

MIL-R-3390E

16 November 1971

SUPERSEDING

MIL-R-3390D

31 March 1970

MILITARY SPECIFICATION

RINGS, DEE

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

1. SCOPE

1.1 Scope.- This specification covers dee rings for use on various equipment items (see 6.2).

* 1.2 Classification.- Dee rings shall be of the configurations shown by letter designations on Drawing 4-1-454 and 4-1-455, as specified (see 6.2) and shall be of the following classes and sizes for the configuration shown. Configuration "X" is available without or with a roller, as specified (see 6.2), as style 1 and 2 respectively.

* 1.2.1 Classes.- Classes of dee rings shall be as follows (see 6.2).

- Class 1 - Brass
- Class 2 - Steel Wire
- Class 3 - Malleable Iron
- Class 4 - Nickel-Silver Alloy
- Class 5 - Molding Plastic (Nylon) Rigid

1.2.2 Sizes.- Configurations "A", "D", "K", "L", "W" and "X" are available in various sizes as shown on Drawing 4-1-454 and as specified (see 6.2).

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 this specification to the extent specified herein:

FSC 5365

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SPECIFICATIONS

FEDERAL

- QQ-B-613 - Brass, Leaded and Nonleaded: Flat Products (Plate, Bar, Sheet, and Strip).
- QQ-B-637 - Brass, Naval, Rod, Wire, Shapes, Forgings and Products with Finished Edges (Bar, Flat Wire, and Strip).
- QQ-C-320 - Chromium Plating (Electrodeposited).
- QQ-C-390 - Copper Alloy Castings (Including Cast Bar).
- QQ-I-666 - Iron Castings, Malleable.
- QQ-P-416 - Plating, Cadmium (Electrodeposited).
- QQ-W-321 - Wire, Copper Alloy.
- QQ-W-461 - Wire, Steel, Carbon, (Round, Bare and Coated).
- QQ-Z-325 - Zinc Coating, Electrodeposited, Requirements For.
- PPP-B-566 - Box, Folding, Paperboard.
- PPP-B-601 - Boxes, Wood, Cleated Plywood.
- PPP-B-621 - Boxes, Wood, Nailed and Lock-Corner.
- PPP-B-636 - Boxes, Shipping, Fiberboard.
- PPP-B-665 - Boxes, Paperboard, Metal Stayed (Including Stay Material).
- PPP-B-676 - Boxes, Setup.

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- MIL-E-480 - Enamel, Baking, Phenol- Or Urea-Formaldehyde.
- MIL-F-495 - Finish, Chemical, Black, for Copper-Alloys.
- MIL-L-10547 - Liners, Case, and Sheet, Overwrap: Water Vapor Proof or Waterproof, Flexible.
- * MIL-M-20693 - Molding Plastic Polyamide (Nylon) Rigid.

STANDARDS

FEDERAL

- * FED-STD-151 - Metals; Test Methods.
- FED-STD-595 - Colors.

MILITARY

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

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* DRAWINGS

ARMY NATICK LABORATORIES

- 4-1-454 - Rings, DEE, SYM A, C, D, K, L, M, U, W and X.
 4-1-455 - Rings, DEE, SYM B, E, F, G, H, J, R, T and V.

(Miniature copies of Drawings 4-1-454 and 4-1-455, identified as figures 1 and 2, are attached for information purposes only.)

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

2.2 Other publications.- The following documents form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on date of invitation for bids or request for proposal shall apply:

National Motor Freight Traffic Association, Inc., Agent

National Motor Freight Classification

(Application for copies should be addressed to the American Trucking Associations, Inc., Tariff Order Section, 1616 P Street, N.W., Washington, D. C. 20036.)

Uniform Classification Committee, Agent

Uniform Freight Classification

(Application for copies should be addressed to the Uniform Classification Committee, Room 202, Union Station, 516 W. Jackson Blvd., Chicago, Illinois 60606.)

3. REQUIREMENTS

- * 3.1 First article.- When specified (see 6.2), the supplier shall furnish a sample for first article inspection and approval (see 4.2, 6.2 and 6.4).

3.2 Materials.- The materials specified shall conform to applicable specifications and requirements specified hereinafter. Commercial tolerances apply to wire diameters.

