

NAVY GEN SPECS

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FINAL PROJECT REPORT
FOR
FEASIBILITY STUDY FOR COMMERCIALIZATION
OF
UNITED STATES NAVY GEN SPECS

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FINAL PROJECT REPORT
FOR

FEASIBILITY STUDY FOR COMMERCIALIZATION
OF
UNITED STATES NAVY GEN SPECS

FOR
MARITIME ADMINISTRATION

JULY 1, 1983

BY

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IN COOPERATION WITH
THE SHIP PRODUCIBILITY RESEARCH PROGRAM
OF
BATH IRON WORKS CORPORATION

ABSTRACT

This study was commissioned under the National Shipbuilding Research Program as a part of the ongoing efforts of the National Shipbuilding Standards Program. In association with the Society of Naval Architects and Marine Engineers, MarAd, the Navy, the Coast Guard, U.S. Shipbuilders, design agents, and marine equipment manufacturers and suppliers, the National Shipbuilding Standards Program intends to foster an increased awareness of the needs for and benefits of industry standardization in the shipbuilding industry and to promote the active development, consolidation~ and implementation of industry-wide shipbuilding standards which will assist the shipbuilder in lowering shipbuilding costs and construction times. This program is presently comprised of the Society of Naval Architects and Marine Engineers (SNAME) Panel SP-6 on Standards and Specifications of the SNAME Ship Production Committee and ASTM Technical Committee F-25 on Shipbuilding Standards.

This particular study provides the results of a review of the "GENERAL SPECIFICATION FOR SHIPS OF THE UNITED STATES NAVY - 1982 EDITION" to critically analyze the imposed Military and Federal Specification requirements to determine the feasibility of converting to commercial standards. The final tabulation of all specification candidates analyzed has been prepared in a matrix format to allow the interested reader the ability to quickly determine if commercial substitutes are potentially available. The recommendations and/or conclusions documented herein are not to be used without additional research and acceptance by the United States Navy.

CONTENTS

	<u>Page</u>
Abstract	i
Contents	i i
List of Illustrations.	iii
Introduction	1
Discussion	2
Method of Evaluation.	2-3
Summaxy of Results...	5
Limitations	5
Conclusions and Recommendations	6 - 7
Appendix A Summary - Feasibility Study for Commercialization of United States Navy GENSPECS	
Appendix B Letters from SNAME SP-6 Members on Preliminary Issue of Appendix A	

LIST OF ILLUSTRATIONS

<u>Figure</u>		<u>Page</u>
1	Evaluation Flowchart & Index	4-4A

FEASIBILITY STUDY FOR COMMERCIALIZATION
OF THE UNITED STATES NAVY'S GENSPECS

INTRODUCTION

The goal of this study was to determine the feasibility of commercializing Navy type Military Standards or Federal Specifications to commercial or marine standards. For the purpose of this study commercialization of military standards means reviewing the standards of domestic standards societies and regulating agencies and identifying those standards which would be suitable substitutes for military standards listed in the Navy's Genspecs as Military Standards, Federal Specifications, NAVSEA Drawings and Design Data Sheets. This goal was chosen in the belief that: the library of military standards is more expensive to update and maintain than commercial standards, commercial standards are more likely to be current than military standards, ships built to commercial standards are less expensive than those built to military standards, and parts built to commercial standards are easier to obtain than parts built to military standards. In general the idea is to exploit commercial standards for different ships of the Navy to the extent that the Navy can accept marginal deviations from the performance requirements of military standards.

Major objectives of the study included: soliciting the Navy and SNAME SP-6 panel members on basic parameter task concepts including types of ships, high shock substitutes, applicability of USCG and ABS requirements applicability of NAVSEA Drawings and Design Data Sheets, relevance of commercial software, and format presentation; devising a method of specification substitution selection; preparing a flow chart for specification substitution analysis; soliciting SNAME SP-6 panel members for known substitutes; and presenting the collected information to the SNAME SP-6 panel members for final comment.

In order to accomplish our goal, the study was performed in the following task steps:

- o Review of the GENSPECS (1982 Edition) and identification of Military/Federal specification candidates for consideration of changing to commercial specifications;
- o Evaluation of each candidate with special emphasis on, but not limited to; impact on mission, operation, reliability, maintainability and availability of support;
- o Preparation, in matrix format, of a "Preliminary" tabulation (Appendix "A") of the evaluations and solicited comments from industry personnel involved in this effort; and
- o Solicitation, review and incorporation of pertinent comments from SNAME SP-6 panel membership (Appendix "B") into the Appendix 'A' tabulation.

DISCUSSION

The results of this feasibility study are tabulated and included hereto as Appendix "A". This document represents numerous inputs from various sources including designers engineers shipbuilding industry personnel and the U. S. Navy.

At the beginning of this study, it became apparent that the number of specification candidates selected for evaluation was too large to complete an in-depth study without exceeding the allotted budget unless each reviewer used the same basis for evaluation. As a result, a flow chart, Figure 1, was developed to ensure consistency in the evaluation process.

METHOD OF EVALUATION

Each section of the Navy's Genspecs was reviewed by a person familiar with the detail requirements of that section. Candidate specifications were chosen by inspection of all Military and Federal Specifications referenced in the Genspecs. If a reason why the specification could not be eliminated was not apparent to the reviewer, it was listed as a candidate for review.

Each substitution candidate listed in Appendix "A" was then evaluated by following the applicable flow chart path of Figure 1. In general, documents were reviewed to determine if major differences existed that would eliminate a candidate specification from consideration. The following typical terms and definitions are reflected in the Appendix "A" tabulation for documentation of each evaluation:

1. MIL/FED SPEC - This section lists the substitution candidate specifications by:
 - o Item - Number keyed to section of. Gen. Specs.
 - o Subject - Brief word description of the item.
 - o MIL/FED SPEC - The candidate Military or Federal Specification number.
 - o SEC REF PAGE/L - A location guide to find the items' location in the Gen. Specs. referring to Section (SEC), Page (PAGE) and Line Number (L)
2. COMMERCIAL SPECIFICATION - This section summarizes the effort to locate, qualify and recommend a commercial specification that will satisfactorily replace the candidate government specifications.
 - o COMM'L. SPEC. - This column lists candidate commercial specifications. A listing does not necessarily constitute a recommendation. "NO COMM'L. SPEC." indicates that a candidate replacement specification has not been identified. Cross-references to other item numbers will be found in this column.

- 0 MISSION IMPACT, OPERATION, Reliability, MAINTAINABILITY and SUPPORT AVAILABILITY - These columns describe the effect of substitution on the various operational categories. Typical responses are "NONE" inferring no impact, "SAME" inferring no change in system function. Specific comments are also entered here describing particular advantages or disadvantages.
- 0 ACTION - This column contains the recommendations for implementation of the candidate commercial specifications. Typical responses are:

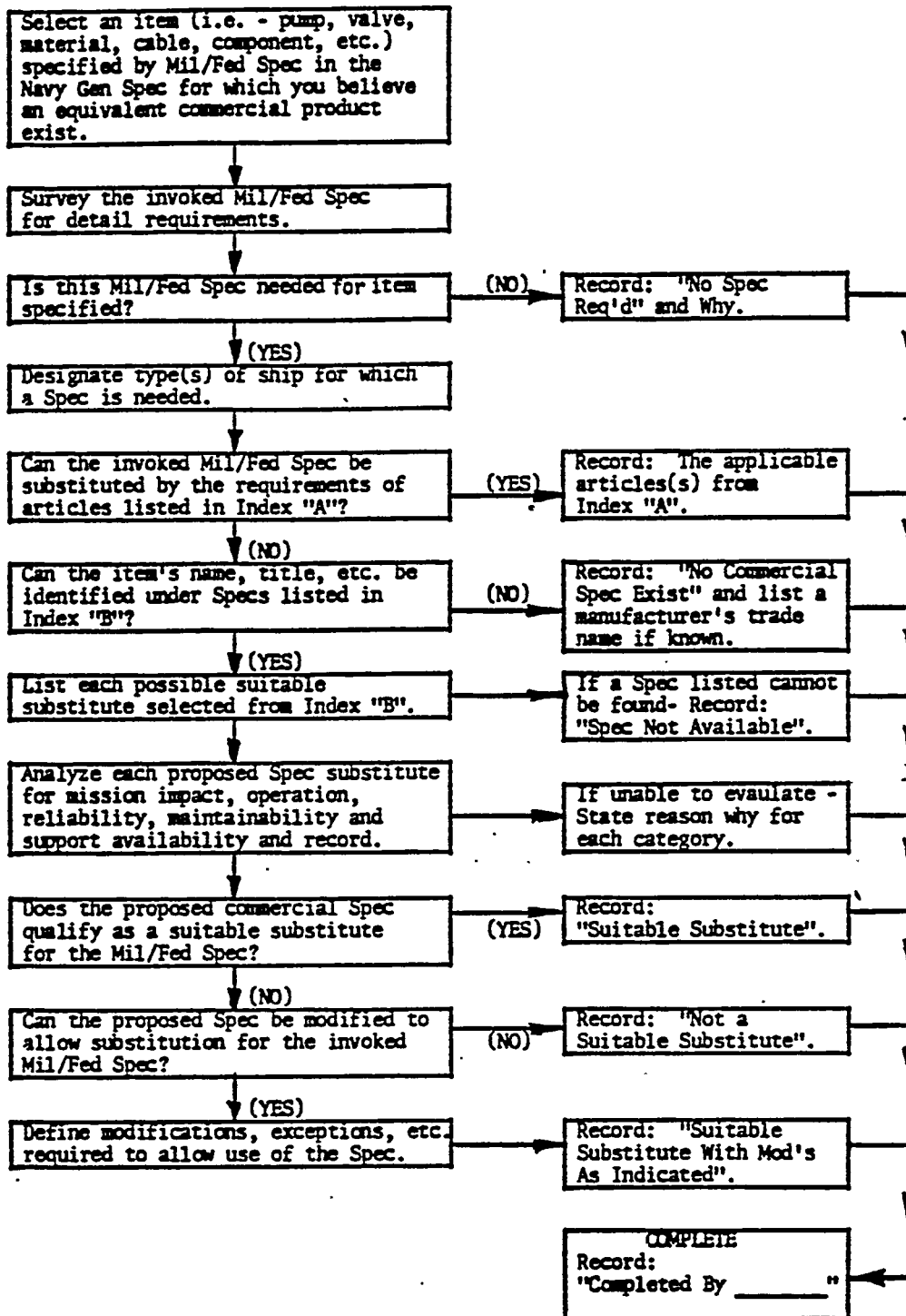
SUITABLE - This response indicates that the candidate Commercial Specification appears to be compatible with the MIL/FED Specification and should be considered for possible implementation. Implementation should be subject to any qualifications listed, such as "Auxiliary Ships Only".

DOCUMENT NOT REVIEWED - The primary reason for this response is that a required document, usually the suggested commercial replacement was not available to the reviewing personnel within the John J. McMullen library. It is not intended that this item be deleted as a candidate, but further investigation is warranted.

NONE - This response indicates that the candidate commercial specification is not a suitable replacement. Comments may follow describing discrepancies.

SPECIFY GOOD COMMERCIAL QUALITY - This response is used when the particular supplying industry has demonstrated that commercial grade products are of a superior and useable quality. Examples of such areas are food service, hand tools and office furniture. To minimize the possibility of inferior products being supplied it is expected that qualifying statements will be made in the ships specifications and purchase specifications. Such qualifying statements could specify gage of sheet metal, type of material, etc., but be far short of the detail found in a technical specification.

FOOTNOTES (1) and (2), Reference to USCG Rules - Items referenced to these footnotes have been satisfactorily procured for similar service on commercial ships by specifying that the item meet USCG requirements.



INDEX A - CLASSIFICATION & REGULATION AGENCIES

ABS	American Bureau of Shipping
USCG	United States Coast Guard

INDEX B - DOMESTIC COMMERCIAL STANDARDS SOCIETIES

AATCC	American Association of Textile Chemists and Colorists
AFBMA	Anti-Friction Bearing Manufacturers Association
A.G.A.	American Gas Association
AGMA	American Gear Manufacturers Association
AIChE	American Institute of Chemical Engineers
AISC	American Institute of Steel Construction
ANS	American Nuclear Society
ANSI	American National Standards Institute
API	American Petroleum Institute
ARI	Air-Conditioning and Refrigeration Institute
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air-conditioning Engineers
ASME	American Society of Mechanical Engineers
ASSE	American Society of Sanitary Engineering
ASTM	American Society for Testing and Materials
AWS	American Welding Society
BISSC	Baking and Sanitation Standards Committee
CGA	Compressed Gas Association, Inc.
CMAAI	Crane Manufacturing Association of America Inc.
EIA	Electronic Industries Association
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
ISA	Instrument Society of America
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry
NACE	National Association of Corrosion Engineers
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NFP(A)	National Fluid Power Association
NSF	National Sanitation Foundation
SAE	Society of Automotive Engineers
UL	Underwriters Laboratory

INDEX "A" & "B"
FOR "EVALUATION FLOW CHART"

SUMMARY OF RESULTS

The tabulation below is a summary of responses recorded as the recommended "Action". Some items received dual recommendations, thus the totals do not necessarily reflect the number of items surveyed.

Suitable Commercial Candidate Recommended For Consideration	65
USCG Or ABS Specifications Recommended As Substitute	122
Commercial Quality Substitute Recommended	99
Commercial Specification Listed, But Not Reviewed	311
No Substitute Candidate Found	<u>167</u>
TOTAL	764

LIMITATIONS

1. The Appendix "A" report includes the great majority of Military\Federal specifications referenced in the GENSPECS, but does not necessarily include all referenced sub-tier specifications and standards invoked thereby.
2. Where a suitable commercial substitute is proposed, it cannot be assumed that a complete study has been made to fully qualify the commercial standard to all sub-tier levels of the Military\Federal specification. At the present level of review, only major characteristics of the military and commercial specifications have been compared. Additional evaluation must be performed and formal U. S. Navy approval must first be obtained before using the recommended substitutes on a Navy ship.

CONCLUSIONS & RECOMMENDATIONS

All the major intermediate objectives of defining and formulating a method of commercialization of Navy type Military Standards or Federal Specifications to commercial standards were achieved. At the beginning of the study it was anticipated that due to the many sources of commercial specifications and due to the volume of military specifications versus time and funding restraints that only a limited review and evaluation of actual substitutes could be achieved. Of the over 700 potential Military/Federal Specifications evaluated to the degree described by this report, 65 commercial standards were recommended as suitable substitutes.

The research has made it apparent that there are few commercial specifications that can or should be quickly recommended as direct equivalents for MIL/FED specifications. Any such determination should come only after an extensive technical evaluation of the consequences of such a recommendation. A major concern is assuring that commercial practices which may now be adequate are not compromised in the future. A MIL/FED specification has built in safeguards against such practices, but commercial quality often varies with vendors or economic conditions.

The tabulation of research data, (Appendix A), collected during this study has convinced us that more effort should be expended to consolidate/merge Military Standards and commercial specifications for use as a U. S. Shipbuilding Standard. As a result, it is recommended that additional in-depth evaluations be made on a smaller number of carefully selected potential substitutes. Please note that as the complexity of a standard increases the probability of finding a substitute standard decreases. For this reason the next major efforts should target on basic type standards to achieve maximum results with the least effort.

It is also recommended that some organization be tasked to assemble a library of commercial specifications of sufficient scope and depth to permit the review of all commercial specifications which have been cited as possible replacements for Military/Federal specifications. Two agencies which can provide comprehensive and up-to-date information on commercial standards are the Visual Search Micro Film Data Control Service by Information Handling Services and the National Bureau of Standards - Standards Information Services by the National Bureau of Standards. Their addresses are:

Information Handling Services
Innerness Business Park
15 Innerness Way East
P. O. Box 1154
Englewood, Colorado 80150
(303) 779-0600

and

Standards Information Services
Room B162, Building 225
National Bureau of Standards
Washington, D.C. 20234
(301) 921-2587

During the final detail review of a suitable substitution standard, all the differences between the two standards should be documented and evaluated in writing.

Subcommittee F-25.94 on Navy Documents has recently been formed to coordinate industry efforts aimed at converting Navy Documents into Commercial ASTM standards. In our opinion, this report can be utilized as an effective tool for the identification and prioritization of items selected as candidates for this program.

It is recommended that Naval Sea Systems Command conduct an immediate analysis of those 65 items identified in this report as suitable commercial candidates for substitution to determine if these standards can be implemented in lieu of the current military specifications.

Finally, in determining that there is a need for further detailed examination of these documents with commercialization in mind, and in recognition that such a process is, indeed, feasible and would yield substantial benefit to the marine industry, it is considered essential that programs such as the National Shipbuilding Standards Program and the efforts of ASTM Subcommittee F-25.94 receive top level management support and direction.

APPENDIX "A"

SUMMARY
FEASIBILITY STUDY FOR COMMERCIALIZATION
OF
UNITED STATES NAVY GEN SPECS
FOR
UNITED STATES MARITIME ADMINISTRATION
JULY 1, 1983

JOHN J McMULLEN ASSOCIATES, INC.
DETAIL DESIGN DIVISION
6060 JEFFERSON AVENUE
NEWPORT NEWS, VIRGINIA 23605

Abbreviations

AATCC	American Association of Textile Chemists and Colorists
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A.G.A.	American Gas Association
AGMA	American Gear Manufacturers Association
AIChE	American Institute of Chemical Engineers
AISC	American Institute of Steel Construction
ANS	American Nuclear Society
ANSI	American National Standards Institute
API	American Petroleum Institute
ARI	Air-Conditioning and Refrigeration Institute
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air-conditioning Engineers
ASME	American Society of Mechanical Engineers
ASSE	American Society of Sanitary Engineering
ASTM	American Society for Testing and Materials
AWS	American Welding Society
BISSC	Baking and Sanitation Standards Committee
CGA	Compressed Gas Association, Inc.
CMAAI	Crane Manufacturing Association of America Inc.
EIA	Electronic Industries Association
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
ISA	Instrument Society of America
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry
NACE	National Association of Corrosion Engineers
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
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NSF	National Sanitation Foundation
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FOOTNOTES (1) and (2), Reference to USCG Rules - Items referenced to these footnotes have been satisfactorily procured for similar service on commercial ships by specifying that the item meet USCG requirements.

(1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS

(2) USCG OR ABS SPECIFICATIONS SUITABLE FOR ALL SHIPS

PAGE 1 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
42 01	INSULATION,ELEC-TRICAL,PLASTIC - SEALER,TY HF	MIL-I-3064	42 7/63	SAE,AMS 1358, 3362,3571						Document not Reviewed
42 02	LUMBER & PLYWOOD, FIRE RETARDANT TREATED	MIL-L-19140	42 8/5	NFPA/ ANSI 703P						Document not Reviewed
42 03	SHIPBOARD BATTLE LANTERNS	MIL-F-16377/53	42 12/53	ANSI 783 UL UL 783						Document not Reviewed
70 01	SEAMLESS CARBON STEEL PIPE & TUBE	MIL-T-20157 TY E	70 6/36	ASTM A106 GR B	NONE	SAME	LESS QA	SAME	UNKNOWN	SUITABLE
70 02	STEEL PLATE HY-80 & HY-100	MIL-S-16216	70 6/48	NO COM'L SPEC						NONE
70 03	STEEL BARS HY-80 & HY-100	MIL-S-21952	70 6/49	NO COM'L SPEC						NONE
70 04	STEEL EXTRUSIONS HY-80	MIL-S-22664	70 6/50	NO COM'L SPEC						NONE
70 05	STEEL CASTINGS HY-80 & HY-100	MIL-S-23008	70 6/51	NO COM'L SPEC						NONE
70 06	STEEL FORGINGS HY-80 & HY-100	MIL-S-23009	70 6/52	NO COM'L SPEC						NONE
70 07	NI-AL,BRZ CAST-INGS,SEAWATER SERV	MIL-B-24480	70 7/20	SAE AMS 4881						Document not Reviewed
70 08	CU-AL ALLOYS	QQ-C-465, ALLOY 632	70 7/21	ASTM B150 C63200	NONE	SAME	LESS QA	SAME	UNKNOWN	SUITABLE FOR AND FOR CONTY

PAGE 3 COMMERCIALIZATION OF NAVY'S GENSI ECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
75 11	ANTI-SEIZE COMPOUND	MIL-A-907	75 3/73	ANSI/ SAE AMS 3080C						DOCUMENT NOT REVIEWED
85 01	TECH REPRODUCTION & SHIPPING	MIL-D-5480 CL 4	085 1/66	ASTM D 3458						SCOPE NOT LARGE ENOUGH, NONE
85 02	TECH DWG REQUIREMENTS	MIL-SPEC DOD-D-1000	085 2/22	ASME Y14.1/36 ANSI Y14.1						SCOPE NOT LARGE ENOUGH, NONE
85 03	EQUIP DWG'S	MIL-STD-100	085 2/28	ASME Y14.1/36 ANSI Y14.1						SCOPE NOT LARGE ENOUGH, NONE
85 04	DWG QUALITY	MIL-D-5480	085 2/50	ASTM D 3458 (SEE 85-01)						SCOPE NOT LARGE ENOUGH, NONE
85 05	MICROFILM QA	MIL-M-9868	085 12/14 2/56	NO COM'L SPEC						NONE
85 06	SHIP DWG INDEX QA	MIL-M-38761/2	085 11/70	NO COM'L SPEC						NONE
85 07	DATA CARDS	MIL-M-38761/2	085 12/27	NO COM'L SPEC						NONE
85 08	MICROFILM	MIL-M-9868	085 12/39	(SEE 85-05) NO COM'L SPEC						NONE
86 01	TECH MANUAL CONTENTS TECH MANUAL FUNCTION	MIL-M-15071 MIL-M-24100	86 2/25	ANSI Z39.16 ANSI Z39.18						DOCUMENT NOT REVIEWED
75 12	STUDS, BOLTS, AND NUTS (VARIOUS MATERIALS)	SEE PAGE	30							

PAGE 4 COMMERCIALIZATION OF NAVY'S SENSITIS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
100 01	STEEL BARS, SHAPES AND PLATES (ORDINARY STRENGTH)	MIL-S-22698	100 7/10& 20	ASTM A131 ASTM A 36 PLUS ABS RULES SECTION 43	NONE	SAME	LESS CERTIFICATION REQUIRED, BUT HAS SAME REQUIREMENTS	SAME	SAME	SUITABLE
100 02	CIRCULAR STEEL TUBING (STRUCTURAL)	MIL-T-16343 TYPE I	100 7/27	ASTM-A 500 COLD FORMED, ASTM-A 501 HOT FORMED	NONE, THIS ASTM SPEC. IS CURRENTLY SPECIFIED BY GEN SPECS FOR RECTANGULAR SHAPES	SAME	SAME	SAME	SAME	SUITABLE - CURRENTLY AN OPTION
100 03	STEEL CASTING (EXCEPT HIGH YIELD STRENGTH)	MIL-S-15083	100 7/37	ASTM A-27 GR 60-30, 65-35, 70-36	NONE	SAME	SAME	SAME	SAME	SUITABLE
100 04	STEEL FORGING	MIL-S-24093	100 7/42	ASTM-A 788						DOCUMENT NOT REVIEWED
100 05	AL SHAPES EXTRUDED	QQ-A-200/7 ALLOY 5456 TEMPER H111	100 10/ 17	ASTM B221 ALLOY 5456 H111	NONE	SAME	SAME	SAME	SAME	SUITABLE
100 06	AL SHAPES EXTRUDED	QQ-A-200/5 ALLOY 5086 H111	100 10/ 16	ASTM B221 ALLOY 5086 H111	NONE	SAME	SAME	SAME	SAME	SUITABLE
100 07	AL SHAPES EXTRUDED	QQ-A-200/6 ALLOY 5454 H111	100 10/18	ASTM B221 ALLOY 5454 H111	NONE	SAME	SAME	SAME	SAME	SUITABLE

