



Standard Guide Listing Relevant Standards and Publications for Commercial Shipbuilding¹

This standard is issued under the fixed designation F 1547; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This guide is a compendium of relevant publications, standards, and other information related to commercial shipbuilding.

2. Significance and Use

2.1 This guide has been developed to aid naval architects, ship designers, material and equipment suppliers, buyers, ship owners and operators, and government agencies by providing pertinent information in one document that can be used during various stages of commercial shipbuilding. These stages include design, planning, purchasing, material fabricating, assembling, testing, quality assurance, and inspection.

2.2 This guide does not specify the use of a particular standard usage nor does it detail what the standard covers.

2.3 There may be more than one standard listed for a particular product, test, or specific application. However, this guide does not compare the different standards or specify which particular standard should be used.

2.4 A partial list of sources for obtaining various standards are included below. Other sources may be located by contacting various information centers such as those at ASTM, the National Institute for Standards and Technology (Codes Standards and Information), and the American National Standards Institute. Information is also available through various sites on the Internet World Wide Web (for example, <http://www.webplus.net/nssn/>). When ordering, organizations should consider obtaining the latest copies of standards as complete sets or portions of sets in whatever media are appropriate (for example, hard copy, CD-ROM, or microform since purchasing, quality assurance, and engineering departments are frequently looking for information about standards called out in contract specifications, and these standards vary from one contract to another. The abbreviations used in Table 1 are defined in 2.4. Some of the sources for ordering standards are:

ABS Americas (ABS)
A Division of the American Bureau of Shipping
16855 Northchase Drive
Houston, TX 77060
Telephone: 281-877-6000

Air Movement and Control Association (AMCA)
30 W. University Drive
Arlington Heights, IL 60004
Telephone: 708-394-0150

American Boat and Yacht Council, Inc. (ABYC)
3069 Solomon's Island Road
Edgewater, MD 21037-1416
Telephone: 410-956-1050
Fax: 410-956-2737

American Gas Association (AGA)
1515 Wilson Boulevard
Arlington, VA 22209
Telephone: 703-841-8400

American National Standards Institute (ANSI)
25 W. 43rd Street, 4th Floor
New York, NY 10036
Foreign/International 212-642-4995
Domestic: 212-642-4900
Telex: 42 42 96 ANSI UI
Fax: 212-302-1286
212-398-0023

American Petroleum Institute (API)
1220 L Street, N.W.
Washington, DC 20005-4070
Telephone: 202-682-8375
Fax: 202-962-4776
<http://www.api.org>

American Society of Heating, Refrigerating and Air
Conditioning Engineers, Inc. (ASHRAE)
Publication Sales Department
1791 Tullie Circle, NE
Atlanta, GA 30329

¹ This specification is under the jurisdiction of ASTM Committee F25 on Ships and Marine Technology and is the direct responsibility of Subcommittee F25.07 on General Requirements.

Current edition approved March 10, 1999. Published July 1999. Originally published as F 1547 – 94. Last previous edition F 1547 – 97.

American Society of Mechanical Engineers (ASME)
ASME International Headquarters
Three Park Avenue
New York, NY 10016-5990

American Society of Naval Engineers (ASNE)
1452 Duke Street
Alexandria, VA 22314-3458
Telephone: 703-836-6727
Fax: 703-836-7491
e-mail: asnehz.asne@mcimail.com

American Society for Nondestructive Testing (ASNT)
Box 21142
Columbus, OH 43221

ASTM-Customer Sales and Service
100 Barr Harbor Drive
PO Box C700
West Conshohocken, PA 19428
Telephone: 610-832-9585
Fax: 610-832-9555
e-mail: service@local.astm.org

ASTM European Office
27-29 Knowl Piece
Wilbury Way
Hitchin, Herts SG4
OSX
England
Telephone: 0462-437933
Fax: 0462-433678

All European orders are serviced by the ASTM European Office. Customers in other countries may order from ASTM (U.S.), ASTM (Europe), or one of the following sources.

Argentina
Suministros
Asociados S.A.
Belgrano 333
1642-San Isidro B.A.
Republica, Argentina
Telephone: 54-742-1466
Fax: 54-743-6461

American Books
Tucuman 994
1049 Buenos Aires
Argentina
Telephone: 54-396-3704
Fax: 54-326-3704

Australia
ACEL Information Pty. Ltd.
58 Atchison St.,
POB 471

Crows Nest NSW 2065
Australia
Telephone: 02-906-5566
Fax: 02-906-6049

Standards Association of Australia
PO Box 458
North Sydney NSW 2059
Australia
Telephone: 02-963-4111
Fax: 02-959-3896

DA Book & Journals
648 Whitehorse Road
Mitcham 3132
Victoria, Australia
Telephone: 03-873-4411
Fax: 03-873-5679

Institute of Metals and Materials
Australasia Ltd.
PO Box 19
Parkville
Victoria 3052
Australia
Telephone: 03-326-7266
Fax: 03-326-7272

Brazil
SAE Brasil
Av. Paulista, 2.073
Horsa II—CJ.2.001
01311-940 Sao Paulo
Brazil
Telephone: 11-287-2627
Fax: 11-288-6599

Publicacoes Tecnicas Internacionais Ltda.
R. peixoto Gomide, 209
01409 Sao Paulo-SP
Brazil
Telephone: 11-259-6644
Fax: 11-258-6990

Livraria Independente Ltda.
Rua De Flores, 105 S/805
Parto Alegre RS
90020 Brazil
Telephone: 27-1732

China
China National Sci-Tech Information
9/F Real Estate Bldg.
Renminnan Road
Shenzhen 518001,
P.R. China
Telephone: 239290

Fax: 0755-252385

CNPIEC
No. 15 Xueyuan Lu
Beijing 10083
P.R. China
Telephone: 2010821
Fax: 2010821

Hong Kong/ Pacific Rim
Global Info Centre Hong Kong
Unit 1 11/F
Multifield Plaza
3-7A Prat Avenue
Tsim Sha Tsui
Kowloon, Hong Kong

India
Book Supply Bureau
D-44
South Extension
New Delhi-110049
India
Telephone: 11-611991
Fax: 11-692-337

Allied Publishers Private Ltd.
ASTM Dept.
751 Mount Road
Madras 600-002
India
Telephone: 44-863938, 863948, 863958
Fax: 44-470-649

Indonesia
C.V. Djakarta Raya
32, Jalan Raya
Jatinegara Timur
Jakarta Timur 13310
Indonesia
Telephone: 21-819-3487
Fax: 21-850-6529

Japan
Japanese Standards Association
1-24, Akasaka 4
Minato-Ku
Tokyo 107
Japan
Telephone: 33-583-8001
Fax: 33-586-2029

Kinokuniya Co. Ltd.
Book Division
PO Box 5050
Tokyo Intl 100-31
Japan
Telephone: 33-439-0124

Fax: 33-439-1094

Maruzen Company, Ltd.
Book Division
PO Box 5050
Tokyo 156
Japan
Telephone: 33-272-7211
Fax: 33-278-1937

Korea
Korean Standards Association
13-31 Yoido-dong
Youngdungpo-gu
Seoul, Korea 150-010
Telephone: 02-369-8114
Fax: 02-780-3340

Korea Technical Exchange Co.
Rm. 1104,
Mapo Jaeil Bldg.
256-13 Kongduk-dong
Mapo-ku,
Seoul 121-020
Korea
Telephone: 02-718-0391
Fax: 02-718-0569

Kumi Trading Co.
PO Box 3553
Seoul 100
Korea
Telephone: 02-588-6667
Fax: 02-588-8291

International Professional Associates
C.P.O. Box 246
Seoul 100-602
Korea
Telephone: 02-704-1733
Fax: 02-704-7585

Korea Stock Book Centre
POB 34, Yeoeido
Seoul, Korea
Telephone: 02-785-1631
Fax: 02-784-0315

Latin/South America & Mexico
Global Info Centre
3909 NE 163rd Street
Suite 110
North Miami Beach, FL 33160
Telephone: 305-944-1099
Fax: 305-944-1029

International Library Service
2722 N. 650 East

PO Box 735
Provo, UT 84601
Telephone: 801-374-6214
Fax: 801-374-0634

Mexico

IHS De Mexico
AZ. Rio Churubusco
No. 364 Col. El Carmen
Coyoacan D.F. 04100
Mexico
Telephone: 5-659-5889
Fax: 5-658-1215

New Zealand

Standards Association of New Zealand
Private Bag 2439
Wellington
New Zealand
Telephone: 04-384-2108
Fax: 04-384-3938

Pakistan

American Book & Subscription Agency
Green Hotel Bldg.
Bahadur Yar Jang Road
PO Box 3513
Karachi Pakistan
Telephone: 21-715187
Fax: 21-6312621

Singapore

Singapore Institute of Standards and Industrial Research
1 Science Park Drive
Singapore 0511
Telephone: 778-7777
Fax: 778-0086

Taiwan

Tao's Publishers & Book Co., Ltd.
Room 502, 5th Floor
No. 121
Chung Ching S Road,
Sec, 1
Taipei Taiwan
R.O.C.
Telephone: 02-331-5773
Fax: 02-375-2555

Transmission Books & Microforms Co., Ltd.
PO Box 96-337
Taipei, Taiwan
Telephone: 02-736-7071
Fax: 02-736-3001

Bureau Veritas (BV), North America, Inc.
1850 Eller Drive
Suite 201

Everglades, FL 33316
Telephone: 954-525-4114
Fax: 954-763-9718

Canadian Standards Association
178 Rexdale Boulevard
Rexdale, ON Canada M9W 1R3
Telephone: 416-747-4058

Compressed Gas Association (CGA)
1725 Jefferson Davis Highway, Suite 1004
Arlington, VA 22202
Telephone: 703-412-0900
Fax: 703-412-0128

Customs Standards Services
802 Oakland, Suite 5
Ann Arbor, MI 48104
Telephone: 313-930-9277

Department of the Navy
(General Specifications for T Ships of the
U.S. Navy (TSGS))
Naval Sea Systems Command
Washington, DC 20362-5101

Det Norske Veritas (DNV)
North and Central America Admin.
70 Grand Avenue, Suite 201
River Edge, NJ 07661
Telephone: 201-343-0800
Fax: 201-343-4061

Document Center
Unit 9
1504 Industrial Way
Belmont, CA 94002-4044
Telephone: 415-591-7600
Fax: 415-591-7617

Document Engineering Company, Inc.
15210 Stagg Street
Van Nuys, CA 91405
Telephone: 213-873-5566

DOD Single Stock Point (DoDSSP)
Standardization Documents Order Desk
700 Robbins Avenue, Bldg. 4D
Philadelphia, PA 19111-5094
Telephone: 215-697-2179
Fax: 215-607-1462

Expansion Joint Manufacturers Association, Inc. (EJMA)
25 N. Broadway
Tarrytown, NY 10591
Telephone: 914-332-0040

Federal Highway Administration (FHWA)
400 Seventh Street, SW
Washington, DC 20590
Telephone: 202-366-0537

Fluid Controls Institute, Inc. (FCI)
Plaza 222, U.S. Highway One
Tequesta, FL 33458

General Services Administration (GSA)
Specifications Branch
Seventh and D Streets, SW
Washington, DC 20407
Telephone: 202-708-9205
Fax: 202-708-9862

Germanischer Lloyd (USA), Inc. (GL)
111 Pavonia Avenue, Suite 1410
Jersey City, NJ 07310-1755
Telephone: 201-216-1725
Fax: 201-216-1727

Global Engineering Documents
7730 Carondelet Avenue
Room 407
St. Louis, MO 63105
Telephone: 800-854-7179
314-726-0444
Fax: 314-726-6418

Illumination Engineering Society (IES)
345 E. 47th Street
New York, NY 10017
Telephone: 212-248-5000
Fax: 212-248-5017

Information Handling Services
15 Iverness Way East
Englewood, CO 80150
Telephone: 303-790-0600
800-525-7052

Institute of Electrical and Electronic Engineers, Inc.
(IEEE)
1828 L Street, N.W.
Suite 1202
Washington, DC 20036-5104
Telephone: 202-785-0017

Instrument Society of America (ISA)
PO Box 12277
Research Triangle Park, NC 27709
Telephone: 919-549-8411
Fax: 919-549-8288

International Maritime Organization (IMO)
Publications Section
4 Albert Embankment

London SE1 754, United Kingdom
Telephone: + 44(1)71-735-7611 x2230
Fax: + 44(1)71-587-3210

International Chamber of Shipping (ICS)
30-32 St. Mary's Axe
London, UK ED3A8ET

International Electrotechnical Commission (IEC)
1 rue de Varembe
Geneva, Switzerland

International Organization for Standardization (ISO):
Central Secretariat Address
For general information and questions on ISO:
1, rue de Varembe
Case postale 56
CH-1211 Genève 20
Switzerland
Telephone: + 41 22 749 01 11
Telefax: + 41 22 733 34 30
Telex: 41 22 05 iso ch
Telegrams: isorganiz

Orders for ISO International Standards and other ISO publications should be addressed to the ISO member bodies (non-USA users, if subscribing to Internet from a USA-based provider, should consult the member list for ordering ISO standards in their country) which are normally the primary ISO sales agents, or for customers in countries where there is no member body, to the ISO Central Secretariat.

