

MIL-C-87093B(NU)

29 Jun 88

SUPERSEDING
MIL-C-87093A
18 May 1984

MILITARY SPECIFICATION

COVERALLS, FLAME RESISTANT (ARAMID)

This specification is approved for use by the Navy Clothing and Textile Research Facility, 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 covers the requirements for a flame resistant coverall made from plain weave, aramid cloth for both male and female personnel.

1.2 Classification. The coveralls shall be of two types in the following sizes and lengths (see 6.2).

1.2.1 Type I. - Men's coverall1.2.1.1 Sizes and lengths.

Sizes: 36, 38, 40, 42, 44, 46, and 48.

Lengths: short, regular, and long.

1.2.2 Type II. - Women's coverall1.2.2.1 Sizes and lengths.

Sizes: 6, 8, 10, 12, 14, 16, 18, 20, and 22.

Lengths: short, regular, and long.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Officer in Charge, Navy Clothing and Textile Research Facility, 21 Strathmore Road, Natick, MA 01760-2490 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 8415

DISTRIBUTION STATEMENT A. Approved for public release. distribution is unlimited.

APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. Unless otherwise specified, the following specifications, standards, and handbooks of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation form a part of this specification to the extent specified.

SPECIFICATIONS

FEDERAL

- V-F-106 - Fastener, Slide, Interlocking
- * NN-P-71 - Pallets, Material Handling, Wood, Stringer Construction, 2 Way and 4 Way (Partial)
- CCC-C-419 - Cloth, Duck, Cotton, Unbleached, Plied Yarns, Army and Numbered
- DDD-L-20 - Label; For Clothing, Equipage, and Tentage (General Use)

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- * MIL-P-15011 - Pallets, Material Handling, Wood Post Construction, 4 Way Entry
- MIL-B-17757 - Boxes, Shipping, Fiberboard, (Modular Sizes)
- * MIL-F-21840 - Fastener Tapes, Hook and Loop, Synthetic
- * MIL-T-44100 - Thread, Para-Aramid, Spun, Intermediate Modulus
- MIL-T-83193 - Thread, Aramid, Spun Staple
- MIL-C-83429 - Cloth, Plain and Basket Weave, Aromatic Polyamide Non-Melting

STANDARDS

FEDERAL

- FED-STD-751 - Stitches, Seams, and Stitchings

MILITARY

- MIL-STD-129 - Marking for Shipment and Storage
- * MIL-STD-147 - Palletized Unit Loads
- MIL-STD-1668 - Provisions for Evaluating Quality of Cloth Coveralls

(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.)

2.1.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this specification to the extent specified herein. Unless otherwise specified, the issues shall be those in effect on the date of the solicitation.

LAW AND REGULATIONS

U.S. POSTAL SERVICE MANUAL

(Copies of the manual may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402-0001.)

* 2.2 Other publications. The following document(s) 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.

NATIONAL MOTOR FREIGHT TRAFFIC ASSOCIATION, INC., AGENT

National Motor Freight Classification

(Application for copies should be addressed to the American Trucking Association, ATTN: Traffic Department, 1616 P Street, N.W., Washington, DC 20036-1404).

UNIFORM CLASSIFICATION COMMITTEE, AGENT

Uniform Freight Classification

(Application for copies should be addressed to the Uniform Classification Committee, Room 1106, 222 South Riverside Plaza, Chicago, Illinois 60606-5808).

THE COLOR ASSOCIATION OF THE UNITED STATES

Department of Defense Standard Shades for Sewing Thread

(Application for copies may be obtained from the Color Association of the United States, 343 Lexington Ave., New York, NY 10016)

2.3 Order of precedence. In the event of a conflict between the text of this specification and the references cited herein, 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.

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3. REQUIREMENTS

3.1 Guide sample. Samples, when furnished, are solely for guidance and information to the contractor (see 6.3). Variations from this specification may appear in the sample in which case this specification shall govern.

3.2 First article. When specified, the contractor shall furnish sample unit(s) for first article inspection and approval (see 4.3 and 6.2).

3.3 Material. (see 6.4).

3.3.1 Basic material. The base fabric shall be a plain weave, aramid cloth conforming to type II, class 1 of MIL-C-83429, the color shall be shade Blue 3375, piece number 84139.

3.3.2 Belt reinforcement. The material for the belt reinforcement shall be an unbleached cotton duck made with plied yarns, conforming to type I, No. 12 of CCC-C-419.

* 3.3.3 Thread. The thread shall be aramid thread, conforming to MIL-T-83193. As an alternate, a para-aramid, spun staple thread, size T-35 conforming to MIL-T-44100 may be used. The color of the thread shall approximate shade Blue, A.R., G.A. 66058. The thread shall meet commercially acceptable colorfastness requirements for aramid thread.

* 3.3.4 Hook and loop fastener tape. The hook and loop fastener tapes shall conform to Type II, Class 1 of MIL-F-21840. The tape shall be 1 inch wide and in cut lengths as specified in Table I. The color shall match shade Lt. Navy Blue 3368.

* 3.3.5 Slide fastener. The slide fastener for the front closure shall conform to V-F-106 as follows:

Type I (men's) type I, style 15, size LMS

Type II (women's) type I, style 3, size LMS

except that all metal components of the slide fastener shall be fabricated of brass and purchased from the same contractor. The tape of the fasteners shall be high-temperature resistant aramid. The color of the tape shall be black and shall meet commercially acceptable colorfastness requirements for aramid threads. The tab shall be a short pull (see 4.4.1).

* 3.3.6 Labels.

* 3.3.6.1 Combination label. Each coverall shall have a combination instruction and identification label conforming to Type VI, Class 15 of DDD-L-20. The fastness to laundering requirement of DDD-L-20 shall apply. The label shall bear the following inscription:

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COVERALLS, FLAME RESISTANT (ARAMID) TYPE I (EXAMPLE)
 FIBER CONTENT: 100% ARAMID
 CONTRACT NO: DLA-100-00-0-0000 (EXAMPLE)
 NAME OF CONTRACTOR:
 NAME OF MANUFACTURER (If other than contractor):

LAUNDERING INSTRUCTIONS

MACHINE WASH HOT, NO BLEACH
 TUMBLE DRY MEDIUM
 REMOVE PROMPTLY

OR

USE NAVEDTRA 414-01-45-81, FORMULA II

DO NOT STARCH

* NOTE: The label for the Type II coveralls shall have a different label with Type II after title.

* 3.3.6.2 Size label. The size label for Type I and Type II coveralls shall conform to type VI, class 2 of DDD-L-20 and shall read as follows:

STOCK NO: 8415-00-000-0000 (EXAMPLE)
 SIZE: 36R (EXAMPLE)

* NOTE: The lengths of both Type I and Type II may be abbreviated as S, R, or L for short, regular, and long.

