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INCH-POUND

A-A-52211
October 23, 1996
SUPERSEDING
MIL-S-17743E
16 February 1973

COMMERCIAL ITEM DESCRIPTION

STRETCHERS, STEEL STRAPPING, HAND

The General Services Administration has authorized the use of this commercial item description for all federal agencies.

1. SCOPE

1.1 Scope. This commercial item description (CID) covers three types of hand operated, steel strapping stretchers for use with open or thread-on seals.

1.2 Intended use. The stretchers are used for applying flat steel strapping on bales, boxes, bundles, cartons, crates, and pallets. The heavier sizes are also used for securing material and equipment for shipment in freight cars, ships and trucks.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: U.S. Army Natick Research, Development and Engineering Center, Natick, MA 01760-5018 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A FSC 3540

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2. CLASSIFICATION

2.1 Classification. Stretchers shall be of the following types and sizes as specified (see 7.1).

Type I - Feed wheel, unlimited take-up

Size 1- 5/8 to ¾ inch width

Type II - Rack and gear take-up, (limited to 4 inches maximum)

Size 2- 3/8 to ¾ inch width

Type III- Drum, limited take-up, without shear device

Size 3 - ¾ to 1¼ inch width
Size 4- 1¼ to 2 inches width

(Sizes indicate range of strapping widths accommodated by stretcher type).

3. SALIENT CHARACTERISTICS

3.1 Desire and construction. Types I, II and III stretchers shall be manually operated and shall be capable of taking up and tensioning flat steel strapping by the reciprocating action of a handle with a ratchet. The stretchers shall be capable of retaining the tension of the strapping as the handle is released. The stretchers shall have a means for releasing the strapping from the stretchers after the strapping has been sealed. The stretchers shall accomplish limited or unlimited take-up of the strapping as specified in 2.1.

3.2 Hardness. The stretcher components shall be heat-treated or case-hardened and shall have the following hardness when tested as specified in 5.2.1.

(1) Feed wheels, push-type noses, gripping dogs, gripping pads and shear blades shall have a minimum hardness of Rockwell “C” 55 to 60.

(2) Winding drums for strapping, ratchet wheels, pawls and gears, racks, gear carriage, bushings and pins shall have a through hardness of Rockwell “C” 45 to 64 or a case hardness of Rockwell “30-N” 69 to 77 for plain carbon steels and a minimum through hardness of Rockwell “C” 20 for alloy steels. Components consisting of carbide shall have a through hardness of Rockwell “C” 71-73.

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3.3 Surface cracks. Heat-treated and case-hardened stretcher components shall have no evidence of surface cracks when examined as specified in 5.2.1.1.

3.4 Sizes. Types I, II and III stretches shall take up and tension strapping of the sizes as indicated in table I. The strapping shall conform to type I of ASTM D 3953.

TABLE I. Straining sizes for stretchers

Stretcher	Strapping sizes (inches) Width	Thickness
Type I	5/8 - 3/4	0.010 to 0.023
Type II	3/8 - 3/4	0.010 to 0.023
Type III	¾- 1¼	0.028 to 0.050
	1¼ - 2	0.050

3.5 Threading and unthreading. When tested as specified in 5.2.2.1 each stretcher shall be threaded and unthreaded with no interference or obstructions from stretcher components.

3.6 Take-up and tension. When tested as specified in 5.2.2.2, each type of stretcher shall take up tension and retain the tension of the applicable maximum size strapping listed in table I and shall withstand the strapping loads listed in table II with no binding of stretcher components, no visual slippage of strapping and with no deformation, fracture or breakage of stretcher components.

TABLE II. Loads (minimum)

Strapping width (inches)	Load (pounds)
¾ (regular duty strapping)	1035
1¼ (heavy duty strapping)	5060
2 (heavy duty strapping)	7950

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3.7 Repair and maintenance. Stretchers shall have a means for adjustment, service, and replacement of components.

3.8 Marking for identification. The stretchers shall be marked for identification in accordance with manufacturer's standard practice and shall include the strapping size range for stretcher use. The marking shall be permanent and legible.

3.9 Finish. The finish on the stretchers shall be in accordance with the manufacturer's commercial practice. The stretchers shall be clean and free from burrs, slivers and rust areas. All welds shall be high quality with a smooth uniform finish, with no slag, spatter or other welding defects.

3.10 Workmanship. The stretchers shall have no binding or misalignment of components. Components shall not be loose, bowed, dented or fractured.

3.11 Metric products. Products manufactured to metric dimensions will be considered on an equal basis with those manufactured using inch-pound units, provided they fall within the tolerances specified using conversion tables contained in the latest revision of ASTM E 380, and all other requirements of this CID are met. If a product is manufactured to metric dimensions and those dimensions exceed the tolerances specified in the inch-pound units, a request should be made to the contracting officer to determine if the product is acceptable. The contracting officer has the option of accepting or rejecting the product.

4. REGULATORY REQUIREMENTS.

4.1 Contractor recovered materials. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR).

5. QUALITY ASSURANCE PROVISIONS

5.1 Proctuct conformance. The products provided shall meet the salient characteristics of this commercial item description, shall conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered that has been sold in the commercial marketplace for over one year, or is the same product that has successfully been delivered to the Government on a previous contract or purchase order. The Government reserves the right to require proof of such conformance prior to first delivery and thereafter as may be otherwise provided for under the provisions of the contract.

The following market acceptability criteria are necessary to document the quality of the product to be provided under this CID.