ISO Member Bodies for Ships and Marine Technology:

Brazil (ABNT)
Associação Brasileira de Normas Técnicas
Av. 13 de Maio, no 13, 27o andar
Caixa Postal 1680
20003-900-Rio de Janeiro-RJ
Telephone: + 55 21 210 31 22
Telefax: + 55 21 532 21 43
Telex: 213 43 33 abnt br
Telegrams: normatécnica rio

Bulgaria (BDS)
Committee for Standardization and
Metrology at the Council of Ministers
21, 6th September Str.
1000 Sofia
Telephone: + 359 2 85 91
Telefax: + 359 2 80 14 02
Telex: 2 25 70 dks bg

China (CSBTS)
China State Bureau of Technical Supervision
4, Zhichun Road
Haidian District
PO Box 8010

Beijing 100088
Telephone: + 86 10 203 24 24
Telefax: + 86 10 203 10 10
Telegrams: 1918 beijing

Cuba (NC)

Oficina Nacional de Normalización
Calle E No. 261 entre 11 y 13
Vedado, La Habana 10400
Telephone: + 53 7 30 00 22
Telefax: + 53 7 33 80 48
Telex: 51 22 45 cen cu

Czech Republic (COSMT)

Czech Office for Standards, Metrology and Testing
Biskupsky dvur 5
113 47 Praha 1
Telephone: + 42 2 232 44 30
Telefax: + 42 2 232 43 76
Telex: 12 19 48 funm c
Telegrams: normalizace praha

Denmark (DS)

Dansk Standard
Baunegaardsvej 73
DK-2900 Hellerup
Telephone: + 45 39 77 01 01
Telefax: + 45 39 77 02 02
Telex: 11 92 03 ds stand
Telegrams: danskstandard

France (AFNOR)

Association française de normalisation
Tour Europe
F-92049 Paris La Défense Cedex
Telephone: + 33 1 42 91 55 55
Telefax: + 33 1 42 91 56 56

Germany (DIN)

DIN Deutsches Institut für Normung
Burggrafenstrasse 6
D-10787 Berlin
Postal address:
D-10772 Berlin
Telephone: + 49 30 26 01-0
Telefax: + 49 30 26 01 12 31
Telex: 18 42 72 din d
Telegrams: deutschnormen berlin
Internet: postmaster@din.de

India (BIS)

Bureau of Indian Standards
Manak Bhavan
9 Bahadur Shah Zafar Marg
New Delhi 110002
Telephone: + 91 11 323 79 91
Telefax: + 91 11 323 40 62
Telex: 316 58 70 bis in

Telegrams: manaksanstha

Italy (UNI)

Ente Nazionale Italiano di Unificazione
Via Battistotti Sassi 11/b
I-20133 Milano
Telephone: + 39 2 70 02 41
Telefax: + 39 2 70 10 61 06
Telegrams: unificazione

Japan (JISC)

Japanese Industrial Standards Committee
c/o Standards Department
Ministry of International Trade
and Industry
1-3-1, Kasumigaseki, Chiyoda-ku
Tokyo 100
Telephone: + 81 3 35 01 92 95
Telefax: + 81 3 35 80 14 18
Telex: 02 42 42 45 jsaty j
Telegrams: mitijisc tokyo

Korea, Dem. P. Rep. of (CSK)

Committee for Standardization of the
Democratic People's Republic of Korea
Zung Gu Yok Seungli-Street
Pyongyang
Telephone: + 85 02 57 15 76
Telex: 59 72 tech kp
Telegrams: standard

Korea, Republic of (KIAA)

Industrial Advancement Administration (KIAA)
2, Chungang-dong, Kwachon-city
Kyonggi-do 427-010
Telephone: + 82 2 503 79 38
Telefax: + 82 2 503 79 41
Telex: 2 84 56 fincen k
Telegrams: koreaiaa

Netherlands (NNI)

Nederlands Normalisatie-instituut
Kalfjeslaan 2
PO Box 5059
NL-2600 GB Delft
Telephone: + 31 15 2 69 03 90
Telefax: + 31 15 2 69 01 90
Telex: 3 81 44 nni nl
Telegrams: normalisatie delft

Norway (NSF)

Norges Standardiseringsforbund
Hegdehaugsveien 31
Postboks 7020 Homansbyen
N-0306 Oslo 3
Telephone: + 47 22 46 60 94
Telefax: + 47 22 46 44 57

Poland (PKN)

Polish Committee for Standardization
ul.Elektoralna 2
PO Box 411
00-950 Warszawa
Telephone: + 48 22 620 54 34
Telefax: + 48 22 620 07 41

Romania (IRS)

Institutul Român de Standardizare
Str. Jean-Louis Calderon Nr. 13
Cod 70201
Bucuresti 2
Telephone: + 40 1 211 32 96
Telefax: + 40 1 210 08 33

Russian Federation (GOST R)

Committee of the Russian Federation for Standardization,
Metrology and Certification
Leninsky Prospekt 9
Moskva 117049
Telephone: + 7 095 236 40 44
Telefax: + 7 095 237 60 32
Telex: 41 13 78 gost su
Telegrams: moskva standart

USA (ANSI)

American National Standards Institute
11 W. 42nd Street
13th Floor
New York, NY 10036
Telephone: + 1 212 642 49 00
Telefax: + 1 212 398 00 23
e-mail: smazza@ansi.org

United Kingdom (BSI)

British Standards Institution
389 Chiswick High Road
GB-London W4 4AL
Telephone: + 44 181 996 90 00
Telefax: + 44 181 996 74 00

Lloyd's Register of Shipping (LR)

17 Battery Place
New York, NY 10004-1195
Telephone: 212-425-8050
Fax: 212-363-9610

Manufacturers Standardization Society (MSS)

127 Park Street, NE
Vienna, VA 22180
Telephone: 703-281-6613
Fax: 703-281-6671

Maritime Administration

National Maritime Resource and Education Center—
Marine Standards Library
400 Seventh Street, SW

Washington, DC 20590
Telephone: 202-366-1864
Fax: 202-366-7197

Morgan Technical Library
National Fire Protection Association
Batterymarch Park, Room 251
Quincy, MA 02269
Telephone: 617-770-3000, ext. 445

National Electrical Manufacturers Association (NEMA)
2101 L. Street, NW
Washington, DC 20036

National Fire Protection Association (NFPA)
PO Box 9146
Quincy, MA 02169
Telephone: 800-344-3550
Fax: 617-984-7057

National Institute of Standards and Technology (NIST)
Room A629, Administration Building
Standards Information Center
Gaithersburg, MD 20899
Telephone: 301-975-4040

National Shipbuilding Research Program (NSRP)
University of Michigan
Transportation Research Institute
2901 Baxter Road
Ann Arbor, MI 48109
Telephone: 313-763-2465

Naval Sea Systems Command (NAVSEA)
Department of the Navy
CODE 03R4
National Center Building 3
2531 Jefferson Davis Highway
Arlington, VA 22202
Telephone: 703-602-1135
Fax: 703-602-6363

Nippon Kaiji Kyokai
One Parker Plaza, 11th Floor
400 Kelby Street
Fort Lee, NJ 07024
Telephone: 201-944-8021
Fax: 201-944-8183

Oil Companies International Marine Forum (OCIMF)
6th Floor, Portland House, Stag Place
London, SW1E 5BH, England

Radio Technical Commission for Marine Services
(RTCMS)
Box 19087
Washington, DC 20036

Telephone: 202-639-4006

Society of Automotive Engineers, Inc. (SAE)
400 Commonwealth Drive
Warrendale, PA 15096

Society of Allied Weight Engineers, (SAWE), Inc.
5530 Aztec Drive
La Mesa, CA 91942-2110
Telephone: 619-465-1367
Fax: 619-465-2561
E-mail: saweedge@king.cts.com

Society of Naval and Marine Engineers (SNAME)
601 Pavonia Avenue
Jersey City, NJ 07306
Telephone: 800-798-2188 or 219-798-4800
Fax: 219-798-4975
E-mail: sname@sname.org

Standards Engineering Society
1706 Darst Avenue
Dayton, OH 45403
Telephone: 513-258-1955
Fax: 513-258-0018

Superintendent of Documents
Government Printing Office
Washington, DC 20402
Telephone: 202-512-1800
Fax: 202-512-2250
U.S. Fax Watch: 202-512-1716

This ordering address applies to the following:
Code of Federal Regulations (CFR)
Department of Health and
Human Services (DHHS)

Technical Standards Service
4024 Mt. Royal Boulevard
Allison Park, PA 15101
Telephone: 412-487-7007

Underwriters Laboratories (UL)
333 Pfingsten Road
Northbrook, IL 60062
Telephone: 312-272-8800

U.S. Coast Guard (USCG)
Department of Transportation
2100 Second Street, SW
Washington, DC 20593
Telephone: 202-366-6483
Fax: 202-366-3877

3. Standards and Publications

3.1 Table 1 lists standards and publications, subdivided into nine groups. If you do not find a standard in one group, check to see if it is in a related group.

4. IACS Member Societies

4.1 The International Association of Classification Societies (IACS) Member Societies are listed below. These Classification Societies have established IACS to promote the highest standards in ship safety and the prevention of marine pollution. IACS provides consultation and cooperation with IMO. The Member Societies are strictly bound by ISO based Quality Assurance Standards for Ship Classification and delegated statutory work.

Societies

American Bureau of Shipping (ABS)
ABS Plaza
16855 Northchase Drive
Houston, TX 77060
Tel: 281-877-6000

Lloyd's Register of Shipping (LR)
71 Fenchurch Street
London EC3M 4BS
England
Tel: (44-71) 709-9166
Tlx: 851 888379 LR LON G
Fax: (44-71) 488-4796

Bureau Verities (BV)
17 bis, Place des Reflets
La Defense 2
92400 Courbevoie, France
(Postal address: Cedex 44-92077
Paris-La-Defense, France)
Tel: (33-1) 42 91 52 91
Tlx: (842) 615368F BVSMS
Fax: (33-1) 42 91 52 93

Nippon Kaiji Kyokai (NK)
4-7, Kioi-Cho, Chiyoda-Ku
Tokyo 102
Japan
Tel: (81-33) 2301201
Tlx: (781) J22975 CLASSNK
Fax: (81-33) 2303524

China Classification Society (CCS)
40, Dong Huang Cheng Gen Nan Jie
Beijn 10006
China
Tel: (86-1) 513-6633
Tlx: (718) 210407 ZCJB CN
Fax: (86-1) 513 0188

Polski Rejestr Statkow (PRS)
ul. Marynarki Polskiej 59
Gdansk-Letniewo
(Postal address: Skr. Poczt. 445
80-958 Gdansk 50, Poland)
Tel: (4858) 31 72 23
Tlx: (867) 512373, 512952 PRS PL
Fax: (4858) 31 66 36

Det Norske Veritas (DNV)
Veritasveien 1
PO Box 300
N-1322 Hovik
Norway
Tel: (47-67) 57 99 00
Tlx: (856) 76 192 VERIT N
Fax: (47-67) 57 99 11

Registro Italiano Navale (RINA)
Via Corsica 12, Genova, Italy
(Postal address: Casella Postale
1195 D-16100 Genova, Italy)
Tel: (39-10) 53 851
Tlx: (843) 270022 RINAVI
Fax: (39-10) 591877

Germanischer Lloyd (GL)
Vorsetzen 32
PO Box 11 16 06
D-2000 Hamburg 11
Germany
Tel: (49-40) 361490
Tlx: (841) 212828 GLHH D
Fax: (49-40) 36149200

Register of Shipping (RS)
191065 St. Petersburg
8, Dvortsovaja Nab.
Russian Federation
Tel: (7-812) 312-88-78
Tlx: 87164 121525 RSSU SU
Fax: (7-812) 314-10-87

Korean Register of Shipping (KR)
1465-10 Seocho-Dong
Seocho-Ku, Seoul, Korea
PO Box 3229
Tel: (82-2) 5826001
Tlx: (787) 27358 K
Fax: (82-2) 5848813

Associates

Hrvatski Registar Brodova (CRS)
Croatian Register of Shipping
Marasoviceva 67
Split 58000
Croatia
Tel: (3858) 48-955
Tlx: (862) 26129 HR CROREG
Fax: 585-746

Indian Register of Shipping
72 Maker Towers F, 7th Floor
Cuffe Parade
Bombay 400-005
Indian
Tel: (91-22) 2186376
Tlx: (953) 83364 IRSIN
Fax: (91-22) 2181241

IACS Ltd.

IACS Permanent Secretariat—J.D. Bell, Permanent Secretary
 IACS Permanent Representative at IMO—
 E.T. Reilly, Permanent Representative at IMO (effective 6/11/93)
 5 Old Queen Street
 London
 SW1H 9JA
 Tel: (44-171) 976-0660
 Tlx: 261720 IACS G
 Fax: (44-171) 976-0440

4.2 *Delegating Countries*—The countries delegating statutory responsibilities to Classification Societies are listed in Table 2. We have received this information from only five of the IACS Member Societies. The abbreviations used are discussed at the end of Table 2.