* 3.4 Design. The coveralls shall have a double slider slide fastener for Type I and a single slider slide fastener for Type II, front fly closure (fold to right for men's and to left for women's) and six patch type pockets: one on each breast (with left having a pencil opening) and two on each leg (a large cargo pocket with a small pocket inside of it). The breast pockets and large cargo pockets shall have flaps with hook and loop fastener tape closures. The inside patch pocket shall have a sewn down flap. The front fly shall have hook and loop fastener tapes at three locations: one at top of fly opening at neck, one at bottom of V at neck, and one at waist. The sleeve and leg openings shall have an adjustment by means of hook and loop fastener tapes attached to tabs. The waistband shall have two belt loops and short belts with hook and loop fastener tapes for adjustment of the waist. The Type II coveralls shall have shoulder, waist and hip darts.

3.4.1 Figure. The figures are furnished for information purposes only. When inconsistencies exist between the written specification and a figure, the written specification shall govern.

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* 3.5 Patterns. Standard patterns to be used to cut working patterns will be furnished by the Government (see 6.3). The working patterns shall be identical to the Government patterns. Neither the Government patterns nor the working patterns shall be altered in any way, except that additional notches for use during construction are permitted on the working patterns. Also, minor modifications are permitted where necessary when using automatic equipment. These modifications shall not alter the dimensional, serviceability, or appearance requirements cited in the specification. The patterns allow 1/2 inch for all seams, except as otherwise indicated in Table I.

* 3.5.1 List of pattern parts. The component parts of the Type I or Type II coveralls shall be cut from the materials as specified and in accordance with the number of parts required for the manufacturing process as follows:

Material	Nomenclature of pattern parts	Cut parts
Basic material (shirt)	Back upper	1
	Front upper left side	1
	Front upper right side	1
	Sleeve	2
	Sleeve tab	2
	Collar	1
	Sleeve elbow patch	2
	Front facing	2
	Breast pocket	2
	Breast pocket flap	4
Basic material (trousers)	Front lower left side	1
	Front lower right side	1
	Back lower	2
	Outside cargo pocket	2
	Inside cargo pocket	2
	Outside cargo pocket flap	4
	Inside cargo pocket flap	2
	Fly reinforcement piece	1
	Waistband	1
	Knee patch	2
	Belt loop	2
	Belt	2
	Leg tab	2

Material	Nomenclature of pattern parts	Cut parts
Cotton duck	Belt reinforcement	2
Templates	Finished outside cargo pocket	-
	Finished breast pocket	-
	Finished breast pocket flap	-
	Cargo pocket and flap location marker	-
	Front lapel marker	-
	Sleeve tab location marker	-
	Leg tab location marker front	-
	Leg tab location marker back	-
	Belt marker	-
	Belt loop location marker	-

NOTE: A pattern is not furnished for hanger loop. See Table I, operation 4, for hanger loop requirements.

3.6 Construction.

* 3.6.1 Stitches, seams, and stitchings. Stitch, seam, and stitching types shall conform to FED-STD-751. Wherever two or more methods for seam or stitch types are given for the same part of the operation, any one may be used. Where stitch type 401 is used, the looper, that is the underthread, shall be on the inside of the coveralls. Seam allowances shall be maintained with seams sewn so that no raw edges, runoffs, twists, pleats, or open seams will result. Unless otherwise specified, top or edge stitching shall be 1/16 to 1/8 inch from edge, hook and loop fastener tape stitching shall be 1/16 to 1/8 inch from edge of tape, and all double needle stitching shall be 1/4 inch gauge with the row of stitching next to the folded edge not more than 1/16 to 1/8 inch from edge.

3.6.2 Thread breaks and ends of seams. Ends of all seams and stitchings, when not caught in other seams or stitchings, shall be backtacked not less than 3/8 inch. The ends of a continuous line of stitching shall be overlapped not less than 1/2 inch. Thread breaks (all stitch types) shall be secured by stitching back of the break not less than 1/2 inch. Skipped stitches or thread breaks (401 stitch type) may be repaired by using 301 stitch type. When stitch type 401 is permitted as an option, it shall not be used unless the ends are caught in other seams of stitching.

3.6.3 Stitches per inch. The minimum and maximum number of stitches per inch shall be specified in Table I.

* 3.7 Manufacturing operations requirements. The coverall shall be manufactured in accordance with operation requirements specified in Table I. The contractor is not required to follow the exact sequence of operations listed provided that the finished coveralls are identical to those produced by following the sequence of operations as listed in Table I. Minor modifications are permitted where necessary when using automatic equipment. These modifications shall not alter the dimensional, serviceability, or appearance requirements cited in this specification.

* 3.7.1 Abbreviations in table of operations. The abbreviations used in table I are as follows:

Stch	-	Stitch
in	-	inch
Ndl	-	Needle
Bob	-	Bobbin
Lpr	-	Looper
Mchne	-	Machine
Brck	-	Bartack
Comrc	-	Commercial
smr	-	similar
Btnhl	-	Buttonhole
incl	-	including
dbl	-	double

TABLE I - CONSTRUCTION OF COVERALLS

No.	Operation	Stch Type	Seam/ Stch type	Stch in	Thread	
					Ndl	Bob/ Lpr

* NOTE: All markers shall be placed on a raw edge of garment except in operations 22c and 26.

* NOTE: A finished part shall not vary from the template by a total of 1/4 inch but not more than 1/8 inch on any one side.

1. Cutting.

a. Cut the coverall in accordance with patterns which show directional lines, marks, and notches for proper assembly. Directional lines shall be placed in the warp direction of the material. The directional line on the fronts and backs of the coverall trouser parts may vary from the warp direction by not more than 1-1/2 inches. Measurements shall be taken from the top and bottom of the directional line on pattern to the selvage edge of the fabric and the difference between the two measurements shall not exceed 1-1/2 inches.

b. Cut all component parts from the same piece of material except the hanger loop, inside cargo pockets, inside cargo pocket flaps, waistband belt loops, belts, and leg tabs, which may be cut from ends and when so cut shall match the main assembly.

c. The waistband may be stripped and placed on rolls.

* d. The hanger loop shall be cut of sufficient length and width to finish in accordance with operations 27e and 4b.

* e. Drill holes are allowed only for breast pocket and breast pocket flap location.

* NOTE: Drill holes must be covered by pocket or flap stitching.

TABLE I - CONSTRUCTION OF COVERALLS

No.	Operation	Stch Type	Seam/ Stch type	Stch in	Thread Ndl Bob/ Lpr
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* f. Lengths of the hook and loop fastener tapes shall be as follows:

<u>Lengths</u>	<u>No. of hook pieces</u>	<u>No. of loop pieces</u>	<u>Location</u>
1-1/2"	7	4	Waistband, legs, leg tab, top of slide fastener, sleeve tab, lapel at gorge seam
1-3/4"	2		Waistband belt
2-1/2"		2	Legs
3"		2 (Type II only) 2	Waistband Sleeve
4"	2	2 (Type I only) 2	Waistband Breast pocket, breast pocket flap
7"	2	2	Cargo pocket flap

NOTE: A tolerance of + 1/4 inch is allowed on the length of the hook and loop fastener tapes.

2. Replacement of defective components.

During the spreading, cutting, and manufacturing process, components having material defects or damages that are classified as defects in MIL-STD-1668 shall be removed from production and replaced with non-defective and properly matched components.

