INCH-POUND

MS20663E <u>10 January 2001</u> SUPERSEDING MS20663D 30 October 1999

MILITARY SPECIFICATION SHEET

BALL END, WIRE ROPE, SWAGING, DOUBLE SHANK

This specification is approved for use by all departments and agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation: MIL-DTL-781, QPL-781.

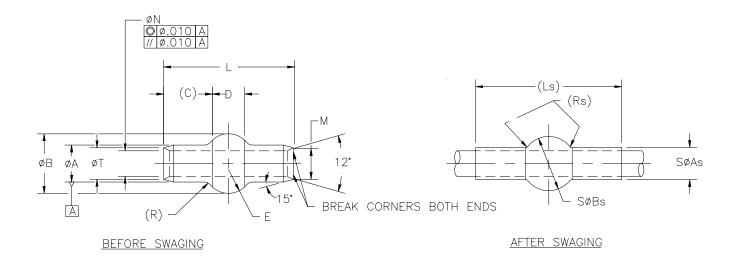


FIGURE 1. Ball end, wire rope, swaging, double shank.

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

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MS part number Corrosion resistant steel	Wire rope diameter		Minimum breaking strength	ØA		ØAs		ØB		SØBs spherical		C REF
resistant steel	Nominal	Minimum	lb									
MS20663C2	1/16	.062	480	.127		.112	+.000	.207		.190	+.000	.125
MS20663C3	3/32	.093	920	.163	+.000	.143	003	.277	+.000	.253	+.000	.188
MS20663C4	1/8	.125	2,000	.218	004	.190	005	.345	004	.315	005	.250
MS20663C5	5/32	.156	2,800	.254	004	.222	+.000	.419	004	.379	+.000	.313
							004				004	
MS20663C6	3/16	.187	4,200	.293		.255	+.000	.487		.442	+.000	.375
MS20663C7	7/32	.218	5,600	.347	+.000	.302	+.000	.555	+.000	.505	+.000	.438
MS20663C8	1/4	.250	7,000	.401	005	.348	005	.624	005	.567	005	.500
MS20663C9	9/32	.281	8,000	.439	005	.382	+.000	.694	005	.632	+.000	.562
MS20663C10	5/16	.312	9,800	.475		.413	007	.763		.694	007	.625

TABLE I. Part numbers and dimensions.

TABLE I. Part numbers and dimensions - Continued.

MS part number	D		Е	L	Ls	М	ØN		R	Rs	ØT
Corrosion	reference		radius	±.0075	reference	+.010			radius	radius	+.000
resistant steel			reference			000			reference	reference	010
MS20663C2	.114	+.000	.0825	.3620	.390	.079	.073		.028	.014	.109
		003									
MS20663C3	.152	+.000	.110	.5250	.578	.114	.104	+.004	.037	.019	.141
		004						+.004			
MS20663C4	.1895		.137	.6880	.765	.152	.139	000	.046	.023	.188
MS20663C5	.2270		.165	.8500	.953	.185	.169		.056	.028	.219
MS20663C6	.2640	+.000	.192	1.0120	1.140	.221	.201		.065	.033	.250
MS20663C7	.3025	005	.220	1.1750	1.328	<u>1</u> /	.233	+.005 000	.075	.038	.297
MS20663C8	.3395		.247	1.3370	1.515		.264		.084	.042	.344
MS20663C9	.3775		.275	1.4970	1.719		.297		.094	.046	.375
MS20663C10	.4145		.302	1.6640	1.875		.328]	.103	.046	.406

 $\underline{1}$ / No tapered bellmouth on -7, -8, -9, -10.

2/ Reference dimensions are for design purposes only and are not an inspection requirement.

REQUIREMENTS:

- 1. <u>Material</u>: Material shall be in accordance with MIL-DTL-781.
- 2. Finish: Finish shall be in accordance with MIL-DTL-781.
- 3. <u>Swage</u>: Swage shall be in accordance with MIL-DTL-6117.
- 4. <u>Tolerances</u>: Unless otherwise specified, tolerances: decimals \pm .010, angles \pm 3°.

NOTES:

- 1. Dimensions are in inches.
- 2. Interpret drawing in accordance with ASME Y14.5M.
- 3. Remove all burrs and sharp edges. (See Procurement specification for definition.)

4. Interchangeability relationship: MS20663 and AN663 parts identified by the same dash number are universally, functionally and dimensionally interchangeable.

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5. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence.

6. Unless otherwise specified, issues of reference documents are those in effect at the time of solicitation.

7. MS20663 supersedes AN663.

8. Corrosion resistant steel parts can be universally substituted for carbon and alloy steel parts in accordance with table II. Carbon and alloy steel parts cannot be substituted for corrosion resistant steel parts.

MS PART NUMBER						
Corrosion	Carbon steel,					
resistant steel	cadmium plated					
MS20663C2	MS20663-2					
MS20663C3	MS20663-3					
MS20663C4	MS20663-4					
MS20663C5	MS20663-5					
MS20663C6	MS20663-6					
MS20663C7	MS20663-7					
MS20663C8	MS20663-8					
MS20663C9	MS20663-9					
MS20663C10	MS20663-10					

TABLE II. Substitution table.

9. Carbon and alloy steel parts are inactive for new design.

CHANGES FROM PREVIOUS ISSUE: Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodians: Army - CR4 Navy - AS Air Force - 99 Preparing activity: DLA - GS5

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Reviewers: Army - AR, MD Navy - MC Air Force - 82