5. IACS Member Societies with Offices in the United States—Publication Lists

5.1 ABS—American Bureau of Shipping & Affiliated Companies—Publications

5.1.1 For current prices and information concerning publications:

ABS Americas:

ABS Plaza
 16855 Northchase Drive
 Houston, TX 77060
 Tel: 281-673-0700
 Fax: 281-874-9551

ABS Europe:

ABS House, 1 Frying Pan Alley
 London, E1 7HR England
 Tel: (44-171) 247-3255
 Telex: 865621
 Fax: (44-171) 377-2453

ABS Pacific:

510 Thomson Road
 No. 06-00, SFL Bldg.
 Singapore 1129
 Republic of Singapore
 Tel: 65-353-5713
 Telex: RS 34264
 Fax: 65-353-3454

5.1.2 *ABS Publication List:*

5.1.2.1 *Classification Register:*

Title	Ref. No.
Record of ABS (Annual) 1998 edition	00

5.1.2.2 *Rules for Building and Classing:*

Title	Ref. No.
Steel Vessels 1998 = Complete set of rules including all notices and updates	2
Aluminum Vessels (1975), RCN-3-5, 1-A	3
Steel Vessels for Service on Rivers and Intra-coastal Waterways (1997), RCN5	4
Steel Vessels Under 90 Meters (295 Feet) in Length (1997)	5
Mobile Offshore Drilling Units (1997)	6

Underwater Vehicles, Systems, and Hyperbaric Facilities (1990), RCN-1	7
Single Point Mooring (1996)	8
Bulk Carriers for Service on the Great Lakes (1978), RCN-1 and 2	9
Steel Barges (1991), RCN 1-4 and corr. #1, also available on CD-ROM	10
Steel Floating Drydocks (1977)	11
Reinforced Plastic Vessels (1978), RCN 1-2	12
Offshore Installations (1997)	29

5.1.2.3 *Rules For:*

Title	Ref. No.
Certification of Cargo Containers (1987)	13
Nondestructive Inspection of Hull Welds (1986)	14

5.1.2.4 *Preliminary Rules For:*

Title	Ref. No.
Building and Classing Accommodation Barges and Hotel Barges (1989), RCN 1	48

5.1.2.5 *Guide For:*

Title	Ref. No.
Burning Crude Oil and Slops in Main and Auxiliary Boilers (1978), RCN 1	15
Construction of Shipboard Elevators (1993)	16
Repair and Cladding of Shafts (1980) RCN 1	17
Underwater Inspection in Lieu of Drydocking Survey (1996)	19
Lay-up and for Reactivation of Laid-Up Ships (1986)	20
Ships Burning Coal (1980)	21
Building and Classing Fire Fighting Vessels Now Part of Ref. #5	22
Ultrasonic Examination of Carbon Steel Forgings for Tail Shafts (1983)	30
Thrusters and Dynamic Positioning Systems (1994)	33
Survey Based on Preventative Maintenance Techniques (1995)	35
The Certification of Offshore Mooring Chain (1986)	39
Lay-Up and for Reactivation of Mobile Offshore Drilling Units (1986)	42
Classing Vessels for Safety Standby Service Now Part of Ref. #5	43
Certification of Cranes (1991), RCN 1	44
Certification of Container Securing Systems (1988)	45
Building and Classing Fishing Vessels (1989), RCN 1	55
The Use of Refrigerated (Low Pressure) Carbon Dioxide as a Fire Extinguishing Medium on Board Ship (1989)	56
The Certification of Drilling Systems (1990)	57
Application of Dynamic-Response-Based Intact Stability Criteria for Column-Stabilized Mobile Offshore Drilling Units (1990)	58
Cargo Vapor Emission Control Systems on Board Tank Vessels (1991), Corr-1	60
Building and Classing High Speed Craft, 1997	61
Building and Classing Motor Pleasure Yachts, (1990), Corr-1, RCN 1	62
Building and Classing Facilities on Offshore Installations (1991)	63
Building and Classing Undersea Pipeline Systems and Risers (1991)	64
Controlled Atmosphere Systems (1992)	66
One Man Bridge Operated (OMBO) Ships (1992)	68
Certification of Oil Spill Recovery Equipment (1993)	69
Building and Classing Oil Recovery Vessels Now Part of Ref #5	71
Hull Condition Monitoring Systems (1995)	73
Assessing Hull-Girder Residual Strength for Tankers	74
Improvement for Structural Connections and Sample Structural Details-Service Experience and Modifications for Tankers (1995)	75
Dynamic Based Design and Evaluation of Double Hull Tanker Structures Between 150 and 190 Meters in Length (1995), Corr 1-2	76

Improvement for Structural Connections and Sample Structural Details—Service Experience and Modifications for Bulk Carriers (1995)	77	Chapter 2: Maintenance of Class (1/1997)	NR 417 DNS R01 E
Assessing Hull-Girder Residual Strength for Bulk Carriers (1995)	78	Part II "Hull Structure" (9/1997)	NR 213 DNC R06 E
Preparation for Special Survey (1996)	79	Chapter 3: General (3/1996)	NR 410 DNC R00 E
Certification of Firms Engaged in Thickness Measurement of Hull Structures (1996)	80	Chapter 4: Subdivision and Intact Stability (3/1996)	NR 411 DNC R00 E
Survey of Voyage Repairs to Hull Structure (1996)	81	Chapter 5: Hull Structure Design—Steel Ships of More Than 65 m in Length (9/1997)	NR 412 DNC R01 E
Building and Classing Floating Production, Storage and Offloading Systems (1996)	82	Chapter 6: Hull Structure Design—Steel Ships of Less Than 65 m in Length (9/1997)	NR 413 DNC R01 E
Dymanic Based Design and Evaluation of Container Carrier Structures (1996)	83	Chapter 7: Strengthening for Navigation in Ice (3/1996)	NR 414 DNC R00 E
Guide for Propulsion Redundancy (1997)	84	Chapter 8: Provisions Applicable to Some Service Notations (9/1997)	NR 232 DNC R02 E
Guide for Building and Classing Vessels Intended to Carry Refrigerated Cargoes (1997)	85	Chapter 9: Hopper Dredgers and Split Hopper Dredgers (3/1996)	NR 233 DNC R02 E
Guidance Notes on the Application of Ergonomics to Marine Systems (1998)	86	Chapter 10: Provisions Applicable to Service and Offshore Working Ships (3/1996)	NR 234 DNC R01 E
5.1.2.6 Guidance Manual For:		Chapter 11: Hull Structure Design—Fiber Reinforced Plastic Ships (3/1996)	NR 220 DNC R02 E
Title	Ref. No.	Chapter 12: Hull Structure Design—Aluminum Alloy Ships (3/1996)	NR 384 DNC R01 E
Material Selection and Inspection of Inert Gas Systems (1980)	24	Chapter 14: Hull Outfittings (3/1996)	NR 415 DNC R00 E
Bronze and Stainless Steel Propeller Castings (1984)	32	Part III "Machinery Systems" (9/1997)	NR 215 DNC R06 E
Preparing Fishing Vessels' Stability Booklet (1990)	59	Chapter 15: Piping Systems—Miscellaneous Installations (9/1993)	NR 244 DNC R02 E
5.1.2.7 Requirements For:		Chapter 16: Boilers and Pressure Vessels (3/1996)	NR 245 DNC R01 E
Title	Ref. No.	Chapter 17: Propelling and Auxiliary Machinery (3/1996)	NR 246 DNC R03 E
Certification of Self-Unloading Cargo Gear on Great Lakes Vessels (1991)	25	Chapter 18: Electrical Installations (9/1997)	NR 247 DNC R02 E
Certification of the Construction and Survey of Cargo Gear on Merchant Vessels (1975)	26	Chapter 19: Equipment—Remote Control—Integrated Propulsion Plant—Automation Notations (3/1996)	NR 248 DNC R02 E
Approved Welding Combinations (1998)	27	Chapter 20: Fire Protection (3/1996)	NR 249 DNC R02 E
Notes on Heavy Fuel Oil (1984)	31	Chapter 21: Refrigerating Plants (3/1996)	NR 250 DNC R02 E
List of Type Approved Equipment (1998)	36	Chapter 22: Ships for the Carriage of Liquefied Gases (3/1996)	NR 251 DNC R01 E
International Workshop on Underwater Welding of Marine Structures	46	Chapter 23: Ships Carrying Liquid Cargoes in Bulk (3/1996)	NR 252 DNC R01 E
Coating Systems: A Guidance Manual for Field Surveyors (1998)	49	Chapter 24: Harbor and Offshore Working Ships or Units—Fishing Vessels—Livestock Carriers (3/1996)	NR 253 DNC R01 E
5.2 Bureau Veritas (Marine Division)—Technical Publications		Chapter 25: Propelled Ships of Less than 24 m in Length (9/1997)	NR 444 DNC R00 E
5.2.1 For information, current prices, and orders concerning publications:		Rules and Regulations for the Classification of Ships and Offshore Installations—Materials (1997)	NR 216 DNC R02 E
Bureau Veritas		Rules for the Classification-Certification of Yachts (1993)	NR 381 DNP R00 E
Direction Division Marine—D.S.M./PUB		Rules and Regulations for the Classification of Submersibles (1989)	NR 316 DTO R00 E
17 bis, place des Reflets—92400 La Defense 2		Rules and Regulations for the Classification of Mobile Offshore Drilling Units (1987)	NR 223 DTO R00 E
Post Adres.: 92077 Paris-La Defense Cedex		Rules and Regulations for the Construction and Classification of Inland Navigation Vessels (1984)	NR 217 DNI R00 E
Tel: 33 (0) 1 42 91 52 91		Amendments No. 1 (+ Leaflets 3/85 and 1/95)	NR 376 DNI F/E G/D
Fax: 33 (0) 1 42 91 52 98		Chapters 1 and 2: Classification Surveys	NR 219 DNC R00 E
5.2.2 Marine Technical Publications List:		Rules and Regulations for the Construction and Classification of Wooden Fishing Vessels (1963)	NR 222 DNC R00 F
5.2.2.1 Rules:		Amendments No. 1 (1970)	NR 387 DTO R00 E
Title	Ref. No.	Rules for the Construction and Classification of 5,50 Metres International Class Yachts (French text only) (1966)	NR 396 UNITAS R01 E
CD-ROM BV Rules for Ships (9/1997)	CDR 09.97 e3.0 E/F	Rules for Classification and Certification of Fishfarms—Tentative Issue (1994)	NR 445 DTO R00 E
Rules and Regulations for the Classification of Ships (9/1997) also applying to fishing vessels, launches, fiber-reinforced plastic ships and aluminum alloy ships	NR 374 SMS R09 E	Rules for the Construction and Classification of High Speed Craft (1997)	NR 446 DTO R00 E
Introduction (+ Amendments) (9/1997)	NR 421 DNC R02 E	Rules for the Classification of Offshore Units (4/1998)	
Part I "Classification—Surveys" (1/1997)	NR 212 DNS R07 E	5.2.2.2 Notes:	
Chapter 1: Classification (1/1997)	NR 416 DNS R01 E	5.2.2.2.1 Rule Notes:	