3. Marking.

a. All parts shall be marked, ticketed, or bundled to insure a uniform shade and proper assembly throughout the coverall. Parts cut from ends and stripped waistband need not be marked. However, they must match main assembly.

TABLE I - CONSTRUCTION OF COVERALLS

No.	Operation	Stch Type	Seam/ Stch type	Stch in	Thread Ndl Bob/ Lpr
	b. The use of corrosive metal fastening devices or sew-on tickets shall be prohibited.				
	c. Adhesive type shade tickets which discolor or adhere to the material upon removal of tickets shall be prohibited.				
	d. The use of ink pad numbering machine, rubber stamp, or pencil is acceptable provided the numbers do not show through the outside of the coverall. Whenever possible, numbers shall be covered by the seam allowance.				
4.	<u>Make hanger loop and belt loop.</u>				
	a. Hanger loop. (1) Make loops by folding a piece of the basic material to center with the edges abutted and double stitched not less than 1/4 inch gage with covering stitch on the underside.	406	EFh-1	8-12	
	OR				
	(2) Seam loop pieces, turn, smooth out, and flatten. The seam shall not be exposed on the side edge of the loop.	301	EFu-1	8-12	
	OR				
	(3) Make loops by abutting folded edges and stitch with the line of stitching covering the abutted edges. The stitching shall not show through to the outside.	105	EFae-1	8-12	
	OR				
	(4) Make loops by folding the material, turn in the side edges and stitch with two rows of edgestitching.	301	EFp-2	8-12	
	b. Hanger loop shall finish 1/2 (+ 1/8) inch in width.				

TABLE I - CONSTRUCTION OF COVERALLS

No.	Operation	Stch Type	Seam/ Stch type	Stch in	Thread Ndl Bob/ Lpr
	c. Belt loop. Fold belt loop in half widthwise, face to face, and stitch sides of loop, 3/8 inch from raw edge. Turn to finished position and topstitch the sides of the belt loop 1/16 to 1/8 inch from the folded edge.	301 or 401 301	SSe-2	8-12	
5.	<u>Attach knee and elbow patches.</u>				
* a.	Position knee patch on leg with notches matched. Turn under 1/2 inch on top and bottom raw edges of knee patch and double stitch to front leg.	301 or 401	LSd-2	8-12	
* b.	Position elbow patch on sleeve according to marks. Turn under 1/2 inch on top, bottom, and inside raw edges of elbow patch and double stitch to sleeve.	301 or 401	LSd-2	8-12	
* 6.	<u>Attach loop fastener tape and make flaps for breast and outside cargo pockets.</u>				
* a.	Position loop fastener tape to underside of pocket flaps. The edge of the tape shall be 3/4 (+ 1/8) inch from outer raw edges for breast pocket flaps and 1 (+ 1/8) inch for outer cargo pocket flaps. Stitch top, bottom, and sides of loop fastener tape. The tape shall be 4 inches long for the breast pocket flaps and 7 inches long for the cargo pocket flaps.	301	LSbj-1	8-12	
* b.	Position plies of flap face to face and stitch 3/8 inch from the sides and outer raw edges. Turn to finished position.	301 or 401	SSe-3(a)	8-12	
c.	Double stitch sides and outer edges of flap.	301	SSe-3(b)	8-12	

NOTE: The loop fastener tape shall not be caught in inner row of double stitching.

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TABLE I - CONSTRUCTION OF COVERALLS

No.	Operation	Stch Type	Seam/ Stch type	Stch in	Thread	
					Ndl	Bob/ Lpr
7.	<u>Make pocket hem, attach hook fastener tape to breast and outside cargo pockets.</u>					
	a. Fold hem over according to marks on patterns and stitch lower folded edge.	301	EFb-1	8-12		
*	b. Place hook fastener tape (size according to loop fastener tape in 6a.) even with top folded edge of hem on breast pocket and centered on hem as not to be caught by inner row of double stitching (operation 13). The top of the tape for the outer cargo pocket shall be 1/4 inch from top folded edge of hem and centered so that it will not be caught in the inner row of double stitching (operation 20).					
	c. Stitch hook fastener tape along both sides and top and bottom edges.	301	LSbj-1	8-12		
* 8.	<u>Make sleeve tabs, leg tabs and waistband belts.</u>					
	a. Fold sleeve tab in half lengthwise, face to face, and stitch 1/4 inch from the raw edge the length of the tab. As an alternate, stitch 1/4 inch from the raw edge on one end and the length of the tab. Turn to finished position.	301	SSe-2(a)	8-12		
	b. Edgestitch 1/8 to 1/16 inch on top and bottom folded edges.	301	SSe-2(b)	8-12		
	c. Fold raw end of sleeve tab over 1 (+1/16) inch and stitch all four sides of 1-1/2 inch long hook fastener tape 1/2 inch in from folded edge of tab.	301	LSbj-1 and EFa-1	8-12		
	d. Fold leg tabs in half lengthwise, face to face and stitch 1/4 inch from the raw edge the length of the tab. As an alternate, stitch 1/4 inch from the raw edge on one end and the length of the tab. Turn to finished position.	301	SSe-2(a)	8-12		
	e. Edgestitch 1/8 to 1/16 inch on top and bottom folded edges.	301	SSe-2(b)	8-12		

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TABLE I - CONSTRUCTION OF COVERALLS

No.	Operation	Stch Type	Seam/ Stch type	Stch in	Thread Ndl Bob/ Lpr
f.	Fold raw end of leg tab over 1 (+ 1/16) inch and stitch all four sides of 1-1/2 inch long hook fastener tape to tab according to marks on patterns.	301	LSbj-1 and EFa-1	8-12	
g.	Fold waistband belt in half lengthwise, face to face. Fold belt reinforcement in half lengthwise. Place waistband belt on belt reinforcement with the edge of the belt 3/8 inch in from raw edge of the reinforcement and with the end of the belt 3/8 inch longer than the reinforcement (Figure 2, Ill. A). Stitch 3/8 inch from raw edge of belt, along the length of the belt. The stitching shall be centered on the folded reinforcement.	301 or 401	SSbd-1	8-12	
h.	Refold belt so that the folded edges of the belt are even with the edges of the reinforcement. Stitch across the top end of the belt, 1/4 inch from raw edge (Figure 2, Ill. B).	301	SSa-1	8-12	
i.	Turn to finished position, working out points and stitch with four rows of equally spaced reinforcement stitching (Figure 2, Ill. C).	301	SSv-4	8-12	
j.	The finished belt shall measure 1 1/2 (+ 1/4) inches in width.				
k.	Position 1-3/4 inch hook fastener tape on underside of belt and stitch around edges of the tape according to the belt marker.	301	LSbj-1	8-12	
*9.	<u>Make shoulder and waist darts on upper fronts and back for Type II only.</u>				
a.	Stitch darts as indicated by marks on pattern, and fold toward center. The stitching shall taper to a point.	301	OSf-1	8-12	
10.	<u>Join shoulder seam.</u>				
a.	Stitch shoulder seams with a double lapped and double stitched seam with front lapped over the back.	301 or 401	LSc-2	8-12	