3.2.1 Copper alloy casting.- The copper alloy (brass) castings shall conform to alloy No. A3 of QQ-C-390.

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3.2.2 Brass sheet or strip.- The brass sheet or strip shall conform to copper alloy No's. 260 or 268, temper half-hard of QQ-B-613.

3.2.3 Wire, copper alloy.- The copper alloy wire shall conform to copper alloy No's 260 or 270 quarter-hard temper of QQ-W-321, or copper alloy No's. 462 or 464, temper half-hard or light annealed of QQ-B-637.

3.2.4 Steel wire.- Steel wire shall conform to steel Number 1006, 1008, or 1010, finish 1, annealed in process, of QQ-W-461.

3.2.5 Malleable iron.- Malleable iron castings shall conform to grade I (35018) of QQ-I-666, except that requirements for marking of castings are not applicable.

* 3.2.6 Nickel-silver alloy.- Nickel-silver alloy castings shall conform to table I for chemical composition when tested as specified in 4.3.1.

TABLE I. - Chemical composition, copper-nickel-zinc alloy

<u>Material</u>	<u>Percent</u>
Copper	55.0 to 64.0
Nickel	18.0 (Min.)
Zinc	Remainder
Iron	0.35 (Max.)
Other	0.25 (Max.)

3.2.7 Enamel.- The enamel shall be black conforming to type I or II of MIL-E-480.

* 3.2.8 Plastic nylon.- The plastic dee rings shall be molded from virgin nylon conforming to composition A, type II of MIL-M-20693. Clean unburned plastic material in the form of imperfect parts, sprues, runners or other scrap of the same composition as the virgin material, and produced in the molding or finishing operation, may be reground and mixed with the virgin material specified. When reground is mixed with the virgin material, the reground shall not exceed a level of 25 percent by weight of the blended mixture.

* 3.3 Design and construction.- The design and construction of the rings shall conform to Drawings 4-1-454, and 4-1-455 and the requirements specified herein. All burrs, sharp edges and slivers shall be removed before application of finish.

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- * 3.3.1 Class 1.- At the option of the supplier class 1 rings shall be cast of brass material specified in 3.2.1 or formed of brass wire specified in 3.2.3, except when one material only is shown on the applicable drawing. Available configurations are A, B, E, F, G, H, J, K, L, W and X. After forming to shape and locating the joint as shown on the drawing, the joint shall be butted and brazed. The brazed joint shall be round and smooth.
- * 3.3.2 Class 2 rings.- Class 2 rings shall be fabricated of steel wire specified in 3.2.4. After forming to shape and locating the joint as shown on the drawing, the joint shall be butted and welded, except that unless otherwise specified (see 6.2), configuration "A" rings shall be butted only. The welds shall be sound, not porous, and free from cracks, burns or reduced areas. The welds shall be ground smooth and free from rough edges. Available configurations are Drawings by the letters A, D, E, F, H, K, L, M, R, T, U, V and X.
- * 3.3.3 Class 3.- Class 3 rings shall be cast from malleable iron specified in 3.2.5. Available configurations are A, B, E, F, G, J, W and X.
- 3.3.4 Class 4.- Class 4 rings shall be cast from nickel-silver alloy specified in 3.2.6, conforming to configuration "C".
- 3.3.5 Class 1, 3, and 4 rings (castings).- Class 1, 3, and 4 rings castings shall be free from porosity, blow holes, warp, and clearly noticeable digs and gouges.
- * 3.3.6 Rollers.- The rollers required for letters U, V, and X (style 2) shall be fabricated of brass sheet or strip specified in 3.2.2, and to the dimensions shown on Drawings. After assembly to the straight section of the ring, the rollers shall rotate freely without binding, and the joint of the roller along its entire length shall be butted evenly.
- * 3.3.7 Class 5.- Class 5 rings shall be molded of plastic specified in 3.2.8 and shall conform to configuration identified by letter "X" of Drawing 4-1-454.
- * 3.4 Finishes.- The finished rings shall be free from corrosion, dirt, discoloration and areas of no finish. Finishes shall be as follows:
 - 3.4.1 Black chemical.- Black chemical finish shall conform to MIL-F-495.
 - 3.4.2 Zinc-plate.-
 - 3.4.2.1 Zinc-plate without enameling.- Zinc-plate without enameling shall conform to type I, class 2 or type II, class 2 of QQ-Z-325.