Title	Ref. No.	Title	Ref. No.
Passenger lifts, good lifts, and hoists suitable for the carriage of the personnel on board ships (1984)	NR 143 DNC R00 E	Process systems on board offshore units and installations (1998)	NR 459 DTO R00 E
Freeboard of dredgers and barges fitted with bottom dump doors (1971)	NR 144 DNC R00 E/F	Quasi-dynamic analysis of mooring systems using Ariane software (1998)	NR 461 DTO R00 E
Steels. Conditions of approval (1986)	NR 160 DNC R00 E	Safety features of offshore units and installations (1998)	NR 460 DTO R00 E
Ultrasoning testing of hull butt welds (1976)	NI 165 DNC R00 E	5.2.2.2.2 Guidance Notes:	
Classification and survey of pontoons supporting plants (1978)	NR 170 DNC R00 E	Title	Ref. No.
Towage at sea of vessels of floating units (1986)	NR 183 DNC R00 E	Study on sloshing and partial filling (1984)	NI 171 DNC R00 E
Rules for the classification and certification of lifting appliances of ships and offshore units (1984–1986)	NR 184 DNC R00 E	Noise on board ships (1981)	NI 174 DNC R00 E
Securing of containers on board ships (1984)	NR 186 DNC R00 E	Underwaterwelding. General information and recommendations (1985)	NI 198 DNC R00 E
Classification of dynamic positioning installations (1996)	NR 187 DNC R01 E	Cyclic fatigue of nodes and welded joints of offshore units (1987)	NI 199 DNC R00 E
Loading instruments. Approval procedures (1984)	NR 189 DNC R00 E	Bollard pull measurement and certification (1985)	NI 202 DNC R00 E
Recommendations for the laying up of ships (1996)	NR 191 DNS R01 E	Guidelines on documents to be submitted for stability study (1988)	NI 299 DNC R00 E
Surveys of installations under continuous survey or distributed survey systems. Authorization of chief engineers (1995)	NI 192 DNS R02 E	Non-bonded flexible steel pipes used as flow-lines (1990)	NI 364 DTO R00 E
Scantlings of spars and standing rigging for sailing pleasure boats (1984)	NR 193 DNS R00 E	Practical guide for the certification of composite yacht hulls under the BV Mode I survey scheme (1993)	NI 385 DNP R00 E/F
Approval of shipyard quality systems for the construction of steel ships (1987)	NR 195 DNC R00 E	Thickness measurements—Requirements—Interpretations—Acceptance criteria (1997)	NI 389 DNS R01 E
Classification and certification of floating hotels and hospitals (1986)	NR 197 SMS R00 E	Fatigue strength of welded ship structures (1995)	NI 393 DSM R00 E
Marine hovercraft (1987)	NR 203 DNC R00 E	Programme for condition assessment survey (PCAS) (1995)	NI 395 DNS R00 E
Approval of yard quality systems for the construction of offshore structures (1987)	NR 204 DTO R00 E	Recommendations to avoid overloading of bulk carrier structures (1995)	NI 402 DNC R00 E
Certification of well control equipment (1986)	NR 205 DNC R00 E	Guidelines for corrosion protection of seawater ballasts tanks and hold spaces (1995)	NI 409 DNC R00 E
Classification of wind propulsion plants aboard ships (1987)	NR 206 DNC R00 E	Recommendations on the quality of software on board (1996)	NI 425 DNC R00 E/F
Building and operation of vibration/free propulsion plants and ships (1987)	NR 207 SMS R00 E	Guidelines for the preparation of cargo securing manual (1997)	NI 429 DNC R00 E
Inspection at works for the classification of steel ships and offshore units (1994)	NR 266 DNC R01 E	Guidance note for the certification of life-saving appliances and arrangements (1997)	NI 430 DNC R00 E
Stainless steels intended for chemical carriers. Conditions of approval (1988)	NR 301 DNC R00 F	Certification of synthetic fiber ropes for mooring systems (1997)	NI 432 DTO R00 E
Approval and inspection at works of materials and equipment for the classification of ships and offshore units. Principles and procedures (1993)	NR 320 DNC R01 E	Type approval of non-destructive testing equipment dedicated to underwater inspection of offshore structures (1998)	NR 422 DTO R00 E
Centralized navigation control (1993)	NR 325 DNC R01 E	5.2.2.2.3 General Notes:	
Bureau Veritas additional class notations for structural cargo protection of oil tankers. Tentative rules (1990)	NR 358 DNC R00 E/F	Title	Ref. No.
Type testing programmes of internal combustion engines for the classification of ships or offshore units (1990)	NR 361 DNC R00 E	List of approved steels. (1994)	NG 259 DSC R01 E/F
Raw materials for FRP hull—Approval and survey programme (1993)	NR 386 DNC R00 E/F	Type approved materials and equipment. Electrical control and monitoring equipment. (1996)	NG 260 DSC R04 E
Guidelines for structural analysis of oil tankers (1995)	NR 399 DSM R00 E	Type approved materials and equipment. Statutory materials and equipment. (1996)	NG 263 DSC R06 E
VERISTAR—Integrating design analysis and ship management (1996)	NR 418 DSM R00 E	Approved filler products for electric arc welding. (1998)	NG 313 DSC R09 E/F
Corrosion protection of offshore units and installations. Recommended practice (1996)	NR 423 DTO R00 E	Type approved processes materials and equipment. Hull and Machinery. (1996)	NG 363 DSC R05 E
Approval of computerized equipment (1996)	NR 424 DNC R00 E/F	5.3 Det Norske Veritas—Publications:	
Construction survey of offshore units and installations Rule Note (1992)	NR 426 DTO R00 E	5.3.1 For current prices and information concerning publications:	
Electrical systems on board offshore units and installations—Tentative issue—Rule Note (1996)	NR 428 DTO R00 E	Det Norske Veritas Classification	
Piping system on board offshore units and installations (1998)	NR 458 DTO R00 E	80 Grand Avenue	
		Suite 201	
		River Edge, NJ 07661	

Tel: 201-488-0112

Fax: 201-488-1778

5.3.2 *Det Norske Veritas—Publication List:*

5.3.2.1 *Rules for Classification of Ships:*

Complete Volume (includes binder and introduction booklet)
 Annual Subscription Fee (includes all new and revised chapters issued)
 CD-ROM version for IBM compatible PC, single user
 Initial price
 Twice yearly updates—annual subscription free
 CD-ROM, network licenses
 Reprints of the Rules for Ships (separate booklets)

Volume 1

Part 0	Introduction
Chapter 1	User Information, Amendments and Indexes
Chapter 2	Introduction to Ship Classification
Part 1	General Regulations
Chapter 1	General Regulations
Part 2	Materials and Welding
Chapter 1	General Requirements for Materials
Chapter 2	Metallic Materials
Chapter 3	Welding
Part 3	Structures and Equipment—Main Class
Chapter 1	Hull Structural Design, Ships with length 100 meters and above
Chapter 2	Hull Structural Design, ships with length less than 100 meters
Chapter 3	Hull Equipment and Appendages
Chapter 4	Stability and Watertight Integrity
Chapter 5	Load Line
Chapter 6	Lifesaving Appliances and Arrangements
Part 4	Machinery and Systems—Main Class
Chapter 1	Machinery and Systems Design, General
Chapter 2	Propulsion and Auxiliary Machinery
Chapter 3	Boilers, Pressure Vessels, Thermal-Oil Installations, and Incinerators
Chapter 4	Electrical Installations
Chapter 5	Instrumentation and Automation
Chapter 6	Fire Protection, Detection and Extinction
Chapter 7	Arrangements for Coal Fired Boilers, Tentative Rules
Chapter 8	Safety of Navigation
Chapter 9	Radio communications for the Global Maritime Distress and Safety System

Volume 2

Part 5	Special Service and Type—Additional Class
Chapter 1	Ships for Navigation in Ice
Chapter 2	Passenger and Dry Cargo Vessels
Chapter 3	Oil Carriers
Chapter 4	Chemical Carriers
Chapter 5	Liquefied Gas Carriers
Chapter 6	Fishing Vessels
Chapter 7	Tugs, Supply Vessels, and other Offshore/Harbor Vessels
Chapter 8	Slop Reception and Processing Facilities, Tentative Rules
Chapter 9	Oil Production and Storage Vessels
Chapter 10	Vessels for Carriage of Refrigerated Cargoes
Part 6	Special Equipment and Systems—Additional Class
Chapter 1	Miscellaneous Notations
Chapter 2	Electric Propulsion Redundant (EPR)
Chapter 3	Periodically Unattended Machinery Space (EO)
Chapter 4	Additional Fire Protection (F-AMC)
Chapter 5	Integrated Computer Systems (ICS), Tentative Rules
Chapter 6	Centralized Cargo Control for Liquid Cargoes (CCO)
Chapter 7	Dynamic Positioning Systems
Chapter 8	Nautical Safety
Part 7	Rules for Ships in Operation
Chapter 1	General Requirements
Chapter 2	Periodical Survey Regulations
Chapter 3	Compulsory Operational Requirements, All Ships
Chapter 4	Compulsory Operational Requirements, Additional Class
Chapter 5	Management of Safe Ship Operation and Pollution Prevention

5.3.2.2 *Rules for Classification of Mobile Offshore Units:*

Complete Volume (includes binder and introduction booklet)
 Annual Subscription Fee (includes all new and revised chapters issued)
 Reprints of the Rules for Mobile Offshore Units (separate booklets):

Part 1	Regulations
--------	-------------

Chapter 1	General Regulations
Chapter 2	Periodical Survey Regulations
Part 2	Materials and Welding
Chapter 1	General Requirements for Materials
Chapter 2	Metallic Materials
Chapter 3	Welding
Part 3	Structures and Equipment—Main Class
Chapter 1	Structural Design General
Chapter 2	Special Designs, Equipment and Stability
Part 4	Machinery and Systems—Main Class
Chapter 1	Machinery and Systems Design, General
Chapter 2	Propulsion and Auxiliary Machinery
Chapter 3	Boilers, Pressure Vessels, Thermal-Oil Installations, and Incinerators
Chapter 4	Electrical Installations
Chapter 5	Instrumentation and Automation
Chapter 6	Fire Protection, Detection and Extinction
Part 5	Special Service and Type—Additional Class
Chapter 1	Units for Transit and/or Location in Ice
Chapter 2	Accommodation Vessels and other Offshore Support Vessels
Chapter 3	Drilling Vessels and other Vessels for Offshore Operations
Chapter 4	Oil Production and Storage Units
Chapter 5	Offshore Loading Buoys
Part 6	Special Equipment and Systems—Additional Class
Chapter 1	Miscellaneous Notations
Chapter 2	Position Mooring (POS Moor)
Chapter 3	Periodically Unattended Machinery Space (EO)
Chapter 4	Additional Fire Protection (F-AM)
Chapter 5	Drilling Plant (DRILL)
Chapter 6	Oil Production Plant (PROD)
Chapter 7	Dynamic Positioning Systems

5.3.2.3 *Rules for Classification of Fixed Offshore Installations:*

Complete Volume (includes binder and introduction booklet)
 Annual Subscription Fee (includes all new and revised chapters issued)
 Reprints of the Rules for Fixed Offshore Installations (separate booklets):

Part 1	Regulations
Chapter 1	General Regulations
Chapter 2	Periodical Survey Regulations
Part 2	Materials
Chapter 1	Steel and Iron
Chapter 2	Aluminum, Copper, and other Non-Ferrous Alloys
Chapter 3	Structural Concrete and Reinforcement Materials
Part 3	Structures
Chapter 1	Structural Design, General
Chapter 2	Fabrication and Construction
Chapter 3	Transport and Installation Operations
Chapter 4	Special Designs: Steel Template (Jacket) Structures
Chapter 5	Special Designs: Concrete Gravity Based Structures, Tentative Rules
Chapter 6	Special Designs: Tension Leg Platforms
Part 4	Safety and Utility Systems Equipment
Chapter 1	General
Chapter 2	General Safety
Chapter 3	Utility Piping System
Chapter 4	Mechanical Equipment
Chapter 5	Electrical Systems and Equipment
Chapter 6	Instrumentation and Automation
Chapter 7	Precommissioning
Chapter 8	Systems Related to Special Designs
Part 5	Special Function
Chapter 1	Drilling Plant
Chapter 2	Production Plant

5.3.2.4 *Tentative Rules for Classification of High Speed and Light Craft:*

Complete Volume (includes binder and introduction booklet)
 Annual Subscription Fee (includes all new and revised chapters issued)
 Reprints (separate booklets):

Part 0	Introduction
Chapter 1	User Information, Amendments and Indexes
Chapter 2	Introduction to Classification
Part 1	Regulations

Chapter 1	General Regulations
Chapter 2	Periodical Surveys
Part 2	Materials and Welding
Chapter 1	Steel and Iron
Chapter 2	Aluminum, Copper, and Non-Ferrous Alloys
Chapter 3	Welding
Chapter 4	Fibre Composite and Sandwich Materials
Part 3	Structures, Equipment
Chapter 1	Design Principles, Design Loads
Chapter 2	Hull Structural Design, Steel
Chapter 3	Hull Structural Design, Aluminum Alloy
Chapter 4	Hull Structural Design, Fibre Composite and Sandwich Constructions
Chapter 5	Equipment, Steering and Appendages
Chapter 6	Stability and Watertight Integrity, Closing Appliances
Part 4	Machinery and Systems—Equipment and Operation
Chapter 1	Machinery and Hull Piping Systems
Chapter 2	Propulsion, Auxiliary Machinery and Pressure Vessels
Chapter 3	Electrical Installations
Chapter 4	Remote Control, Instrumentation and Automation
Chapter 5	Fire Safety
Part 5	Special Service and Type—Additional Class
Chapter 1	Passenger Craft
Chapter 2	Car Ferry
Chapter 3	Cargo
Part 6	Special Equipment and Systems—Additional Class
Chapter 1	Periodically Unattended Machinery Space (EO)
Chapter 2	Nautical Safety

5.3.2.5 Certification Notes:

Quality Assurance Systems:

- 1.1 Conformity Certification Services—General Description, November 1988
 - 1.2 Conformity Description, November 1988—Type Approval, January 1990
 - 1.3 Conformity Certification Services—Quality System Certification, May 1990
 - 1.5 Conformity Certification Services—Approval of Manufacturers, Metallic Materials, September 1990
- Approval Schemes:*

- 2.1 Approval and Survey Programs for Materials, October 1988
 - MAT 100—Approval of Manufacturers, Ferrous and Non-Ferrous Materials and Material Products
 - MAT 200—Manufacturing Survey, Ferrous and Non-Ferrous Materials and Material Products
 - MAT 300—Approval of Manufacturer and Manufacturing Survey, Mooring Equipment
 - MAT 400—Approval of Welding Consumables
 - MAT 500—Type Approval of Non-Metallic Materials and Material Products
 - MAT 600—Approval of Corrosion Protection Systems
- 2.4 Type Approval of Instrumentation and Automation Equipment, March 1988
- 2.5 Type Approval of Loading Instruments for Ships, June 1985
- 2.6 Certification of Offshore Mooring Chain, July 1985
- 2.7-1 Offshore Freight Containers, May 1989
- 2.8 On Board Stability Computers, February 1990
- 2.9 101 Type Approval, Valves, November 1991
 - 102 Type Approval, Pipe Couplings, November 1991
 - 103 Type Approval, Flexible Hoses of Non-Metallic Materials, November 1991
 - 201 Approval Program, Approval of Hydraulic Cylinders

2.10 Diesel Engine Driven Power Plants—Certification, Testing, and Inspection, July 1991

Marine Operations:

- 3.3 Declarations on Lay-up of Ships, August 1983
- 3.4 Declarations on Preservation of Laid-up Ships, August 1976
 - 5.3.2.6 Register Book
 - Det Norske Veritas' Register Book (including 4 supplements)
 - 5.3.2.7 Guidelines and Classification Notes:
 - Complete Volume (purchase basis)
 - Annual Subscription Fee (includes all new and revised notes issued)
 - Design and Classification of Roll-On/Roll-Off Ships, May 1980
 - Prevention of Harmful Vibration in Ships, July 1983
 - Internal Control, Mobile Offshore Units (Owners' Control System) September 1983
 - Stability Documentation for Mobile Offshore Units Class and Statutory Services, November 1986
 - Documentation Required for SC Class, June 1988
 - Condition Assessment Program, September 1991
 - Safety and Quality Management, May 1992
 - Guidelines for Corrosion Protection of Ships, July 1992
 - 4.1 Guidance Manual for Inspection and Repair of Bronze Propellers, October 1992
 - 4.2 Guidance Manual for Inspection and Repair of Steel Propellers, October 1992
 - 6. Fire Test of Components Intended for Use in Piping Systems On Board Ships, May 1980 (Reprint of 1975)
 - 6.1 Fire Test Methods for Plastic Pipes, Joints, and Fittings, January 1987
 - 7. Ultrasonic Inspection of Weld Connections, May 1980 (Reprint of November 1978)
 - 10.1 Ships and Mobile Offshore Units, Alternative Survey Arrangements for Machinery and Automation Systems, August 1992
 - 13. Erosion and Corrosion in Piping Systems for Sea Water, May 1980 (Reprint of January 1979)
 - 14. Instrumentation and Automation, Programmable Electronic Systems, May 1991
 - 20.1 Stability Documentation—Ships (Newbuildings), February 1990
 - 20.2 Lightweight Determination—Ships, February 1990
 - 30.1 Buckling Strength Analysis, May 1992
 - 30.2 Fatigue Strength Analysis for Mobile Offshore Units, August 1984
 - 30.3 Spherical Shells Subjected to Compressive Stresses, October 1987
 - 30.4 Foundations, February 1992
 - 30.5 Environmental Conditions and Environmental Loads, March 1991
 - 30.6 Structural Reliability Analysis of Marine Structures, July 1992
 - 31.1 Strength Analysis of Hull Structures in Bulk Carriers and Container Ships, May 1980
 - 31.2 Strength Analysis of Hull Structures in Roll-On/Roll-Off Ships, May 1980

31.3 Strength Analysis of Hull Structures in Tankers, October 1988

31.4 Strength Analysis of Main Structures of Column Stabilized Units (Semi-submersible Platforms), September 1987

31.5 Strength Analysis of Main Structures of Self-Elevating Units, February 1992

32.1 Strength Analysis of Rudder Arrangements, January 1984

32.2 Strength Analysis of Container Securing Arrangements, July 1983

41.2 Calculation of Gear Rating for Marine Transmission, August 1990

41.3 Calculation of Crankshafts for Diesel Engine, July 1988

42.1 Dual Fuel Arrangement for Diesel Engines with High Pressure Gas Injection, February 1989

5.3.2.8 *Lists of Type Approved Manufacturers and Type Approved Products:*

Approved Manufacturers:

100. Companies with Veritas Certified Quality Systems

101. Metallic Materials

Type Approved Products:

1. Nonmetallic Materials
2. Welding Consumables
3. Structural Equipment, Containers, Cargo Handling, and Securing Equipment

4. Machinery Components
5. Mechanical Equipment and Piping
6. Electrical Equipment and Systems
7. Instrumentation and Automation
8. Fire-Restricting Materials and Fire Technical Equipment
9. Drilling and Well Control Equipment

5.3.2.9 *Rules for Other Objects:*

Translation of Tentative Rules for the Construction and Classification of Vessels of Glass Reinforced Plastics (1972) Norwegian and English Editions

Tentative Rules for the Construction and Classification of Dynamic Positioning Systems for Ships and Mobile Offshore Units, 1977

Rules for the Construction and Classification of Floating Docks, 1977

Rules for Certification of Lifting Appliances, 1989
Rules for Certification of Freight Containers, 1981
Rules for Certification of Diving Systems, 1988
Rules for Certification of Lifts, 1987
Rules for Certification/Classification of Submersibles, 1988
Rules for Lifeboats Based on SOLAS 1974 Amendment 83 Rev. Ch. 3, 1986

5.4 Germanischer Lloyd—English Publications

5.4.1 For current prices and information concerning publications:

Germanischer Lloyd

PO Box 11 16 06, D-20416 Hamburg

Vorsetzen 32, D-20459 Hamburg

Tel: (040) 36 14 90

Telex: 2 12 828 glhh d

Fax: (040) 36 14 92 00

Cable: klassenlloyd hamburg

5.4.2 *Germanischer Lloyd—Publication List:*

NOTE 1—This list includes all English titles, in which the publication is available.

5.4.2.1 *Ship Technology:*

Title	Ref. No.
Classification and Surveys (1993)	10
Part 1—Seagoing Ships	
Chapter 1—Rules for Hull Structures (1992)	11E
Chapter 2—Rules for Machinery Installations (1992)	12E
Chapter 3—Rules for Electrical Installations (1992)	13E
Chapter 4—Rules for Refrigerating Installations (1992)	12E
Chapter 5—Rules for High Speed Vessels (1991)	14E
Chapter 6—Rules for Liquefied Gas Tankers (1992)	15E
Chapter 7—Rules for Chemical Tankers (1992)	15E
Chapter 8—Rules for Fishing Vessels (1991)	16E
Chapter 9—Rules for Oil Recovery Ships (1993)	17E
Regulations for Chemical Recovery Vessels (1993)	18
Part 2—Inland Waterway Vessels	
Chapter 1—Rules for Hull Structures (1990)	24E
Chapter 2—Rules for Machinery Installations (1990)	24E
Chapter 3—Rules for Electrical Installations (1990)	24E

5.4.2.2 *Materials and Welding:*

Title	Ref. No.
Part 1—Metallic Materials	
Chapter 1—Principles, Testing Procedures (1992)	30E
Chapter 2—Ferrous Materials (1992)	30E
Chapter 3—Non-Ferrous Metals (1992)	30E
Chapter 4—Equipment (1992)	30E
Part 2—Non-Metallic Materials	
Chapter 1—Plastic Materials	31
Chapter 2—Wooden Materials	31
Part 3—Welding	
Chapter 1—General Requirements/Proof of Qualification/Approvals (1992)	32E
Chapter 2—Design, Fabrication, and Inspection of Welds (1992)	32E
Chapter 3—Welding in the Various Fields of Application (1992)	32E

5.4.2.3 *Offshore Technology:*

Title	Ref. No.
Part 1—Underwater Technology	
Chapter 1—Diving Systems and Diving Simulators (1991)	40
Chapter 2—Submersibles (1991)	40
Chapter 3—Underwater Equipment (1991)	40
Part 2—Offshore Installations	
Chapter 1—General Regulations (1990)	41E
Chapter 2—Rules for Structure (1990)	41E
Chapter 3—Rules for Specific Types of Units and Equipment (1990)	41E
Chapter 4—Rules for Machinery Installation (1990)	42E
Chapter 5—Rules for Electrical Installation (1990)	42E
Part 3—Mooring and Loading Installations (10.1993)	43

5.4.2.4 *Non-Marine Technology:*

Title	Ref. No.
Part 1—Wind Energy	
Chapter 1—General Conditions for Approval (1993)	50E
Chapter 2—Safety System, Protective and Monitoring Equipment (1993)	50E
Chapter 3—Requirements for Manufacturer, Quality Assurance, Materials and Production (1993)	50E
Chapter 4—Definitions of Design Loads (1993)	50E

Chapter 5—Rotor Blades (1993)	50E
Chapter 6—Mechanical Engineering Components (1993)	50E
Chapter 7—Electrical Installations (1993)	50E
Chapter 8—Tower and Foundations (1993)	50E
Chapter 9—Operating Instructions and Maintenance Manual (1993)	50E
Chapter 10—Noise Aspects (1993)	50E

5.4.2.5 Additional Rules and Regulations:

Title	Ref. No.
Containers	
Rules for the Stowage and Lashing of Containers Aboard Ships (1987)	65
Regulations for the Construction, Repair, and Testing of Freight Containers (1988)	66
Lifesaving Appliances—Lifting Appliances—Towing Gears—Accesses	
Regulations for Lifesaving—Launching Appliances (1986)	70E
Regulations for the Construction and Survey of Lifting Appliances (1992)	71E
Regulations for the Construction and Examination of Towing Gears (1988)	72E
Regulations for the Construction and Testing of Accesses to Ships (1983)	73E
Preliminary Rules for Classification of Lifting Appliances (1989)	74E
Machinery Installations	
Regulations for the Design, Equipment, and Testing of Waste Incinerating Systems on Seagoing Ships (09.1993)	80
Regulations for Testing of Steam Boiler Plants in Accordance with the Dampfkessel-verordnung (German Boiler Regulations) for Seagoing Ships Under the Federal German Flag (1991)	81
Regulations on Hygienic Requirements for Cargo Tanks for the Carriage of Liquid Foodstuffs on Board of Seagoing Ships (1991)	82
Regulations for Equipment on Fire Fighting Ships (1984)	83
Regulations for Design, Equipment, and Testing of Gas Welding Installations on Seagoing Ships (1990)	84
Regulations for Construction, Equipment, and Testing of Closed Fuel Overflow Systems (1990)	85
Regulations for Ventilation Systems on Board Seagoing Ships (1992)	86
Preliminary Rules for Bridge Design on Seagoing Ships with One-Man-Control Console (1991)	87E
Regulations for the Recognition of Manufacturers of Hose Assemblies of Non-Metallic Materials (1992)	88
Regulations for Systems with Controlled Atmosphere on Ships (Russische Übersetzung vorhanden) (09.1993)	89
Diesel Engines	
Regulations for Mass Produced Engines (1987)	90
Regulations for the Seating of Diesel Engine Installations (1984)	93
Regulations for Assessment and Repair of Defects on Propellers (1983)	101E
Pumps, Compressors, Fitting	
Regulations for the Design, Construction, and Testing of Pumps (1984)	110
Regulations for the Design, Construction, and Testing of Compressors (1987)	111
Type Tests	
Regulations for the Performance of Type Tests, Part 0—Procedure (1992)	114
List of Type Tested Products (1993/94)	115
Regulations for the Performance of Type Tests, Part 1 Test Requirements for Electric/Electronic Equipment, Computers and Peripherals (09.1993)	116
Regulations for the Performance of Type Tests, Part 2 Test Requirements for Sealing Systems of Bulkhead and Dock Penetrations (1993)	118

E-Technology	
Regulations for Electromagnetic Compatibility of Electrical Equipment (1989)	120
Guidelines for the Use of Explosion Protection of Electrical Equipment (1980)	121
Regulations for the Use of Computers and Computer Systems (1987)	122
Regulations for the Installation and Ventilation of Storage Batteries and the Construction of Battery Chargers (1989)	123
Regulations for Variable Frequency Ship's Mains Operation (Variable Frequency Operation) (1991)	124

Materials—Welding	
Regulations for the Inspection of Anchor Chain Cables at Dealers' Promises (09.1993)	130
Structural Fire Protection for Ships and Offshore Structures—List of Approvals (1992)	131
Regulations for Offshore Mooring Chains (09.1993)	132
Approved Welding Consumables and Auxiliary Materials (1989)	133
List of Manufacturers of Materials Approved by Germanischer Lloyd (1993)	135
Rules for Surveying and Testing of Plywood for Aircraft (1953)	137E
Regulations for the Approval and Application of Composite Materials for Repair and Seating of Components (1992)	138

German Statutory Regulations	
Accident Prevention Regulation of Soe-BG (1981)	145
Regulations, Guidelines, Specifications, Standard Letters of German Authorities for Ships Flying the German Flag (1989)	146

Other Operations	
Guidelines for Ocean Towing (1986)	150
Recommendations for Laid-Up Ships (1983)	151
Guide for Sea Trials of Motor Vessels (1993)	152E
Heat Transfer Equipment of Seagoing Ships (1987)	153E

Certification of Quality Systems	
Instructions for the Certification of Quality Systems (1993)	160
List of Fees for the Certification of Quality Systems (1993)	162
List of Holders of Certificates of Conformity of Their Quality System with ISO 9001, ISO 9002, or ISO 9003 (1993)	163

5.5 Lloyds Register (LR)—Publications

5.5.1 For current prices and information concerning publications:

International Headquarters of
the LR Group
Lloyd's Register
100 Leadenhall Street
London EC3A 3BP, United Kingdom
Tel: +44 171 709 9166
Tlx: 888379 LR LONG
Fax: +44 171 488 4796

North America Regional Office
Lloyd's Register of Shipping
17 Battery Place
New York, NY 10004
Tel: (212) 425-8050
Fax: (212) 363-9610

5.5.2 Lloyds Register (LR)—Publication List:

5.5.2.1 Rules and Regulations (Marine):

Rules and Regulations for the Classification of Ships 1993—Based on combination of long practical experience and advanced theory, the rules are constantly revised to take account of new developments in merchant shipbuilding. They are

intended primarily for use by naval architects, shipbuilders, and marine engineers. A complete set consists of seven separate parts contained in a Substantial binder.

The complete set, together with four-ring binder and LR's List of Approved Manufacturers of Materials, Recognized Proving Establishments, Class 1 Welding Firms and Firms Approved for Product Certification by Surveillance of Quality Systems.