TABLE I - CONSTRUCTION OF COVERALLS

No.	Operation	Stch Type	Seam/ Stch type	Stch in	Thread Ndl Bob/ Lpr
11.	<u>Set sleeve.</u>				
	a. Set sleeve to armhole, 1/2 inch from raw edges, face to face, simultaneously stitching and overedging in one operation.	515, 516 or 519	SSa-2	8-12	
	b. Turn seam allowance into sleeve, and topstitch 1/4 inch from folded edge, through all plies.	301 or 401	LSq-2	8-12	
12.	<u>Join underarm and side seams.</u>				
	a. Join the underarm and side seams in one continuous operation with a double lapped and double stitched seam with the fronts over the backs, catching elbow patch in the stitching.	301 or 401	LSc-2	8-12	
	NOTE: The seam at the armhole junction shall not be staggered more than 3/8 inch (measured from center of seam to center of seam).				
13.	<u>Attach breast pockets to fronts.</u>				
	a. Position pocket on upper front according to marks on patterns. Fold under the sides and bottom edges of pocket 3/8 inch and double stitch 1/4 inch gauge with the outer row of stitching 1/16 inch from the folded edges.	301 or 401	LSd-2	8-12	
	b. Place two vertical 3/8 (+ 1/16) inch bartacks, superimposed on the inner row of stitching at the top of the pockets.	Brtck		28 per brtck	
14.	<u>Attach breast pocket flaps to fronts.</u>				
	* NOTE: The distance between the finished pocket and finished flap (top of pocket and lower row of flap stitching) shall be 1/2 (+1/8) inch.				

TABLE I - CONSTRUCTION OF COVERALLS

No.	Operation	Stch Type	Seam/ Stch type	Stch in	Thread Ndl Bob/ Lpr
1. <u>Right flap.</u>	* a. Position raw edge of flap on upper front as indicated by marks on pattern and stitch 1/4 inch from raw edge. The distance between top of pocket and flap edge shall be 3/4 (+1/16) inch. The flap shall be centered over the pocket.	301	Similar to LSs-2(a)	8-12	
	* b. Turn flaps down and topstitch 1/16 to 1/8 inch from the folded edge using a double stitch with a 1/4 inch gauge. The loop of the fastener tapes shall match the hook portion of the fastener tape on the pocket.	301	Similar to LSs-2(b)	8-12	
	c. Place two vertical 3/8 (+ 1/16) inch bartacks, superimposed on the inner row of stitching at top corner of flap.	Brtck		28 per brtck	
2. <u>Left flap.</u>	NOTE: The pencil pocket opening shall be positioned at the end of flap closest to slide fastener.				
	* a. Clip notch of pencil pocket opening, turn opening in and stitch 1/4 inch gauge, from notch on pattern across pencil pocket opening to end of flap, with the outer row of stitching 1/16 to 1/8 inch from the folded edge.	301	SSc-2	8-12	
	* b. Position flap on upper front as indicated by marks on pattern, and stitch from notch end of pencil pocket opening to end of flap, 1/4 inch from raw edge. The distance between top of pocket and flap edge shall be 3/4 (+1/16) inch. The flap shall be centered over the pocket.	301	Similar to LSs-2(a)	8-12	
	* c. Turn flap down and topstitch from both ends of pencil pocket, 1/16 to 1/8 inch from the folded edge using a double stitch with a 1/4 inch gauge, leaving pencil pocket opening free. The loop of the fastener tape shall match the hook portion on the pocket.	301	Similar to LSs-2(b)	8-12	

TABLE I - CONSTRUCTION OF COVERALLS

No.	Operation	Stch Type	Seam/ Stch type	Stch in	Thread Ndl Bob/ Lpr
	d. Place two vertical 3/8 (+ 1/16) inch bartacks, superimposed on the inner row of stitching at the top of the flaps. Place a vertical bartack on each side of the pencil pocket opening.	Brtck		28 per brtck	
	e. Pencil pocket opening shall measure 1-1/8 to 1-1/4 inches wide.				
*15.	<u>Make hip darts on lower back for Type II only.</u>				
	a. Stitch darts as indicated by marks on pattern. Fold toward center. The stitching shall taper to a point.	301	OSf-1	8-12	
16.	<u>Join seat seam.</u>				
	a. Join the seat seam with a double lapped and double stitched seam, with the right back over left back.	301 or 401	LSc-2	8-12	
17.	<u>Join outseams.</u>				
	a. Stitch the outseam, with a double lapped and double stitch seam, with front over back catching knee patch in seam, matching notches at knee area.	301 or 401	LSc-2	8-12	
18.	<u>Make and attach inside cargo pocket.</u>				
	* NOTE: Marker must be used for inside cargo pocket location.				
	a. Form a 1 (+1/8) inch hem on inside cargo pocket according to marks on pattern and stitch along bottom folded edge.	301	EFb-1	8-12	

TABLE I - CONSTRUCTION OF COVERALLS

No.	Operation	Stch Type	Seam/ Stch type	Stch in	Thread Ndl Bob/ Lpr
*	b. Position pocket centered on outseam according to marker, with top of marker on waistline raw edge. Fold under raw edges and double stitch sides and bottom.	301	LSd-2	8-12	
19.	<u>Make and attach inside cargo pocket flaps.</u>				
*	NOTE: Marker must be used for inside cargo pocket flap location.				
a.	Fold flaps in half, face to face, and stitch both sides 1/4 inch from raw edges.	301	SSE-3(a)	8-12	
b.	Turn to finished position, forcing out sides and corners.				
c.	Double stitch sides and folded edge of flap.	301	SSE-3(b)	8-12	
*	d. Turn top raw edge of flap under 1/4 inch and position flap above pocket according to marker, with top of marker on waistline raw edge. Double stitch top and midway down sides of flap.	301	LSd-2	8-12	
	Place two vertical 3/8 (+ 1/16) inch bartacks superimposed on outer row of double stitching midway down sides of flap.	Brtck		28 per brtck	
20.	<u>Attach outside cargo pockets.</u>				
*	NOTE: Marker must be used for outside cargo pocket location.				
*	a. Position outside cargo pockets with raw edges turned under, centered on outseams according to marker, with top of marker on waistline raw edge, and double stitch to leg.	301	LSd-2	8-12	
*	b. Place two vertical 3/8 (+1/16) inch bartacks superimposed on inner row of double stitching at both top edges of outside cargo pocket.	Brtck		28 per brtck	