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- * 3.4.2.2 Zinc-plate with enameling.- Zinc-plate with enameling shall conform to type III, class 2 of QQ-Z-325, followed by baking enamel. The enamel shall conform to 3.2.7.

3.4.3 Cadmium plate.- Cadmium plate shall conform to class 1, or 2, type I or II of QQ-P-416.

3.4.4 Chromium plate.- Chromium plate shall conform to class 1 of QQ-C-320.

3.4.5 Class 1 rings.- All class 1 rings, except configurations L, shall be finished as specified in 3.4.1, and tested as specified in 4.3.3.3.

- * 3.4.5.1 Configuration L.- Configuration L, except dimension 1 inch by 7/8 inch, class 1 rings shall be given a bright polished finish. Configuration L, class 1 ring dimension 1 inch by 7/8 inch shall be given either a bright polished finish or a chromium finish specified in 3.4.4, as specified (see 6.2). The chromium plate thickness shall be not less than 0.0002 inch.

3.4.6 Class 2 rings.- All class 2 rings, except configurations L and X, shall be given a finish specified in 3.4.2.2. The enamel coating shall level out to a uniform dry film thickness without orange peel, wrinkles, drops, streaks or areas of no film.

- * 3.4.6.1 Configuration L.- At the option of the supplier configuration L, class 2 rings shall be given either the type II, class 2 finish specified in 3.4.2.1 or the class 2, type II finish specified in 3.4.3.

3.4.6.2 Configuration X.- Configuration X, class 2 rings shall be given the type I, class 2 finish specified in 3.4.2.1 or the class 1, type I finish specified in 3.4.3, as specified (see 6.2).

3.4.7 Class 3 rings.- All class 3 rings shall be given the finish specified in 3.4.2.2. The enamel coating shall level out to a uniform dry film thickness without orange peel, wrinkles, drops, streaks or areas of no film.

3.4.8 Class 4 rings.- All class 4 rings shall be ground and polished to a bright finish.

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- * 3.4.9 Class 5 rings.- The surfaces of the class 5 dee rings shall have a smooth and lusterless or semi-gloss finish. All surfaces shall be free of dirt, dust and foreign matter inclusion. The finish shall be produced from a die which has the cavity surfaces finished in a vapor blast, water hone, or similar satin finish, and not be the application of any protective coating lacquers or other materials. The resultant surface gloss shall not exceed that of semi-gloss color black chip number 27038 of FED-STD-595 by visual comparison.

3.5 Workmanship.- The rings shall be free from dents, tool marks, corrosion, dirt, discoloration or areas of no finish.

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.

- * 4.2 First article inspection.- When a first article is required, it shall be examined for defects in table III, dimensions specified, and tested in accordance with 4.3.3.3, when applicable. Any visual defect or any dimension not meeting specified requirements or failure to meet the test requirements shall be cause for rejection of the preproduction sample.

4.3 Inspection.- Sampling for inspection shall be performed in accordance with MIL-STD-105, except where otherwise indicated hereinafter.

4.3.1 Component and material inspection.- In accordance with 4.1 above, components and materials shall be inspected and tested in accordance with all the requirements of referenced specifications, standards, and drawings unless otherwise excluded, amended, modified or qualified in this specification or applicable purchase document. In addition, copper-nickel-zinc alloy shall be tested as specified in table II. Nonconformance to the requirements of 3.2.6 shall constitute cause for rejection of the lot.

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TABLE II. -- Material tests, copper-nickel-zinc alloy

Lot expressed in terms of	Characteristic	Requirement para.	Test method	Number de- terminations	Sample unit	Results reported as	Inspection level
(100 pounds)				(composite)			
Copper-nickel- zinc alloy	Chemical composition	3.2.6	111 or 112 of F.D-STP-151	2 for each element	4 oz. of material	Nearest 0.1 percent each element	S-1

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- * 4.3.1.1 Inspection of nylon plastic material.- Each batch of reground material, when applicable, shall be inspected for compliance with the requirements specified in 3.2.8. Any batch containing reground nylon plastic material exceeding 25 percent of a blended mixture with virgin nylon material shall be cause for rejection of the batch.