PAGE 5 COMMERCIALIZATION OF NAVY'S SENSIBLES-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
100 08	AL ALLOY PLATE	QQ-A-250/10 ALLOY 5454 H34	100 10/11	ASTM B209	NONE	SAME	LESS QA	SAME	UNKNOWN	SUITABLE
100 09	AL ALLOY DRAWN SEAMLESS TUB-ING	WW-T-700/5 ALLOY 5086 H32	100 10/21	ASTM B210	NONE	SAME	LESS QA	SAME	UNKNOWN	SUITABLE
100 10	AL TUBING EXTRUDED	QQ-A-200/5 ALLOY 5086 H111	100 10/23	ASTM B221 (SEE 100-06)	NONE	SAME	LESS QA	SAME	UNKNOWN	SUITABLE
111 01	LATEX MASTIC	MIL-D-3135	111 1/66	SAE J-17 & J-18 ASTM 1055						DOCUMENT NOT REVIEWED
162 01	SMOKE INDICATOR BOILER UPTAKE	MIL-I-2002	162 1/55	NO COM'L SPEC						NONE
162 02	CRES STL BOILER UPTAKE	QQ-S-766	162 2/24	ASTM A240	NONE	SAME	LESS QA	SAME	UNKNOWN	SUITABLE
164 01	TUBULAR STEEL FRAMES	MIL-T-16343	164 1/70	ASTM-A 500 (SEE 100-02)	NONE	SAME	SAME	SAME	SAME	SUITABLE
164 02	RUST-PREVENTIVE COMPOUND, DECK PLATE(COSMOLINE)	MIL-C-11796 CL 1, 1A	164 1/40	NO COM'L SPEC						NONE
170 01	BONDING & GROUNDING METHODS	MIL-STD-1310	170 1/71	(SEE 70-09)						SEE 70-09
180 01	SELF-LKG NUTS (PLASTIC INSERT) OR ALL METAL SELF-LKG NUTS(DIS-TORTED TYPE	MIL-N-25027	180 2/20	ANSI/SAE AMS 7252 SAE AS-3066, 3068A, 3070, 3291 IFI-100						DOCUMENT NOT REVIEWED

PAGE 6 COMMERCIALIZATION OF NAVY'S SENSIEDS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
221-01	VALVES(BOILER BLOW)	MIL-V-17737F	221 a. 1/50	ANSI-PTC25.3 ANSI-221.11						DOCUMENT NOT REVIEWED
221-02	PROPULSION STEAM BOILERS	MIL-B-18381	221 d. 3/1	ANSI PTC4.1, ASHR CHAPTER (24-79) ASME, SEC 1						DOCUMENT NOT REVIEWED
221-03	AUXILIARY STEAM BOILERS	MIL-B-16747	221 e. 3/23	ANSI PTC 4.1 ASME SEC 1						DOCUMENT NOT REVIEWED
221-04	BOILERS(HOT WATER)	MIL-B-17748	221 f. 3/28	ANSI SEC 4 ANSI Z21.13						DOCUMENT NOT REVIEWED
231-01	TURBINES	MIL-T-17600	231 a. 1/11	ANSI 37 P ANSI PTC 17 ASME PTC 17 ASME TWDP-1 (2)						DOCUMENT NOT REVIEWED
233-01	DIESEL ENGINES	MIL-E-23457	233 a. 1/11	UL 1247						DOCUMENT NOT REVIEWED
234-01	GAS TURBINE ENGINES	MIL-E-17341	234 b. 1/20	ASME PTC 22 ANSI PTC 22 SAE J 828						DOCUMENT NOT REVIEWED
235-01	AIR COOLERS	MIL-C-19836	235 c. 2/40	AICHE E 17, ASHRAE CHAPTER 6 & 8, API STD 661						DOCUMENT NOT REVIEWED
235-02	CONTROL EQUIPMENT	MIL-C-2212 MIL-S-18475	235 c. 2/41 2/70	ASME PTC 20.2 ANSI E337						DOCUMENT NOT REVIEWED
235-03	PROPULSION MOTORS AND GENERATORS	MIL-G-18473 MIL-G-18474	235 c. 2/42	SAE ARP497A, U.L.UL674,U.L. UL1112, ASME TWDP-1(2)						DOCUMENT NOT REVIEWED

PAGE 7 COMMERCIALIZATION OF NAVY'S SENSITICS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
241-01	GEARS	MIL-G-17859	241 a. 1/11	AGMA 330.01 ANSI Y14.7.2						DOCUMENT NOT REVIEWED
242-01	MECHANICAL CLUTCHES	MIL-C-18087	242 a. 1/11	SAE J286 SAE AIR 853						DOCUMENT NOT REVIEWED
242-02	FLUID DRIVE CLUTCHES	MIL-C-18087	242 a. 1/13	NO COM'L SPEC						NONE
242-03	FLEXIBLE COUPLINGS	MIL-C-23233	242 b. 1/45	AGMA 510.02						DOCUMENT NOT REVIEWED
243-01	COUPLING COVERS AND FAIRWATERS CU-NI ALLOY	MIL-C-15726	243 h. 3/40-48	ASTM B402	NONE	SAME	LESS QA	SAME	UNKNOWN	SUITABLE
243-02	ROPE GUARDS	MIL-S-22698 TYPE II, CLASS A	243 h. 3/49-50	(SEE 100-01) ASTM A36	NONE	SAME	LESS QA	SAME	SAME	SUITABLE
244-01	LINE SHAFT & THRUST BEARINGS	QQ-T-390 MIL-B-18558	244 a. 1/18, 19	ASTM B23	NONE	SAME	SAME	SAME	SAME	SUITABLE
244-02	ROLLING BEARING	FF-B-171 FF-B-185 FF-B-187	244 b. 1/64	AFBMA STD 21.2 ANSI 21.2						DOCUMENT NOT REVIEWED
244-03	BUSHINGS (STERN TUBE AND STRUT BEARING)	MIL-C-15345 FED.QQ-C-390	244 d. 2/24	ASTM SAE ARP 899A						DOCUMENT NOT REVIEWED DOCUMENT NOT REVIEWED
244-09	FORGINGS NI-CU	QQ-N-281 Class A	244N 6/23	ASTM B564	NONE	SAME	SAME	SAME	SAME	SUITABLE

PAGE 8 COMMERCIALIZATION OF NAVY'S SENSITIVE-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
244 -04	STUDS,NUTS AND BOLTS	NI-CU QQ-N-281 CLASS A NI-CU-AL QQ-N-286 CLASS A	244 n. 6/28 42	ASTM F467 ASTM F468	NONE	SAME	SAME	SAME	SAME	SEE ITEM 75-12
244 -05	BEARING TEMP MEASUREMENT DEVICE	MIL-I-17244 MIL-T-19646 MIL-T-15377	244 c. 2/15-17	UL 873 SAE ARP 485						DOCUMENT NOT REVIEWED
244 -06	INORGANIC ZINC COATING	DOD-P-23236 CLASS 3	244 e. 2/70,71	ANSI 35P						DOCUMENT NOT REVIEWED
244 -07	GROUNDING DEVICE SLEEVE FOR GROUNDING DEVICE	NAVSHIPS NO. SSBN- 203-1973171 MIL-C-15345 MIL-C-20159	244 j. 5/32-38	NO COM'L SPEC (SEE 244-03)						NONE
244 -08	BULKHEAD STEEL STUFFING BOX	MIL-S-15083 GRADE B MIL-S-22698 TYPE I, CLASS A	244 h. 6/5-8	SAE J246 (SEE 100-01) ASTM A36	NONE	SAME	LESS QA	SAME	SAME	DOCUMENT NOT REVIEWED SUITABLE
245 -01	PROPELLER	NAVSHIPS NO. 810- 4435837	245 a. 1/18,19	ABS	NONE	SAME	SAME	SAME	SAME	REQ ABS SPEC AUX SHIPS, NO CHANGE COMB SHIPS
245 -02	PLASTIC FOAM STRIPPABLE PLASTIC FOAM	MIL-P-21929	245 e. 2/45-59	ANSI D2735 ANSI D2736 ANSI D1638						DOCUMENT NOT REVIEWED
244 -10	STUD, NUTS AND BOLTS (STEEL)	MIL-B-857 SUPERSEDED BY MIL-S- -1222	244 m 6/13	SEE ITEM 75-12						SUITABLE SEE ITEM 75-12

PAGE 9 COMMERCIALIZATION OF NAVY'S SENSPECTS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
251-01	FORCED DRAFT BLOWERS (VERTICAL OR HORIZONTAL VANE AXIAL TYPE) CENTRIFUGAL TYPE (MOTOR DRIVEN)	MIL-F-18602 MIL-F-19004	251 b. 1/27	NFPA 91P ANSI PTC9 ASME PTC10 UL 507 API STD 673						DOCUMENT NOT REVIEWED
251-02	DUCTS & TRUNKS	QQ-A-250/8 QQ-S-775 MIL-S-22698	251 d. 2/63-65	ASHR CHAP.33 ANSI 1136 (SEE 100-01)						DOCUMENT NOT REVIEWED
251-03	AUTOMATIC DIS-CHARGE SHUTTER	NAVSHIPS NO. 810-4433336	251 d. 2/72	ANSI Z21.67 ASHR CH 2						DOCUMENT NOT REVIEWED
252-01	FURNITURE AND FIXTURES	AA-C-275 W-C-500 NAVSHIPS NO. S3209-860179 S3209-631136 S3306-633778 805-1627547 805-1632788	252 b. 1/55-75 2/1-15	NO COM'L SPEC						NONE
254-01	CONDENSERS	MIL-C-15430	254 a. 1/11,13	ASME PTC12.2 AICHE E15						DOCUMENT NOT REVIEWED
254-02	AIR EJECTORS	MIL-E-15465	254 a. 1/15,16	ASME PTC24						DOCUMENT NOT REVIEWED
254-03	GLAND EXHAUST FANS	MIL-F-19004	254 a. 1/17	(SEE 251-01) NFPA PT 4 CHAP 43,UL 507						DOCUMENT NOT REVIEWED
255-01	DEAERATING FEED TANK	MIL-H-15787	255 b. 1/27	NO COM'L SPEC						NONE
255-02	FEED HEATER AND DRAIN COOLER	MIL-E-15465	255 b. 1/29	(SEE 254-02) AICHE E15 ANSI PTC12.1						DOCUMENT NOT REVIEWED

PAGE 10 COMMERCIALIZATION OF NAVY'S SENSITIVE-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
255-03	WATER SAMPLE COOLER	MIL-C-17557	255 b. 1/37	AICHE E15 ANSI PTC12.1						DOCUMENT NOT REVIEWED
259-01	AIR FILTERS, GAS TURBINES	MIL-F-7194	259 d. 2/47	AGA Z21.35 SAE J1141						DOCUMENT NOT REVIEWED
262-01	STRAINERS	MIL-S-17849 MIL-F-3623 MIL-F-3690	262 b. 1/60	UL 331 ANSI B93.39						DOCUMENT NOT REVIEWED
262-02	COOLERS, OIL & WATER	MIL-C-15730	262 b. 2/1	ANSI PTC12.1 NFFA SEC 9						DOCUMENT NOT REVIEWED
262-03	PURIFIERS	MIL-P-20632	262 b. 2/5	SAE J931A SAE J1124 UL 331 ASME 121						DOCUMENT NOT REVIEWED
262-04	PRECIPIRATOR	MIL-P-23917	262 b. 2/8,9	NO COM'L SPEC						NONE
262-05	LUBE OIL HEATERS	MIL - H-17428	262 b. 2/17,19	NO COM'L SPEC						NONE
262-06	GREASE FITTINGS	MIL-F-3541	262 b.	SAE J534						DOCUMENT NOT REVIEWED
262-07	VALVED HOSE CONNECTIONS	NAVSHIPS NO. 810-1385711	262 f. 7/22-23	SAE J518C						DOCUMENT NOT REVIEWED

PAGE 11 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
300 01	EQUIPMENT/INSTALLATION	MIL-E-917	300 1/69	IEEE-45 OR (1)						DOCUMENT NOT REVIEWED
300 02	EQUIPMENT ENCLOSURES	MIL-E-2036	300 2/46	NEMA UL-50 UL-698 OR (2)						DOCUMENT NOT REVIEWED
302 01	MOTORS	MIL-M-17059	302 b. 3/52	IEEE-24 NEMA-A/B OR (1)						DOCUMENT NOT REVIEWED
302 02	MOTORS	MIL-M-17060	302 b. 3/52	UL 1004-77 ANSI C33.123-76 OR (1)						DOCUMENT NOT REVIEWED
302 03	MOTORS	MIL-M-17413	302 b. 3/53	UL 1004-77 ANSI C33.123-76 OR (1)						DOCUMENT NOT REVIEWED
302 04	MOTORS	MIL-M-17556	302 b. 3/53	UL 1004-77 ANSI C33.123-76 OR 9L0						DOCUMENT NOT REVIEWED
302 05	CONTROLLERS	MIL-C-2212	302 b. 3/73	NEMA UL-845-80 (SEE 235-02) OR (1)						NONE
302 06	ELECTRIC BRAKES	MIL-B-16392	302 b. 3/74	NO COM'L SPEC OR (1)						DOCUMENT NOT REVIEWED
303 01	SNAP SWITCHES	MIL-S-15291	303 f. 3/37	UL 20-79 OR (1)						DOCUMENT NOT REVIEWED

- (1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS
(2) USCG OR ABS SPECIFICATIONS SUITABLE FOR ALL SHIPS

PAGE 12 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
303 02	FUSES IC/FC	MIL-S-15001	303 f. 3/50	UL 198B 198D 198E OR (2)						DOCUMENT NOT REVIEWED
303 03	FUSES IC/FC	MIL-S-17000	303 f. 3/50	UL 198F 198G 198H 198 L OR (2)						DOCUMENT NOT REVIEWED
303 04	FUSES IC/FC	MIL-I-983	303 f. 3/49	UL 198F 198G 198H 198L OR (1)						DOCUMENT NOT REVIEWED
303 05	FUSES PWR/LTG	MIL-F-15160	303 g. 3/67	UL 198F 198G 198H 198L OR (2)						DOCUMENT NOT REVIEWED
303 06	CIRCUIT BKRS ACB	MIL-C-17587	303 g. 4/3	ANSI-C37.13 ANSI-C37.27 UL-489 NEMA-AB1 OR (1)						DOCUMENT NOT REVIEWED
303 07	CIRCUIT BKRS AQB	MIL-C-17361	303 g. 4/4	ANSI-C37.01 IEEE-320 IEEE-538 ANSI-C37.011 OR (1)						DOCUMENT NOT REVIEWED
303 08	CIRCUIT BKRS ALB/20V	MIL-C-17588	303 g. 4/5	ANSI-C37.13A OR (1)						DOCUMENT NOT REVIEWED
303 09	RELAY INDUCTION	MIL-R-2033	303 g. 4/9	NEMA-A600 ANSI-C37.90 OR (1)						DOCUMENT NOT REVIEWED
303 10	RELAY CONTROL	MIL-C-2212	303 g. 4/10	NEMA-A600 (SEE 235-01) OR (1)						DOCUMENT NOT REVIEWED

- (1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS
 (2) USCG OR ABS SPECIFICATIONS SUITABLE FOR ALL SHIPS

COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
303 11	RELAY MOTOR DRIVEN	MIL-R-19523	303 g. 4/12	NEMA-A600 OR (1)						DOCUMENT NOT REVIEWED
303 12	VOLTAGE/FREQ MONITOR	MIL-M-24116	303 g. 4/14	ANSI-C39.1 OR (1)						DOCUMENT NOT REVIEWED
303 13	AVAILABLE LOAD MONITOR	MIL-M-24347	303 g. 4/16	ANSI-C39.1 OR (1)						DOCUMENT NOT REVIEWED
303 14	CURRENT/TIME SENSING/SIGNALLING DEVICES	MIL-S-24561	303 g. 4/20	NO COM'L SPEC OR (1)						SEE (1)
304 01	SOLDERLESS LUGS/ SOLDER TYPE LUGS	MIL-T-16366	304 c. 6/47	UL-486A ANSI-C33.5 OR (2)						DOCUMENT NOT REVIEWED
304 02	SOLDERLESS LUGS/ SOLDER TYPE LUGS	MIL-T-7928	304 c. 6/48	UL-486A ANSI-C33.5 OR (2)						DOCUMENT NOT REVIEWED
304 03	SOLDERLESS LUGS/ SOLDER TYPE LUGS	MIL-T-15659	304 c. 6/48	UL-486A ANSI-C33.5 OR (2)						DOCUMENT NOT REVIEWED
304 04	CABLE	MIL-C-17	304 d. 6/64	IEEE-45 OR (2)						DOCUMENT NOT REVIEWED
304 05	CABLE	MIL-C-915	304 d. 6/65	NEMA-WC3 NEMA-WC8 UL-44 UL-62 OR (2)						DOCUMENT NOT REVIEWED

- (1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS
 (2) USCG OR ABS SPECIFICATIONS SUITABLE FOR ALL SHIPS

PAGE 14 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY										
MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
304 06	CABLE	MIL-C-21609	304 d. 6/65	IEEE-45 OR (2)						DOCUMENT NOT REVIEWED
304 07	CABLE	MIL-C-23020	304 d. 6/65	IEEE-45 ANSI/IEEE 386 OR (2)						DOCUMENT NOT REVIEWED
304 08	CABLE	MIL-C-28777	304 d. 6/65	IEEE-45 OR (2)						DOCUMENT NOT REVIEWED
304 09	CONNECTORS	MIL-STD-1683	304 d. 6/74	UL-498 OR (2)						DOCUMENT NOT REVIEWED
304 10	CONNECTORS	MIL-STD-1353	304 d. 6/75	UL-498 OR (2)						DOCUMENT NOT REVIEWED
304 11	PLASTIC SEALER FOR STUFFING TUBES	MIL-I-3064	304 d. 10/3	NO COM'L SPEC (SEE 42-01) OR (2)						SEE (2)
305 01	CONDUCTOR COLOR CODE	MIL-C-915	305 c. 14/64	IEEE-45 (SEE 304-05) OR (2)						DOCUMENT NOT REVIEWED
305 02	IDENT PLATES	MIL-P-15024	305 g. 14/71	NO COM'L SPEC OR (2)						SEE (2)
305 03	IDENT PLATES	MIL-P-2877	305 g. 14/73	NO COM'L SPEC OR (2)						SEE (2)
305 04	HEAT SHRINKING TUBING	MIL-I-23053	305 h. 15/25	UL-E-38155 OR (2)						SEE (2)

(2) USCG OR ABS SPECIFICATIONS SUITABLE FOR ALL SHIPS

PAGE <u>15</u> COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY										
MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
305 05	INSULATING SLEEVING	MIL-I-631	305 h. 15/30	UL-E-38155 UL-E-48012 OR (2)						DOCUMENT NOT REVIEWED
310 01	STEAM/GAS TURBINE/DIESEL GENERATOR SETS	MIL-G-3087	310 b. 1/35	NO COM'L SPEC OR (1)						SEE (1)
310 02	STEAM/GAS TURBINE/DIESEL GENERATOR SETS	MIL-G-3048	310 b. 1/36	NO COM'L SPEC OR (1)						SEE (1)
310 03	STEAM/GAS TURBINE/DIESEL GENERATOR SETS	MIL-G-22077	310 b. 1/37	NO COM'L SPEC OR (1)						SEE (1)
310 04	EXCITATION/REGULATION	MIL-R-2729	310 b. 1/58	NO COM'L SPEC OR (1)						SEE (1)
310 05	EXCITATION/REGULATION	MIL-G-3111	310 b. 1/63	NO COM'L SPEC OR (1)						SEE (1)
310 06	EXCITATION/REGULATION	MIL-G-3124	310 b. 1/63	NO COM'L SPEC OR (1)						SEE (1)
313 01	STORAGE BATTERIES	MIL-S-15072	313 j. 3/61	IEEE-25 OR (2)						DOCUMENT NOT REVIEWED
313 02	BATTERY CHARGING UNITS	MIL-C-24095	313 j. 3/63	UL-1236 OR (1)						DOCUMENT NOT REVIEWED
313 03	BATTERY CHARGING UNITS	DOD-C-24529	313 j. 3/64	UL-1236 OR (1)						DOCUMENT NOT REVIEWED

(1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS (2) USCG OR ABS SPECIFICATIONS SUITABLE FOR ALL SHIPS

PAGE 16 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
313 04	HYDROMETERS	MIL-H-16384	313 k. 5/35	NO COM'L SPEC OR (2)						DOCUMENT NOT REVIEWED
314 01	MOTOR GENERATOR	MIL-M-19097	314 b. 1/64	IEEE-45 OR (2)						DOCUMENT NOT REVIEWED
314 02	MOTOR GENERATOR	MIL-M-19160	314 b. 1/64	IEEE-45 OR (1)						DOCUMENT NOT REVIEWED
314 03	MOTOR GENERATOR	MIL-M-19167	314 b. 1/64	IEEE-45 OR (1)						DOCUMENT NOT REVIEWED
314 04	MOTOR GENERATOR	MIL-M-19283	314 b. 1/64	IEEE-45 OR (1)						DOCUMENT NOT REVIEWED
314 05	MOTOR GENERATOR	MIL-M-19633	314 b. 1/64	IEEE-45 OR (1)						DOCUMENT NOT REVIEWED
314 06	FREQUENCY CHANGER	MIL-F-24122	314 b. 2/2	IEEE-45 OR (1)						DOCUMENT NOT REVIEWED
314 07	RECTIFIER PWR SUPPLIES	MIL-P-15736	314 b. 2/4	UL-1012 OR (1)						DOCUMENT NOT REVIEWED
314 08	TRANSFORMERS	MIL-T-15108	314 b. 2/9	NEMA-TR-11 ANSI-C57.12.10 IEEE-45 NEMA TR-1 & TR-27 OR (1)						DOCUMENT NOT REVIEWED

- (1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS
 (2) USCG OR ABS SPECIFICATIONS SUITABLE FOR ALL SHIPS

PAGE 17 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
314 09	TRANSFORMERS	MIL-T-17221	314 b. 2/10	NEMA-TR-11 ANSI-C57.12.10 IEEE-45 NEMA TR1 & TR2 OR (1)						DOCUMENT NOT REVIEWED
314 10	LINE VOLTAGE REGULATORS	MIL-R-23098	314 b. 2/12	ANSI-C57 OR (1)						DOCUMENT NOT REVIEWED
314 11	ARC WELDING MACHINE	MIL-W-24150	314 b. 2/14	UL-551 OR (1)						DOCUMENT NOT REVIEWED
314 12	ARC WELDING MACHINE	MIL-W-19285	314 b. 2/15	UL-551 OR (1)						DOCUMENT NOT REVIEWED
314 13	ARC WELDING MACHINE	MIL-W-80019	314 b. 2/17	UL-551 OR (2)						DOCUMENT NOT REVIEWED
314 14	ARC WELDING MACHINE	MIL-W-80043	314 b. 2/17	UL-551 OR (2)						DOCUMENT NOT REVIEWED
320 01	MANUAL BUS TRANSFER	MIL-P-23928	320 c. 3/51	UL-551 OR (1)						DOCUMENT NOT REVIEWED
320 02	MANUAL BUS TRANSFER	MIL-S-17773	320 c. 3/52	UL-551 OR (1)						DOCUMENT NOT REVIEWED
320 03	SHORE PWR RECPT/ CONT SW	MIL-C-24368	320 c. 3/67	UL-551 OR (1)						DOCUMENT NOT REVIEWED

