## 6.3 Definitions.

6.3.1 Wire. Each individual cylindrical steel rod or thread shall be designated as a wire.

6.3.2 Strand. Each group of wires helically twisted or laid together shall be designated as a strand.

6.3.3 Cable or wire rope. A group of strands helically twisted or laid about a central core shall be designated as a cable. The strands and the core shall act as a unit.

6.3.4 Preformed type. Cable consisting of wires and strands shaped, prior to fabrication of the cable, to conform to the form or curvature which they take in the finished cable, shall be designated as preformed types.

6.3.5 Diameter. The diameter of cable is the diameter of the circumscribing circle.

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- 6.3.6 Lay (or twist). The helical form taken by the wires in the strand and by the strands in the cable is characterized as the lay (or twist) of the strand or cable respectively. In a right-hand lay the wires or strands are in the same direction as the thread on a right-hand screw, and for a left-hand lay they are in the opposite direction.
- \* 6.3.7 Regular lay. Cable or wire rope in which the direction of the lay of the wires in the strand is opposite to the direction of the lay of the strand in the rope.
- \* 6.3.8 Lang lay. A cable or wire rope in which the direction of lay of the wires in the strand is the same as the direction of the lay of the strand in the rope.
- \* 6.3.9 Length of lay (or pitch). The distance, parallel to the axis of the strand or cable, in which a wire or strand makes one complete turn about the axis, is designated as the length of lay (or pitch) of the strand or cable respectively.
- \* 6.3.10 Wire center. The center of all strands shall be an individual wire and shall be designated as a wire center.
- \* 6.3.11 Strand core. A strand core shall consist of a single straight strand made of preformed wires similar to the other strands comprising the cable in arrangement and number of wires.
- \* 6.3.12 Independent wire rope core (IWRC), 7 by 7. A 7 by 7 independent wire rope core as specified herein shall consist of a cable or wire rope of 6 strands, 7 wires each, twisted or laid around a strand core consisting of 7 wires.
- \* 6.4 The margins of this specification are marked with an asterisk 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.

**Custodians:**

Army - WC  
Navy - AS  
Air Force - 82

**Preparing Activity:**

Air Force - 82

**Review Activities:**

Army - WC  
Navy - AS  
Air Force - 71

Project No. 4010-0078

SPECIFICATION ANALYSIS SHEET		Form Approved Budget Bureau No. 22-R255
<p><b>INSTRUCTIONS:</b> 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. Comments and suggestions submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or serve to amend contractual requirements.</p>		
SPECIFICATION		
ORGANIZATION		
CITY AND STATE	CONTRACT NUMBER	
<p>MATERIAL PROCURED UNDER A</p> <p><input type="checkbox"/> DIRECT GOVERNMENT CONTRACT      <input type="checkbox"/> SUBCONTRACT</p>		
<p>1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?</p> <p>A. GIVE PARAGRAPH NUMBER AND WORDING.</p>		
<p>B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES</p>		
2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID		
<p>3. IS THE SPECIFICATION RESTRICTIVE?</p> <p><input type="checkbox"/> YES      <input type="checkbox"/> NO (If "yes", in what way?)</p>		
<p>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)</p>		
SUBMITTED BY (Printed or typed name and activity - Optional)		DATE

DD FORM 1426

REPLACES EDITION OF 1 OCT 64 WHICH MAY BE USED.