TABLE I - CONSTRUCTION OF COVERALLS

No.	Operation	Stch Type	Seam/ Stch type	Stch in	Thread Ndl Bob/ Lpr
21.	<u>Attach outside cargo pocket flaps.</u>				
	* Note: Marker must be used for outside cargo pocket flap location.				
	* a. Position outside cargo pocket flaps on legs according to marker, with top of marker on waistline raw edge, turning under top of flap 1/4 inch and double stitch to legs.	301 or 401	LSd-2	8-12	
	b. The center of the flap shall be centered over leg outseam.				
	c. The loop fastener tape on the flap shall match the hook portion of the fastener tape on the pocket.				
	d. Place two vertical 3/8 (+ 1/16) inch bartacks, superimposed on inner double row of stitching at both top ends of flap.	Brtck		28 per brtck	
*22.	<u>Hem sleeve and attach sleeve tab.</u>				
	a. Turn raw edge of sleeve under 3/8 (+1/16) inch. Fold, according to notches on pattern, back over body of material and stitch 1/16 inch from folded edge.	301	EFb-1	8-12	
	b. Hem shall finish 1/2 inch in width.				
	NOTE: Position location marker on sleeve seam with marker on finished edge of sleeve.				
	c. Stitch all four sides of 3 inch long loop fastener tape to sleeve according to marker.	301	LSbj-1	8-12	
	d. Fold under 1/4 inch and boxstitch the end of sleeve tab to sleeve according to location marker. If alternate sleeve tab construction was used, superimpose and boxstitch sleeve tab on sleeve according to location marker. The finished sleeve tab shall measure 3-1/4 (+1/4) inches long.	Box criss- cross stch	LSd-1	8-12	

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TABLE I - CONSTRUCTION OF COVERALLS

No.	Operation	Stch Type	Seam/ Stch type	Stch in	Thread Ndl Bob/ Lpr.
23.	<u>Attach shirt and trouser portions at waist.</u>				
* a.	Stitch back to back, the shirt to trousers 1/2 inch from the raw edge at the waist. For Type I, form two pleats on the back. The pleats shall be 4 (+ 1/4) inches from side seams, with inside folded edges facing center back.	301 or 401	SSa-1	8-12	
b.	Turn seam allowances onto shirt portion and stitch 1/8 inch from raw edge, through seam allowance and shirt portion.	301 or 401	SSa-1	8-12	
24.	<u>Attach waistband.</u>				
a.	Position waistband so that when finished, it shall be centered over waist joining seam of coveralls.				
b.	Stitch lower edge of waistband to trouser portion, face to face, 1/4 inch from raw edge.	301 or 401	LSq-2(a)	8-12	
c.	Turn waistband to finished position, turning raw edge under 1/4 inch and edge stitch top and bottom folded edges.	301 or 401	LSq-2(b) and LSB-1	8-12	
OR					
* d.	As an alternate to operation b. and c., the waistband may be attached by means of a double needle machine. The gauge shall be 1-5/8 (+ 1/8) inches between needles.	301 or 401	LSc-2	8-12	
e.	Waistband shall finish 1-3/4 (+ 1/16) inches wide.				

TABLE I - CONSTRUCTION OF COVERALLS

No.	Operation	Stch Type	Seam/ Stch type	Stch in	Thread Ndl Bob/ Lpr
25.	<u>Attach slide fastener and lapel facing.</u>				
	a. Turn outer front (left for Type I and right for Type II) fly with reinforcement piece inside, under 3/8 to 1/2 inch positioning outside edge of slide fastener tape even with inner folded edge. Stitch down center of tape. Extend top of tape over top of step. Turn to finished position, stitch through all plies 1/16 inch from inner folded edge.	301	Similar to SSc-1 Inverted	8-12	
	b. Turn front (right for Type I and left for Type II) fly with raw edge turned under and stitch to front 1/16 inch from inner folded edge.	301	LSd-1	8-12	
	* c. Superimpose outside edge of slide fastener tape on stitched seam of operation 25b. Stitch slide fastener tape to front 1/16 inch from edge.	301	SSa-1	8-12	
	* d. Line up, face to face, lapel facing to front and stitch 1/2 inch from raw edge around lapel, starting at the notch. Trim points, turn to finished position forcing out edges and points.	301	SSa-1	8-12	
	e. Neck portion of lapel facing may be stay stitched. The stitching shall not extend to end of lapel facing to allow for turning.	301	SSa-1	8-12	
	f. Turn under inner and bottom raw edge of lapel facing 1/2 inch and stitch 1/16 inch from the folded edge.	301	LSb-1	8-12	
	OR				
	As an alternate, the slide fastener tape on the inner edge of the grown-on facing (left for Type I or right for Type II) may be positioned on top of the lapel facing after turning under inner and bottom raw edge (operation 25f). Stitch slide fastener tape to front 1/16 inch from edge.	301	LSbj-1	8-12	

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TABLE I - CONSTRUCTION OF COVERALLS

No.	Operation	Stch Type	Seam/ Stch type	Stch in	Thread Ndl Bob/ Lpr
	g. If alternate is used, bartack the top end of the slide fastener tape to the front.	Brtck		28 per brtck	
26.	<u>Attach hook and loop fastener tape to lapel, lapel facing, and fly.</u>				
	* NOTE: For hook and loop fastener tape placement, line up marker with finished edge of lapel.				
	* a. Stitch all four sides of 1-1/2 inch long hook tape to lapel at gorge seam and on top of slide fastener tape (right and left for Type II) according to	301	LSbj-1	8-12	
	* b. Stitch all four sides of 1-1/2 inch hook tape vertically on underside of lapel (left for Type I and right for Type II).		LSbj-1	8-12	
	* c. Stitch all four sides of 1-1/2 inch long loop tape on underside of lapel facing and at top of slide fastener (left for Type I and right for Type II) according to marker. Loop tape shall cover the top of the slide fastener tape.	301	LSbj-1	8-12	
27.	<u>Make and attach collar, hanger loop, and size label.</u>				
	a. Fold collar along center foldline, face to face, and stitch the two sides 1/4 inch from the raw edge.	301	SSe-2(a)	8-12	
	b. Turn to finished position, forcing out points and edges.				
	* c. Join 1/4 inch from raw edge the undercollar to neckline, catching the underside ends of hanger loop in the stitching, centered over the center back (1/2 inch off center tolerance).	301	SSe-2(a)	8-12	

TABLE I - CONSTRUCTION OF COVERALLS

No.	Operation	Stch Type	Seam/ Stch type	Stch in	Thread Ndl Bob/ Lpr
* d.	Turn collar to finished position, turning in lower edge of topcollar 1/4 inch. Edgestitch 1/16 inch from folded edge, inserting size label approximately centered in between hanger loop.	301	SSe-2(b) and LSb-1	8-12	
* e.	The free opening of the hanger loop shall measure 2 (+ 1/4) inches. Turn the hanger loop so the top side is visible.				
28.	<u>Stitch crotch seam.</u>				
a.	Stitch crotch seam 1/2 inch from the raw edge.	301 or 401	LSq-3(a)	8-12	
b.	Overedge stitch the two raw edges together.	503, 504 or 602	SSa-1	5-8	
c.	Operations 28a. and 28b. may be performed in one operation by simultaneously stitching and overedging.	515, 516 or 519	SSa-2	8-12	
d.	Turn seam with left front over right front (Type I) and right front over left front (Type II) and stitch with two rows of stitching 3/16 to 1/4 inch gauge. The outer row of stitching shall be 1/16 inch from the folded edge. Continue the stitching so that it meets the stitching on the respective front, and crosses the slide fastener tape in the stitching.	301	LSq-3(b)	8-12	
e.	Place a 1/2 (+ 1/16) inch horizontal bartack at the top of crotch seam, catching the end of the slide fastener tape and facing in the stitching.	Brtck		28 per brtck	
29.	<u>Topstitch lapel facing, collar, and fly.</u>				
	Stitch 3/16 to 1/4 inch from the folded edge, the collar, lapel facing, both the front edges of the fly and along bottom of fly to inner edges of slide fastener tape, catching both fronts and slide fastener in one continuous operation.	301	SSe-2(b) and OSf-1	8-12	