- (1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS
 (2) USCG OR ABS SPECIFICATIONS SUITABLE FOR ALL SHIPS

PAGE 18 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
320 04	GROUND DETECTORS	MIL-S-16036	320 c. 4/31	USCG EE REG PARA 111.05-21 THRU 25 OR (1)						SEE (1)
320 05	GROUND DETECTORS	MIL-S-24395	320 c. 4/32	USCG EE REG PARA 111.05-21 THRU 25 OR (1)						SEE (1)
324 01	SHIP SERVICE SWBD	MIL-S-16036	324 b. 1/75	ANSI-C37.20 IEEE-27 (SEE 32-04) OR (1)						SEE (1)
324 02	CONTROL CENTER	MIL-C-23742	324 b. 2/39	UL-845 OR (1)						SEE (1)
324 03	POWER DISTRIBUTION	MIL-P-23928	324 b. 2/54	UL-67 (SEE 20-01) OR (1)						SEE (1)
324 04	LAMINATED DIAG FOR SWBDS/CONTROL CTRS	MIL-P-15024	324 d. 5/17	ANSI-C37.20 (SEE 305-02) OR (2)						SEE (2)

- (1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS
 (2) USCG OR ABS SPECIFICATIONS SUITABLE FOR ALL SHIPS

PAGE 19 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
430 01	ALM SWBDS & PNLS	MIL-A-17196	430 d. 2/15	NO COM'L SPEC OR (1)						SEE (1)
430 02	AMPLIFIERS SYNCHRO SIGNAL	MIL-A-15344	430 d. 2/17	NO COM'L SPEC						NONE
430 03	ANNUNICATORS	MIL-A-15373	430 d. 2/18	NO COM'L SPEC OR (1)						SEE (1)
430 04	AUDIBLE SIGNALS	MIL-A-15303	430 d. 2/19	NO COM'L SPEC OR (1)						SEE (1)
430 05	INDICATOR LIGHTS FOUR DIAL	S6202-73921	430 d. 2/22	NO COM'L SPEC OR (1)						SEE (1)
430 06	SHIP CONTROL CSLS & COMB EQUIPMENT	MIL-S-17422	430 d. 2/23	NO COM'L SPEC OR (1)						SEE (1)
430 07	SHIP CONT ORDER & IND EQUIPMENT	MIL-S-17299	430 d. 2/25	NO COM'L SPEC OR (1)						SEE (1)
430 08	INDICATOR LIGHTS SINGLE DIAL	S6202-73919	430 d. 2/28	NO COM'L SPEC OR (1)						SEE (1)
430 09	SWITCH, LEVER OPERATED	803-74055	430 d. 2/30	NO COM'L SPEC						NONE
430 10	SWITCH, ROTARY SNAP	S6202-74207	430 d. 2/31	NO COM'L SPEC OR (1)						SEE (1)
430 11	SWITCHES, ROTARY ENCLOSED	MIL-S-15743	430 d. 2/31	NO COM'L SPEC OR (1)						SEE (1)
430 12	SWITCHES, SWBD ALM SYS	MIL-S-16032	430 d. 2/32	NO COM'L SPEC OR (1)						SEE (1)

(1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS

PAGE 20 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						ACTION
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	
430 13	TWO DIAL IND LT	S6202-73920	430 d. 2/34	NO COM'L SPEC OR (1)						SEE (1)
430 14	EQUIPMENT SPEC	MIL-I-983	430 d. 2/40	NO COM'L SPEC (SEE 303-04) OR (1)						SEE (1)
430 15	AIR SAMPLING & URINALYSIS, FIXED & PORTABLE	MIL-T-23669 MIL-T-23752	430 f. 4/61	NO COM'L SPEC						NONE
430 16	MASTER CLOCK CONSOLE	MIL-P-24423	430 f. 5/42	NO COM'L SPEC						NONE
431 01	MAIN & LOCAL IC SWBDS	MIL-S-15001	431 b. 1/29	NO COM'L SPEC (SEE 303-02)						NONE
431 02	IC TEST SWBDS	S6508-73677	431 b. 1/30	NO COM'L SPEC						NONE
432 01	SP TEL JACK BOX ENCLOSED	MIL-J-24142	432 c. 2/35	NEMA 4X						DOCUMENT NOT REVIEWED
432 02	AUTOMATIC SWBD DIAL TELEPHONE	MIL-T-1943	432 c. 2/55	NO COM'L SPEC OR (1)						SEE (1)
432 03	BUZZER, TY IC/ZIS4	MIL-A-15303	432 c. 2/56	NO COM'L SPEC (SEE 430-04) OR (1)						SEE (1)
432 04	CONNECTOR ASSY	815-1853064	432 c. 2/57	NO COM'L SPEC						NONE
432 05	COUPLING, MULTIPLE 12 POINT	803-500102 SECT. 2 SHT 219	432 c. 2/58	NO COM'L SPEC						NONE

(1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS

PAGE 21 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
432 06	ENCLOSURE TY G TELEPHONE	815-1853038	432 c. 2/62	NO COM'L SPEC OR (1)						SEE (1)
432 07	EXTENSION SIGNAL RELAY	MIL-T-1943	432 c. 2/64	NO COM'L SPEC (SEE 432-02) OR (1)						SEE (1)
432 08	FLEET ANCHOR-AGE COMM PNL	815-1197077	432 c. 2/65	NO COM'L SPEC						NONE
432 09	HORN, TY IC/HB54	MIL-A-15303	432 c. 2/67	NO COM'L SPEC (SEE 430-04) OR (1)						SEE (1)
432 10	JACKBOX, TY G-15A	S6501-74210	432 c. 2/68	NO COM'L SPEC OR (1)						SEE (1)
432 11	LIGHTNING ARRESTOR	S6501-74062	432 c. 2/69	NO COM'L SPEC						NONE
432 12	MANUAL SWBD	MIL-T-1943	432 c. 2/70	NO COM'L SPEC OR (1) (SEE 432-02)						SEE (1)
432 13	PLUG, TELEPHONE WATERTIGHT	S6501-1449010	432 d. 2/71	NO COM'L SPEC						NONE
432 14	POWER CONTROL PANEL	MIL-T-1943	432 c. 2/72	NO COM'L SPEC (SEE 432-02) OR (1)						SEE (1)
432 15	POWER SUPPLY	MIL-T-1943	432 c. 2/73	NO COM'L SPEC OR (1)						SEE (1)
432 16	TELEPHONE PLUG TY H-39 A	S6505-74211	432 c. 2/74	NO COM'L SPEC (SEE 432-02)						NONE
432 17	TELEPHONE SETS TY A, C, F&G	MIL-T-1943	432 c. 2/75	NO COM'L SPEC (SEE 432-02) OR (1)						SEE (1)

(1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS

PAGE 22 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
432 18	CABLE, TTH FWA-1-1/2	MIL-C-915	432 c. 5/17	IEEE-45 (SEE 304-05)						DOCUMENT NOT REVIEWED
432 19	CABLE TTH FWA-3	MIL-C-915	432 c. 5/19	IEEE-45 (SEE 304-05)						DOCUMENT NOT REVIEWED
432 20	CABINET SPT HANDSETS	S6501-73819	432 d. 6/11	NO COM'L SPEC OR (1)						SEE (1)
432 21	HOLDER, SPT HANDSETS	S6501-74464	432 d. 6/14	NO COM'L SPEC OR (1)						SEE (1)
432 22	HOOKS, SPT HEADSETS	815-1853041	432 d. 6/16	NO COM'L SPEC OR (1)						SEE (1)
432 23	JACK, SBM 4000 SPT	815-1853061	432 d. 6/18	NO COM'L SPEC						NONE
432 24	JACKBOX ASSY TY G-15A, G15B G-15C	S6501-74210	432 d. 6/20	NO COM'L SPEC OR (1)						SEE (1)
432 25	LOUDSPEAKERS	MIL-A-20222	432 d. 6/27	NO COM'L SPEC OR (1)						SEE (1)
432 26	RELAY	815-1853089	432 d. 6/30	NO COM'L SPEC						NONE
432 27	SPT AMPLIFIER	MIL-A-16749	432 d. 6/31	NO COM'L SPEC						NONE
432 28	SPT HADSETS & HEADSETS	MIL-T-15514	432 d. 6/33	NO COM'L SPEC OR (1)						SEE (1)

(1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS

PAGE 23 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
432 29	SPT SWBD PNLS TY IC/A	MIL-P-15570	432 d. 6/35	NO COM'L SPEC						NONE
432 30	SPT STOWAGE BOXES	805-4477923	432 d. 6/38	NO COM'L SPEC						NONE
432 31	SWITCH, ROTARY SELECTOR TYPE A-26A	S6510-74295	432 d. 6/41	NO COM'L SPEC						NONE
432 32	SWBD PLUG TY PJ-055B	MIL-P-642	432 d. 6/45	NO COM'L SPEC						NONE
432 33	SPT SWITCHBOX TY A-17A	S6501-74093	432 d. 6/48	NO COM'L SPEC						NONE
432 34	SPT SWITCHBOX TY A-19A	S6501-74094	432 d. 6/51	NO COM'L SPEC						NONE
432 35	TRANSFER SWBD TY SB-82/SPR	RE-D-23000	432 d. 6/54	NO COM'L SPEC						NONE
432 36	HORNS, BUZZERS & BELLS	MIL-A-15303	432 e. 20/28	NO COM'L SPEC (SEE 430-04) OR (1)						SEE (1)
432 37	ANNUNCIATORS	MIL-A-15373	432 e. 20/32	NO COM'L SPEC (SEE 430-03) OR (1)						SEE (1)
432 38	PUSHBUTTON STATIONS	815-1853053, S6202-73755, S6202-73756	432 e. 20/33 & 34	NO COM'L SPEC OR (1)						SEE (1)
432 39	SIGNAL STATIONS	MIL-C-15306	432 e. 20/35	NO COM'L SPEC OR (1)						SEE (1)

(1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS

PAGE 24 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
433 01	AMPLIFIER VOICE EQUIP	MIL-A-15373	433b. 1/38, 40 & 45	NO COM'L SPEC (SEE 430-03)						NONE
433 02	FIXTURE 100 WATT, RED	MIL-F-16377	433b. 1/52	NO COM'L SPEC (SEE 42-03)						NONE
433 03	HANDSET, TY IC/MPH	MIL-L-24223	433b. 1/56	NO COM'L SPEC (SEE 433-03)						NONE
433 04	LOUDSPEAKERS	MIL-L-24223	433b. 1/58	NO COM'L SPEC SEE 433-03) OR (1)						SEE (1)
433 05	MAGNETIC MICROPHONES TYPE M-146/SIC	815-1853081	433b. 1/69	NO COM'L SPEC OR (1)						SEE (1)
433 06	MICROPHONE CONTROL STATION TYPE IC/MSB	MIL-A-20222	433b. 1/71	NO COM'L SPEC OR (1) (SEE 432-25)						SEE (1)
433 07	MICROPHONE HOLDER	MIL-M-23813	433b. 1/74	NO COM'L SPEC OR (1)						SEE (1)
433 08	MICROPHONE JACKBOX IC/MJB	MIL-A-20222	433b. 1/75	NO COM'L SPEC (SEE 432-25) OR (1)						SEE (1)
433 09	MICROPHONE PORTABLE	MIL-M-23813	433b. 2/2	NO COM'L SPEC (SEE 433-07) OR (1)						SEE (1)
433 10	SWITCH LVR OPER S-2JRM3A-2	803-74055	433b. 2/3	NO COM'L SPEC						NONE
433 11	HANDSET HOLDER	S6501-74464	433b. 5/41	NO COM'L SPEC OR (1)						SEE (1)

(1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS

PAGE 25 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
433 12	HANDSET IC/MPH	MIL-A-20222	433c. 5/41	NO COM'L SPEC (SEE 432-25) OR (1)						SEE (1)
433 13	INTERCOM UNITS	MIL-I-24078	433c. 5/48	NO COM'L SPEC OR (1)						SEE (1)
433 14	MICROPHONE M132/SIC	MIL-M-23813	433c. 5/54	NO COM'L SPEC (SEE 433-07) OR (1)						SEE (1)
433 15	MICROPHONE HOLDER	MIL-M-23813	433c. 5/56	NO COM'L SPEC (SEE 433-07) OR (1)						SEE (1)
433 16	INTEGRATED INTERCOMM SYS EQUIP	MIL-S-23012	433e. 8/60	NO COM'L SPEC						NONE
433 17	AUDIO ENTERTAINMENT UNIT	MIL-A-17053	433h. 13/49	NO COM'L SPEC						NONE
433 18	LOUDSPEAKER LS-444/WIH	MIL-L-17080	433h. 13/51	NO COM'L SPEC OR (1)						SEE (1)
433 19	1/4" MAG TAPE	W-T-70	433h. 13/52	NO COM'L SPEC						USE COM'L QUALITY EQUIP
433 20	PROJECTOR SCREEN	MIL-S-260	433h. 14/65	NO COM'L SPEC						USE COM'L QUALITY EQUIP
433 21	FILM SPLICER & PORTABLE 16MM REWINDS	MIL-R-12956	433j. 14/74	NO COM'L SPEC						USE COM'L QUALITY EQUIP
435 01	BELLS, BUZZERS, & HORNS	MIL-A-15303	435b. 1/69	NO COM'L SPEC (SEE 430-04) OR (1)						SEE (1)

(1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS

PAGE 26 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY										
MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
435 02	PUSHBUTTONS	815-1853053, S6202-73755, S6202-73756	435b. 1/70	NO COM'L SPEC OR (1)						SEE (1)
436 01	ALM SWBD IC/S	MIL-A-17196	436a. 1/20	NO COM'L SPEC (SEE 430-01) OR (1)						SEE (1)
436 02	HORN IC/H254	MIL-A-15303	436a. 1/23	NO COM'L SPEC (SEE 430-04) OR (1)						SEE (1)
436 03	HORN IC/H154	MIL-A-15303	436a. 1/24	NO COM'L SPEC (SEE 430-04) OR (1)						SEE (1)
436 04	IND LT, 2 DIAL B-46A	S6202-73920	436a. 1/61	NO COM'L SPEC OR (1)						SEE (1)
436 05	PUSHBUTTON E-20	815-1853053, S6202-73755, S6202-72756	436b. 2/4	NO COM'L SPEC OR (1)						SEE (1)
436 06	ALM PANEL IC/B52	MIL-A-17196	436b. 2/8	NO COM'L SPEC OR (1)						SEE (1)
436 07	ALM UNIT TY IC/EIDI	MIL-A-15373	436b. 2/23	NO COM'L SPEC (SEE 430-03) OR (1)						SEE (1)
436 08	DOOR SW TY S193A	S6202-74052	436b. 2/31	NO COM'L SPEC OR (1)						SEE (1)
436 09	BUZZER IC/ZIS4	MIL-A-15303	436b.	NO COM'L SPEC (SEE 430-04) OR (1)						SEE (1)

(1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS

PAGE 27 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
436 10	BELL IC/B254	MIL-A-15303	436b. 2/50	NO COM'L SPEC (SEE 430-04) OR (1)						SEE (1)
436 11	SIREN, TYPE IC/S154	MIL-A-15303	436b. 2/70	NO COM'L SPEC (SEE 430-04) OR (1)						SEE (1)
436 12	ALM PANEL IC/B51	MIL-A-17196	436b. 3/36	NO COM'L SPEC (SEE 430-01) OR (1)						SEE (1)
436 13	BELL, IC/B354	MIL-A-15303	436b. 3/71	NO COM'L SPEC (SEE 430-04) OR (1)						SEE (1)
436 14	THERMOSTAT IC/J	MIL-S-16032	436b. 5/9	NO COM'L SPEC (SEE 430-12) OR (1)						SEE (1)
436 15	SWITCHBOARD IC/SM	MIL-A-17196	436b. 5/71	NO COM'L SPEC (SEE 430-01) OR (1)						SEE (1)
436 16	SWITCH LIQ LVL IC/RL-1-U	MIL-S-16032	436b. 6/73	NO COM'L SPEC (SEE 430-12) OR (1)						SEE (1)
437 01	PUSHBUTTON SW	815-1853053, S6202-73755, S6202-73756	437b. 1/26	NO COM'L SPEC						SEE (1)
437 02	BUZZER IC/Z154	MIL-A-15303	437b. 1/30	NO COM'L SPEC (SEE 430-04) OR (1)						SEE (1)
437 03	BELL IC/B154	MIL-A-15303	437b. 1/39	NO COM'L SPEC (SEE 430-04) OR (1)						SEE (1)
437 04	DOOR SW S-193A	MIL-A-15303	437b. 1/49	NO COM'L SPEC (SEE 430-04) OR (1)						SEE (1)

(1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS

PAGE 28 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
437 05	IND LIGHT B-41A	S6202-73919	437b. 1/52	NO COM'L SPEC OR (1)						SEE (1)
437 06	BELL, IC/B254	MIL-A-15303	437b. 3/7	NO COM'L SPEC (SEE 430-04) OR (1)						SEE (1)
437 07	WIND DR & SPEED EQUIP	MIL-W-15805, MIL-W-22900	437b. 3/13	NO COM'L SPEC OR (1)						SEE (1)
437 08	PROPELLER REV IND SYS	MIL-P-15555	437b. 3/4	NO COM'L SPEC OR (1)						SEE (1)
437 09	SWITCH LVR OPER, S-171A	S6501-73689	437b. 4/69	NO COM'L SPEC OR (1)						SEE (1)
437 10	ENG RPM & TOT REV	MIL-T-16049	437b. 4/73	NO COM'L SPEC OR (1)						SEE (1)
437 11	GYRO COMPASS SYS	MIL-C-15952, MIL-C-17012, MIL-C-18106,	437b. 6/11	NO COM'L SPEC OR (1)						SEE (1)
437 12	SHIP COURSE IND	MIL-I-15676	437b. 6/12	NO COM'L SPEC OR (1)						SEE (1)
437 13	PROPELLER ORDER EQUIP	MIL-S-17299	437b. 9/75	NO COM'L SPEC (SEE 430-07) OR (1)						SEE (1)
437 14	ENGINE ORD EQUIP	MIL-S-17299	437b. 10/31	NO COM'L SPEC (SEE 430-07) OR (1)						SEE (1)

(1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS

PAGE 29 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
437 15	IND LIGHT B-41C	S6202-73919	437b. 11/60	NO COM'L SPEC OR (1)						SEE (1)
437 16	SWITCH ROTARY S-3JR	S6202-73827	437b. 11/68	NO COM'L SPEC OR (1)						SEE (1)
437 17	BELL IC/B354	MIL-A-15303	437b. 12/8	NO COM'L SPEC (SEE 430-04) OR (1)						SEE (1)
437 18	RUDDER MECH XMTR & IND IC/ T5C2D1 & IC/ R1C5B1	MIL-M-15338 3	437b. 13/13	NO COM'L SPEC OR (1)						SEE (1)
437 19	XMTR, SYNCHRO RUDDER	MIL-A-17299	437b. 13/17	NO COM'L SPEC (SEE 430-07) OR (1)						SEE (1)
437 20	RTD's	MIL-T-15377	437b. 14/34	NO COM'L SPEC (SEE 244-05) OR (1)						SEE (1)
437 21	SALINITY IND EQUIP	MIL-S-15103	437b. 19/22	NO COM'L SPEC OR (1)						SEE (1)
437 22	HORN IC/H254	MIL-A-15303	437b. 17/37	NO COM'L SPEC (SEE 430-04) OR (1)						SEE (1)
437 23	FORCED DRAFT BLOWER XMTR	MIL-T-16049	437b. 18/24	NO COM'L SPEC (SEE 437-10) OR (1)						SEE (1)
437 24	TANK LVL SYS	MIL-L-23886	437b. 18/50	NO COM'L SPEC OR (1)						SEE (1)
437 25	PROPULSION PLANT TEMP	MIL-T-15377	437b. 19/69	NO COM'L SPEC (SEE 244-05) OR (1)						SEE (1)

(1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS

PAGE 30 COMMERCIALIZATION OF NAVY'S GENSI EDS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
437 26	SWITCHES MAIN BALLAST TANK IND	S6504-73689	437b. 20/67	NO COM'L SPEC						NONE
437 27	UNDERWATER LOG SYS	MIL-U-18033	437b. 22/47	NO COM'L SPEC (1)	NONE	SAME	SAME	SAME	SAME	SEE (1)
437 28	SPEED & DISTANCE IND	MIL-I-17301	437b. 22/53	NO COM'L SPEC (1)	NONE	SAME	SAME	SAME	SAME	SEE (1)
75 12	STUDS, BOLTS & NUTS (VARIOUS MATERIALS)	MIL-S-1222	75 1/63	ASTM F467 NON-FERROUS NUTS	NONE	SAME	SAME	SAME	SAME	SUITABLE SEE ITEM 244-04
				ASTM F468 NON-FERROUS BOLTS	NONE	SAME	SAME	SAME	SAME	SUITABLE
				ASTM A307, A325, A449, A687 CARBON STEEL BOLTS&STUDS	NONE	SAME	SAME	SAME	SAME	SUITABLE
				ASTM A194, A563 CARBON STEEL & ALLOY NUTS	NONE	SAME	SAME	SAME	SAME	SUITABLE
				ASTM A320, A490 ALLOY STEEL BOLTS	NONE	SAME	SAME	SAME	SAME	SUITABLE
				ASTM A193 ALLOY STEEL & CRES BOLT MAT'L	NONE	SAME	SAME	SAME	SAME	SUITABLE
				ASTM F593 CRES BOLTS ASTM F594 CRES NUTS	NONE	SAME	SAME	SAME	SAME	SUITABLE

(1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS

PAGE 31 COMMERCIALIZATION OF NAVY'S GENSI EDS-SUMMARY										
MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
502-01	REDUCTION GEARS	MIL-G-17859	502a. 1/26,27	ASME Y14.7.2 (See 241-01)						DOCUMENT NOT REVIEWED
503-01	PRESSURE REGULATING GOVERNOR	MIL-G-18916	503a, 2/13,14	ASME PTC 26 ASME PTC 29						DOCUMENT NOT REVIEWED
503-02	SEWAGE PUMPS FIRE PUMP MAIN CIRCULATING CONDENSATE DISTILLER FEED BRINE OVERBOARD FRESH & POTABLE WATER SEA WATER	MIL-C-20159 ASTM A296 CN-7m QQ-N-288 QQ-N-281 ASTM B164 QQN-288	503c. 3/70-75 4/1-49	ANSI B93.6 SAE HIR 1513 SAE HIR 1514 UL 778 SAE J 744 SAE J 745 (See 244-04) (See 244-07)						DOCUMENT NOT REVIEWED
504-01	INDICATORS, FOR SENSING SPEED, DEPTH, COURSE & ALTITUDE	MIL-I-19782	504a. 1/75 2/1	EIA RS-247						DOCUMENT NOT REVIEWED
504-02	TACHOMETERS	MIL-T-16049	504c. 2/50	SAE AS 404B (See 437-10)						DOCUMENT NOT REVIEWED
504-03	THERMOMETERS	MIL-I-17244	504d. 2/68-75 3/1-9	ANSI EL UL 873 (See 244-05)						DOCUMENT NOT REVIEWED
504-04	THERMOMETER WELLS	MIL-W-24270	504d. 3/13-60	SAE ARP 464						DOCUMENT NOT REVIEWED
504-05	ELEC PRESS & DIFF PRESS TRANSDUCER	MIL-P-24212	504g.	ANSI B40.1						DOCUMENT NOT REVIEWED