4.3.2 In-process inspection.-

- * 4.3.2.1 Process examination.- Process examination shall be conducted to see that class 2 and class 3 rings, except configurations L and X have had the phosphate treated zinc-plate applied before enameling as specified in 3.4.2.2. When nonconformance is noted, correction shall be made to the affected items and process.

4.3.2.2 Intermediate visual examination of welded or brazed rings without roller.- When applicable, welded or brazed ring configurations requiring rollers shall be examined before finishing and assembling the roller, to determine conformance to 3.3.1 or 3.3.2. the lot shall be all unfinished rings without roller assembled of one class, configuration and size offered for inspection at one time. The sample unit for this examination shall be one ring. The inspection level shall be S-1 with an acceptable quality level (AQL) of 4.0, expressed in terms of defects per hundred units.

4.3.3 End item inspection.- The lot shall consist of all completely finished rings of one class, size, configuration and style, as applicable, offered for inspection at one time. The sample unit for this inspection shall be one completely fabricated and finished ring.

4.3.3.1 Visual examination.- The end item shall be examined for defects classified in table III. The inspection level shall be level II with an acceptable quality level (AQL) of 2.5 for major defects, and 6.5 for total defects, expressed in terms of defects per hundred units.

TABLE III.- Classification of defects

Examine	Defect	Classification	
		Major	Minor
Finish	Not type specified	X	
General	Evidence of corrosion	X	
Black chemical	Color not as specified		X
	Finish not clean and uniform		X
	Area of no finish or finish discolored		X

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TABLE III.- Classification of defects (cont'd)

Examine	Defect	Classification	
		Major	Minor
Finish (cont'd)			
Enamel	Area of no film or color not as specified	X	
	Separation of color, or finish rough (i.e., lint, dust, dirt or other foreign matter imbedded in finish)		X
	Finish not continuous, smooth and adherent (i.e., orange peel, wrinkles, drons, streaks)		X
Zinc, chromium and cadmium plated	Coating omitted, or area of no coating	X	
	Coating not smooth, uniform, fine-grained, or not tightly adherent (i.e., flaky, blistered or peeling); or coating is scratched, stained, discolored, shaded, broken or cut through, or is not free from pits, modules or indications of burning		X
* Plastic	Not smooth, lusterless or semi-gloss black	X	
	Gloss exceeds color chip No. 27038 when compared visually		X
Polished finish	Polish not bright	X	
	Buff drag, cloudy, hazy, or mottle finish clearly noticeable		X
Construction and workmanship	Sharp edge or projection that may cause injury	X	
	Cracked, broken, bent, malformed or damaged	X	
	Pronounced tool or forming marks		X
Castings	Miscast, incomplete, or contains blowholes, or evidence of porosity	X	

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TABLE III.- Classification of defects (cont'd)

Examine	Defect	Classification	
		Major	Minor
Rollers (when applic- able)	Does not turn freely	X	
	Joint not butted	X	
Workmanship of welds or brazing	Weld or brazing missing, unless welding is not required		X
	Completely broken or not fused	X	
	Cracked, partially broken, in- complete, or evidence of poor fusion or burn through		X
	Evidence that weld contains gas pockets or has been undercut, or that excess flux or spatter has not been removed		X

4.3.3.2 Dimensional examination.- Inspection shall be made of rings for compliance with dimensions specified. Any dimension that is not within the specified tolerances shall be classified as a defect. The inspection level shall be S-2 and the AQL shall be 4.0, expressed in terms of defects per hundred units.

4.3.3.3 End item testing.- Testing of the completely finished class 1 rings shall be performed in accordance with table IV for the characteristics shown therein. The inspection level shall be S-1 with an AQL of 6.5 expressed in terms of defects per hundred units.