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TABLE I - CONSTRUCTION OF COVERALLS

No.	Operation	Stch Type	Seam/ Stch type	Stch in	Thread Ndl-Bob/ Lpr
30.	<u>Join inseams.</u>				
	a. Join inseams in one continuous operation with a double lapped and double stitched seam with the fronts over the backs. The seam at the crotch junction shall not be staggered more than 3/8 inch (measured from center of seam to center of seam). The inseam stitching shall catch the knee patch in the seams.	301 or 401	LSc-2	8-12	
	<u>leg tabs, belt loops, and waistband belts.</u>				
	NOTE: Position marker bottom with raw edge of leg bottom.				
	a. Stitch all four sides of 1-1/2 inch and 2-1/2 inch long loop fastener tapes to legs according to marker.	301	LSbj-1	8-12	
*	b. Fold under 1/2 inch and boxstitch end of leg tabs to legs according to marker. If alternate leg tab construction was used, superimpose leg tab on leg according to marker. The finished leg tab shall measure 4-3/4 (+1/4) inches.	Box criss- cross stch	LSd-1	8-12	
*	c. Position folded edge of belt loop on bottom edge of waistband according to marks on belt loop location marker while positioning marker on folded edge of fly front opening. Stitch the belt loop to the waistband 1/16 to 1/8 inch from folded edge. Fold under raw edge of belt loop even with the top edge of waistband and stitch 1/16 to 1/8 inch from edge through belt loop and waistband.	301	LSbj-1	8-12	

TABLE I - CONSTRUCTION OF COVERALLS

No.	Operation	Stch Type	Seam/ Stch type	Stch in	Thread Ndl Bob/ Lpr
* d.	Stitch all four sides of loop fastener tape, 4 inches long for Type I or 3 inches long for Type II, on the fly closure side of the waistband (left side for Type I, right side for Type II) approximately 1-1/4 inches from flap folded edge. The back edge of the tape shall end approximately at the front edge of the belt loop.	301	LSbj-1	8-12	
* e.	Stitch all four sides of loop fastener tape, 4 inches long for Type I or 3 inches long for Type II, approximately 1/8 inch from the metal portion of the slide fastener (right side for Type I, left side for Type II) to correspond to the hook tape on the underside of the fly closure flap.	301	LSbj-1	8-12	
* f.	Position the belt onto the waistband, aligning the back edge of the hook tape on the belt with the back edge of the loop fastener tape on the waistband (nearest belt loop). Thread belt through the belt loop, laying belt smooth and flat. Fold under raw end of belt up to 1/2 inch. Stitch a 1 inch criss-cross box stitch according to marker, through belt and waistband.	Box	LSd-1	8-12	criss- cross stch
32.	<u>Hem leg bottoms.</u>				
	a. Turn raw edge under 3/8 (+ 1/16) inch. Fold back over body of material and stitch 1/16 inch from folded edge.	301	EFb-1	8-12	
	b. Hem shall finish 1-1/4 (+ 1/8) inches in width.				
33.	<u>Combination label.</u>				
	a. Position top of combination label 2 to 3 inches down from neckline seam centered (1/2 inch tolerance) on inside of back piece.				
	b. Stitch on all four sides.	301 or 401	LSbj-1	8-12	

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TABLE I - CONSTRUCTION OF COVERALLS

No.	Operation	Stch Type	Seam/ Stch type	Stch in	Thread Ndl Bob/ Lpr
34.	<u>Cleaning.</u>				
	* a. Trim all thread ends and thread floats on the outside of the coverall to 1/4 inch or less and on the inside to 1/2 inch or less.				
	* b. Remove all loose threads from inside and outside of the coveralls.				
	* NOTE: Thread trimming and removal may be performed after each operation or upon completion of all sewing operations. Caution shall be used so not to harm the material when trimming.				
	c. Remove all spots, stains, and shade tickets.				

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* 3.8 Sizes and measurements. Sizes and measurements of finished coveralls shall be as shown in Table II and III (see Figure 1). All measurements are expressed in inches.

Table II - Measurements of Type I Coveralls

Sizes	Chest (A)			Sleeve Inseam (B)			Leg Inseam (C)		
	Short	Regular	Long	Short	Regular	Long	Short	Regular	Long
36	40	40	--	19-1/2	20-1/2	--	27	28	--
38	42	42	42	19-1/2	20-1/2	21-1/2	27-1/4	28-1/4	29-1/4
40	44	44	44	19-1/2	20-1/2	21-1/2	27-1/2	28-1/2	29-1/2
42	46	46	46	19-1/2	20-1/2	21-1/2	27-3/4	28-3/4	29-3/4
44	48	48	48	19-1/2	20-1/2	21-1/2	28	29	30
46	50	50	50	19-1/2	20-1/2	21-1/2	28-1/4	29-1/4	30-1/4
48	--	52	52	--	20-1/2	21-1/2	--	29-1/2	30-1/2
Toler- ance	+ 1 - 1	+ 1 - 1	+ 1 - 1	+ 1/2 - 1/4	+ 1/2 - 1/4	+ 1/2 - 1/4	+ 3/4 - 3/8	+ 3/4 - 3/8	+ 3/4 - 3/8

NOTE: Chest, sleeve inseams, and leg inseams measurements shall be taken with coveralls fully zippered, laid flat and smooth.

- (A) Chest - Twice the measurement taken across the front at base of armholes from folded edge to folded edge.
- (B) Sleeve inseam - Measurement shall be taken from base of armhole, along sleeve inseam to bottom of sleeve.
- (C) Leg inseam - Measurement shall be taken from junction of crotch and seat seam along leg inseam to bottom of leg.

Table III - Measurements of Type II Coveralls

Sizes	Bust (A)			Sleeve Inseam (B)			Leg Inseam (C)		
	Short	Regular	Long	Short	Regular	Long	Short	Regular	Long
6	36	36	36	20	21	22	29-1/2	31-1/2	33-1/2
8	37	37	37	20	21	22	29-1/2	31-1/2	33-1/2
10	38	38	38	20	21	22	29-1/2	31-1/2	33-1/2
12	39-1/2	39-1/2	39-1/2	20	21	22	29-1/2	31-1/2	33-1/2
14	41	41	41	20	21	22	29-1/2	31-1/2	33-1/2
16	43	43	43	20	21	22	29-1/2	31-1/2	33-1/2
18	45	45	45	20	21	22	29-1/2	31-1/2	33-1/2
20	47	47	47	20	21	22	29-1/2	31-1/2	33-1/2
22	49	49	49	20	21	22	29-1/2	31-1/2	33-1/2
Toler- ance.	+ 1 - 1	+ 1 - 1	+ 1 - 1	+ 1/2 - 1/4	+ 1/2 - 1/4	+ 1/2 - 1/4	+ 3/4 - 3/8	+ 3/4 - 3/8	+ 3/4 - 3/8

NOTE: Bust, sleeve inseams, and leg inseams measurements shall be taken with coveralls fully zippered, laid flat and smooth.