PAGE 32 COMMERCIALIZATION OF NAVY'S SENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
504-06	BOILER DRAFT GAGES	MIL-G-17489	504h. 4/50-53	ASME B40.1						DOCUMENT NOT REVIEWED
504-07	LIQUID LEVEL INDICATORS	810-1385876 MIL-L-23886 MIL-G-16456 MIL-I-22610 MIL-R-2784 MIL-T-16644 MIL-G-16408 MIL-I-20037 810-1385847	504j. . 5/1-26	ASME B40.1 (See 437-24)						DOCUMENT NOT REVIEWED
504-08	FLOWMETERS	MIL-M-2082	504i. 4/60-61	ASHR 41.8 SAE AS407B ASTM D2458						DOCUMENT NOT REVIEWED
504-09	CLINOMETERS	MIL-2-20061	504L. 6/70-73	SAE AS1162						DOCUMENT NOT REVIEWED
504-10	DRAFT & STRESS CALCULATING DEVICE	MIL-C-16065	504m. 7/22-25	ANSI S2.4						DOCUMENT NOT REVIEWED
505-01	HYDRAULIC PUMPS & HUDRAULIC MTRS	MIL-P-18111	505b.9 7/10-11	ANSI B93.6 SAE ARP 819						DOCUMENT NOT REVIEWED
505-02	LOCKWASHERS	FF-W-100	505b.10 8/38	SAE J489B						DOCUMENT NOT REVIEWED
505-03	GREASE	MIL-G-23549	505b.10 8/35	NO COM'L SPEC						NONE
505-04	ZINC DUST (200 MESH FINENESS)	TT-P-460	505b.10 8/36	NO COM'L SPEC						NONE

PAGE 33 COMMERCIALIZATION OF NAVY'S SENSITIVES-SUMMARY										
MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
505-05	SCREW THREAD COATING	MIL-S-22473	505b.10 8/56-57	NO COM'L SPEC (See 75-01)						NONE
505-06	OVRD DISCHARGE FITTINGS: SLEEVE & FLANGE	MIL-E-22200 TYPE MIL 310	505b.10 9/30.31	ANSI 1121						DOCUMENT NOT REVIEWED
505-07	VALVES	MIL-STD-777 MIL-STD-438	505c.9 11/30-36	ANSI B1634 (See 505g 10-29)	NONE	SAME	SAME	SAME	SAME	SUITABLE
505-08	SPRING HANGERS AND SWAYBRACES	MIL-P-15877	505c.3 15/31	UL 203 ANSI SP 58						DOCUMENT NOT REVIEWED
505-09	HOSE	NAVSHIPS NO 810-1385506	505c.6 16/66, 67	ANSI B93.59m						DOCUMENT NOT REVIEWED
505-10	MIL STD 777 MOLY-CHROM ALLOY STEEL PIPE	MIL-T-18165 CL	505 10/67	ASIM A335 ANSI B125.24	NONE	SAME	LESS QA	SAME	UNKNOWN	SUITABLE
505-11	MIL STD 777 COPPER PIPE	MIL-T-24107	505 10/67	ASIM B88	NONE	SAME	LESS QA	SAME	UNKNOWN	SUITABLE
505-12	MIL STD 777 NI CU PIPE	MIL-T-1368 CA A	505 10/67	ASIM B165	NONE	SAME	LESS QA	SAME	UNKNOWN	SUITABLE
505-13	MIL STD 777 CRES PIPE	MIL-P-1144	505 10/67	ASIM A312 ANSI B125.16	NONE	SAME	LESS QA	SAME	UNKNOWN	SUITABLE
505-14	MIL STD 777 RED BRASS PIPE	MIL-T-20168	505 10/67	ASIM B135	NONE	SAME	LESS QA	SAME	UNKNOWN	SUITABLE
505-15	MIL STD 777 COPPER #260 TUBE	MIL-T-20219	505 10/67	ASIM B135	NONE	SAME	LESS QA	SAME	UNKNOWN	SUITABLE

PAGE 34 COMMERCIALIZATION OF NAVY'S SENSORS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						ACTION
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	
505-16	MIL STD 777 STEAM RELIEF VALVE	MIL-V-20065	505 10/67	NO COM'L SPEC (1)						SEE (1)
505-17	MIL STD 777 GAS & O ₂ RELIEF VALVE	MIL-V-22549	505 10/67	NO COM'L SPEC (1)						SEE (1)
505-18	MIL STD 777 LIQUID RELIEF VALVE	MIL-V-24332	505 10/67	NO COM'L SPEC (1)						SEE (1)
505-19	MIL STD 777 GLOBE VALVES & CHR-MOL STL, 600# & 1500#	MIL-V-22094	505 10/67	MSS SP 42						DOCUMENT NOT REVIEWED
505-20	MIL STD 777 GLOBE VALVES CHR-MOL STL	MIL-V-22052	505 10/67	MSS SP 42						DOCUMENT NOT REVIEWED
505-21	MIL STD 777 GLOBE VALVES H.P. HYD & AIR	MIL-V-24109	505 10/67	MSS SP 42						DOCUMENT NOT REVIEWED
505-22	MIL STD 777 GATE VALVE STEEL	MIL-V-18110	505 10/67	API STD 600 STD 603, STD 606 MSS SP 42						DOCUMENT NOT REVIEWED
505-23	MIL STD 777 GATE VALVE BRONZE	MIL-V-1189	505 10/67	MSS SP 80						DOCUMENT NOT REVIEWED

(1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS

PAGE 35 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
505-24	MIL STD 777 CHECK VALVE BRONZE	MIL-V-17547	505 10/67	AWWA C508						DOCUMENT NOT REVIEWED
505-25	MIL STD 777 O2 & H2 3000 PSI VALVE	MIL-V-24439	505 10/67	SAE AS 1214 AS 1225						DOCUMENT NOT REVIEWED
505-26	MIL STD 777 BUTTERFLY VALVE 50/200 PSI	MIL-V-22133	505 10/67	VL 109 1 AWWA C508						DOCUMENT NOT REVIEWED
505-27	MIL STD 777 PLUG OR DISC GASOLINE CUT OUT VALVE	MIL-V-16468	505 10/67	NO COM'L SPEC						NONE
505-28	MIL STD 777 BALL VALVE 400/6000 PSI	MIL-V-22687	505 10/67	NO COM'L SPEC						NONE
505-29	MIL STD 777 FULL PORT VALVE BALL (OR) PLUG SEWAGE	MIL-V-24509	505 10/67	API STD 599						DOCUMENT NOT REVIEWED
505-30	LOCKING DEVICES	NAVSHIPS NO S4823- 1385502, S4824- 1385509	505c.2 13/46- 53	NO COM'L SPEC						NONE

PAGE 36 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
505-31	PIPE HANGER LINER MATERIAL	MIL-R-6855 CLASS II 60 DURO-METER ZZ-R-765 CLASS III 60 DURO-METER HH-P-1784 HH-P-466	505c.3 15/65-75	ANSI D1571 ANSI D315						DOCUMENT NOT REVIEWED
505-32	VALVE RESEATING MACHINES	NAVSHIPS NO. S4824-1385814 S4824-1385815 S4824-1385816 S4824-1385817 S4824-1385818 S4824-1385819	505e.4 21/70-72	NO COM'L SPEC						NONE
506-01	SOUND FITTINGS	NAVSHIPS NO. 810-1385791 810-1385848	506c.4/9-11	ANSI B16						DOCUMENT NOT REVIEWED
507-01	ADHESIVE	MIL-A-22895	507b.1/41, 42	SAE AMS3691 ANSI K68.1 ASTM D2560						DOCUMENT NOT REVIEWED

PAGE 37 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
507-02	IDENTIFICATION PLATES	MIL-P-15024 MIL-P-15024/5	507b. 1/48-50	SAE J298 ASME A13.1 (See 305-02)						DOCUMENT NOT REVIEWED
507-03	PLASTISOL (ADHESIVE COVERING FOR VALVE HAND-WHEELS)	MIL-P-20689	507d. 6/11-13	NO COM'L SPECS						NONE
507-04	CONTROL BOARDS	NAVSHIPS NO S2803-841123 S2803-841124	507g. 8/20-36	NO COM'L SPEC						DOCUMENT NOT REVIEWED
509-01	FIBROUS GLASS BLANKET INSULATION	MIL-I-22023	509 2/21	ASTM C971 C892 SAE AMS 3676A						DOCUMENT NOT REVIEWED
509-02	FIBROUS GLASS PIPE INSULATION	MIL-I-22344	509 2/22	ASTM F683 ANSI C552						DOCUMENT NOT REVIEWED
509-03	FIBROUS GLASS HARD BOARD INSULATION	MIL-I-742	509 2/24	ANSI C552						DOCUMENT NOT REVIEWED
509-04	CRES STL SHEET	QQ-S-766	509 2/42	(SEE 585-04) ASTM A240	NONE	SAME	LESS QA	SAME	SAME	SUITABLE
509-05	VAPOR BARRIER COATING COMPOUND	MIL-C-19993	509 2/45	NO COM'L SPEC						NONE

PAGE 38 COMMERCIALIZATION OF NAVY'S GENSPFDS-SUMMARY										
MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
509-06	ADHESIVE FIRE RESISTANT	MIL-A-3316	509 2/49	NO COM'L SPEC						NONE
509-07	SHEATHING AL PLATE	QQ-A-250/8 TY 5052	509 2/53	ASTM B-209 TY 5052	NONE	SAME	LESS QA	SAME	SAME	SUITABLE
509-08	ANIT-SWEAT PAINT	TT-C-492	509 2/57	NO COM'L SPEC						NONE
512-01	FANS VANE AXIAL & TUBE-AXIAL, FIXED & PORTABLE	MIL-F-18953	512 3/18	ANSI 507 UL 1128						DOCUMENT NOT REVIEWED
512-02	FANS, CENTRI-FUGAL FIXED & PORTABLE	MIL-F-19004	512 3/21	ANSI 507 UL 1128 (See 251-01)						DOCUMENT NOT REVIEWED
512-03	FANS, CIRC-ULATING, BRACKET, NON OSCILLATING	MIL-F-68	512 3/23	ANSI 507 UL 1128						DOCUMENT NOT REVIEWED
				SPECIFY COMM'L						SUITABLE AUXILIARY SHIPS
512-04	COOLING COIL DUCT & UNIT	MIL-C-2939	512 3/47	UL 883 ANSI 303						DOCUMENT NOT REVIEWED
512-05	FAN COIL	MIL-A-23798	512 3/50	UL 883 ANSI 883 ANSI 303						DOCUMENT NOT REVIEWED
512-06	PIPE & TUBE, CU NI	MIL-T-16420	512 3/55	ASTM B466	NONE	SAME	LESS QA	SAME	UNKNOWN	SUITABLE

COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
512-07	CONVECTION HEATER HOT H ₂ & STEAM	MIL-H-3117	512 4/9	ASHR 28 ASHR 13 ASHR 17						DOCUMENT NOT REVIEWED
512-08	ELECTRIC SPACE HEATER	MIL-H-22663	512 4/10	UL 823 UL 1025 ASHR 20						DOCUMENT NOT REVIEWED
512-09	ELECTRIC VENT DUCT HEATER	MIL-H-22594	512 4/12	UL 109G ARI280						DOCUMENT NOT REVIEWED
512-10	STEAM VENT DUCT HEATER	MIL-H-16235	512 4/14	ASHR 13						DOCUMENT NOT REVIEWED
512-11	UNIT STEAM HEATER AIR CIRCULATING	MIL-U-17293	512 4/16	ASHR 28 ASHR 13						DOCUMENT NOT REVIEWED
512-12	ELECTROSTATIC AIR FILTER	MIL-F-22963	512 4/63	NO COM'L SPEC						NONE
512-14	AIR ENVIRONMENT HIGH VELOCITY FILTER	MIL-F-16552	512 4/67	ARI 850						DOCUMENT NOT REVIEWED
512-15	FLAME ARRESTORS VENT EXH	MIL-F-17548	512 4/71	NO COM'L SPEC						NONE
512-16	DEHUMIDIFIER, SPACE MECHANICALLY REFRIGERATED, SELF CONTAINED	MIL-D-19947	512 5/45	ASHR 41 UL 474						DOCUMENT NOT REVIEWED
512-17	DESICCANT CONTAINERS, DEHUMIDIFIERS	MIL-D-3263	512 5/48	NO COM'L SPEC						NONE

PAGE 40 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
512-18	DIFFUSING TERMINALS	MIL-T-22576	512 5/60	NO COM'L SPEC						NONE
512-19	AUTO FIRE DAMPER CONT. ELECT	MIL-C-2212	512 6/28	IEEE-27, UL 845 or (1) (See 235-01)						DOCUMENT NOT REVIEWED SEE (1)
512-20	GALV SHEET STEEL	QQ-S-775	512 8/30	ASTM-A361,A444 A552, A526, A527, A528, A642, (See 251-02)	NONE	SAME	LESS QA	SAME	SAME	SUITABLE
512-21	HOT ROLLED STEEL	QQ-S-698	512 8/31	ASTM A109	NONE	SAME	SAME	SAME	SAME	QQ-S-698 IS CANCELLED SUITABLE
512-22	BLIND RIVITS	MIL-R-7885	512 8/51	SAE 1200						DOCUMENT NOT REVIEWED
512-23	BLIND RIVITS	MIL-R-24243	512 8/51	SAE 1200						DOCUMENT NOT REVIEWED
512-24	THREAD CUTTING SCREWS	FF-S-107	512 8/54	ASME B18.6						DOCUMENT NOT REVIEWED
512-25	CRES BARS	QQ-S-763	512 8/64	ASTM A276 (See 75-09)	NONE	SAME	LESS QA	SAME	UNKNOWN	SUITABLE
512-26	RUBBER CHLOROPRENE	MIL-R-6855	512 10/36	SAE AMS 3273C D1330						DOCUMENT NOT REVIEWED
512-27	TEMP REG-ULATORS	MIL-V-3155	512 11/28	NEMA DC 15 OR (1)						DOCUMENT NOT REVIEWED SEE (1)

(1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS

PAGE <u>41</u> COMMERCIALIZATION OF NAVY'S GENSI EDS-SUMMARY										
MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
512-28	HEATING/COOLING DUAL TEMP CONT. SW	MIL-R-16743	512 11/73	NEMA DC 15						DOCUMENT NOT REVIEWED SEE (1)
512-29	SWITCHES ROTARY	MIL-S-18396	512 12/36	ANSI RS 457						DOCUMENT NOT REVIEWED SEE (1)
512-30	ELECT CONT. AC & DC	MIL-C-2212	512 12/30	IEEE-27 NEMA UL-845 (See 235-01)						DOCUMENT NOT REVIEWED SEE (1)
512-31	SNAP ACT SWITCHES	MIL-S-15291	512 12/31	UL-20 (See 303-01)						DOCUMENT NOT REVIEWED SEE (1)
512-32	CONTROLLERS ELECT	MIL-F-18953	512 12/32	IEEE-27 NEMA UL-845 (See 512-01)						DOCUMENT NOT REVIEWED SEE (1)
512-33	TYPE BLAST TERMINALS	NAVSEA 804-860481	512 6/3	NO COM'L SPEC						SEE (1)
512-34	VENTILATION GREASE INTERCEPTOR HOOD	NAVSEA 805-1749098	512 6/9	NO COM'L SPEC						SEE (1)
512-35	BELLMOUTH INTAKES	NAVSEA 810-451223	512 7/9	NO COM'L SPEC						SEE (1)
516-01	REFRIGERATION	MIL-R-16743	516 1/43	UL 412 UL 427 (See 512-28)						DOCUMENT NOT REVIEWED
516-02	COMPRESSED GAS CYL	RR-C-910	516 2/31	ANSI 644 UL 644						DOCUMENT NOT REVIEWED

(1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS

PAGE <u>42</u> COMMERCIALIZATION OF NAVY'S GEN-SPEC'S-SUMMARY										
MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
516-03	OVERHEAD FANS REFRIGERATOR	MIL-F-151	516 6/19	SPECIFY COMM'L						SUITABLE
516-04	INSULATION CELLULAR FOAM IN PLACE	MIL-I-24172	516 8/22	ASTM C951						DOCUMENT NOT REVIEWED
516-05	PRESERVATION	MIL-W-18142	516 8/48	NO COM'L SPEC						NONE
516-06	SOLVENT TRICHLORO-TRIFLUOROETHANE	MIL-C-81302	516 9/41	NO COM'L SPEC						NONE
516-07	REFRIGERATORS	MIL-R-21098	516 11/55	UL 412 UL 427						DOCUMENT NOT REVIEWED
516-08	DRINKING WATER COOLER	MIL-C-24166	516 11/58	ANSI 399 ASHR CH 38						DOCUMENT NOT REVIEWED
516-09	REFRIGERATED DISPLAY CASE	MIL-D-19645	516 11/59	UL 412 UL 427						DOCUMENT NOT REVIEWED
516-10	ICE MAKING MACHINE	MIL-I-19012	516 11/60	ARI 810 ASHR 40 & 29 UL 565						DOCUMENT NOT REVIEWED
516-11	REFRIGERATOR & ICE MAKING MACHINES	MIL-R-19003	516 11/61	ARI 810 UL 412						DOCUMENT NOT REVIEWED
516-12	ICE CREAM FREEZER & SOFT TYPE DISPENSER	MIL-I-19915	516 11/62	UL 621						DOCUMENT NOT REVIEWED
516-13	MECHANICAL DEHUMIDIFIER	MIL-D-19947	516 11/63	ASHR 41 UL 474 (See 512-16)						DOCUMENT NOT REVIEWED

PAGE 43 COMMERCIALIZATION OF NAVY'S GENSIPEC-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
516-14	REFRIGERATED CABINET	MIL-D-19932	516 11/64	UL 412 UL 427						DOCUMENT NOT REVIEWED
516-15	WOOD (CREOSOTE) PRESERVATION PRACTICE	TT-W-571	516 12/5	NO COM'L SPEC						NONE
516-16	BULKHEAD PENETRATION	NAVSHIPS 810-1385899	516 2/63	NO COM'L SPEC						NONE
521-01	SPRINKLER HEADS	MIL-H-19387 TYPE I OR II CLASS I OR II	521d. 4/47, 48	UL 1474 ANSI 199						DOCUMENT NOT REVIEWED
521-02	CONTROL VALVES (FIRE PROTECTION)	MIL-V-17501	521d. 4/49, 50	UL 1486 UL 312 ANSI 753						DOCUMENT NOT REVIEWED
521-03	WASHDOWN NOZZLES	NAVSHIPS NO. 810-1385828 QQ-S-763 MIL-H-24146	521k. 10/10-26	NO COMM'L SPEC						NONE
521-04	EQUIPMENT FOR FIREPLUGS	ZZ-H-451 NAVSHIPS NO 810-1385711 810-1385901 810-1385834 810-1385836	521p. 10/10-26	ANSI 14 NFPA 14						DOCUMENT NOT REVIEWED

PAGE 44 COMMERCIALIZATION OF NAVY'S GENSTIECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
528-01	FITTING DECK DRAINS	810-1385789	528 3/50	NO COM'L SPEC (1)						See (1)
528-02	SCUPPER GAG VALVES	810-1385707	528 7/71	NO COM'L SPEC (1)						See (1)
528-03	GAG SCUPPER VALVE HULL FITTINGS	S4808-1385803 S4808-1385804	528 7/72	NO COM'L SPEC (1)						See (1)
528-04	SCUPPER EXT-ENSIONS	805-1508069	528 7/9	NO COM'L SPEC (1)						See (1)
528-05	PORTABLE SCUPPER	805-860296	528 7/17	NO COM'L SPEC (1)						See (1)
529-01	MALE QUICK DISCONNECT FITTINGS	MIL-C-27487	529c. 1/40-43	AGA 221.41 ANSI 221.41						DOCUMENT NOT REVIEWED
531-01	DISTILLING UNITS	MIL-D-18641	531a. 1/10-15	ANSI E133 ASME 144						DOCUMENT NOT REVIEWED
531-02	3-WAY SOLENOID OPERATED VALVE	MIL-V-16556	531b. 1/30	UL 1002						DOCUMENT NOT REVIEWED
532-01	INTERFACE STD FOR SHIPBOARD SYSTEMS	DOD-STD-1399	532 1/62	NO COM'L SPEC						NONE

(1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS

COMMERCIALIZATION OF NAVY'S SENSORS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
532-02	SCREW THD STD FOR FED SERV	FED-STD-H-28	532 2/32	NO COM'L SPEC						NONE
532-03	WATER METER	MIL-M-2082	532 2/52	AWWA-M6 AWWA-C700 (See 504-08)						DOCUMENT NOT REVIEWED
532-04	CU-NI ALLOY, ROD, FB & FORGINGS	MIL-C-15726	532 3/54	ASTM B402 B151 (See 243-01)	NONE	SAME	LESS QA	SAME	UNKNOWN	SUITABLE
532-05	GLASS REIN-FORCED TANK LAMINATE	MIL-T-19247 TANK	532 3/56	NO COM'L SPEC						NONE
532-06	POLYVINYL CHLORIDE SHEET TANK	L-P-535	532 3/61	ASTM D1248 ASTM D2103						DOCUMENT NOT REVIEWED
532-07	HOT WATER HEATERS STEAM NO TANK	MIL-H-22881	532 5/36	NO COM'L SPEC (1)						SFE (1)
532-08	DESALTER KITS	MIL-D-5531	532 10/42	NO COM'L SPEC						NONE
532-09	STRUCTURAL TANK CONNECT-ION	810-1385866	532 4/22	NO COM'L SPEC						NONE
532-10	FLOW METERS	S3803-921804	532 11/13	NO COM'L SPEC						NONE
534-01	STEAM TRAPS	MIL-T-960 MIL-T-2118	534a. 1/18-20	ANSI PTC 39.1						DOCUMENT NOT REVIEWED

(1) USCG OR ABS SPECIFICATIONS SUITABLE FOR AUXILIARY SHIPS

COMMERCIALIZATION OF NAVY'S SENSITIVE SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
534-02	DRAIN ORIFICE ASSEMBLY	MS-18301	534a. 1/18-20	ASTM D2458 ANSI B16.36 ASME B16.36						DOCUMENT NOT REVIEWED
534-03	FUNNELS	NAVSHIPS NO 810-1385913	534a. 1/56	NO COM'L SPEC						NONE
534-04	INSPECTION TANKS	NAVSHIPS NO.S4802-1385510	534d. 4/31, 32	NO COM'L SPEC						NONE
541-01	DIESEL FUEL JP-5	MIL-F-16884 MIL-T-5624	541b. 1/49-52	NO COM'L SPEC						NONE
541-02	FUEL HEATER	MIL-H-16313 TYPE B, C & D	541d.3 9/27-28	SAE AS143C						DOCUMENT NOT REVIEWED
541-03	HAND-OPERATED CHAIN HOISTS	MIL-H-904	541d.3 9/47	ANSI B30.11 B30.16						DOCUMENT NOT REVIEWED
541-04	FILTER SEPARATORS	MIL-F-15618 CLASS I	541d.3 10/45	API BULL 1581 ANSI 331						DOCUMENT NOT REVIEWED
541-05	FUELING CONNECTIONS; NIPPLE FLANGED ADAPTER CUTOUT VALVE WITH CAP AND CHAIN	S4824-841597 805-2213794 MIL-F-25896 MIL-C-8605	541d.3 11/65-70	NO COM'L SPEC						