TABLE IV.- End item testing

Characteristic	Requirement paragraph	Test method	Number determinations per sample unit	Results reported as
Black chemical				
Finish				
Color and gloss	3.4.5	MIL-F-495	1	Pass or fail
Resistance to hot soap solution	3.4.5	MIL-F-495	1	Pass or fail
Resistance to accelerated weathering	3.4.5	MIL-F-495	1	Pass or fail

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4.3.4 Examination of preparation for delivery requirements.- Packaging, packing and marking shall be examined for defects in table V. The sample unit shall be one shipping container fully prepared for delivery, with the exception that it need not be sealed. Defects of closure listed in table V shall be examined on shipping containers fully prepared for delivery. The lot shall be the number of shipping containers offered for delivery at one time. The inspection level shall be S-2 and the AQL shall be 2.5, expressed in terms of defects per hundred units.

TABLE V. - Examination of preparation for delivery

<u>Examination</u>	<u>Defect</u>
Marking (exterior and interior container)	Omitted; incorrect; illegible; of improper size, location, sequence or method of application
Material	Component missing or damaged
Workmanship	Inadequate application of components such as incomplete closure of case liners, container flaps, inadequate strapping or stapling
Contents (exterior and interior containers)	Bulged or distorted containers Number per container is more or less than required

5. PREPARATION FOR DELIVERY

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

- * 5.1.1 Level A.- Unless otherwise specified, rings of one class, style, configuration and size only shall be packaged in a snug-fitting fiberboard box conforming to grade W5c or W5s, style RSC of PPP-B-636. Each box shall be agitated from time to time while filling to assure a compact and well filled box. The weight of contents of each box shall not exceed 20 pounds. When specified (see 6.2), rings shall be packaged in quantities specified in boxes conforming to PPP-B-566, PPP-B-665 or PPP-B-676. Closure shall be in accordance with the appendix of the applicable box specification.

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5.1.2 Level C.- Rings shall be packaged to afford adequate protection against damage during shipment from the supply source to the first receiving activity. The supplier may use his standard practice when it meets this requirement.

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

* 5.2.1 Level A.- Rings of one class, style, configuration and size only packaged as specified in 5.1 shall be packed in a snug-fitting shipping container conforming to grade V2s, style FTC of PPP-B-636, except that weight limitations shall be waived, overseas type of PPP-B-601 or class 2, style 2 of PPP-B-621. When rings are packed in boxes conforming to PPP-B-566, PPP-B-665 or PPP-B-676, each cleated plywood or nailed wood shipping container shall be provided with a type I or II, grade C case liner conforming to MIL-L-10547 and each fiberboard shipping container shall be waterproofed with tape in accordance with the appendix of PPP-B-636. Closure and reinforcing shall be in accordance with the appendix of the applicable specification. The weight of contents of each shipping container shall not exceed 120 pounds.

* 5.2.2 Level B.- Rings of one class, style, configuration and size only, packaged as specified in 5.1, shall be packed as specified in 5.2.1, except that shipping containers shall conform to type CF, variety DW, class domestic, grade 350, style FTC of PPP-B-636; domestic type, style A or B of PPP-B-601 or class 1, style 2 of PPP-B-621; and case liner and waterproofing of containers shall not be required.

5.2.2.1 When specified (see 6.2), the shipping container shall be a grade V3c, V3s, or V4s fiberboard box fabricated in accordance with PPP-B-636 and closed in accordance with the appendix of the box specification.

* 5.2.3 Level C.- Rings, 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. Containers shall be in accordance with 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. Each interior package and shipping container shall be marked with the quantity of rings contained therein.

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6. NOTES

6.1 Intended use.-

- * 6.1.1 Class 1 rings.- Class 1 rings, other than configurations W, X, and L, are intended for use in connection with textile, webbing and leather items where the corrosion products of ferrous metals may adversely affect the textile, webbing and leather items.

6.1.2 Classes 2 and 3 rings.- Classes 2 and 3 rings, other than configurations X and D are intended for use as alternates to class 1 rings in periods of emergency. These also may be used where a specific requirement for additional strength is necessary.

6.1.3 Class 4 rings.- Class 4 rings are intended for use on animal equipment in special applications where high resistance to corrosion is required.

- * 6.1.4 Configurations W, X and L rings.- Configurations W, rings are generally used on Munition Command items; configuration X rings are generally used on Weapons Command items; configuration L rings are generally used on Electronic Command items.