- (A) Bust - Twice the measurement taken across the front at base of armholes from folded edge to folded edge.
- (B) Sleeve inseam - Measurement shall be taken from base of armhole, along sleeve inseam to bottom of sleeve.
- (C) Leg inseam - Measurement shall be taken from junction of crotch and seat seam along leg inseam to bottom of leg.

3.9 Workmanship. The finished coveralls shall conform to the quality of product established by this specification. The occurrence of defects shall not exceed the applicable point value or defect limit.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the contractor may use his own or any other facilities suitable for 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.

4.1.2 Certificate of compliance. Where certificates of compliance are submitted, the Government reserves the right to check test such items to determine the validity of the certification.

4.2 Classification of inspection. The inspection requirements specified herein are classified as follows:

1. First article inspection (see 4.3).
2. Quality conformance inspection (see 4.4).

* 4.3 First article inspection. When required, the first article submitted in accordance with 3.2 and 6.2 shall be inspected for compliance with design, construction, workmanship, appearance, and dimensional requirements.

* 4.4 Quality conformance inspection. Sampling for inspection shall be performed in accordance with MIL-STD-1668.

4.4.1 Component and material inspection. In accordance with 4.1 above, components and materials shall be tested in accordance with all the requirements of referenced specifications, drawings, and standards unless otherwise excluded, amended, modified, or qualified in this specification or applicable procurement documents. In addition, a certificate of compliance shall be furnished stating that all components of slide fastener shall be furnished by the same contractor (see 3.3.5) and the tape of the slide fastener shall be a high temperature resistant aramid (see 3.3.5).

* 4.4.2 Examination of the end item. Sampling and examination of the end item shall be performed in accordance with the provisions of MIL-STD-1668.

4.4.3 Examination of packaging requirements. Packaging inspection shall be in accordance with MIL-STD-1668.

* 4.4.4 Palletization examination. An examination shall be made to determine that the palletization complies with the section 5 requirements. Defects shall be scored in accordance with the list below. The sample unit shall be one palletized unit load fully packaged. The lot size shall be the number of palletized unit loads in the end item inspected lot. The inspection level shall be S-1 and the AQL, expressed in terms of defects per hundred units, shall be 6.5.

<u>Examine</u>	<u>Defect</u>
Finished dimensions	Length, width, or height exceeds specified maximum requirements.
Palletization	Pallet pattern not as specified. Interlocking of loads not as specified. Load not bonded with required straps as specified.
Weight	Exceeds maximum load limits.
Marking	Omitted, incorrect, illegible, of improper size, location, sequence, or method of application.

5. PACKAGING

5.1 Preservation-packaging. Preservation-packaging shall be level A or C as specified (see 6.2).

5.1.1 Level A. Each coverall shall be folded as follows:

1. Secure slide fastener and hook and loop fasteners.
2. Place coverall flat, face down.
3. Fold coverall in half along the length.
4. Fold sleeves at shoulder seam and place them on top and parallel to the folded sides of coverall.
5. Fold leg bottoms up approximately 4 inches and fold coverall in quarters by bringing the legs up and the top down. The folded coveralls shall measure approximately 11-1/2 inches by 15 inches. Five pairs of coveralls shall be stacked in a bundle, with collars alternated, securely cross-tied with cotton tape or twine.

5.1.2 Level C. Coveralls shall be packaged to afford adequate protection deterioration and physical damage during shipment from the supply the first receiving activity. The package and the quantity per shall be the same as that normally used by the contractor for retail distribution.

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

5.2.1 Level A. Thirty (30) coveralls of one type and size only, packaged as specified in 5.1, shall be packed in a fiberboard shipping container assembled, closed, and reinforced conforming to type CF, class weather resistant, grade V15C, variety DW, size 3A of MIL-B-17757. The fiberboard for the liner shall conform to type CF, class domestic of MIL-B-17757. Level A folded coveralls shall be stacked flat, one in width, two in length, and fifteen (three bundles of five) in depth within a shipping container. Each container shall have the contents completely covered on the top and bottom with a sheet of commercial grade kraft paper.

5.2.2 Level B. Thirty (30) coveralls of one type and size only, packaged as specified in 5.1, shall be packed in a fiberboard shipping container assembled and closed conforming to type CF, class domestic, grade 275, variety DW, size 3A of MIL-B-17757. The fiberboard for the liner shall conform to type CF, class domestic of MIL-B-17757. Level A folded coveralls shall be stacked flat, one in width, two in length, and fifteen (three bundles of five) in depth within a shipping container. Each container shall have the contents completely covered on the top and bottom with a sheet of commercial grade kraft paper.

5.2.3 Level C. Coveralls, packaged as specified in 5.1, shall be packed in a manner to insure carrier acceptance and safe delivery at destination at the lowest transportation rate for such supplies. The quantity per shipping container shall be the same as that normally used by the contractor for retail distribution. Containers shall comply with the US Postal Service Manual, Uniform Freight Classification Rules or National Motor Freight Classification Rules, as applicable.

5.3 Marking. In addition to any special marking required by the contract or order, interior packages and shipping containers shall be marked in accordance with MIL-STD-129.

* 5.4 Palletization. When specified (see 6.2) item packed as specified shall be palletized on a 4-way entry pallet in accordance with load type 1A of MIL-STD-147. Each prepared load shall be bonded with primary and secondary straps in accordance with bonding means C, K, and L or O or P. Pallet pattern shall be in accordance with the appendix of MIL-STD-147.

The pallet shall be 4-way, Type IV, V or VIII, Class 1, Style A, Size 2, wood group I, II, III or IV, Grade A of NN-P-71, or 4-way, Style 1, Size A, Type I, Class 1 of wood group I, II, III, or IV, Grade A of MIL-P-15011. Interlocking of loads shall be effected by reversing the pattern of each course. If the container is of a size which does not conform to any of the patterns specified in MIL-STD-147, the pallet pattern used shall be approved by the contracting officer.

6. NOTES

6.1 Intended use. The coveralls are intended for wear by Navy shipboard personnel (engineering spaces).

6.2 Ordering data. Procurement documents should specify the following:

- a. Title, number and date of this specification.
- b. Sizes and lengths required (see 1.2).
- * c. When first article inspection is required (see 3.2). The item will be tested and should be a first article sample. The contracting officer should include specific instructions in acquisition documents, regarding arrangements for examination, quantity, and testing and approval of the first article.
- d. Selection of applicable levels of packing and packaging (see 5.1 and 5.2).
- * e. When palletization is required (see 5.4).