PAGE 47 COMMERCIALIZATION OF NAVY'S SENSORS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
541-06	FEMALE SPLIT CLAMP HOSE	MIL-C-24356 MIL-H-370	541d.4 13/54-59	SAE J518C SAE J846						DOCUMENTS NOT REVIEWED
542-01	QUICK RELEASE RACKS (FOR STOWAGE OF GASOLINE)	NAVSHIPS NO. 810-4444641	542d.c 3/7-10	NO COM'L SPEC						NONE
542-02	NON-VORTEX BELLMOUTH FITTING	NAVSHIPS NO. 810-385792	542d. 5/4,5	NO COM'L SPEC						NONE
542-03	PROTECTIVE PIPE COVERS (FOR GASOLINE PIPING LOCATED OUTSIDE OF SHELL)	NAVSHIPS NO S1500-860085	542d. 6/32, 33	NO COM'L SPEC						NONE
542-04	FUELING/DE-FUELING HOSES	MIL-H-21291 MIL-H-370	542d. 6/48, 49	SAE AMS3386B SAE AMS3387C SAE AMS3389B (See 541-06)						DOCUMENTS NOT REVIEWED
542-05	HOSE REELS	MIL-R-15917	542d. 6/54	UL 47 NFPA 14 SAA AS1221						DOCUMENTS NOT REVIEWED
542-06	FLEXIBLE SPOUT SAFETY CAN	RR-S-30	542d. 7/28, 29	NO COM'L SPEC						NONE
542-07	CLEAVAGE TYPE INDICATING SYSTEM	NAVSHIPS NO S5501-841258	542g. 11/30-31	NO COM'L SPEC						NONE

COMMERCIALIZATION OF NAVY'S GENSI DES-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
551-01	AIR FLASKS	MIL-F-22606	551c.1 2/13	NO COM'L SPEC						NONE
551-02	AIR RECEIVERS	MIL-T-15301	551c.1 2/35, 36	NO COM'L SPEC						NONE
551-03	HIGH PRESSURE AIR REDUCING STATIONS	MIL-V-24272	551c.1 3/7,8	ISA RP4.2 ISA RP75.06						DOCUMENT NOT REVIEWED
551-04	AIR OPERATED HOISTS AND BRIDGE CRANES	MIL-F-82042	551C.6 7/7-9	ANSI B30.17 ASME B30.2.0						DOCUMENT NOT REVIEWED
551-05	AIR CONTROL PANELS	NAVSHIPS NO. 803-1385925	551c.6 7/28-30	NO COM'L SPEC						NONE
551-06	LOW POINT DRAIN PLUGS	MS-18229 MS-16142	551c.d 7/25-27	ASTM-A-105	NONE	SAME	SAME	SAME	SAME	SUITABLE
551-07	PNEUMATIC TOOL AIR OUTLETS	MIL-F-82042	551c.6 7/40-42	NO COM'L SPEC (See 551-04)						NONE
551-08	EMERGENCY BREATHING AIR SYSTEM	MIL-B-24222	551c.8 8/66-68	NO COM'L SPEC						NONE
551-09	SEAWATER-COOLED AFTER-COOLER	MIL-C-19713 CLASS II	551c.11 10/30-32	NFPA SEC9 AICHE E17						DOCUMENT NOT REVIEWED

PAGE 49 COMMERCIALIZATION OF NAVY'S SENSITIVE-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
551-10	AIR SUPPLY PIPING WITH FLEXIBLE HOSE CONNECTION, ROTARY UNION & CHECK VALVE ASSY IN ACCORDANCE WITH-	NAVSEA 551-5517537 551-5469867	551c.11 10/44-46	ANSI B93.59						DOCUMENT NOT REVIEWED
551-11	AIR COMPRESSORS	MIL-C-23961 MIL-C-19113	551d.1 13/67-72	ANSI PTC 10 ANSI PTC 9 API BULL 11						DOCUMENT NOT REVIEWED
551-12	CONTROLLERS	MIL-C-2212	551d.1 14/35, 36	(SEE 235-02)						DOCUMENT NOT REVIEWED
551-13	COMPRESSED AIR DEHYDRATORS	MIL-D-17847 CLASS I MIL-D-23523 TYPE I	551d.2 15/50-58	ARI 710 ARI 730						DOCUMENT NOT REVIEWED
551-14	HIGH PRESSURE DEW POINT INSTRUMENT & CONNECTION	MIL-I-24144	551e.2 17/34	ANSI S26						DOCUMENT NOT REVIEWED
551-15	IMPULSE FLASKS (TORPEDO TUBE SERVICE)	MIL-F-22606	551e.2 17/59-63	NO COM'L SPEC (See 551-01)						NONE
551-16	VENT-CHECK VALVE	MIL-V-23953	551e.2 18/60-62	ASTM B62 ASME B16.34	NONE	SAME	SAME	SAME	SAME	SUITABLE DOCUMENT NOT REVIEWED

COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
551-17	MANUALLY OPERATED CONTROL VALVES	MIL-V-24232	551e.2 19/8-12	ASTM B62	NONE	SAME	SAME	SAME	SAME	SUITABLE
551-18	SALVAGE AND GAGGING WRENCHES	NAVSHIPS NO 149189	551e.4 23/8-12	NO COM'L SPEC						NONE
551-19	ELECTRIC MOTOR	MIL-M-17060	551e.5 23/29	(See 302-02) ANSI MG-1 ANSI 674						DOCUMENT NOT REVIEWED
552-01	CYLINDERS (FOR STOWING NITROGEN)	MIL-F-22606	552b. 1/28-29	ANSI 644 (See 551-01)						DOCUMENT NOT REVIEWED
552-02	CYLINDERS (FOR STOWING OXYGEN)	RR-C-901	552b. 3/6	SAE AIR1059 UL 644						DOCUMENT NOT REVIEWED
552-03	OXYGEN REGULATOR	MIL-F-19180 TYPE C	552b. 3/8	UL 144 UL 252						DOCUMENT NOT REVIEWED
552-04	CARBON DIOXIDE CYLINDERS	RR-C-901	552b. 3/14, 15	UL 644 SAE AIR1059 (See 552-02)						DOCUMENT NOT REVIEWED
555-01	PORTABLE CO ₂ EXTINGUISHERS	MIL-E-24269	555b. 1/46, 47	NFPA 10L UL 154						DOCUMENT NOT REVIEWED
555-02	HALON 1301 FIRE EXTINGUISHING SYSTEM	MIL-E-24572	555c. 3/10-12	ANSI 12A P NFPA 16						DOCUMENT NOT REVIEWED

PAGE 51 COMMERCIALIZATION OF NAVY'S GENSIERS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
555-03	(AFFF) LIQUID CONCENTRATES	MIL-F-24385	555e. 6/55, 56	UL 162 NFPA SEC 18						DOCUMENT NOT REVIEWED
555-04	PROPORTIONERS	MIL-P-15208 TYPE FP-180	555e. 6/67, 68	ANSI 1017						DOCUMENT NOT REVIEWED
555-05	WRENCHES (FOR AFFF HOSE OUT-LET)	NAVSHIPS NO. 810-4444647	555e. 6/64, 65	NO COM'L SPEC						NONE
555-06	HYDRAULICALLY OPERATED STOP CHECK VALVE	MIL-V-15508	555e. 7/30-35	ASTM B61 ASTM A126	NONE	SAME	SAME	SAME	SAME	SUITABLE
555-07	ROOT VALVE AIR-ACTUATED CONTROL VALVE	MIL-V-18030	555g. 11/47-49	NO COM'L SPEC						NONE
556-01	HYDRAULIC FLUID	MIL-L-17672	556a. 1/16-18	NO COM'L SPEC						NONE
556-02	GASKETS (HYDRAULIC SYSTEM)	MIL-L-17672	556a. 2/18-21	ANSI B16.20 (See 556-01)						DOCUMENT NOT REVIEWED
556-03	COMPONENT PAINT	DOD-P-23236, CLASS I, II OR IV MIL-P-22808	556a. 2/27, 28	NO COM'L SPEC (See 244-06)						NONE

COMMERCIALIZATION OF NAVY'S GENSI EDS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
556-04	HEAT EXCHANGERS	MIL-C-15730	556b. 3/60-63	ARI 1060 NFPA SEC 9 (See 262-02)						DOCUMENT NOT REVIEWED
556-05	ROTARY ACTUATORS	MIL-A-24533	556b. 3/70	NO COM'L SPEC						DOCUMENT NOT REVIEWED
556-06	O-RING GLANDS BACK-UP RINGS	MIL-G-5514 MIL-R-5521 MS-28782 MS-28783	556c. 6/35-61	SAE AMS 7278E SAE J515A SAE AS3076						DOCUMENT NOT REVIEWED
561-01	STEERING GEARS	MIL-S-17803	561a. 1/12, 13	NO COM'L SPECS						NONE
562-01	RUDDERS & DIVING PLANES CROSS-SECT	MS-18230	562 1/14	NO COM'L SPECS (FROM NACA #460)						NONE
562-02	RUDDER & PLANE STOCK	MIL-S-23284 CL I	562 1/61	NO COM'L SPEC						NONE
562-03	RUDDER STOCK SLEEVE, SHRINK FIT	QQ-C-390 AL DS MIL-C-15345 AL D8	562 2/3	ASTM B21 B271 (See 244-03) ASTM B 143	NONE	NOT SUIT-ABLE SAME	SAME	SAME	SAME	NONE SUITABLE
562-04	LAMINATED PHENOLIC STAVES	MIL-P-18324	562 2/8	NO COM'L SPEC						NONE

PAGE 53 COMMERCIALIZATION OF NAVY'S SENSORS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
562-05	SPHERICAL ROLLER BEARINGS	FF-B-185	562 2/12	AFBMA (See 244-02)						DOCUMENT NOT REVIEWED
562-06	FLOATING BRZ RINGS	QQ-C-390 AL 910	562 2/20	ASTM B124, B271, B21, B584		NOT SUIT-ABLE				NONE
562-07	PRESSURE GREASE LUB	MIL-G-24139	562 2/30	NO COM'L SPEC						NONE
562-08	PACKING FOR BEARING SEALS 45 DUR RUBBER	MIL-R-900	562 2/43	ASTM D1330 SAE, AMS 3222E						DOCUMENT NOT REVIEWED
562-09	CLAD WELDING	MIL-STD-278	562 2/65	NO COM'L SPEC						NONE
562-10	STUDS & NUTS	QQ-N-286 COMP "A"	562 2/71	(See 244-04)						SUITABLE
562-11	RUDDER & DIVING PLANE SUPPORT ASSY CASTING HUB CASTING	MIL-S-15083 GR B	562 3/4	ASTM A27 (SEE 100-03) GR 60-30	NONE	SAME	LESS QA	SAME	UNKNOWN	SUITABLE
		GR 100-70	3/16	NO COM'L SPEC						NONE
562-12	RUDDER PLATE	MIL-S-22698	562 3/25	(SEE 100-01)						SUITABLE
562-13	RUDDER PLATE HY-80	MIL-S-16216	562 3/27	NO COM'L SPEC (See 70-02)						NONE
562-14	SYNTACTIC MATERIAL	MIL-S-24167	562 3/57	NO COM'L SPEC						NONE

PAGE 54 COMMERCIALIZATION OF NAVY'S SENSIBLES-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
563-01	HOSE COUPLING	MIL-F-19488	563g. 4/53, 54	ANSI B93.59M SAE						DOCUMENT NOT REVIEWED
570-01	DECK TIE-DOWN FITTING, TY I	805-1916300	570c 3/15	DWG NOT AVAILABLE						NONE
570-02	WIRE ROPE 6 x 37 IWRC	FED SPEC RR-W-410	570C 2/31	ASTM A603 SAE J959 API SAE 9A	NONE	SAME	LESS QA	SAME	SAME	SUITABLE DOCUMENT NOT REVIEWED DOCUMENT NOT REVIEWED
571-01	WIRE ROPE TY I, CL 3, CON 6, 1 WRC, IMP. P.STL	FED SPEC RR-W-410	571d 2/4	ASTM A603 (See 570-02) SAE J959 API SPE 9A	Less Strength	1/2"D=9% Less Strength	80% Less Q.A.	SAME	SAME	NOT SUITABLE , NONE DOCUMENT NOT REVIEWED DOCUMENT NOT REVIEWED
571-02	4" CIR DOUBLE BRAIDED SYN-THETIC ROPE	MIL-R-24536	571e. 4/28	SAE AMS 3813/3						DOCUMENT NOT REVIEWED
571-03	MANILA ROPE	FED SPEC T-R-605	571h 8/6	NO COM'L SPEC						SPECIFY GOOD COM'L QUALITY NO SPEC REQ'D
571-04	AIR FLASK 10 CU FT	MIL-F-22606	571j 11/65	ASME BPV VIII	NONE	SAME	SAME	SAME	UNCERTAIN	SUITABLE
571-05	ELECT - HYD WINCH GR "A" OR "B" SHOCK	MIL-W-17265	571j 12/16	NO COM'L SPEC						NONE
571-06	ELECT DRUM WINCH	MIL-W-15808	571j 12/21	CRANE MFG ASSOC OF AMERICA INC						DOCUMENT NOT REVIEWED

PAGE 55 COMMERCIALIZATION OF NAVY'S SENSES-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
571-07	DECK REVERS BOLTS/SOCKET	805-1639000	571d 2/20							GUIDANCE DWG NO ACTION
571-08	RIGGING INST PLATE	528-4542996	571j. 11/54	DWG NOT AVAILABLE						NONE
571-09	ELECTRIC-HYD WINCH	5210113 5210114 5210115	571j 12/18 12/19	DWG NOT AVAILABLE						NONE
571-10	ELECT GYPSY WINCH	MIL-W-15802	571j 12/23	CRANE MFG ASSOC OF AMERICA INC						DOCUMENT NOT REVIEWED
572-01	100# VERTICAL CONVEYOR	MIL-C-23218	572b 1/26	NO COM'L SPEC						NONE
572-02	4000#, 5'x 6' 60 FPM, STORES ELEVATOR	MIL-E-17807	572c 1/65	NO COM'L SPEC						NONE
572-03	TY II, SIZE B, CL 4 6000# MANUAL LIFT PALLET TRUCK	MIL-T-17491	572g 3/24	NO COM'L SPEC						SPECIFY GOOD COM'L QUALITY, NO SPEC REQ'D
572-04	BATTERY PALLET TRUCK TY EE, CL 2, SIZE 2, 6000#	MIL-T-17760	572g 3/27	ANSI B56						DOCUMENT NOT REVIEWED
572-05	GRAVITY CONVEYOR SECTIONS	805-1749069 1749078 1749070 1749079 1749074 1749075	572f 3/2 3/3 3/4 3/5 3/6 3/8	DWG NOT REVIEWED						NONE

PAGE <u>56</u> COMMERCIALIZATION OF NAVY'S SENSIBLES-SUMMARY										
MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
572-06	450# 2 WHEEL HAND TRUCK	805-1749105	572g 3/21	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
573-01	TRUCK GUARDS	805-1749105	572g 3/21	DWG NOT REVIEWED						NONE
573-02	ELEC HYD OR ELEC MECH CARGO CRANE	MIL-C-17933	573c 2/33	ANSI B30 CRANE MFG ASSOC OF AMERICA INC						DOCUMENT NOT REVIEWED
573-03	MANUAL LIFT PALLET TRUCK	MIL-C-17491	573d 2/69	(See 572-03)						SPECIFY GOOD COM'L QUALITY, NO SPEC REQ'D
573-04	BATTERY PALLET TRUCK	MIL-T-17760	573d 2/70	(See 572-04) ANSI B56						DOCUMENT NOT REVIEWED
573-05	BATTERY POWERED SIT DOWN 4000# FORK LIFT	MIL-T-21869/21	573d 2/73	ANSI B56						DOCUMENT NOT REVIEWED
573-06	BATTERY POWERED STAND UP 4000# TY EE SIZE V	MIL-T-40629	573d 2/75	ANSI B56						DOCUMENT NOT REVIEWED
573-07	CARGO ELEVATOR	MIL-E-17807	573e 3/4	NO COM'L SPEC (See 572-02)						NONE
573-08	3000# VERTICAL CONVEYOR	MIL-C-23842	573f 3/57	NO COM'L SPEC						NONE

PAGE 57 COMMERCIALIZATION OF NAVY'S SENSORS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN- ABILITY	SUPPORT AVAILABILITY	ACTION
573-09	LOW HEAD ROOM, MANUAL CHAIN HOISTS	MIL-H-904	573g 4/34	ANSI B30.11, B30.16, B30.17 (See 541-03)						DOCUMENT NOT REVIEWED
573-10	ELECTRIC HOISTS	MIL-H-15317	573g 4/46	ANSI B30.11 B30.16 B20.17						DOCUMENT NOT REVIEWED
573-11	PALLET FLAT STRAPPING	FED-SPEC QQ-S-781	573i 5/8	ASTM D3950 PART 20						DOCUMENT NOT REVIEWED
573-12	CLASS 1, TY D, STYLE 2, HAND-OPERATED HOIST	MIL-H-904	573j 5/16	ANSI B30.11, B30.16, B30.17 (See 541-03)						DOCUMENT NOT REVIEWED
581-01	ELEC HYDR TYPE BLOWER ANCHOR WINDLASSES	MIL-W-19623	581 1/40	NO COM'L SPEC						NONE
581-02	STERN WINCH	MIL-W-15808	581 1/55	(SEE 571-06) CMAAI						DOCUMENT NOT REVIEWED
581-03	REVERSIBLE HYD MOTOR	MIL-P-17869	581 1/57	NO COM'L SPEC						NONE
581-04	DK & SHELL BOLSTER WELDMENT	MIL-S-15083 GR B	581 2/39	(SEE 100-03) ASTM A-27 GR 60-30	NONE	SAME	LESS QA	SAME	UNKNOWN	SUITABLE
581-05	BELLMOUTHS	MIL-S-15083 GR B	581 2/58	(SEE 100-03) ASTM A-27 GR 60-30	NONE	SAME	LESS QA	SAME	UNKNOWN	SUITABLE

PAGE 59 COMMERCIALIZATION OF NAVY'S GENSIEDS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
583-02	DOLLY STOWAGE	804-1339000 1339002 1339004	583b 2/44 2/46	DWG NOT REVIEWED						NONE
583-03	TRIPPING LINE 3" CIR, FIBER ROPE POLYESTER STAPLE WRAP	MIL-R-24537	583c 3/33	NO COM'L SPEC						NONE
583-04	GRAVITY DAVITS & WINCHES	MIL-D-17762	583d 4/20 4/39	CRANE MFG ASSOC OF AMERICA INC						DOCUMENT NOT REVIEWED
583-05	3½ & 4½ CIR DOUBLE-BRAIDED NYLON ROPE BOAT HANDLING	MIL-A-24050	583e 4/57	NO COM'L SPEC						NONE
583-06	MK6, 25 MAN INFLATABLE LIFEBOAT	MIL-L-24489	583f 4/62	NO COM'L SPEC						NONE
583-07	RAYMOND QUICK RELEASE HOOKS	803-5000941	583d 3/64	NO COM'L SPEC						NONE
583-08	DAVIT SPANLINE	803-5184124	583d 4/7							NONE
583-09	CRESCENT TYPE DAVITS	S8201-860075 805-1873016	583d 4/34	DWG NOT REVIEWED						NONE
583-10	CLOSED CHOCKS	805-1843363	583d 4/51	DWG NOT REVIEWED						NO SPEC REQUIRED, SPECIFY GOOD COMMERCIAL QUALITY

COMMERCIALIZATION OF NAVY'S SENSORS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
583-11	LIFEBOAT STOWAGES	803-5001024 803-4001025	583f 4/75 583g 5/26	DWG NOT REVIEWED						NONE
584-01	BOW DOOR & RAMP, CL 1, 2 & 3 HYD PLANT	MIL-P-17869	584b 1/69	NO COM'L SPEC (See 581-03)						NONE
584-02	BOW RAMP WINCH, ELECT DECK RAMP DOUBLE DRUM DOUBLE GYPSY	MIL-W-15808	584b 2/17 2/37	CRANE MFG ASSOC OF AMERICA INC (SEE 571-06)						DOCUMENT NOT REVIEWED
584-03	BOW RAMP GASKETS	MS-15217 MS-16720	584b 1/44	NO COM'L SPEC						NONE
585-01	CYLINDRICAL MASTS, SUBS & SNORKEL	MIL-M-19852	585 1/32							VOID SPEC - CANCELLED 5/29/81
585-02	CYLINDRICAL MASTS, SUBS & SNORKEL	MIL-S-867 CL II & CL III	585 1/32	ASTM A743 A744 GR CF-8C GR CF-8M	NONE	SAME	LESS QA	SAME	SAME	SUITABLE
585-03	CYLINDRICAL MASTS, SUBS & SNORKEL	MIL-T-15471	585 1/32	NO COM'L SPEC						NONE
585-04	CYLINDRICAL MASTS, SUBS & SNORKEL	QQ-S-766 CL 316L	585 1/32	ASTM A240 (See 162-02)	NONE	SAME	LESS QA	SAME	SAME	SUITABLE

PAGE 61 COMMERCIALIZATION OF NAVY'S SENSIBLES-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
585-05	MAST PLASTIC LAMINATE	MIL-P-17549 GR 1	585 1/38	ASTM D3841						DOCUMENT NOT REVIEWED
588-01	ELEVATOR HYD FLUID FIRE PROOF	MIL-H-19457	588a 1/70	SAE AMS 3150C						DOCUMENT NOT REVIEWED
588-02	AIRCRAFT ELEVATOR HYD FLUID PACKING & SEALS	MIL-G-22050 MIL-R-83248	588a 1/71	SAE AMS 3220D ANSI B93.58M						DOCUMENT NOT REVIEWED
588-03	AIRCRAFT ELEVATOR DK EDGE WHEEL STOP HANDLING	MIL-H-46865 MIL-STD 1472	588a 2/38							DOCUMENT NOT REVIEWED
588-04	AIRCRAFT ELEVATOR RUBBER BUMPER	MIL-C-882	588a 2/52	SAE AMS 3273C						DOCUMENT NOT REVIEWED
588-05	WIRE ROPE TY IV CL 3 FLAT STRAND CONT 2 6 x 30, STY G RH, LONG LAY IWCR	FED-SPEC RR-W-410	588a 3/410	SAE J959 (SEE 570-01)						DOCUMENT NOT REVIEWED
588-06	WIRE ROPE SHEAVES SH & PLATE	MIL-S-16113	588a 3/44	ASTM A242 & A588	NONE	SAME	HARDER TO FABRICATE & WELD CORRECTLY	SAME	UNKNOWN	SUITABLE
	CASTING	MIL-S-15083		ASTM A27 & A148 (See 100-03)	NONE	SAME	SAME	SAME	UNKNOWN	SUITABLE