All Parts from the Rules are available individually:

Part 1—Regulations—Classification and periodical survey.

Rules for the Manufacture, Testing, and Certification of Materials

Part 3—Ship Structures—The basic structural philosophy of hull construction, longitudinal strength, aft end structures, superstructures, and so forth.

Part 4—Ship Structures—Hull construction requirements for specific ship-types—for example, tugs, ferries, bulk carriers, oil tankers, and containerships.

Part 5—Main and Auxiliary Machinery—Main and auxiliary machinery including shaft vibration and alignment, piping systems for oil and chemical tankers, and steering gear.

Part 6—Control, Electrical, Refrigeration, and Fire—Automation and control systems, electrical systems, refrigeration systems and fire prevention systems.

Part 7—Special Types—Highly specialized ships to which the format of the rest of the Rules cannot easily be applied—that is, nuclear ships; ships with installed process plant; fire fighting ships; dynamic positioning installed in ships; oil recovery ships; ship to shore ramps and linkspans; burning of coal in ships' boilers; positional mooring systems and thruster assisted positional mooring systems.

Four-Ring Binder—With 55-mm capacity and blocked "Rules and Regulations."

LR PASS (Plan Appraisal Systems for Ships)

Current Facilities

Rules programs for IBM/PC and compatible computers

Direct calculations programs for IBM/PC and compatible computers

Feedback and Improvement Procedure

Rules for Inland Waterway Ships—A complete set consists of the five parts contained in a substantial binder.

All parts are available individually:

Part 1—Regulations

Part 2—Materials for Ship and Machinery

Part 3—Ship Structure

Part 4—Ship Structure

Part 5—Main and auxiliary Machinery

Part 6—Control, Electrical and Fire

Binder—(With 55-mm capacity and blocked "Rules and Regulations.")

Rules for Floating Docks 1987

Code for Lifting Appliances in a Marine Environment 1987—Requirements for ship derricks and deck cranes, offshore and floating cranes, lifts and ramps. launch and recovery systems for diving operations and mechanical lift docks.

Rules for Ships for Liquefied Gases 1986—Rules and regulations for the construction and classification of ships for the carriage of liquefied gas in bulk, incorporating the IMO

International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code).

Rules for Ships for Liquid Chemicals 1989—Rules and regulations for the construction and classification of ships for the carriage of liquid chemicals in bulk, incorporating the IMO International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code). Two-volume set.

5.5.2.2 Rules and Regulations (Offshore):

Rules and Regulations for the Classification of Mobile Offshore Units 1989—The Rules now appear in six Parts contained in a substantial binder (included in the price) and with Materials from the Rules and Regulations for the Classification of Ships.

Various Parts from the Rules are available:

Part 1—Regulations—Classification and periodical surveys.

Part 2—Materials—Conditions for manufacture, survey and certification, and requirements for high holding power anchors and special quality chain cable.

Part 3—Structure—Unit structural requirements, unit types, strength, mooring equipment, and steering arrangements.

Part 4—Stability, Watertight/Weathertight Integrity and Corrosion Control—Requirements for stability, load lines, watertight and weathertight integrity, guard rails, bulwarks and corrosion control.

Part 5—Main and Auxiliary Machinery—Main and auxiliary machinery including shaft vibration and alignment, piping systems, pressure vessels and steering gear.

Part 6—Control, Electrical, Hazardous Areas and Fires—Control systems, electrical systems, hazardous areas, fire fighting units and dynamic positioning systems.

Four-Ring Binder—With 40-mm capacity and blocked "Rules and Regulations."

Rules and Regulations for the Construction and Classification of Submersibles and Underwater Systems 1989

Rules and Regulations for the Classification of Fixed Offshore Installations 1989—The rules are based on LR's experience from the certification of over 600 platforms worldwide. Like all other LR rules, they are based on a mixture of experience and theoretical innovation. They are primarily intended for operators and designers in areas where national authorities have no requirements of their own. A complete set consists of eight parts contained in a binder.

All parts are available individually:

Part 1—Regulations—Classification and periodical survey requirements. Operations Manual.

Part 2—Materials and Manufacturing Procedures—Material selection for both the jacket structure and machinery components. This part is accompanied by Materials of the Rules and Regulations for the Classification of Ships and includes a chapter covering Quality Assurance Scheme for the Construction of Fixed Offshore Installations.

Part 3—Environmental and Design Considerations—Approval of each installation is site specific including complete assessment of all environmental factors and ocean bed conditions. The jacket and module structures are examined for a variety of external loads imposed by the elements and the

distribution of weight on the platform. Also includes gravity foundation design.

Part 4—Steel Structures—The structural arrangements of each installation are independently examined and advice given on acceptable analysis techniques, factors of safety and fatigue design.

Part 5—Concrete Structures—All aspects of concrete structures including materials, fabrication, and assessment are covered.

Part 6—Corrosion Protection—Active and passive cathodic protection systems, coating and paint systems.

Part 7—Machinery and Process Systems—Regulations for drilling and process equipment on platform and subsea, including pressure vessels and pressure systems, heating, ventilation, and air conditioning. Mechanical, electrical, control engineering, and hazardous areas are included.

Part 8—Fire and Safety Equipment—Passive and active fire safety measures, both fixed and portable. Safety equipment including lifesaving appliances and radio communications.

Four-Ring Binder—With 40-mm capacity and blocked “Rules and Regulations.”

Container Certification Scheme 1988—Rules for the design, construction, and inspection of general cargo containers, thermal containers (both insulated and refrigerated), tank containers and other portable tanks; container trailer/vehicle chassis; in-service inspection of containers, tanks, and carrying tanks of road containers; basic quality system requirements for manufacturer; ISO test procedures.

5.5.2.3 *Approved Products:*

LR-Type Approval System 1990—Advice to producers is given in a series of documents which outlines the approval procedure and test requirements to qualify for inclusion in the list of LR-Type Approved Products.

LR-Type Approval System Procedure—describes system operation.

LR-Type Approval System Test Specification No. 2—gives marine environmental tests.

LR-Type Approval System Test Specification No. 3—gives certain electrical product tests.

LR-Type Approval System Test Specification No. 4—gives internal combustion engine tests.

List of Type Approved Products 1992—Includes details of all products currently Type Approved in accordance with the published Type Approval System. Available in four parts:

- Part 1—Marine, Offshore and Industrial Equipment
- Part 2—Electrical Equipment (Environmentally Tested)
- Part 3—Control Equipment (Environmentally Tested)
- Part 4—Fire Protection and Fire Fighting

List of Approved Type Tested Fuses (2nd Edition, 1987 plus Addendum 1991)—Each entry in this publication carries information essential in the selection of fuses for marine installations and includes details of current ratings, together with descriptions of fuse holders and bases.

List of Approved Type Tested Circuit Breakers (2nd Edition, 1987 plus Addendum 1991)—This publication has been developed to assist in the selection of circuit breakers in relation to their performance under short circuit conditions.

Approved Prefabrication Primers, Recognized Corrosion Control Coatings, Accepted Fire Safe Paints 1992—This publication consists of two main sections covering prefabrication primers and coatings approved for corrosion control in ships’ tanks. An additional section gives useful notes on procedures for applying tank coatings. The publication lists approximately 400 products indexed under the name of the manufacturer.

List of Approved Welding Consumables for use in Ship Construction 1992—This document, which is published annually, lists those welding consumables that have complied with the approval requirements for use in ship construction set out in LR’s rules. The document lists approximately 3500 consumables in seven sections related to welding process and parent material.

5.5.2.4 *Approved Manufacturer:*

List of Approved Manufacturers of Materials, Recognized Proving Establishments and Class 1 Welding Firms 1992—Also includes a list of manufacturers of steel, castings, forgings, chain cable, wire ropes, and so forth.

5.5.2.5 *Computer Data: Rulefinder*

5.6 *Nippon Kaiji Kyokai (Class NK)—English Publications*

5.6.1 For current prices and information concerning publications:

Nippon Kaiji Kyokai (Class NK)
4-7, Kioi-Cho, Chiyoda-Ku
Tokyo 102
Japan
Tel: (81-33) 2301201
Tlx: (781) J22975 CLASSNK
Fax: (81-33) 2303524

Nippon Kaiji Kyokai
Regional Office for the Americas
One Parker Plaza 11th
400 Kelby Street
Fort Lee, NJ 07024
Tel: 201-944-8021
Fax: 201-944-8183

5.6.2 *Nippon Kaiji Kyokai (Class NK) Publication List:*

5.6.2.1 *Registers*—Register of Ships (1995–96) with Quarterly Supplements—This book contains the principal particulars and survey records of NK-classed ships.

5.6.2.2 *Rules and Regulations/Guidances:*

Regulations for the Classification and Registry of Ships (1997)
Conditions of Service for Classification of Ships and Registration of Installations (1997)
Regulations for the Issue of Statutory Certificates (1997)
Rules for Approval of Manufacturers (1997)
Rules for the Survey and Construction of Steel Ships
Part A—General Rules (1997)
Part B—Class Surveys (1997)
Part C—Hull Construction and Equipment (1997)
Part U—Intact Stability (1997)
Part V—Load Lines (1997)

- Part CS—Hull Construction and Equipment of Small Ships (1997)
- Part D—Machinery Installations (1997)
- Part H—Electrical Installations (1995)
- Part K—Materials (1997)
- Part L—Equipment (1997)
- Part M—Welding (1997)
- Part N—Ships Carrying Liquefied Gases in Bulk (1997)
- Part S—Ships Carrying Dangerous Chemicals in Bulk (1997)
- Part P—Mobile Offshore Drilling Units, Workshops, and Special Purpose Barges (1997)
- Part Q—Steel Barges (1997)
- Part T—Submersibles (1997)
- Part R—Fire Protection, Detection, and Extinction (1997)
- Rules for Installations of Ships
- Rules for Marine Pollution Prevention Systems (1997)
- Rules for the Safety Equipment (1997)
- Rules for the Radio Installation (1997)
- Rules for Cargo Refrigerating Installations (1997)
- Rules for Cargo Handling Appliances (1997)
- Rules for Diving Systems (1997)
- Rules for Automatic and Remote Control Systems (1997)
- Rules for Navigation Bridge Systems (1997)
- Rules for Preventive Machinery Maintenance Systems (1997)
- Rules for Integrated Fire Control Systems (1997)
- Rules for Construction and Certification of Freight Containers (1994)
- Rules for the Survey and Construction of Ship of Fiberglass Reinforced Plastics (1994)
- Rules for Floating Docks (1994)
- Rules for High Speed Craft (1996)
- Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use (1997)
- List of Approved Materials and Equipment (1997)
- Rules and Guidance for Assessment and Registration of Quality Systems (1995)
- Rules and Guidance for Assessment and Registration of Safety Management Systems—According to the International Safety Management Code (ISM CODE) (1996)
- 5.6.2.3 *Other Publications*
- New Shipbuilding in Japan (issued quarterly)
- Class NK Technical Bulletin
- Directory
- Annual Report
- Class NK Magazine

6. Keywords

6.1 commercial shipbuilding; marine technology; ship construction; shipbuilding; shipbuilding standards; ships

TABLE 1 Standards and Publications

Group 1 Materials and Processes			
ISO Code No.	Designation	Title	Approved For Incorporation In
SAE J1942		Hose and Hose Assemblies for Marine Applications	46 CFR 28.405
ANSI ASME B1.1		Unified Inch Screw Threads (UN and UNR Thread Form)	46 CFR 56.60-1, 56.25-20; TSGS
ANSI ASME B1.20		Pipe Threads, General Purpose (Inch)	46 CFR 56.60-1
ANSI ASME B1.20		Dryseal Pipe Threads (Inch)	46 CFR 56.60-1
ANSI B2.1		Pipe Threads	46 CFR 56.60-1
ASTM A 20/A 20M		Specification for General Requirements for Steel Plates for Pressure Vessels	46 CFR 154.1; 154.610
ASTM A 27/A 27M		Specification for Steel Castings, Carbon, for General Application	46 CFR 160.032-1; TSGS
ASTM A 36/A 36M		Specification for Carbon Structural Steel	46 CFR 156.30-10; 160.035-1; TSGS
ASTM A 20/A 20M		Specification for General Requirements for Steel Plates for Pressure Vessels	46 CFR 54.25-10
ASTM A 47		Specification for Ferritic Malleable Iron Castings	46 CFR 56.60-1
ASTM A 47M		Specification for Ferritic Malleable Iron Castings (Metric)	
ASTM A 216/A 216M		Specification for Steel Castings, Carbon, Suitable for Fusion Welding for High-Temperature Service	46 CFR 160.032-1; TSGS
ASTM A 276		Specification for Stainless Steel Bars and Shapes	46 CFR 56.60-2; TSGS
ASTM A 307		Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength	46 CFR 56.25-20; TSGS
ASTM A 320/A 320M		Specification for Alloy/Steel Bolting Materials for Low-Temperature Service	46 CFR 56.50-105
ASTM A 370		Test Method and Definitions for Mechanical Testing of Steel Products	46 CFR 54.25-20
ASTM A 525		Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process	46 CFR 160.035-1
ASTM A 525M		Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process (Metric)	
ASTM A 575		Specification for Steel Bars, Carbon, Merchant Quality, M-Grades	46 CFR 56.60-2
ASTM A 690		Specification for High-Strength Low-Alloy Steel H-Piles and Sheet Piling for Use in Marine Environment	
ASTM B 61		Specification for Steam or Valve Bronze Castings	46 CFR 162.014-1
ASTM B 85		Specification for Aluminum-Alloy Die Castings	46 CFR 56.60-2
ASTM B 209		Specification for Aluminum and Aluminum-Alloy Sheet and Plate	46 CFR 58.55; TSGS
ASTM B 124		Specification for Copper and Copper-Alloy Forging Rod, Bar, and Shapes	46 CFR 56.60-2
ASTM B 369		Specification for Copper-Nickel Alloy Castings	
NFPA 255-72		Method of Test of Surface Burning Characteristics of Building Materials	46 CFR 164.012-1
UL 44		Rubber-Insulated Wires and Cables	46 CFR 111.60-11
UL 62		Flexible Cord and Fixture Wire	46 CFR 111.13; 161.006-1
FED-STD-141 (DoDSSP)		Paint, Varnish, Lacquer, and Related Materials: Methods of Inspection, Sampling and Testing	46 CFR 164.018-5