6.1.5 Configurations D.- Configurations D are generally used on animal equipment.

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

- (a) Title, number and date of this specification.
- (b) Configuration and, when applicable, size required, (see 1.2 and 1.2.2).
- (c) Style required when applicable (see 1.2).
- (d) Class required (see 1.2.1).
- (e) When a first article is required (see 3.1, 4.2 and 6.4).
- (f) When configuration A ring shall be welded (see 3.3.2).
- (g) Finish required (see 3.4.5.1 and 3.4.6.2).
- (h) Selection of applicable levels of packaging and packing (see 5.1 and 5.2).
- (i) When specific quantities of one class, style, configuration and size are required (see 5.1.1).
- (j) Whether weather-resistant class fiberboard shipping containers are required for level B shipments (see 5.2.2.1).

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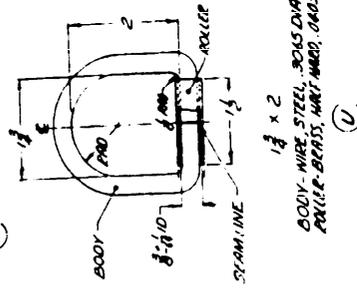
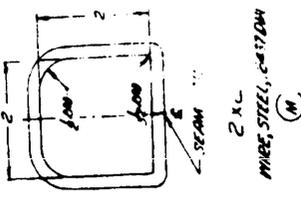
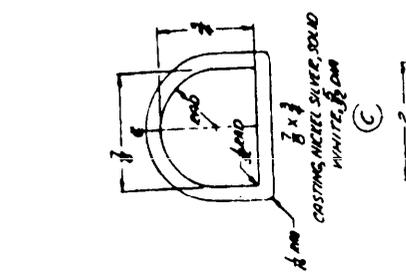
6.3 The margins of this specification are marked with an asterisk (*) to indicate where changes (additions, modifications, corrections, deletions) from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. 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.

- * 6.4 First article.- When a first article is required it shall be inspected and approved under the appropriate provisions of ASPR 7-104.55. The first article should be a preproduction sample of the required rings. The first article should consist of one unit of each ring required. The contracting officer should include specific instructions in all procurement instruments regarding arrangements for inspection and approval of the first article.
- * 6.5 Cross reference data.- Cross reference between configuration designations of Specification MIL-R-3390D, Drawing 4-1-57 and Specification MIL-R-3390E, Drawing 4-1-454 and 4-1-455 are as shown in table VI.

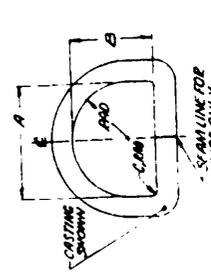
TABLE VI.- Cross reference data.

MIL-R-3390E Drawing 4-1-454 and 4-1-455	MIL-R-3390D Drawing 4-1-57
Configuration A	Configuration A, N, P
C Nickel, Silver only	C
D	Z, Y
K	D, K, L, S
L	AA, BB
X	X, C
Custodian:	Preparing activity:
Army - GL	Army - GL
Review activities:	Project No. 5365-0001
Army - MU, WC	
User activities:	
Army - EL, ME	
Navy - MC	

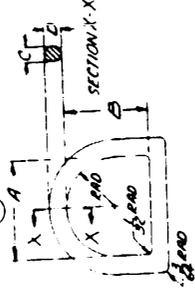
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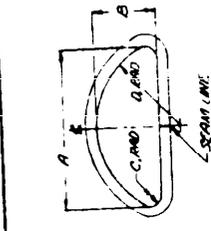
WIRE DIAMETER	STEEL	CAST
1/8	1205	1205
3/16	1205	1205
1/4	1205	1205
5/16	1205	1205
3/8	1205	1205
1/2	1205	1205
5/8	1205	1205
3/4	1205	1205
7/8	1205	1205
1	1205	1205
1 1/8	1205	1205
1 1/4	1205	1205
1 3/8	1205	1205
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1 3/4	1205	1205
1 7/8	1205	1205
2	1205	1205



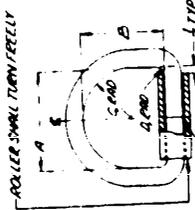
WIRE DIAMETER	CAST	STEEL
1/8	1205	1205
3/16	1205	1205
1/4	1205	1205
5/16	1205	1205
3/8	1205	1205
1/2	1205	1205
5/8	1205	1205
3/4	1205	1205
7/8	1205	1205
1	1205	1205
1 1/8	1205	1205
1 1/4	1205	1205
1 3/8	1205	1205
1 1/2	1205	1205
1 5/8	1205	1205
1 3/4	1205	1205
1 7/8	1205	1205
2	1205	1205