COMMERCIALIZATION OF NAVY'S SENSORS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
588-07	WARNING HORN TY 1C/H8S4 AIRCRAFT ELEVATOR	MIL-A-15303	588a 4/21	ANSI 464 NEMA SB27 (See 430-04)						DOCUMENT NOT REVIEWED
588-08	AIRCRAFT ELEVATOR PUMP PLANT CL 1 PUMPS VAR DISPL	MIL-P-17869	588a 4/42 4/66	(See 584-03) NO COM'L SPEC						NONE
588-09	HYD FLUSH & CLEAN	MIL-STD-419	588a 5/51	NO COM'L SPEC						NONE
588-10	HYD FLUID SAMPLING VLV	MIL-V-81940	588a 5/52	NFP B93.19						DOCUMENT NOT REVIEWED
588-11	HYD COOLER TYPE A SHELL & TUBE OIL IN SHELL	MIL-C-15730	588a 5/60	NFP SEC 9-3 (See 262-02)						DOCUMENT NOT REVIEWED
588-12	DISPOSABLE HYD FILTER TY I SINGLE ELEMENT	MIL-F-24402	588a 6/40 6/41	NO COM'L SPEC						NONE
588-13	AIRCRAFT TIE DOWN	MIL-S-18957	588d 9/56	NO COM'L SPEC						NONE
588-14	HEAT-RESISTANT ALUMINUM PAINT 1200°F	FED SPEC TT-P-28	588f 10/58	NO COM'L SPEC						NONE
588-15	HUMAN FACTOR ENG FOR HELI-COPTER CONTROL STATION	MIL-H-46855	588n 13/12	NO COM'L SPEC						NONE

PAGE 63 COMMERCIALIZATION OF NAVY'S GEN-SPEC'S-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
588-16	POTABLE WHEEL STOPS HUMAN ENGR DESIGN	MIL-STD-1472	588a 2/38	(SEE 588-03) NO COM'L SPEC						NONE
588-17	TIMING METERS, HYD PUMP AIR-CRAFT ELEVATOR	MS-17325-2	588a 4/58	NO COM'L SPEC						NONE
588-18	STRUCTURAL DESIGN PROCEDURES, AIR-CRAFT ELEVATORS	NAVSEA MANUAL 0916-LP-045-7010	588a 2/18	PROCEDURE NOT AVAILABLE						NONE
588-19	TIE-DOWN FITTING, INSTALL AIR-CRAFT DECK FITTING	805-1916300	588e 9/56, 59 9/74 12/69	DWG NOT REVIEWED						NONE
588-20	HIGH POINT, SECURING FITTINGS, HELICOPTER	804-4563131	588m 13/3	DWG NOT REVIEWED						NONE
593-01	SEWAGE COMMNUITOR	MIL-S-24603	593 1/41	ANSI B71.6-82						DOCUMENT NOT REVIEWED
593-02	ASPIRATOR PUMPS, SEWAGE	MIL-P-24475	593 2/12	NO COM'L SPEC						NONE
593-03	LATEX CEMENT	MIL-D-21631	593 3/33	NO COM'L SPEC						NONE
593-04	POLYURETHANE PLASTIC	MIL-P-21929	593 3/41	NO COM'L SPEC (See 245-02)						NONE

PAGE 65 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY										
MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
602 01	HULL LABEL PLATE MATERIAL	MIL-P-15024, MIL-M-43719, MIL-A-22895, L-P-387	602g. 6/49, 7/43, 7/67, 602h. 9/7	NO COM'L SPEC (SEE 305-02) (SEE 507-01)						NONE
602 02	PAINT	TT-E-489 TT-E-490	602i. 10/43 & 44	NO COM'L SPEC						NONE
604 01	PADLOCKS	MIL-L-15596, MIL-P-17802, FF-P-110	604a. 2/44, 604b. 2/55	UL-768 UL-437						DOCUMENT NOT REVIEWED
604 02	TAGS	FF-T-77	604d. 3/25	NO COM'L SPEC						NONE
612 01	WIRE ROPE	RR-W-410	612c. 2/39, 41	SEE 571-01						
612 02	WIRE ROPE FITTINGS	MIL-S-21433 RR-C-271	612c. 2/60 3/17	AASH-M269						DOCUMENT NOT REVIEWED
612 03	NON-METALLIC ROPE	MIL-R-30500, MIL-R-24050	612c. 3/7, 8	NO COM'L SPEC						NONE
612 04	TUBING, LIFE-RAILS	WW-T-700/5, MIL-P-1144, MIL-T-6735	612c. 4/31, 612d. 5/62, 4/73	ANSI-B429 ANSI-B241 ANSI-A271 ANSI-A376 (SEE 100-09)						DOCUMENT NOT REVIEWED

PAGE 66 COMMERCIALIZATION OF NAVY'S SENSIEDS-SUMMARY										
MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
612 05	LIFE LINES, LIFERAILS, & AWNINGS	805-1409910, 805-1409911, 805-1409912, 805-1409913, 805-1409914	612 b. 1/58, 59	NO COM'L SPEC (2)						SEE (2)
612 06	AWNING INSTAL-LATION	805-1629553, 805-1629554	612 b. 1/64, 65	NO COM'L SPEC						USE COM'L PRACTICE
612 07	LIFERAILS, LIFELINES, etc. (NON-METALLIC)	803-4354051, 803-5000903, 803-5000938, 803-5184097	612b. 1/71	NO COM'L SPEC (2)						SEE (2)
613 01	PELICAN HOOK	S1801-860234	613a. 1/29	NO COM'L SPEC						USE COM'L PRACTICE
613 02	WIRE ROPE	RR-W-410	613a. 6/13	(SEE 612-01)						
613 03	WIRE ROPE FITTINGS	FF-T-791 MIL-S-21433, RR-S-550	613a. 1/30, 33, 41	(SEE 612-02)						

(2) USCG OR ABS SPECIFICATIONS SUITABLE FOR ALL SHIPS

COMMERCIALIZATION OF NAVY'S SENSES-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
613 04	CANVAS (COATED)	MIL-C-43006	613a. 1/43	NO COM'L SPEC						NONE
613 05	COTTON CLOTH	CCC-C-430	613 e. 2/66	NO COM'L SPEC						NONE
613 06	CANVAS	CCC-C-428	613e. 3/10	NO COM'L SPEC						NONE
613 07	PELICAN HOOK	S1801-860334	613a. 1/29	NO COM'L SPEC						USE COM'L PRACTICE
621 01	JOINER BHDS	805-1749274, 804-4623540	621a. 1/52, 53, 55	NO COM'L SPEC						USE COM'L PRACTICE
621 02	EXPANDED METAL BHDS	805-1649742	621a. 2/30	NO COM'L SPEC						USE COM'L PRACTICE
622 01	LADDERS, HANDRAILS, GRATINGS (NON-METALLIC)	803-5184098, 803-5184099, 804-4477915, 804-4477927	622a. 1/39, 40	NO COM'L SPEC						USE COM'L PRACTICE
622 02	INCLINED LADDERS	S1604-860039-41 805-1749113-4	622b. 1/48	NO COM'L SPEC						USE COM'L PRACTICE

PAGE 68 COMMERCIALIZATION OF NAVY'S SENSIBLES-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
622 03	VERTICAL LADDERS	S1604-860091 805-1360280	622b. 2/19	NO COM'L SPEC						USE COM'L PRACTICE
622 04	GANG PLANK	805-179049	622b. 3/7	NO COM'L SPEC						USE COM'L PRACTICE
622 05	JACOBS LADDERS	805-1111431	622b. 3/12	NO COM'L SPEC						NONE
622 06	PERFORATED PLATING	805-921931	622b. 3/51	NO COM'L SPEC						NONE
622 07	HANDRAILS	S1604-860040 805-1749113	622b. 5/69, 70	NO COM'L SPEC						NONE
622 08	LADDERS, JACOB	MIL-L-221	622b. 3/16	USCG 46CFR 160.017 (2)						SUITABLE
622 09	FLOOR PLATES	QQ-F-461	622e. 3/50	NO COM'L SPEC						SPECIFY "GOOD COMMERCIAL QUALITY" NO SPEC REQUIRED
622 10	GRATINGS	MIL-G-18015, MIL-G-18014	624c. 3/58, 60	NO COM'L SPEC						SPECIFY "GOOD COMMERCIAL QUALITY" NO SPEC REQUIRED
624 01	GASKETS, SILI- CONE CORE	MIL-G-17927	624b. 3/20	NO COM'L SPEC						NONE
624 02	GASKETS, SYN- THETIC RUBBER	MIL-R-15624	624b. 3/21	NO COM'L SPEC						NONE

(2) USCG OR ABS SPECIFICATIONS SUITABLE FOR ALL SHIPS

COMMERCIALIZATION OF NAVY'S GENSI ES-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN- ABILITY	SUPPORT AVAILABILITY	ACTION
624 03	GASKETS, SILI- CONE RUBBER	ZZ-R-765	624b. 3/22	SAE AMS 32XX (See 505-31)			.			SPECIFY APPROPRIATE SAE SPEC BASED ON DURO- METER & CHEMICAL RE- SISTANCE NEEDED
624 04	GASKETS, RUBBER	MIL-R-900	624c. 4/20	NO COM'L SPEC (See 562-08)			.			NONE
624 05	DOOR CLOSERS	FF-H-121	624c. 4/34	ANSI A156.4			.			DOCUMENT NOT REVIEWED, SPECIFY GOOD COM'L QUALITY
624 06	CHAIN HOIST	MIL-H-904	624d. 8/67	(SEE 541-03) ANSI B30.11 ANSI B30.16			.			RETAIN MIL SPEC FOR COMBAT SHIPS, SPECIFY GOOD COMMERCIAL QUALITY FOR AUX. SHIPS, DOCUMENT NOT REVIEWED
624 07	GASKET, SYNTHETIC RUBBER	MIL-R-15624	624f. 10/58	SAME AS 624-02						NONE
624 08	GASKETS	MIL-G-1149	624f. 10/60	SAE AMS 3200D			.			SPECIFY APPROPRIATE SAE SPEC BASED ON DUROMETER & CHEMICAL RESISTANCE NEEDED
624 09	GASKETS	MIL-C-6183	624f. 10/61	SAE AMS 3250E- AMS 3251E- AMS 3252E-			.			SPECIFY APPROPRIATE SAE SPEC BASED ON DUROMETER & CHEMICAL RESISTANCE NEEDED

PAGE 70 COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
624 10	DOORS, JOINER DOORS, EXPANDED METAL	805- 1642434, 805- 1642752, 805- 1649742, 805- 1649743	624c. 5/26 7/3	NO COM'L SPEC						SPECIFY GOOD COM'L PRACTICE
624 11	MANHOLES, FLUSH MANHOLES, RAISED	805- 1480210/ 1626726/ 1647868/ 1626698/ 1480210	624c. 10/14, 17,18, 23	NO COM'L SPEC						SPECIFY GOOD COM'L PRACTICE
631 01	PAINT	DOD-P- 24555, MIL- P-24441, MIL-C- 16173, NATO CODE C-620	631a. 1/17,28 631c. 1/63,64	ANSI C213						DOCUMENT NOT REVIEWED
631 02	PAINT, PRE- TREATMENT & PRIMING	TT-P-66*, DOD-P- 21035, MIL-C- 11796, MIL- C-5541, MIL-Z- 23377, TT- V-119, MIL- I-24391, MIL-C- 18265, MIL- T-22361	631e. 4/32, 5/7,14, 25,47, 50,56, 63	SAE AMS 3132D, ASTM C834, ASTM C920, SAE AMS 3087E						DOCUMENT NOT REVIEWED

PAGE <u>71</u> COMMERCIALIZATION OF NAVY'S GENSPECS-SUMMARY										
MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
631 03	PAINT, TOPSIDE	TT-E-490 MIL-P-24441	631g. 6/73, 7/54	NO COM'L SPEC						NONE
631 04	COATINGS-TANKS VOIDS, BILGES	MIL-P- 4 24441, MIL- L-315*, MIL-C- 1613*, MIL- S-2417*	631 21/8, 47 64, 23/ 22	NO COM'L SPEC						NONE
632 01	ZINC COATING	DOD-P-23236	632c. 1/56	(SEE 244-06)						
634 01	RUBBER MATS	ZZ-M-42, MIL-M-910, DDD-M-156	634b. 3/26, 27 28	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
634 02	CARPET	DDD-C-95	634b. 4/14	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
635 01	INSULATION (BLOCK TYPE)	MIL-I-2819	635b. 2/44	AASH M230 ANSI C517, 532, 533, 552, 578, 612, 656 P557						DOCUMENT NOT REVIEWED
635 02	INSULATION (FOAM TYPE)	MIL-P-15280, MIL-I-24172	635b 2/47	ANSI C591 & 610, ASTM C 951 (See 516-04)						DOCUMENT NOT REVIEWED
635 03	CEMENT (INSULATION)	MIL-C-2861	635b. 2/59	ASTM C195, 196, 449						DOCUMENT NOT REVIEWED
635 04	CEMENT (FINISHING)	SS-C-160	635b. 2/60	SAME AS 635-03						DOCUMENT NOT REVIEWED

PAGE 72 COMMERCIALIZATION OF NAVY'S SENSPECTS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
635 05	ACOUSTIC BOARD	MIL-A-23054	635c. 3/1	ASTM C208, 209, 532, 612, 640, 656						DOCUMENT NOT REVIEWED
636 01	FELT(ZN CR IMPREG.)	MIL-G-20241	636c. 2/11	ASTM C553						DOCUMENT NOT REVIEWED
640 01	LETTER COLLECTION BOXES	805-1629807	640e. 3/75	NO COM'L SPEC						DOCUMENT NOT REVIEWED
644 01	SPRINKLER HEAD	MIL-H-19387	644b. 1/64	NFPA SEC 15 & 17 (See 521-01)						DOCUMENT NOT REVIEWED
644 02	SHOWER HEAD EYE/FACE BATH	WW-P-541/7	644c. 2/13,14	ANSI Z358.1						DOCUMENT NOT REVIEWED
644 03	FAUCET	MIL-F-163	644e. 3/19	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
644 04	MISC ACCESSORIES (PAPER TOWEL DISPENSER SOAP DISH etc.)	WW-P-541	644e. 3/22,24,31,33,38	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
644 05	HAND DRYER	W-H-50	644e. 3/57	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
644 06	SHOWER OUTFIT	MIL-S-965	644e. 4/3	ANSI 1016						DOCUMENT NOT REVIEWED

PAGE 73 COMMERCIALIZATION OF NAVY'S SENSES-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
644 07	SINK	MIL-S-2041	644e. 4/20	ANSI A112.19 3						DOCUMENT NOT REVIEWED
644 08	SERVICE SINKS	MIL-S-2143	644d. 4/36	SAME AS 644-07						DOCUMENT NOT REVIEWED
644 09	URINAL FLUSH-ING VALVE	MIL-V-15020	644e. 4/52	ANSI 1002						DOCUMENT NOT REVIEWED, SPECIFY GOOD COMMERCIAL QUALITY
645 01	GRINDER	W-G-656	645f. 6/40	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
645 02	SEWING MACHINE & STAND	oo-S-256	645 f. 6/47	NO COM'L SPEC						NONE
645 03	WISE	GGG-V-410	645f. 6/53	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
645 04	RACK, DOUGHNUT STOWAGE	805-1631454	651 4/24	NSF SPECS						DOCUMENT NOT REVIEWED, SPECIFY GOOD COMMERCIAL QUALITY
645 05	SHEET PANS	805-1631454	645 4/5	NSF SPECS						DOCUMENT NOT REVIEWED, SPECIFY GOOD COMMERCIAL QUALITY
651 01	FILE CABINET	805-1638844	651c. 7/41	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
651 02	CONVECTION OVEN	MIL-D-43633	651c. 3/74, 5/7	NAT'L SANI-TATION FDN STD NO. 4						DOCUMENT NOT REVIEWED, SPECIFY GOOD COMMERCIAL QUALITY

PAGE 74 COMMERCIALIZATION OF NAVY'S SENSIBLES-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
651 03	FOOD MIXER	OO-M-38	651c. 4/71, 5/7	NSF STD 2 & 8 UL 73, UL 982						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 04	PAN DISPENSER	MIL-D-40631	651c. 4/10, 5/73	NSF STD 2 & 4						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 05	SCALE, BEAM & DIAL INDICATING	AAA-S-108	651c. 4/12	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
651 06	DOUGH-DIVIDING MACHINE	MIL-D-3886	651c. 4/14	BAKING IND. SANITATION STDS COMM (BISSC) STD 8						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 07	DOUGH SHEETER	MIL-D-2467	651c. 4/16	BISSC STD 13 UL 73, UL 982						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 08	DOUGHNUT CUTTER/FRYER	OO-D-582	651c. 4/19	BISSC STD 16 & NSF STD 14 UL 197						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 09	DOUGH MIXER (HORIZONTAL)	MIL-D-10921	651c. 4/29	BISSC STD 6 UL 73, UL 983						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 10	KETTLE, STEAM JACKETED	RR-K-195	651c. 4/25, 5/19	NSF STD 4 & ASME SECT VIII, DIV I						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED

COMMERCIALIZATION OF NAVY'S GENSIECS-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
651 11	DOUGH TROUGH	MIL-D-13053	651d. 4/31	BISSC STD 2						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 12	SLICER BREAD	MIL-B-43886	651c. 4/48	BISSC STD 13 UL 73						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 13	REFRIGERATOR	MIL-R-21098	651c. 4/18, 5/14,58 6/56	NSF STD 7-66 UL 471						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 14	FRYER, DEEP FAT	S-F-695	651c. 5/8	NSF STD 2 & 4 UL 197						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 15	GRIDDLE	MIL-G-2338	651c. 5/13 5/51	NSF STD 2 & 4 UL 197						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 16	FREEZER	MIL-R-21098	651c. 5/15	NSF STD 7-66 UL 471						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 17	CUTLERY RACK	MIL-R-40607	651c. 5/16, 6/55	NSF STD 2						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 18	MEAT SLICING MACHINE	OO-M-280	651c. 5/17, 35,6/52	NSF STD 8 UL 982						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED

PAGE 76 COMMERCIALIZATION OF NAVY'S SENSITIVE-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
651 19	SCALE BEAM INDICATING	AAA-S-115	651c. 5/23	NATIONAL BUR OF STDS (NBS) HANDBOOK 44						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 20	RANGE, CONVECTION OVEN	MIL-R-43954	651c. 5/26	NSF STD 4						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 21	COFFEE MAKER	W-C-500	651c. 5/27	NSF STD 4						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 22	INTERMITTENT TOASTER	W-T-550	651c. 5/28	NSF STD 4						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 23	WAFFLE MAKER	MIL-W-40110	651c. 5/29	NSF STD 4						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 24	DISHWASHER, UNDERCOUNTER	OO-D-1390	651c. 5/30	NSF STDS 3, 5 and 29 UL 929						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 25	VEGETABLE PEELER	OO-V-185	651c. 5/33, 7/9	NSF STD 8 & AMERICAN SOC OF SANITARY ENGRG (ASSE) STD 1009 UL 982						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 26	FOOD CUTTER	MIL-F-43402	651c. 5/34, 7/16	NSF STD 2 & 8 UL 982						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 27	JET SPRAY CLEANER	MIL-C-28605	651c. 5/36	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY

PAGE 77 COMMERCIALIZATION OF NAVY'S SENSES-SUMMARY										
MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
651 28	SHELVING	MIL-F-902	651c. 5/39, 5/41	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
651 29	SINK HEATER	MIL-H-43895	651c. 5/40	NO COM'L SPEC UL 1453						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 30	TOASTER CONTINUOUS	S-T-540	651c. 5/42	NSF STD 4 UL 197						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 31	COFFEE URN	MIL-U-43263	651c. 5/43, 6/11	NSF STD 2 & 4 UL 197						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 32	MEAT TENDERIZING MACHINE	MIL-M-17312	651c. 5/44, 6/11	NSF STD 8 UL 982						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 33	MEAT GRINDER	OO-G-667	651c. 5/45, 6/51	NSF STDS 8 & C2 UL 982						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 34	FOOD SHAPING MACHINE	MIL-M-40163	651c. 5/46, 6/64	NSF STDS 8 & C2						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 35	GARBAGE CAN	RR-C-82	651c. 5/74, 6/50	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 36	COOKER, HOT DOG	MIL-G-43817	651c. 5/50	NSF STD 4 UL 197						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED

PAGE 78 COMMERCIALIZATION OF NAVY'S GENSERVICES-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
651 37	HOT FOOD WELL	MIL-W-43896	651c. 5/52	NSF STD 4						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 38	CONVEYER TOASTER	S-T-540	651c. 5/53	SEE 651-30						
651 39	MICROWAVE OVEN	S-O-1425	651c. 5/54	UL 923 NSF STD 4						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 40	DISPENSER, BOWL DISPENSER, PLATE	MIL-D-40631	651c. 5/55, 5/56	NSF STD 2 & 4						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 41	SOFT ICE CREAM DISPENSER	MIL-I-43705	651c. 5/66, 6/21	NSF STD 6 UL 621						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 42	COLD FOOD COUNTER	MIL-C-43300	651c. 5/71, 6/9	NSF STD 2						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 43	ICE & WATER DISPENSER	MIL-I-43682	651c. 6/10	NSF STD 12						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 44	MILK DISPENSER	OO-D-450	651c. 6/12	NSF STD 20						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 45	BEVERAGE DIS- PENSER	MIL-D-82035	651c. 6/13	NSF STD 18						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED

PAGE 79 COMMERCIALIZATION OF NAVY'S SENSIBLES-SUMMARY										
MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
651 46	CARBONATED BEVERAGE DISPENSER	MIL-D-43738	651c. 6/15	NSF STD 18						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 47	HOT CHOCOLATE DISPENSER	MIL-D-43715	651c. 6/17	NSF STD 18						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 48	ICED TEA DISPENSER	MIL-D-43845	651c. 6/18	NSF STD 18						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 49	CUP/GLASS DISPENSER	MIL-D-40631	651c. 6/19	SEE 651-02						
651 50	COFFEE MAKER	W-C-500	651c. 6/25, 8/46	SEE 651-21						
651 51	TRAY DISPENSER (MOBILE TYPE)	MIL-D-40631	651c. 6/27	SEE 651-02						
651 52	FOOD CONTAINER	MIL-F-43392	651c, 6/54, 7/15	NSF STD 2						SPECIFY GOOD COMMERCIAL QUALITY DOCUMENT NOT REVIEWED
651 53	ROLL PAPER HOLDER	FF-H-571	651c. 7/13	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
651 54	SALAD PLAT DISPENSER	MIL-D-40631	651c. 7/14	SEE 651-02						
651 55	GARBAGE CAN	RR-C-82	651c. 7/17	SEE 651-35						
651 56	SCALE	AAA-S-115	651c. 7/44	SEE 651-19						

PAGE 80 COMMERCIALIZATION OF NAVY'S GENSI ES-SUMMARY										
MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
651 57	COFFEE MAKER	W-C-500	651e. 11/61 12/32 .	SEE 651-21						
652 01	FILE CABINET	805-1638844	652b. 2/54, 8/43	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
652 02	FILE CABINET	S3209-636607	652b. 11/39	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
652 03	FILE CABINET	805-1638844	652b. 15/32	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
652 04	BOOK RACK	805-1749061	652c. 24/34	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
654 01	DISPENSER CARBONATED BEVERAGE	MIL-D-43738	654d. 3/36	SEE 651-46						
654 02	DISPENSER, BEVERAGE	MIL-D-82035	654d. 3/39	SEE 651-45						
654 03	DISPENSER, SOFT ICE CREAM	MIL-I-43705	654d. 3/41	SEE 651-41 UL 621						
655 01	SPRAY GUN	MIL-L-19493	655a. 1/44	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
655 02	WASHER (25, 60, 100 lb CAP)	MIL-W-19044	655d. 12/7	UL 1206						NONE, SHIP MOTION CONSIDERATIONS PRECLUDE USE OF MOST COM'L UNITS

PAGE 81 COMMERCIALIZATION OF NAVY'S SENSES-SUMMARY

MIL/FED SPEC.				COMMERCIAL SPEC.						
ITEM	SUBJECT	MIL/FED SPEC	SEC REF PAGE/L	COMM'L SPEC	MISSION IMPACT	OPERATION	RELIABILITY	MAINTAIN-ABILITY	SUPPORT AVAILABILITY	ACTION
655 03	TUMBLE DRYER (50 lb cap)	MIL-T-23480	655d. 12/16	UL-1240						SPECIFY "GOOD COMMERCIAL QUALITY"
661D 01	DESK, FLAT TOP, TYPEWRITER, LOG, RADIO OPERATING, STANDING, FLAT TOP, TYPEWRITER	805-2224391, 805-2228956, S3209-633953, S6700-635345, S3209-631336, 805-2228255, 805-2224393	661a. 2/37, 41 42, 43, 45, 47, 49	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
663 01	BOOK RACK	805-1749061	663c. 2/43	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
663 02	BULLETIN BOARD	S3209-638101	663c. 3/25	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
663 03	FILE CABINET	S3209-636606	663c. 3/42	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
663 04	FILE CABINET	805-1638844	663c. 3/44 3/46	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY
664 01	BOOK RACK	805-1749061	664e. 4/6	NO COM'L SPEC						SPECIFY GOOD COMMERCIAL QUALITY

APPENDIX "B"

Item 1 is the forwarding letter soliciting comments from SNAME PANEL SP-6 members of a preliminary issue. Items 2 thru 8 are copies of review comments from the panel members. Commenting parties included shipbuilders, design agents and the Navy. Criticisms ranged from constructive remarks on format to comments on specific items. The comments were reviewed and incorporated inasmuch as possible while still maintaining the intended purpose of the paper.