TABLE 1 *Continued*

FED-STD-151 (DoDSSP)	Metal, Test Methods, B, and Notice 2	46 CFR 160.062-1
FED-STD-191 (DoDSSP)	Textile, Test Methods	46 CFR 160.002-1; 160.005-1; 160.009-1; 160.047-1; 160.052-1; 160.055-1; 160.060-1; 160.171-3
FED-STD-191 (DoDSSP)	The following Methods: Method 5100, Strength and Elongation, Breaking of Woven Cloth; Grab Method	46 CFR 160.176-13
	Method 5804.1, Weathering Resistance of Cloth; Accelerated Weathering Method	46 CFR 160.176-8
	Method 5762, Mildew Resistance of Textile Materials; Soil Burial Method	46 CFR 160.176-8
FED-STD-370 (DoDSSP)	Instrumental Photometric Measurements of Retroreflective Materials and Retroreflective Devices	46 CFR 164.018
FED-STD-595 (DoDSSP)	Colors, A, and Notice 5 Used in Government Procurement	46 CFR 160.050-1; 160.055-1; TSGS
FED-STD-751 (DoDSSP)	Stitches, Seams, and Stitchings	46 CFR 160.002-1; 160.005-1; 160.047-1; 160.048-1; 160.052-1; 160.055-1; 160.060-1; 160.171-3; 160.174-3(b); 160.176-9
ASTM C 177	Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus	46 CFR 160.171-3; 160.174-3
ASTM C 518	Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus	46 CFR 160.171-3; 160.174-3
ASTM D 413	Test Methods for Rubber Property Adhesion to Flexible Substrate	46 CFR 160.055-1
ASTM D 570	Test Method for Water Absorption of Plastics	46 CFR 160.055-1
ASTM D 751	Test Methods for Coated Fabrics	46 CFR 160.176-13(y)
ASTM D 882	Test Methods for Tensile Properties of Thin Plastic Sheeting	46 CFR 160.055-1
ASTM D 975	Specification for Diesel Fuel Oils	46 CFR 160.171-3; 160.174-3
ASTM D 1004	Test Method for Initial Tear Resistance of Plastic Film and Sheeting	46 CFR 160.055-1; 160.171-3; 160.174-3
ASTM D 1434	Test Method for Determining Gas Permeability Characteristics of Plastic Film and Sheeting	46 CFR 160.176-13(y)
ASTM D 1435	Practice for Outdoor Weathering of Plastics	46 CFR 163.003-3
ASTM D 1518	Test Method for Thermal Transmittance of Textile Materials	46 CFR 160.174-3
ASTM D 3574	Test Methods for Flexible Cellular Materials—Slab, Bonded, and Molded Urethane Foam	
ASTM E 84	Test Method for Surface Burning Characteristics of Building Materials	46 CFR 164.012-1
ASTM E 119	Test Methods for Fire Tests of Building Construction and Materials	46 CFR 164.007-1; 164.008-1
Fed. Spec. CCC-C-426 (DoDSSP)	Cloth, Cotton, Drill	46 CFR 160.048-1; 160.049-1; 160.055-1; 164.018-5
Fed. Spec. CCC-C-443 (DoDSSP)	Cloth, Duck, Cotton (Single and Plied Filling Yarns, Flat)	46 CFR 164.018-5
Fed. Spec. CCC-C-700 (DoDSSP)	Cloth, Coated, Vinyl-Coated (Artificial Leather)	46 CFR 160.048-1; 160.049-1; 160.055-1
Fed. Spec. GGG-A-926 (DoDSSP)	Ax (Single Bit, Double Bit, Pick Head, and Mattock Head)	46 CFR 160.013-1
Fed. Spec. L-P-375 (DoDSSP)	Plastic Film, Flexible, Vinyl Chloride	46 CFR 160.002-1; 160.005-1; 160.047-1; 160.048-1; 164.018-1
Fed. Spec. L-P-390 (DoDSSP)	Plastic Molding and Extrusion Materials, Polyethylene and Copolymers (Low, Medium, and High Density)	46 CFR 161.010-1
Fed. Spec. QQ-I-706 (DoDSSP)	Iron and Steel Sheet, Tinned (Tin-plate)	46 CFR 160.061-1
Fed. Spec. T-R-605 (DoDSSP)	Rope, Manila and Sisal	46 CFR 160.031-1
Fed. Spec. TT-E-489 (DoDSSP)	Enamel, Alkyd, Gloss, Low VOC Content	
Fed. Spec. TT-P-59 (DoDSSP)	Paint, Ready-Mixed, International Orange (Not for Residential Use)	46 CFR 160.035-1
Fed. Spec. V-T-285 (DoDSSP)	Thread, Polyester	46 CFR 160.001-1
Fed. Spec. V-T-295 (DoDSSP)	Thread, Nylon	46 CFR 160.001-1; 160.050-1
Fed. Spec. VV-G-671 (DoDSSP)	Grease	

TABLE 1 Continued

Fed. Spec. W-B-101 (DoDSSP)	Battery, Dry	
Fed. Spec. WW-C-621 (DoDSSP)	Coupling, Assembly, Hose (Fire, Woven-Jacketed-Rubber or Fabric-Lined and Unlined)	46 CFR 162.027-1
UL 814	Gas-Tube-Sign and Ignition Cable	46 CFR 63.05-55; 63.10-55
UL 19	Lined Fire Hose and Hose Assemblies	33 CFR 149.469 46 CFR 34.10-10;76.10-10; 95.10-10; 108.425; 167.45-5; 169.115; 169.563; 181.15-10; 193.10-10
UL 83	Standard for Thermo-Plastic Insulated Wires and Cables	33 CFR 183.5; 183.435; 183.540 46 CFR 111.30-19; 111.60
UL 1114	Marine Flexible Fuel-Line Hose	33 CFR 183.5
UL 1426	Electric Cables for Boats	33 CFR 183.5; 183.435
ANST	Recommended Practice No. SNT-TC-1A (1988), Personnel Qualification and Certification in Nondestructive Testing	46 CFR 38.25-3(c)(2); 157.01-2
NEMA-WC-3	Rubber-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy	46 CFR 111.60-13(a)(2), (c)
NEMA-WC-8	Ethylene-Propylene-Rubber-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy	46 CFR 111.60-13(a)(3), (c)
SAE-J343-80	Tests and Procedures for SAE 100R Series Hydraulic Hose and Hose Assemblies	46 CFR 56.60-25
SAE-J429	Mechanical and Material Requirements for Externally Threaded Fasteners	46 CFR 58.30-15
SAE-J373	Marine Engine Wiring	33 CFR 183.5; 183.430
SAE-J557	High Tension Ignition Cable	33 CFR 183.5; 183.440
SAE-J1127	Battery Cable	33 CFR 183.5; 183.430
SAE-J1128	Low Tension Primary Cable	33 CFR 183.5; 183.430
SAE-J1527	Marine Fuel Hoses	33 CFR 183.5; 183.540
SAE-J1942-89	Hose and Hose Assemblies for Marine Applications	46 CFR 56.60
SAE-J1475-84	Hydraulic Hose Fittings for Marine Applications	46 CFR 56.60-25
ASTM A 576	Specification for Steel Bars, Carbon, Hot-Wrought, Special Quality	46 CFR 56.60-2; TSGS
ASTM B 16	Specification for Free-Cutting Brass Rod, Bar, and Shapes for Use in Shapes for Use in Screw Machines	46 CFR 56.60-2
ASTM B 16M	Specification for Free-Cutting Brass Rod, Bar, and Shapes for Use in Shapes for Use in Screw Machines (Metric)	
ASTM B 21	Specification for Naval Brass Rod, Bar, and Shapes	46 CFR 56.60-2; TSGS
ASTM B 21M	Specification for Naval Brass Rod, Bar, and Shapes (Metric)	
ASTM B 26/B 26M	Specification for Aluminum-Allow Sand Castings	46 CFR 56.60-2; TSGS
ASTM B 96	Specification for Copper-Silicon Alloy Plate, Sheet, Strip, and Rolled Bar for General Purposes and Pressure Vessels	46 CFR 56.60-2; TSGS
ASTM B 96M	Specification for Copper-Silicon Alloy Plate, Sheet, Strip, and Rolled Bar for General Purposes and Pressure Vessels (Metric)	
ASTM B 122/B 122M	Specification for Copper-Nickel-Tin Alloy, Copper-Nickel-Zinc Alloy (Nickel Silver), and Copper-Nickel Alloy Plate, Sheet, Strip, and Rolled Bar	46 CFR 58.50; 182.15-25; TSGS
ASTM B 124	Specification for Copper and Copper Alloy Forging Rod, Bar, and Shapes	46 CFR 56.60-2
ASTM B 124M	Specification for Copper and Copper Alloy Forging Rod, Bar, and Shapes (Metric)	
ASTM B 127	Specification for Nickel and Copper Alloy (UNS No. 4400) Plate, Sheet, and Strip	46 CFR 58.50-5; 58.50-10; 182.15-25; 182.20-25; TSGS
ASTM B 152	Specification for Copper Sheet, Strip, Plate, and Rolled Bar	46 CFR 58.50; 182.15-25
ASTM B 152M	Specification for Copper Sheet, Strip, Plate, and Rolled Bar (Metric)	
ASTM B 154	Method for Mercurous Nitrate Test for Copper and Copper Alloys	46 CFR 56.60-2
ASTM D 92	Test Method for Flash and Fire Points by Cleveland Open Cup	46 CFR 58.30-10; TSGS
ASTM D 93	Test Methods for Flash Point by Pensky-Martens Closed Cup Tester	46 CFR 35.25-10; 58.01-10; 58.01-15; 78.17-75; 97.15-55; 182.15-1; 182.20-1
ASTM D 323	Test Method for Vapor Pressure of Petroleum Products (Reid Method)	46 CFR 30.10-22; 30.10-59; 58.16-5; 105.10-15; 188.10-21
ASTM A 690/A 690M	Specification for High-Strength Low-Alloy Steel H-Piles and Sheet Piling for Use in Marine Environments	
ASTM B 369	Specification for Copper-Nickel Alloy Castings	
ASTM D 2069	Specification for Marine Fuels	
ASTM D 2481	Test Method for Accelerated Evaluation of Wood Preservatives for Marine Services by Means of Small-Size Specimens	
ASTM D 4330	Practice for Evaluation of Fiberglass Boat Polish and Wax	
ASTM D 4939	Test Method for Subjecting Marine Antifouling Coating to Biofouling and Fluid Shear Forces in Natural Seawater	
ASTM D 5437	Practice for Weathering of Plastics Under Marine Floating Exposure	
ASTM D 5479	Practice for Testing Biofouling Resistance of Marine Coatings Partially Immersed	
ASTM D 5969	Test Method for Corrosion-Preventive Properties of Lubricating Greases in Presence of Dilute Synthetic Sea Water Environments	
ASTM D 6081	Practice for Aquatic Toxicity Testing of Lubricants: Sample Preparation and Results Interpretation	