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a. The compmy producing the item must have been producing a product meeting the requirements of this CID for at least 2 years.

b. The company must have sold 200 items meeting this CID, in the commercial or government marketplace over the past 2 years.

5.2 Tests.

5.2.1 Hardness test. Each heat-treated and case-hardened stretcher component shall be tested for hardness. The average hardness of the components shall be obtained from a minimum of 3 determinations in accordance with ASTM E l8. Failureof the components to meet the requirements of 3.2 shall constitute failure of the test.

5.2.1.1 Visual examination. Stretcher components which have been heat-treated or case-hardened shall be examined for evidence of surface cracks using a glass having a minimum of 5X magnification. Failure of the components to meet the requirements of 3.3 shall constitute failure of the visual examination.

5.2.2 Performance tests.

5.2.2.1 Threading and unthreading test. The stretchers shall be threaded and unthreaded with the applicable maximum size strapping shown in table I simulating the application of strapping on a package and checked for ease of threading and unthreading. Inability of the stretcher to meet threading requirements of 3.5 shall constitute failure of this test.

5.2.2.2 Take-up and tension test. The stretchers threaded with the applicable maximum size strapping, shall be attached to a tension measuring apparatus and shall be operated to take up and apply tension to the strapping until the specified load in table II has been reached. Extension of the stretcher handles to meet the requirements is acceptable. Inability of the stretchers to meet the take-up, tensioning and load requirements specified in 3.6 shall constitute failure of this test.

6. PACKAGING

6.1 Packaging. Preservation, packing and marking requirements shall be as specified in the contract or purchase order (see 7.1)

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7. NOTES

7.1 Ordering Data. Purchasers should select the preferred options permitted herein and include the following information in procurement documents (if applicable).

a. Title, number and date of this CID
b. Type and size of item required (see 2.1)
c. Packaging requirements (see 6.1)

7.2 Sources for documents.

7.2.1 Sources for non-government association documents.

ASTM STANDARDS:

D3953 - Strapping, Fiat Steel and Seals, Standard Specification for
E l8 - Tests for Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials
E 380 - Use of The International System of Units (SI) (The Modernized Metric System)

(Application for copies of ASTM standards should be addressed to the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959).

7.3 Sources of supply. Manufacturers whose products are known to meet this CID are listed below; however, competition is not limited to these companies :

Dyna Pak Inc.
P. O. Box 384
Panola, TX 75685

Independent Metal Strap Co., Inc.
34 Lumber Road
Roslyn, NY 11576-2106

C. K. Strapping Systems Inc.
16601 Lebanon Church Road, Ste. 1
Pittsburgh, PA 15236

North Shore Strapping Co., Inc.
9401 Maywood Avenue
Cleveland, OH 44102-4852

Midwest Industrial Packaging Inc.
P. O. Box 498
Winnetka, IL 60093

Shipping Room Products Inc.
19400 St. Clair Avenue
Cleveland, OH 44117

Sircle Spring Co., Inc.
9401 Maywood Avenue
Cleveland, OH 44102-4852

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7.4 National stock numbers (NSN). The following is a list of NSNs assigned to the stretchers:

Stretcher	(Strapping) Size (inches)	NSN
Type I, size 1	5/8 to 3/4	3540-00-857-8512
Type II, size 2	3/8 to 3/4	3540-00-278-1250
Type III, size 3	3/4 to l¼	3540-00-278-1251
Type III, size 4	1¼ to 2	3540-00-223-8436

7.5 Part identification number (PIN). The PINS to be used for items required by this CID are created as follows:

A A 52211 - 1 -1

(Example of a PIN: AA52211-11)

Size: l-5/8 to 3/4 inch width
2- 3/8 to 3/4 inch width
3 - 3/4 to l l/4 inch width
4-1 l/4 to 2 inches width

Type: 1- Feed wheel unlimited take-up
2- Rack and gear take-up, (limited to 4 inch maximum)
3- Drum, limited take-up, without shear device

CID number

Designates a Commercial Item Description

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MILITARY INTERESTS:

Custodians

Army - GL
Navy - SA
Air Force - 99

Review Activities

Army - SM
Navy - MC
Air Force -84

CIVIL AGENCY COORDINATING ACTIVITY:

GSA-FSS

Preparing Activity:

Army - GL

Project 3540-0159

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STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
2. The submitter of this form must complete blocks 4, 5, 6, and 7.
3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of 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.

I RECOMMEND A CHANGE:

1. DOCUMENT NUMBER: A-A-52211
2. DOCUMENT DATE (YYMMDD): 96-10-23
3. DOCUMENT TITLE: Stretchers, Steel Strapping, Hand
4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)
5. REASON FOR RECOMMENDATION
6. SUBMITTER
   a. NAME (Last, First, Middle Initial)
   b. ORGANIZATION
   c. ADDRESS (Include Zip Code)
   d. TELEPHONE (Include Area Code) (1) Commercial (2) AUTOVON (if applicable)
7. DATE SUBMITTED (YYMMDD)
8. PREPARING ACTIVITY
   a. NAME: U.S. Army Natick RD&E Center
   b. TELEPHONE (Include Area Code) (1) Commercial: 508-233-5175 (2) AUTOVON: 256-5175
   c. ADDRESS (Include Zip Code): Commander, U.S. Army Natick RD&E Center, ATTN: SSCNC-WEF, Natick, MA 01760-5018

IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT:
Defense Quality and Standardization Office
5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466
Telephone (703) 756-2340 AUTOVON 289-2340