TABLE OF CONTENTS

JJMA transmittal letter:

1. JJMA letter to SP-6 Members, HRO-4937M-13835 dated March 4, 1983

Response letters received:

2. Bath Iron Works Corporation letter, NavGen/4400, MSS-R-129, dated April 12, 1983
3. Department of the Navy letter SEA 55H/JH, Ser 16, dated April 1, 1983
4. National Steel and Shipbuilding Company letter, dated March 30, 1983
5. J. J. Henry Co., Inc. letter, General/KG-19, dated March 24, 1983
6. Peterson Builders, Inc., General-1830-JJG, dated March 18, 1983
7. Tacoma Boat letter, DES-0033, dated March 17, 1983
8. Todd Pacific Shipyards Corporation letter, Eng/1008, dated March 13, 1983

JOHN J. McMULLEN ASSOCIATES INC.



March 4, 1983
HRO 4937M-13835

Attention: MEMBERS OF SNAME P-L SP-6

subject: SNAME PANEL SP-6, PROGRAM TASK S-34 COMMERCIALIZATION
OF USN GENERAL SPECIFICATIONS

Enclosures: (1) "Commercialization of Navy's Genspecs - Summary"
Report
(2) Flowchart for Commercialization of Navy's Genspecs
(3) List of Commercial Standard Organizations having
specifications suitable for building and outfitting
Navy ships.

Gentlemen:

In accordance with the provisions of Task S-34, Enclosure (1)
is submitted for your review and comment.

Enclosures (2) and (3) were used for guidance in preparing the
Commercialization of the Navy Genspecs Summary and is presented for
your information.

Please mark up Enclosure (1) or note comments regarding changes
or additions to be made. The information received from your review
will be added to information from others and our own reviews and
formulated into the final report.

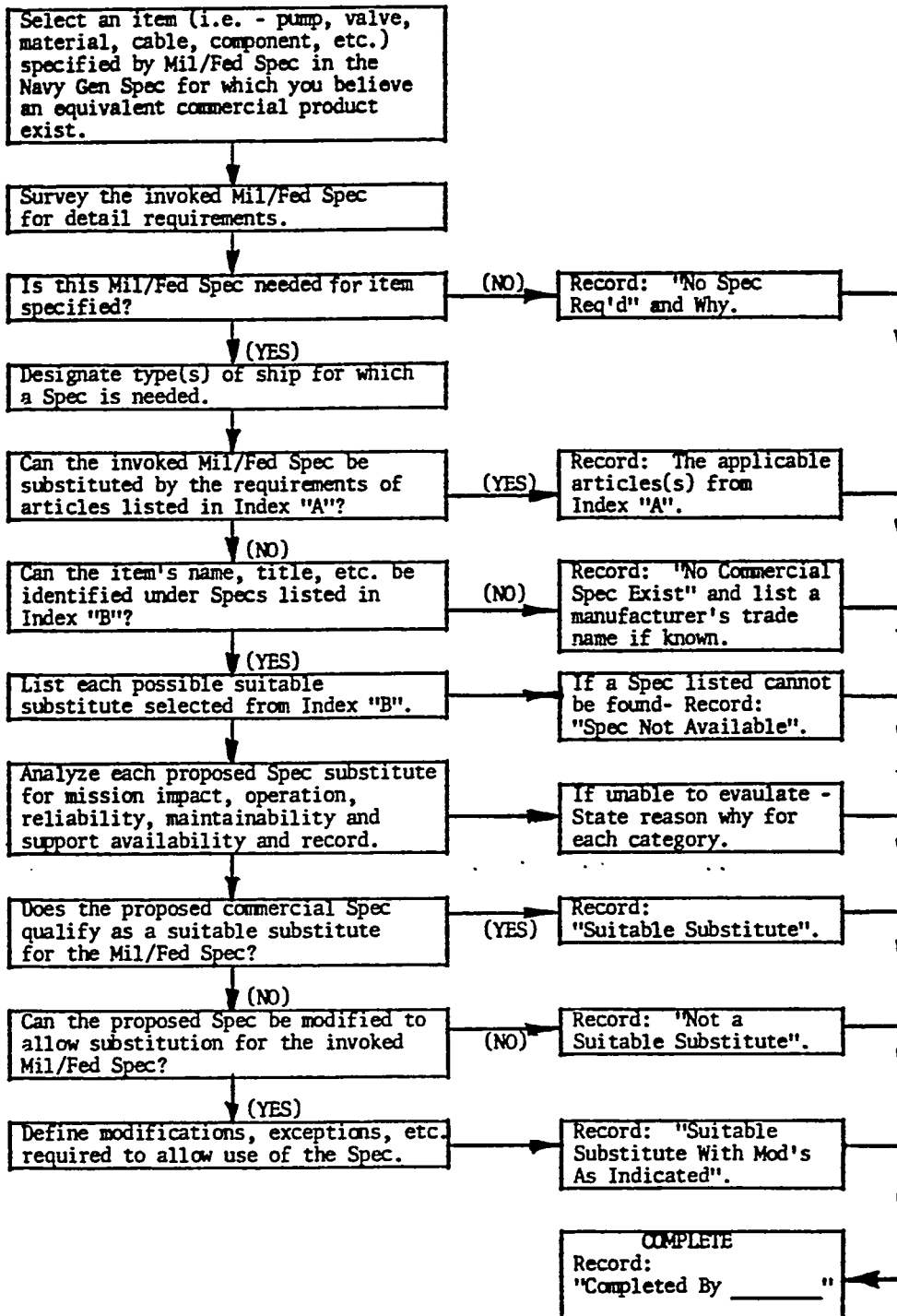
If you have any questions please call J. N. Barefoot at
(804) 244-9536. Your response by March 21, 1983 will be greatly
appreciated.

Yours very truly,

J. N. Barefoot
Project Engineer

JNB/TOW/bae

cc: BLS:JRW:JKB:4937M



INDEX "A"

LAWS, CLASSIFICATION, RULES, REGULATIONS, STANDARDS AND CERTIFICATES

- 1) American Bureau of Shipping (ABS) Rules for Building and Classing Steel Vessels
 - 2) United States Coast Guard (USCG)
-

INDEX "B"

DOMESTIC COMMERCIAL STANDARDS

Source/Society

Abbreviations

MTCC	American Association of Textile Chemists and Colorists
AFBMA	Anti-Friction Bearing Manufacturers Association
A.G.A.	American Gas Association
AGMA	American Gear Manufacturers Association
AICHE	American Institute of Chemical Engineers
AISC	American Institute of Steel Construction
ANS	American Nuclear Society
ANSI	American National Standards Institute
API	American Petroleum Institute
ARI	Air-Conditioning and Refrigeration Institute
ASHRAE	American Society of Civil Engineers
	American Society of Heating, Refrigerating and Air-conditioning Engineers
ASME	American Society of Mechanical Engineers
ASSE	American Society of Sanitary Engineering
ASTM	American Society for Testing and Materials
AWS	American Welding Society
BISSC	Baking and Sanitation Standards Committee
CGA	Compressed Gas Association, Inc.
CMAAI	Crane Manufacturing Association of America Inc.
EIA	Electronic Industries Association
IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
ISA	Instrument Society of America
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry
NACE	National Association of Corrosion Engineers
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NFP(A)	National Fluid Power Association
NSF	National Sanitation Foundation
	Society of Automotive Engineers
SAE	Underwriters Laboratory



Bath Iron Works Corporation A Congoleum Company

700 WASHINGTON STREET, BATH, MAINE 04530 • (207) 443-3311

NavGen/4400
MSS-R-129
April 12, 1983

John J. McMullen Associates Inc.
Rouse Tower Suite 7001
6060 Jefferson Avenue
Newport News, Virginia 23606-3076

Attention: Terry O. Walker

Subject: National Shipbuilding Standard Program, MarAd Task S- 34
Commercialization of USN General Specifications.

Reference: (a) JJMA letter J. N. Barefoot to J. E. DeMartini HRO
4937M-13835, March 4, 1983.

(b) Telephone conversation, V. W. Orlovsky (BIW to T. O. Walker
(JJMA) March 4, 1983.

Dear Mr. Walker:

This is in response to Reference (a), requesting BIW comments to the
Enclosure (1) to Reference (a) -- Commercialization of USN General Specifications
Summary -- which JJMA has been tasked to perform under MarAd task S- 34.

The substance of BIW compents was communicated to you by telecon, Reference
(b), these comments were as follows:

1. Time allowed for review was not sufficient. Reference (a) requested
reply within (16) calendar days which included (3) weekends and mailing
time. A minimum of (4) weeks is required in-house to turn around an
unscheduled task.
2. Reference (b) lacks sufficient introduction explaining the objective
and deliverable end product. This is needed in order for an uninitiated
"reviewer" to develop relevant comments.
3. The purpose of review is not clearly stated. The request to offer
"---comments regarding changes or additions to be made---" is too broad.
In order for a "reviewer" to come up with such conclusive comments, it
will be necessary to conduct a detailed study and essentially prove JJMA
work, which we do not believe to be the objective of the review.
4. The report is inaccurate, following are some examples:
 - 4.1 A random sampling of (13) items listed as "spec not available"
revealed that in fact only (1) out of (13) was not available.
(11) both MIL/COML specs available. (1) wrong MIL-SPEC listed on
report.

- 4.2 Item 244-04 lists MIL-B-857 which was superseded by MIL-S-1222, in 1976
We do not believe commercialization of obsolete MIL-SPECS will be
a productive effort.
- 4.3 Item 235-01 listed twice, should be 235-01 and 235-02.
5. As to the project in general, it is our opinion that it is a good
undertaking and it is our intention to support it to the maximum
degree possible. It is our recommendation, however, that a clarification
be made for potential users (shipbuilder) as soon as possible, as to
how proposed commercialization will be formally approved/adapted by the
Navy.
6. Please address any further questions relative to this subject to the
undersigned.

BATH IRON WORKS CORPORATION


VWOrlovsky
Chief of Material and standards Section

VW0:blb



DEPARTMENT OF THE NAVY

NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

Committee Correspondence

IN REPLY REFER TO

SEA 55H/JH
Ser 16

1 APR 83

John J. McMullen Associates, Inc.
Rouse Tower, Suite 7001
6060 Jefferson Avenue
Newport News, VA 23605-3076
Attn: Mr. J.N. Barefoot

Dear John,

Your letter of 4 Mar 83 forwarded a draft copy of your proposed final summary report under SNAME SP-6 Task S-43. This task relates to the "Commercialization of the Navy GEN SPECS".

We feel the following areas require clarification to make the final report more helpful to us and others:

(1) The report obviously does not include all specifications, drawings, etc., referenced in the GEN SPECS. An introduction should be added indicating the basis for selection, such as amenability to commercialization the "easy" ones, those where industry standards were readily available, or what.

(2) In the ACTION column, there is repetitive use of the term "specs. not available". If the industry standard is truly not available (obsolete, difficult to come by, etc.), that term would be correct. If however, it means that it was merely not available to the JJMA engineer, then it is an internal JJMA note; the more correct external note would be "industry document not reviewed" or something similar. (In some cases, the non-availability may refer to the Mil.Spec. or NAVSEA drawing. In such cases, the note is correct but needs clarification.)

(3) In many instances where an industry standard is listed for a Mil. Spec., the ACTION column note is "both suitable". It would appear that the more correct note would be "use existing industry standard".

(4) In many instances no corresponding industry document was found, and the ACTION column states "none". It would appear that the more correct note would be something like "prepare industry standard" or "industry standard required"; if clearly a marine item, ASTM F-25 could be cited.

(5) In many instances, no comparable industry standard is listed, but the comparison columns are filled in. How can this be?

(6) In many instances where no comparable industry standard is listed, the ACTION column states "use commercial practice" or "specify good commercial quality". Except for extremely minor items, and even there the practice is questionable, the use of such terminology is useless; item 572-03 is a good example of a very expensive pallet truck where "commercial" is just not enough. The recommendation under (4) above would also apply here. (In some cases (622-01 for example), ASTM F-25 is already working on some of these items.)

(7) One page 11 and the immediate following pages (corresponding to the 300 and 400 sections of GEN SPECS), most of the items have the same or a similar note in the ACTION column. Unfortunately, we do not know how to interpret it. Merely citing ABS or USCG is of no help. The recommendation under (4) above may also apply here.

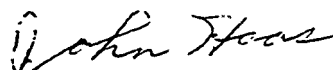
(8) For the same group of items, the cited industry standards are often UL, NEMA, and IEEE. With the exception of IEEE #45, it appears doubtful that most of these standards are marine equivalents of the Mil. Specs. Has JJMA actually compared them?

(9) In Index B, is ARI different from ASHRAE? Latter is often listed as ASHR in tables. Table shows AWWA, which is not in index.

(10) There are some misspellings and other typos.; also, for item 262-05, Mil. Spec. no. is in error.

You will note that most of our comments concern the ACTION column, because that is where clear direction "is required. When completed, this document will be an important input guideline for the "rapid Mil. Spec. conversion program" triggered by John Nachtsheim's recent charge to SNAME.

Sincerely,



John Haas

NAVSEA member, SNAME SP-6

copy to:

J. DeMartini (SP-6)
RADM Hopkins (F-25)

NATIONAL STEEL AND SHIPBUILDING COMPANY

30 March 1983

J.J. McMullen Assoc., Inc.
Rouse Tower, Suite 7001
6060 Jefferson Ave
Newport News, Va. 23605 -3076

Attn: Mr. J. N. Bakefoot

Subject: SNAME SP-6, Task S-43
Commercialization of USN General Spec's.

Reference: (a) Your ltr dtd March 4, 1983, M3R0 493714-13835

Enclosure: (1) Swary of Gen Spec
(2) Literature

Gentlemen:

As requested by reference (a), Nassco has reviewed enclosure (1) and has the following comments.

The task approach, as previously agreed to, is to be applauded.

The actual task of comparing MIL Specs to commercial lacks depth, that is not enough time spent and too many errors due to "specifications" not available. We do understand the frustration this task must have caused when one does not have adequate data.

We took the liberty of contacting "Information Handling Services" representative in our area, and was informed that their system has complete cross reference compatibility through an IHS locator code, thus by looking at the MIL Spec code one can call up the equivalent commercial spec's, see enclosure (2).

We feel that the summary, as presented, could create a false picture and outright rejection.

Very truly yours,

J. E. Krohn,
Manager, M/L & Design Standards

J.E. DeMartini
Bath Iron Works Corp.
700 Washington St.
Bath, Maine 04530

Managing the Unmanageable

5:00 L.
2

Ever since Russia's Sputnik first beeped around the earth we have been building a gigantic backlog of information. Our store of knowledge has been growing since man learned to write. But with every technological advance, the rate of growth accelerates like a rocket booming into orbit. It's wishful thinking to even entertain the notion that this speed will slacken.

Between 1950 and 1965, the technological revolution doubled the quantity of information in the world. The amount of technical data again doubled by 1972, and again by 1979. The present forecast is that technical information will double every six years.

The problem is.. It is becoming more and more difficult to find specific information. We're near the point where if we can't retrieve information quickly and easily — it isn't worth the effort.

We're near the point where if we can't retrieve information quickly and easily—it isn't worth the effort.

You know the feeling: Management is out of patience. Your design is due now. But one item is missing; someone tore out the particular page from the particular vendor catalog that somebody else borrowed. Another item doesn't quite meet your specs, and your estimated bottom-line cost is already too high. What's worse is that even if you had the time to continue searching, the data would probably be incomplete or out-of-date.

A closer look at the problem. Economists have identified a chronic disease attacking America's economy. Declining productivity. Our long-term growth rate has dropped from about 3.2 percent a year for the period 1947 to 1966 to nearly 1.8 percent per year during 1967 to 1977. In fact, figures released for 1979 indicate that productivity, down 0.9 percent from 1978 figures, actually declined throughout the year for the first time since 1974. This represents non-growth — if not an actual decline — in America's Gross National Product. At this rate, Japan and Western Europe will out-produce America in the next ten years.

"There MUST be an easier way. . ." information Handling Services was founded in 1959 by an engineer who was all too familiar with the perplexing problems of, first, finding information, and then finding it fast. In the two decades that have followed, we have revolutionized the process of handling technical information. From the beginning it was called W5MF" (Visual Search Microfilm Files). We do all the locating, assembling and organizing of a vast mountain of data composed of over 8,000,000 pages of information. What we then offer you is processed information. We've already done the hard work.

More specifically, during 1980, Information Handling Services researched the consumption of technical information in 40 U.S. engineering organizations not presently using VSMF systems. The research was designed to evaluate the types of technical data required, frequency of use of this data, and the time consumed in use. Responses were received from 1,326 engineers, representing

approximately 30 percent of the engineering population at these organizations:

Ž The average engineer conducted approximately nine technical searches per week.

- Each search averaged 49.5 minutes.

- 81.3 percent reported difficulty in locating needed data.

Ž 76.9 percent felt their sources were out-of-date.

Ž 84.9 percent indicated their sources for technical reference material were incomplete.

These organizations were spending 18.5 percent of their major engineering resource time on technical data searches which were non-productive or suboptimal.

When compared with a 5-to-10-minute VSMF search, search time could be reduced 80 percent — and with better results ! Engineers fully utilizing a VSMF system can increase their productive capacity by 19.3 percent and save the company appreciable amounts of capital.

Engineers fully utilizing a VSMF system can increase their productive capacity by 19.3 percent.

VSMF is cost-effective — here's proof. The Electronics Division of General Dynamics uses VSMF systems at three sites. Their engineers average nearly 5,000 VSMF searches each month, and the frequency is increasing. Electronics Division staffers, computing the costs of search time, paper

documents, salaries, etc., calculate that the VSMF systems save \$470,000 per year — returning more than 10 times the company's \$45,000 annual cost.

The most comprehensive engineering data base in the world. Information Handling Services can provide you with more engineering data than anyone else in the world. We've been gathering this information for over twenty years. Our data base now includes:

- More than 24,000 different vendor catalogs.
- The most comprehensive commercial collection of Mil Specs, Mil Standards and Mil Drawings available.
- The world's largest library of U.S. Industry Standards, plus the standards of Great Britain, Canada, Germany, Japan, ISO and IEC.

Our engineers spend tens of thousands of man-hours a year organizing, cataloging, cross-indexing and cross-referencing technical data, just to make sure it's properly classified and up-to date. For that matter, we have over 1,100 employees internationally producing an ever-widening variety of information services.

To keep this information current and complete, Information Handling Services updates data as frequently as every 15 days. You automatically receive all pertinent revisions, updates, deletions, addenda and new indexes. This amounts to more than 20-million feet of microfilmed technical information — each month!

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This service gives you direct contact with an expert. In most cases, you get an answer to your

question quickly before you hang up. After all, you call Extension 99 because you want an answer now.

- The specific document you want should be in your file, but you can't find it. Call us. We'll guide you through your file — step by step.
- The piece of information you need is in a data base to which you've not subscribed. Perhaps it isn't in any VSMF file. We'll attempt to find the information for you in any case.
- Someone unfamiliar with your VSMF file needs information. Have the person call us. Extension 99 is included with your VSMF subscription.

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We accept calls from anywhere in the world. If you want facts "yesterday," we can frequently comply — especially if you call from the other side of the earth where it's already tomorrow.

Call Toll Free 800-525-7052. (AL BATIK)

Telex: **4322083**

Note: Facsimile transmission available. Ask Extension 99 operator.

IHS Locator Code

When you need information fast you can rely on our unique Locator Code to help you find desired information in minutes. Our computerized cross-indexing system interrelates product catalog data, industry standards, military and federal specific- and a wide variety of other government documents. A Locator Code number is assigned to each of information and appears on all related

This means that when you search by a specific product type or general subject, using the Subject Index, you'll find a Locator Code number which will guide you to related information quickly.

Depending on the IHS service(s) you subscribe to, simply choose the desired locator index cartridge and search the Locator Code alpha-numerically until you find the one you want. Each Locator Code will indicate the cartridge and frame numbers for all relevant documents. Pius each document has a locator Code to reduce search time. In addition, you can search via our new TECH-NH on-line service using this Locator Code to quickly guide you to the information you need.

Training: When your VSMF system is installed one of our trained representatives will give on-site instruction in its use. This service is subsequently available for training of your new employees and to provide periodic additional training of staff as needed.

Blip Coding: We blip code the film so that you can use automatic retrieval equipment for easier, more productive searches.

TECH-NH search service is an on-line index to government and industry specifications and standards and vendor catalog data accessible in an easy to use tutorial mode.

This service serves as both a reference to VSMF microfilm products and an awareness tool for the engineer identifying existing specs, standards, or catalog data for a particular subject area.

TECH-NET has a companion service for ordering documents or catalog pages called DOR (Documents on Request) and an on-line message to IHS feature known as MSG.

TECH-NH is available through the Federal Library Committee (FED LINK) in addition to various subscription plans with IHS.

How to find the VSMF® Locator Code

To locate a SPECIFIC subject, use the WHITE section. Look up the subject ('BOLT' and type 'Bent End') in the listing. This search will yield the VSMF® Locator Code opposite the subject name.