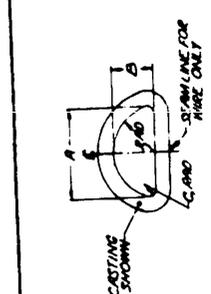
WIRE DIAMETER	CAST	STEEL
1/8	1205	1205
3/16	1205	1205
1/4	1205	1205
5/16	1205	1205
3/8	1205	1205
1/2	1205	1205
5/8	1205	1205
3/4	1205	1205
7/8	1205	1205
1	1205	1205
1 1/8	1205	1205
1 1/4	1205	1205
1 3/8	1205	1205
1 1/2	1205	1205
1 5/8	1205	1205
1 3/4	1205	1205
1 7/8	1205	1205
2	1205	1205



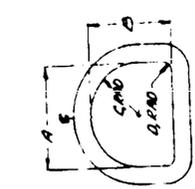
WIRE DIAMETER	CAST	STEEL
1/8	1205	1205
3/16	1205	1205
1/4	1205	1205
5/16	1205	1205
3/8	1205	1205
1/2	1205	1205
5/8	1205	1205
3/4	1205	1205
7/8	1205	1205
1	1205	1205
1 1/8	1205	1205
1 1/4	1205	1205
1 3/8	1205	1205
1 1/2	1205	1205
1 5/8	1205	1205
1 3/4	1205	1205
1 7/8	1205	1205
2	1205	1205



WIRE DIAMETER	CAST	STEEL
1/8	1205	1205
3/16	1205	1205
1/4	1205	1205
5/16	1205	1205
3/8	1205	1205
1/2	1205	1205
5/8	1205	1205
3/4	1205	1205
7/8	1205	1205
1	1205	1205
1 1/8	1205	1205
1 1/4	1205	1205
1 3/8	1205	1205
1 1/2	1205	1205
1 5/8	1205	1205
1 3/4	1205	1205
1 7/8	1205	1205
2	1205	1205



WIRE DIAMETER	CAST	STEEL
1/8	1205	1205
3/16	1205	1205
1/4	1205	1205
5/16	1205	1205
3/8	1205	1205
1/2	1205	1205
5/8	1205	1205
3/4	1205	1205
7/8	1205	1205
1	1205	1205
1 1/8	1205	1205
1 1/4	1205	1205
1 3/8	1205	1205
1 1/2	1205	1205
1 5/8	1205	1205
1 3/4	1205	1205
1 7/8	1205	1205
2	1205	1205



WIRE DIAMETER	CAST	STEEL
1/8	1205	1205
3/16	1205	1205
1/4	1205	1205
5/16	1205	1205
3/8	1205	1205
1/2	1205	1205
5/8	1205	1205
3/4	1205	1205
7/8	1205	1205
1	1205	1205
1 1/8	1205	1205
1 1/4	1205	1205
1 3/8	1205	1205
1 1/2	1205	1205
1 5/8	1205	1205
1 3/4	1205	1205
1 7/8	1205	1205
2	1205	1205

FIGURE - 1

RINGS, DEC.

SYNOPSIS, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

SPECIFICATION ANALYSIS SHEET		Form Approved Budget Bureau No. 22-R255
<p>INSTRUCTIONS: This sheet is to be filled out by personnel, either Government or contractor, involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity. 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	
MATERIAL PROCURED UNDER A <input type="checkbox"/> DIRECT GOVERNMENT CONTRACT <input type="checkbox"/> SUBCONTRACT		
1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE? A. GIVE PARAGRAPH NUMBER AND WORDING.		
B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES		
2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID		
3. IS THE SPECIFICATION RESTRICTIVE? <input type="checkbox"/> YES <input type="checkbox"/> NO (If "yes", in what way?)		
4. REMARKS (Attach any pertinent data which may be of use in improving this specification. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity)		
SUBMITTED BY (Printed or typed name and activity - Optional)		DATE

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