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6.3 Samples and patterns. For access to samples and patterns, address the procuring activity issuing the invitation for bids.

6.4 Recycled materials. It is encouraged that recycled materials be used when practical as long as it meets the requirements of this specification.

6.5 Changes from previous issue. 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 requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

*6.6 Subject term (key word) listing.

Clothing, flame resistant
Coverall, aramid
Coverall, flame resistant
Coverall, utility
Suit, flame resistant

Custodians:
Navy - NU

Preparing Activity:
Navy - NU

Review Activity:
DLA - CT

Project No. 8415-N625

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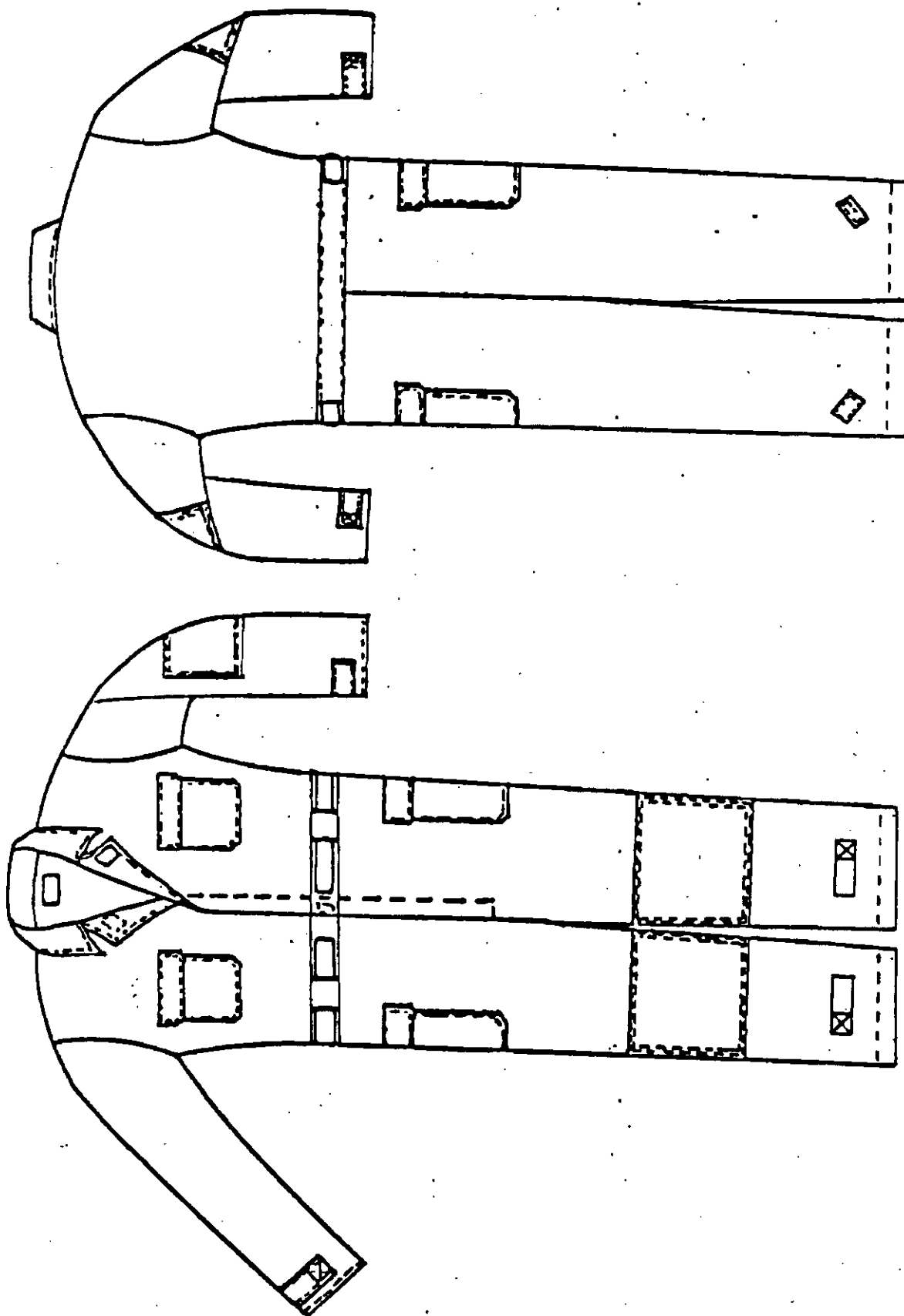


FIGURE 1
COVERALLS, FLAME RESISTANT (ARAMID)
TYPE I

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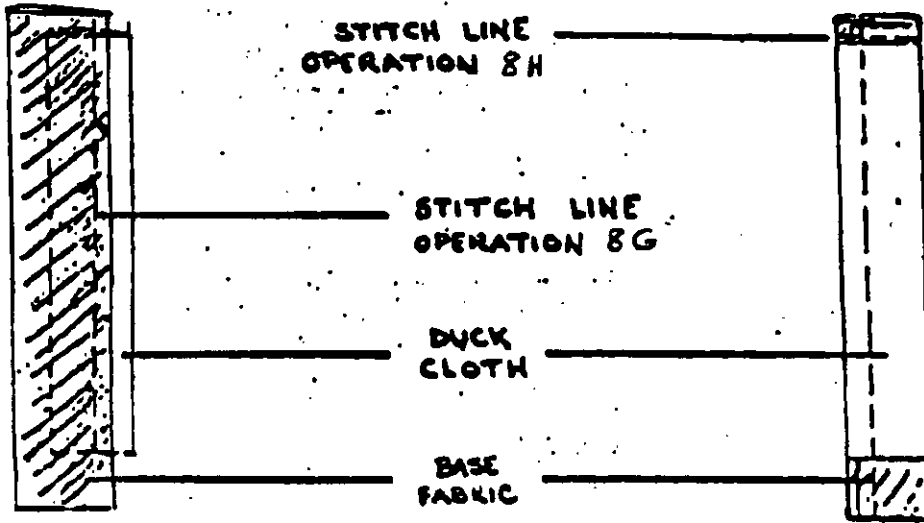


Illustration A

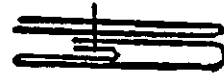


Illustration B

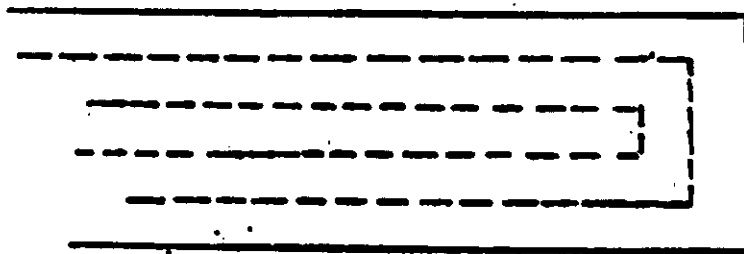


Illustration C

FIGURE 2 COVERALLS (F.R.)

Waistband Belt construction