BOLT	D-90-60
Anchor, Bent End	D-01-03
Bent End, Machine Screw Threaded	D-01-03
Bent End, Wood Screw Threaded	D-23-13
Blade/Scraper (Plow)	D-01-16
Blind, Pull-Stem	D-15-23
Threaded (Except Pull-Stem)	D-29-02
Bone	C-96-61
Boyd Type Locking	D-17-27

To locate a GENERAL subject, use the YELLOW section. In the GENERAL SUBJECT LISTING at the beginning of this section, find the heading most closely associated with your subject.

GENERAL SUBJECT LISTING

GENERAL SUBJECT	PAGE
Earth Sciences & Astronomy	2
Electrical/Electronics Engineering	3
Energy	4
Environmental Pollution	4
Fastening, Joining & Thread Design	5
Fluid Systems (Including Fluid Power)	5
Heat Generation & Transfer	6
Inspection & Test	6
Instrumentation & Control	6

Refer to the appropriate subject heading in the alphabetic listing which follows. This search will yield a number of related subject entries. Note the VSMF® Locator Code opposite the subject name. (For more extensive listings on a SPECIFIC subject, refer to the WHITE section).

FASTENING, JOINING & THREAD DESIGN	
Adhesives	H-52
In General	H-53, H-55
Specific Types	D-90
Fasteners (General)	D-29
Specialty Fasteners	J-86
Nonthreaded Fasteners	D-15
Clamps/Clips	D-13
Rivets	J-11-11
Pins/Nails/Staples	D-29-28
Latches/Hooks	
Timber Connectors	

(continued)

How to reference specific types of data

I. If you want Manufacturers' Product Data.

A. Find the appropriate VSMF® Locator Code. See page II.



B. Use the Master Locator cartridges and scan alpha-numerically to the selected locator code (Example: D-01-03).

C. Look down the "03" column. This search will yield the manufacturer's name, and cartridge and frame number for the specific page(s) from the manufacturer's catalog.

D-01 BOLTS, SPECIAL

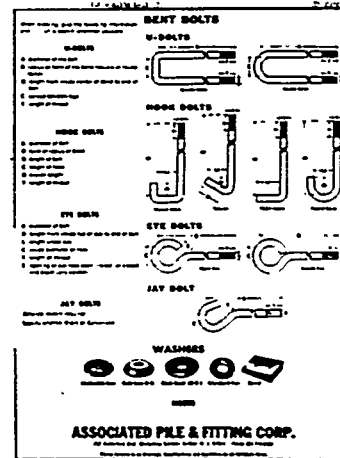
VC VENDOR CATALOG LOCATION
01 GENERAL INFORMATION
03 BENT END
06 T-HEAD/T
08 FIN/SQUARE/RIBBED NECK

SUPPLIERS	CART FRAME	-VC	-01	-03	-06	-08	-10	-12	-13
ANCHOR BOLT & SCREW CO	8363 3973			DES 0100 0034					
ANVIL INDUSTRIES INC/ CLEVELAND CITY FORGE CO	8359 2491			DES 0100 0035					
ARCO CONCRETE INC	6955 1316			VC					
ASSEMBLY FASTENERS INC	8370 1117					DES 0100 0117			
ASSOCIATED PILE & FITTING CORP	6955 0346			DES 0100 0036					
ATHLONE INDUSTRIES INC, REYNOLDS FASTENERS DIV	8368 0763					DES 0100 0120			

(continued)



D. Refer to the indicated cartridge and advance to the appropriate frame.



II. If you want MS-AN-AND-NAS-NASA Documents.

A. Find the appropriate VSMF[®] Locator Code. See page II.



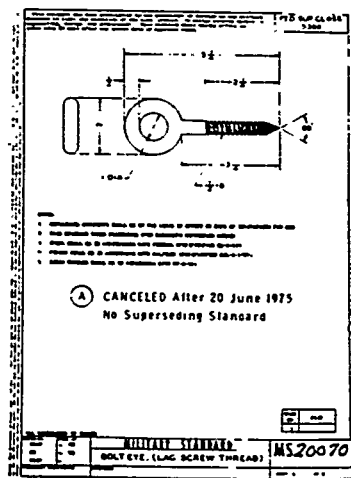
B. Use the MS Drawings Locator cartridge and scan alpha-numerically to the appropriate locator code (Example: D-01-03).

C. Look for the "03" listings and locate the desired document number. Cartridge/frame references indicate where data on the subject begins.
NOTE: The type of document (Example: MS Drawing) is abbreviated in the first column (MSD).

SOURCE	DOC NUM	DOCUMENT DESCRIPTION	CART/FRAE	SOURCE
XXXX 01	GENERAL INFORMATION			XXXX 03
MSD	MS18116-E		306-1231	NAS
MSD	MS1995-H		377-1673	
XXXX 03	BENT END			XXXX 06
MSD	RM42-5 THRU RM49		377-1674	MSD
MSD	MS20070-A		377-1676	MSD
MSD	MS20071-A		377-1677	MSD
MSD	MS20072-A		377-1678	MSD
MSD	MS51937-B		377-1679	MSD
NASA	RM42-5 THRU RM49		377-1674	MSD
NASA	MC126-D		385-0836	MSD
NASA	MC658		385-0837	MSD
NASA	MC659		385-0838	MSD



D. Refer to the indicated cartridge and advance to the appropriate frame.

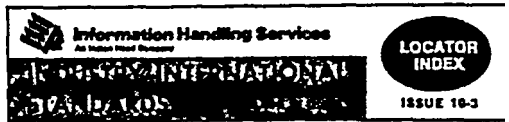


(continued)

v

III. If you want applicable Industry Standards.

A. Find the appropriate VSMF® Locator Code. See page II.



B. Use the Industry Standards Locator cartridge and scan alpha-numerically to the appropriate locator code (Example: D-01 -03).

C. Look for the "03" listings. Documents are listed alphabetically by society and alpha-numerically by document number. Cartridge/frame references are opposite the desired document.

00000000	00000000	11		
00000000	00000000	111		BOLTS, SPECIAL
00 00	00 00	1111		
00 00	XXXXXXX	00 00	11	
00 00	XXXXXXX	00 00	11	
00 00		00 00	11	
00000000	00000000	11111111		
00000000	00000000	11111111		
SOCIETY Doc mm	Cf%UIS4T	OSSCRI?TIW	C=T/FRIXE	SOCIETY
#### 01	GENERAL INFORMATION			#### 03
#### 03	BENT END			DIN
ANSI	B18. 15-69	FORGED EYEBOLTS (ANSI/ASME B18. 15) DOD ADOPTED	ASME-B 3252-0348	DIN
ASME	B18. 15-69	FORGED EYEBOLTS (ANSI/ASME B18. 15-69)	3252-0348	DIN
BSI	SP 144-55	EYE BOLTS (UNIFIED THREADS) FOR AIRCRAFT AMENDMENT 1 FEB 1961	BSI 0459	JIS.
				#### 08



D. Refer to the indicated cartridge and advance to the appropriate frame.

U S A S T A N D A R D

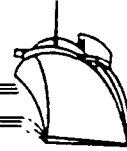
FORGED EYEBOLTS

IMs m 15 1%9

(continued)

J·J·HENRY·CO·INC·

· NAVAL ARCHITECTS · MARINE ENGINEERS · MARINE CONSULTANTS ·



WEST PARK DRIVE
MT. LAUREL INDUSTRIAL PARK
MOORESTOWN, N.J. 08057
609-234-3860

File: General /KG-1 9

Date: March 24, 1983

John J. McMullen Associates, Inc.
Rouse Tower, Suite 7001
6060 Jefferson Avenue
Newport News, Virginia 23605-3076

Attention: Mr. J. M. Barefoot
Project Engineer

Subject: SNAME PANEL SP-6
Commercialization of Navy Gen. Specs.

Reference: (a) Your letter dated March 4, 1983 HRO
4937M-1 3835
(b) J. J. Henry letter to J. J. McMullen
dated November 18, 1982

Gentlemen:

We acknowledge receipt of letter, Reference (a), and enclosure with the request to comment on same.

Our observations are:

1. It is noted that the enclosure, consisting of 82 pages, is basically organized according to spec item of SWBS system, and during a recent telephone conversation, it was established that the Gen. Specs. of 1982 have been used. We do not have the 1982 Specs in this office. Our current spec is dated 1981.

File: General/KG-19
Date: March 24,1983
Page two

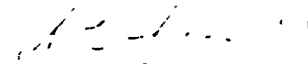
2. The summary represents a good deal of work. It is suggested to coordinate this assignment with the work planned for the review and update of the Mil/Fed Specifications.
3. Suggest to develop a cross-reference according to item number. Valves, electric motors, etc. are par-t of many systems in different specification sections.
4. It is noted that the summary indicates that there is no commercial specification available and that no action is to be taken there. In many instances the vendor's technical spec is governing as long as approved by the cognizant regulatory bodies.
5. We have in our library copies of the following MARAD Specifications:

PB-257-261 Standard Specification for Diesel Merchant Ship
Construction dated 1976

PB-290-400 Standard Specification for Merchant Ship
Construction dated January 1979.

Very truly yours,

J. J. HENRY COMPANY, INC.



K. Gyswyt

KG:dc



SHIP DESIGNERS
AND BUILDERS

Peterson Builders, Inc.

STURGEON BAY, WISCONSIN 54235-0047
101 Pennsylvania Street, P.O. Box 47

(414) 743-5577
TELEX 26-3423

In reply refer to:
General - 1830 - JJG
18 March 1983

John J. McMullen Associates, Inc.
Rouse Tower
6060 Jefferson Avenue
Newport News, VA 23605

Attn: Mr. J. N. Bare Foot

Subj : SNAME Panel SP-6, Program Task S-43; Commercialization of USN General Specifications

Ref: (a) JJMA Ltr. HRO-4937M-13835 dated 4 March 1983

Gentlemen:

Thank you for the opportunity to review and comment on the preliminary results of the subject task. Specific comments on the Enclosure (3) to . Reference (a) are as follows:

(a) The final report should recommend the following:

- (1) That some organization be tasked to assemble a library of commercial specifications of sufficient scope and depth to permit the review of all commercial specifications which have been cited in Enclosure (3) of Reference (a) as possible replacement for Mil. Specs.
 - (2) That a review of all candidate specs that have not yet been reviewed be accomplished.
- (b) In several places, use of ABS and Coast Guard rules and regulations are recommended in lieu of Mil. Specs/Standards. It is strongly recommended 'that this recommendation be dropped and the technical society specifications cited be used in lieu of Mil. Specs.
- (c) It is recommended that the work of the F-25 Committee of ASTM be reviewed and the results of its work incorporated into this study.

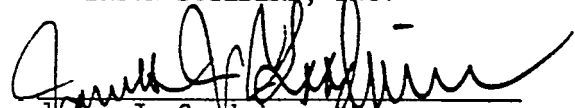
Again, thank you for the opportunity to comment on Reference (a) prior to publication of the final report.

18 March 1983

Page 2

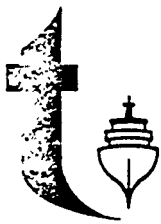
Very truly yours,

PETERSON BUILDERS, INC.


James J. Goodwin
Naval Architect/MMarine Engineer

JJG:jeg

cc: E.L.Peterson/KC
F.McGrath/File
J.J.Goodwin



tacoma boat

TACOMA BOATBUILDING CO. / 1840 Marine View Drive / Tacoma, Washington 98422 / Phone (206) 572-3600
SHIPBUILDING · SHIP REPAIR · ENGINEERING · MACHINERY MANUFACTURE Telex 32-7461

March 17, 1983
DES-0033

John J. McMullen Associates, Inc.
Rouse Tower, Suite 7001
6060 Jefferson Avenue
Newport News, VA 23605-3076

Attention: J. N. Barefoot
Project Engineer

Subject: Panel 5P-6, Task S-34 'Commercialization of USN General Specifications'

References: (a) JJMA letter to J. Saucier, File No. HRO-4937M-13835, dated March 4, 1983
(b) TBC letter, L. White to J. N. Barefoot, dated November 18, 1983
(c) "Commercialization of Navy's GENSPECS - Summary"
(d) Flowchart for Commercialization of Navy's GENSPECS.
(e) List of commercial Standard Organizations having specifications suitable for building and outfitting Navy ships

Enclosure: (1) Pages 1-5 (of 82) from "Commercialization of Navy's General Specifications - Summary"

Gentlemen:

Thank you for including us in your review and comment phase of Task S-34, reference (c).

We note the dual designation for the subject Panel 5P-6 task. Reference (b) had noted similar dual task numbers. A recent index of Panel 5P-6 activities, distributed at the February 1983 meeting at ASI, identifies only Task S-34.

The suggested date for return of reference (c) does not permit a thorough review. Instead, we have attempted to consider only the first five pages, presuming that our comments may be typical to the entire summary.

Our review was accomplished by Allan F. Jamsgard in the Engineering Design Standards Group. Mr. Jamsgard, draws from experience as a Material Specialist concerned with the selection and application of specifications and standards. He has previously accomplished activities similar to Task S-34.

Mr. Jamsgard established footnotes as follows:

- (1) poor or inadequate specification number
- (2) doubt specification, but cannot verify
- (3) wrong specifications
- (4) suspect that a commercial specification can be found
- (5) suspect that an ASTM specification covers this

Mr. Jamsgard also suggests, for your consideration:

- (1) ASTM should be referenced when several commercial specifications are equivalent.
- (2) On the basis of five sheets reviewed, a follow-up critical review of reference (c) by JJMA may identify inadvertent errors/inconsistencies throughout.
- (3) Commercially established information resource services provide computer-based cross indices of military/federal specifications with commercial specifications. This information can be sorted in any way which customer specifies.

We presume that an explanatory sheet was overlooked in the transmittal of reference (c). For example:

- (1) The heading for the right hand portion of the summary is indicated as 'Commercial Spec', but appears to identify 'Comparative Equivalency of Commercial Specification'. The 'Action' column should not be included under comparative equivalency.
- (2) We are uncertain as to the intended application of the column 'Action'. Does 'spec not available' imply that the indicated commercial specification or standard was not available to the reviewer accomplishing the summary? or does 'spec not available' imply that subsequent application of the suggested commercial specification cannot be accomplished by users of the summary?

- (3) The term 'both suitable' in the 'Action' column is misleading when only a single commercial specification is identified. If the 'Action' column were separated from the 'commercial spec' heading, then the 'both suitable' comment might be made more specific if it were indicated as 'equivalent'. Reference (c) also uses the term 'suitable' which permits a more straightforward consideration.

Each of the terms used within the summary should be defined, to ensure consistent interpretation of the reviewers' commentaries. consistency of intent would also provide for development input from several persons without inadvertent 'shades' of intent.

Sheets such as 17 and 29 support the addition of a column which might be headed 'action suggested to provide for application of commercial specs'. The noteworthy preparation of reference (c) tends to be incomplete without promoting action which will provide for increased application of commercial specifications and standards in place of military/federal specifications.

Not all of the referenced military/federal specifications nor all of the commercial specifications were available for an in-house evaluation supporting additional comments.

We are in admiration of the scope and apparent thoroughness exhibited in references (c), (d) and (e).

Our comments relative to reference (c) are intended to be supportive of this JJMA effort. The gradual adoption and application of equivalent commercial standards will have significant benefit to shipbuilders.

We are returning, as enclosure (l), a copy of the five sheets from reference (c).

PI ease revise your transmittal record to identify the correspondent, Lloyd E. White, as designated contact point for Panel SP-6 activities forwarded to Tacoma Boatbuilding Company.

Respectfully,

TACOMA BOATBUILDING COMPANY



Lloyd E. White,
Project Coordinator

LEW/st
Enclosure

T O D D PACIFIC SHIPYARDS CORPORATION

Los Angeles Divisor: P. O. Box 231, San Pedro, California 90733-0231 Tel. 832-3361 (Area code 213)

FILE/ENG/ 1008

March 15, 1983

John J. McMullen Associates, Inc.
Rouse Tower, Suite 7001
6060 Jefferson Avenue
Newport News, VA. 23605-3076

Attention: J.N. Barefoot
Project Engineer

Subject: SNAME Panel SP-6, Program Task S-34
Commercialization of USN General Specifications

Reference: (a) JJMA/TPLA Letter Dated March 4, 1983
#HRO 4937M-13835

Enclosure: (1) Commercialization of Navy's Gen Specs-Summary (82 Pages)

Gentlemen:

Enclosure (1), submitted with reference (a), is herewith returned with the following comments, further noted in red on the said enclosure.

Page 1

1. ASTM 30-13, indicated against Item 42-01, should be deleted, in lieu the right ASTM number should be listed.
2. Against Item 42-03, ANSI 763 & UL 763 is incorrectly shown; is it possible ANSI 783 and UL 783 are the requirements for this Item?

Page 3

3. Under the Subject Column for Item 75-11, revise "Thread Anti-Seize" to read "Compound Anti Seize"

Page 4

4. Against Item 100-02, add "In Rounds & Shapes" in the Subject Column, and correct "501" under the Comm'l. Spec. Column to read "ASTM A 501."

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Page 5

5. Under the Subject Column, against Item 100-08, revise "Al Plate" to read "Al Alloy Plate."
6. Under the Subject Column, against Item 100-09, revise "Al Drawn Tubing" to read "Al Alloy Drawn Seamless Tubing."

Page 7

7. Against Item 243-02, add "Structural Steel" under the Subject Column.
8. ASTM B143 noted against Item 244-03, cannot be located. Is this the correct ASTM number?
9. Against Item 244-08, under the Subject Column revise "Bulkhead Stuffing Box" to read "Bulkhead Steel Stuffing Box."

Page 11

10. Against Item 300-02, it appears UL-698 references control equipment for hazardous location and therefore does not belong to this item. Please delete.
11. "IEEE-24" indicated against items 302-01, 02, 03 & 04 are incorrect. Revise to read "IEEE-45."
12. "IEEE-27", indicated against Item 302-05 is incorrect, revise to read "IEEE-45."
13. UL-202 indicated against Item 303-01 cannot be located in the UL Standards, perhaps the snap switches are listed under another UL number.

Page 12

14. What does the symbol "J/H" after "NEMA", shown against Items 303-02, 03, 04, & 05, represent?
15. Against Item 303-07, IEEE-320 seems to be obsolete and IEEE-538 has been superseded with ANSI/IEEE-C37.13. Please correct.
16. Against Items 303-09 & 10, NEMA-A600 has been indicated; is there such a Standard?

Page 13

17. Comment (16) above applicable to Item 303-11.
18. Under the Subject Column, indicate "Insulated Cable" against Item 304-05; in addition U.L-62 should be deleted as this Standard is not insulated, as noted in remaining three standards listed under the "Comm'l. Spec" Column.

Page 15.

19. "IEEE-25" should be revised to read "IEEE-45" against Item 313-01.

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Page 18

20. Comment (12) above shall be applicable to Item 324-01.

Page 31

21. Against Items 504-02 & 03, under the Subject Column, add "Electric" to further describe tachometers & thermometers.

Page 33

22. Against Items 505-10, 11, 12 & 13, indicate the pipes are seamless.
23. Item 505-15 indicate the tube to be copper under the Subject Column; whereas under the Comm'l. Spec, ASTM B135, the tube is noted brass; please reconcile.

Page 38

24. In addition to the standards, noted in the Comm'l. Spec. Column against Items 512-01, 02 & 03, add UL-507.

Page 39

25. UL-109 does not seem to be consistent with described Item 512-09, please correct the UL standard.

Page 40

26. To be consistent with the rest of the pages, indicate "ASTM" prior to the Standard No's. against Item 512-20, in addition delete A552 and A700, the former does not seem to exist, the latter does not belong to this Item.
27. Against Item 512-26, under the Subject Column, change "Rubber" to read "Chloroprene Rubber."

Page 41

28. Comment (12) of this letter shall be applicable to Items 512-30 and 32

Page 43

29. Is ASTM B62-51 correctly noted against Item 521-03?

Page 46

30. Item 534-03 describes funnels, whereas ASTM B61-51 describes steam or valve bronze castings; please reconcile.

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[LOS ANGELES DIVISION]

Page 47

31. Item 542-02 has ASTM B16.9 noted against it, please indicate the correct standard number.
32. Against Item 542-04, SAE AMS 33868 is indicated, should this read SAE AMS 3386B? Please reconcile.

Page 49

33. SAE ARP 485 & UL 873 noted against Item 551-12 seems to be erroneous. Please indicate correct standard numbers for controllers.

Page 50

34. UL-626 is for a water type extinguisher noted against Item 555-01 "CO2 extinguisher." Please delete UL-626.

Page 51

35. Item 555-03 has "(AFFF) Concentrate" indicated, please revise to read "(AFFF) Liquid Concentrates."

Page 53

36. Item 562-06 has SAE #62 noted against it, this particular SAE number seems incomplete, revise accordingly.
37. Item 562-10 has ASTM B151 noted against it. This item is described as studs & nuts under the Subject Column, whereas ASTM B151 is a specification for rods & bars, please reconcile.

Page 61

38. Does ANSI B93.58M actually belong to Item 588-02? If not, please locate correct ANSI number.

Page 63

39. Item 593-01 indicates "Sewage Communitor." What does that terminology mean? ANSI B71-6-82, noted against it, describes safety specs. for powered shredder/grinders and shredder/baggers. The ANSI standard and the subject item seems to be inconsistent, please verify.

Page 65

40. Item 602-01 has ASTM D-3752 noted against it. This standard describes a test method for strength of asbestos in a cement matrix whereas the subject item is hull label plate material, please verify.

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41. Against Item 612-03 described as a non-mettalic rope; ASTM A413 and A466 indicates a carbon steel chain & weldless carbon steel chain respectively, therefore these erroneous ASTM numbers should be corrected.

Page 69

42. SAE AMS 32XX noted against Item 624-03, does such a number exist?
43. It appears SAE AMS 3022D-76, noted against Item 624-08, has been superseded by SAE AMS 3022-80. This standard does not have any bearing on the subject item gaskets. Please revise.
44. The 3rd in line SAE standard AMS 3251E-77, noted against Item 624-09, Comm'l. Column, should read AMS 3252E-77. Please correct.

Page 70

45. Against Item 631-02, ASTM D3390 & D3391 & SAE AMS 3087E appears to be in error, if so, please delete.

Page 71

46. ASTM C-193 & 194, noted against Item 635-03, should be deleted; in accordance with the latest standards, they do not exist.

Page 72

47. ASTM P557, noted against Item 635-05, cannot be located in the ASTM standards. Please verify.

Page 82

411. Comment (44) above shall be applicable to Item 670-02.

Lastly, throughout the enclosure page numbers 1 to 30 (inclusive) and 65 to 82 (inclusive) are inconsistent with page numbers 31 to 64 (inclusive) in way of the Item column numbering system; in addition there are a number of blank spaces under various column headings that should be completed.

The foregoing comments indicate an indepth review of the commercial specifications and subject item references only. A further study of the remaining columns of enclosures (1) have been abandoned due to the inconsistencies that have been revealed as indicated in the foregoing.

TODD PACIFIC SHIPYARDS CORPORATION
(LOS ANGELES DIVISION)

The foregoing comments are made in the interest of presenting a good standard. Should you have any questions, please do not hesitate to call the undersigned.

Very truly yours

William P. O'Sullivan
Staff Engineer

WPO:sss

cc: J. De Martini (BIW)