TABLE 1 *Continued*

ASTM E 1123	Practices for Mounting Test Specimens for Sound Transmission Loss Testing of Naval and Marine Ship Bulkhead Treatment Materials	
ASTM E 1317	Test Method for Flammability of Marine Surface Finishes	
ASTM E 1524	Test Method for Saltwater Immersion and Corrosion Testing of Photovoltaic Modules for Marine Environments	
ASTM E 1597	Test Method for Saltwater Pressure Immersion and Temperature Testing of Photovoltaic Modules for Marine Environments	
ASTM F 718	Standard for Shipbuilders and Marine Paints and Coatings Product/ Procedure Data Sheet	
ASTM D 396	Specification for Fuel Oils	46 CFR 63.05-75; 65.10-75
ASTM D 635	Test Method for Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position	46 CFR 56.60-25
ASTM D 2863	Test Method for Measuring the Minimum Oxygen Concentration to Support Candle-Like Combustion of Plastics (Oxygen Index)	46 CFR 56.60-25
ASTM E 23	Test Methods for Notched Bar Impact Testing of Metallic Materials	46 CFR 54.05-5; 56.50-105
ASTM E 208	Test Method for Conducting Drop-Weight Test to Determine Nil-ductility Transition Temperature of Ferritic Steels	46 CFR 54.05-5
ASTM B 117	Practice for Operating Salt Spray (Fog) Apparatus	46 CFR 110.15-1(b); 160.171-3; 161.002-1; 161.004-1; 161.006-1; 160.176-8
ASTM D 4066	Specification for Nylon Injection and Extrusion Materials	46 CFR 111.60-1(b)(4)
ASME	Boiler and Pressure Vessel Code Section V, Nondestructive Examination	46 CFR 38.25-3(a)(1); 98.01-3; 151.01-2
ASME	Section VII, Recommended Guidelines for the Care of Power Builders	46 CFR 59.01
ASME	Section VIII, Division I, Pressure Vessels	46 CFR 56.15-1; 56.15-5; 56.15-10; 56.25-5; 56.30-10; 56.30-30; 56.60-1; 56.60-15; 56.95-10
ASME	Section VIII, Pressure Vessels	46 CFR 54.01; 54.03; 54.05; 54.10; 54.15; 54.20; 54.25; 54.30; 58.30; 59.10; 197.204; 197.205; 197.300; 197.310; 197.328
ASME	Section VIII, Division I, Pressure Vessels	46 CFR 64.2; 64.5; 64.11; 64.13; 64.21; 64.25; 64.31
ASME	Section IX, Welding and Brazing Qualifications	46 CFR 56.70-5; 56.70-20; 56.75-20; 56.85-10
ASME	Section IX, Welding and Brazing Qualifications	46 CFR 57.01; 57.02; 57.03; 57.04; 57.05; 57.06; 59.10
ASTM A 193/A 193M	Specification for Alloy-Steel and Stainless Steel Bolting Materials for High-Temperature Service	46 CFR 58.30-15; TSGS
ASTM A 194/A 194M	Specification for Carbon and Alloy Steel Nuts for Bolts for High Pressure or High Temperature Service, or Both	46 CFR 56.50-105; TSGS
ASTM A 197	Specification for Cupola Malleable Iron	46 CFR 56.60-1
ASTM A 197M	Specification for Cupola Malleable Iron (Metric)	
ASTM A 203/A 203M	Specification for Pressure Vessel Plates, Alloy Steel, Nickel	46 CFR 54.05-20
ASTM A 351/A 351M	Specification for Castings, Austenitic, Austenitic-Ferritic (Duplex), for Pressure-Containing Parts	46 CFR 56.50-105
ASTM A 352/A 352M	Specification for Steel Castings, Ferritic and Martensitic, for Pressure Containing Parts, Suitable for Low-Temperature Service	46 CFR 56.50-105
811510	ASTM F 941	Practice for Inspection of Marine Surface Preparation and Coating Application
811510	ASTM F 940	Practice for Quality Control Receipt Inspection Procedures for Protective Coatings (Paint), Used in Marine Construction and Shipbuilding
811515	ASTM F 1312	Specification for Brick, Insulating, High-Temperature, Fire Clay
811510	ASTM F 1178	Specification for Enameling System, Baking, Metal Joiner Work and Furniture
811515	ASTM F 1097	Specification for Mortar, Refractory (High-Temperature, Air-Setting)
811500	ASTM F 718	Standard for Shipbuilders and Marine Paints and Coatings Product/ Procedure Data Sheet
ISO 614	Shipbuilding and Marine Structures Toughened Safety Glass Panes for Rectangular Windows and Side Scuttles—Punch Method of Non-Destructive Strength Testing	TSGS
ISO 657–18	Hot Rolled Steel Sections—Part 18: L Sections for Shipbuilding (Metric Series)—Dimensions, Sectional Properties and Tolerances	
TR 6065-91	Shipbuilding and Marine Structures—Inflatable Life Rafts—Materials	
ASTM D 471	Test Method for Rubber Property—Effect of Liquids	33 CFR 183.5; 183.114; 183.516; 183.607; 183.620
ASTM D 1621	Test Method for Compressive Properties of Rigid Cellular Plastics	33 CFR 183.5; 183.516
ASTM D 1622	Test Method for Apparent Density of Rigid Cellular Plastics	33 CFR 183.5; 183.516
ASTM D 2842	Test Method for Water Absorption of Rigid Cellular Plastics	33 CFR 183.5; 183.114
ASTM E 11	Specification for Wire-Cloth Sieves for Testing Purposes	33 CFR 159.125
NFPA 51B	Fire Prevention in Use of Cutting and Welding Processes	33 CFR 127.003
NFPA 251	Fire Tests of Building Construction and Materials	33 CFR 127.003
Fed. Spec. ZZ-H-451 (DoDSSP)	Hose, Fire, Woven-Jacketed, Rubber- or Latex or Rubber-Coated Fabric-Lined, with Couplings	33 CFR 149.469 46 CFR 34.10-10; 193.10-10; 181.15-10; 76.10-10; 95.10-10; 108.425; 167.45-5; 169.115; 169.563

TABLE 1 Continued

ISO Code No.	Designation	Title	Approved For Incorporation In
	Mil. Spec. MIL-P-21929 (DoDSSP)	Plastic Material, Cellular Polyurethane, Foam-in-Place, Rigid, 1970 2 Pounds Per Cubic Foot	33 CFR 183.5; 183.505; 183.516; 46 CFR 160.010-1
Group 2 Outfitting			
	ABYC A-3	Galley Stoves	46 CFR 169.115; 169.703
	ANSI A14.3	Fixed Ladders	46 CFR 108.160
	UL 217	Single and Multiple Station Smoke Detectors	46 CFR 28.325
	UL 710	Exhaust Hoods for Commercial Cooking Equipment	46 CFR 28.33-0
	API RPD	Operation and Maintenance of Offshore Cranes	46 CFR 107.259; 109.437; 109.521; 109.527
	API SPEC 2C	Offshore Cranes, 1972	46 CFR 107.309; 108.601; 109.437
051520	ISO 3796	Shipbuilding—Clear Openings through Frames for External Single-Leaf Doors	
051520	ISO 4089	Shipbuilding—Inland Navigation—Sealing Rubber for Covers of Cargo Hatches	
051520	ISO 5778	Shipbuilding—Small Weathertight Steel Hatches	
51525	ISO 4001	Shipbuilding—Inland Navigation—Raft-Type Lifesaving Apparatus	
51525	ISO 4143	Shipbuilding—Inland Vessels—Open Rowing Lifeboats	
51525	ASTM F 1333	Specification for Construction of Fire and Foam Station Cabinets	
051530	ISO 799	Shipbuilding—Pilot Ladders	
051530	ISO 3797	Shipbuilding—Vertical Steel Ladders	
051530	ISO 5480	Shipbuilding—Guardrails for Cargo Ships	
051530	ISO 5485	Shipbuilding—Inland Vessels—Fixed Steel Deck Stairs	
051530	ISO 5487	Shipbuilding—Steel Dog-Step Ladders	
051530	ISO 5488	Shipbuilding—Accommodation Ladders	
051530	ISO 5489	Shipbuilding—Embarkation Ladders	
	ISO 5894	Shipbuilding—Manholes with Bolted Covers	
	ISO 6042	Shipbuilding—Weathertight Single-Leaf Steel Doors	
	ISO TR 6065	Shipbuilding and Marine Structures—Inflatable Liferrafts—Materials	
	ISO 6185	Shipbuilding and Marine Structures—Inflatable Boats—Boats Made of Reinforced Elastomers or Plastomers	
	ISO 6345	Shipbuilding and Marine Structures—Windows and Side Scuttles— Vocabulary	
	ISO 6454	Shipbuilding—Strum Boxes	
051530	ISO 6812	Roll-On/Roll-Off Ship-to-Shore Connection-Interface Between Terminals and Ships with Straight Stern/Bow Ramps	
051530	ISO 7061	Shipbuilding—Aluminum Shore Gangways for Seagoing Vessels	
	ISO 9089	Marine Structures—Mobile Offshore Units—Anchor Winches	
051530	ISO 9519	Shipbuilding and Rungs for Dog-Step Ladders	
051590	ISO 3674	Shipbuilding—Inland Vessels—Deck Rail	
051590	ISO 3876	Shipbuilding—Inland Vessels—Hand-Holes	
052525	ISO 614	Shipbuilding—Toughened Safety Glass Panes for Ships' Side Scuttles Ships' Rectangular Windows—and Punch Method of Nondestructive Strength Testing	
052525	ISO 1095	Shipbuilding—Toughened Safety Glass Panes for Side Scuttles	
052525	ISO 1751	Shipbuilding and Marine Structures—Ships' Side Scuttles	
	ISO 3078	Shipbuilding—Cargo Winches	
052525	ISO 3254	Shipbuilding—Toughened Safety Glass Panes for Rectangular Windows	
052525	ISO 3434	Shipbuilding and Marine Structures—Heated Glass Panes for Rectangular Windows	
	ISO 3652	Shipbuilding—Inland Vessels—Rope Reels	
052525	ISO 3902	Shipbuilding and Marine Structures—Gaskets for Rectangular Windows and Side Scuttles	
052525	ISO 3903	Shipbuilding and Marine Structures—Ship's Ordinary Rectangular Windows	
052525	ISO 3904	Shipbuilding and Marine Structures—Clear-View Screens	
	ISO 4565	Small Craft—Anchor Chains	
052525	ISO 5779	Shipbuilding—Ordinary Rectangular Windows—Positioning	
052525	ISO 5780	Shipbuilding—Side Scuttles—Positioning	
052525	ISO 5797 PT 1	Shipbuilding and Marine Structures—Windows and Side Scuttles for Fire- resistant Constructions—Specifications—Part 1: "B" Class Divisions	
	EJMA	Standards of the Expansion Joint Manufacturers Association Inc.	
52510	ASTM F 1244	Specification for Berths, Marine	
51510	ASTM F 915	Specification for Bitts, Ship Mooring, Cast Steel (Double Barrel)	TSGS
51510	ASTM F 938	Specification for Bitts, Ship Mooring, Welded Steel (Double Barrel)	TSGS
52510	ASTM F 822	Specification for Chest of Drawers (Chiffonier), Steel, Marine	TSGS
51510	ASTM F 936	Specification for Chocks, Panama, Mooring Cast Steel	
51510	ASTM F 937	Specification for Chocks, Ship Mooring, Cast Steel	
51510	ASTM F 1074	Specification for Cleats, Welded Horn Type	
52510	ASTM F 823	Specification for Desk, Log, Marine, Steel, with Cabinet	TSGS
52505	ASTM F 1073	Specification for Door Fittings, for Watertight/Gastight/Airtight, Weathertight, and Non-Tight Doors, for Marine Use	
52505	ASTM F 821	Specification for Doors and Frames, Steel, Interior, Marine	TSGS

TABLE 1 *Continued*

52505	ASTM F 1068	Specification for Doors, Double, Gastight/Airtight, Individually Dogged, for Marine Use	
	ASTM F 765	Specification for Wildcats, Ship Anchor Chain	
	ASTM F 1106	Specification for Warping Heads, Rope Handling	
	ASTM F 1384	Test Method for Fire Tests of Marine Joiner Doors	
52505	ASTM F 782	Specification for Doors, Furniture, Marine	TSGS
52505	ASTM F 1070	Specification for Doors, Non-Tight, for Marine Use	
52505	ASTM F 1069	Specification for Doors, Watertight, Gastight/Airtight and Weathertight, Individually Dogged, for Marine Use	
52510	ASTM F 825	Specification for Drawers, Furniture, Marine, Steel	TSGS
52500	ASTM F 1071	Specification for Expanded-Metal Bulkhead Panels	
52505	ASTM F 1072	Specification for Expanded-Metal Door	
	ASTM F 1092	Specification for Fiberglass (GRP) Pultruded Open-Weather, Storm-, and Guard-Square Handrails	
52505	ASTM F 840	Specification for Ladders, Fixed, Vertical, Steel, Ships'	TSGS
52505	ASTM F 1144	Specification for Manhole Cover Assembly, Bolted, Hinged, Semi-Flush, Oiltight, and Watertight, Hinged	
52505	ASTM F 1142	Specification for Manhole Cover Assembly, Bolted, Semi-Flush, Oiltight, and Watertight	
52505	ASTM F 1143	Specification for Manhole Cover Assembly, Raised, Oiltight, and Watertight	
52510	ASTM F 1085	Specification for Mattress and Box Springs, Berths	
52505	ASTM F 1267	Specification for Metal, Expanded, Steel	
52590	ASTM F 985	Specification for Panama Canal Pilot Platform	
	ASTM F 987	Specification for Portable Intermediate Flush Deck Stanchion	TSGS
	ASTM F 1323	Specification for Shipboard Incinerators	
	ASTM F 1310	Specification for 65-Gallon Dispensing Tank	
52505	ASTM F 1196	Specification for Sliding Watertight Door Assemblies	46 CFR 92.01; 170.270; 174.100; 190.01-3
52505	ASTM F 1197	Specification for Sliding Watertight Door Control Systems	46 CFR 92.01; 170.270; 174.100; 190.01-3
52505	ASTM F 783	Specification for Staple, Handgrab, Handle, and Stirrup Rung	TSGS
52510	ASTM F 1019M	Specification for Steel Deck Gear Stowage Box (Metric)	TSGS
52510	ASTM F 1018	Specification for Steel Emergency Gear Stowage Locker	TSGS
52510	ASTM F 824	Specification for Tables, Mess, Marine, Steel	TSGS
51525	ASTM F 1273	Specification for Tank Vent Flame Arresters	46 CFR 32.20-10
52510	ASTM F 826	Specification for Tops, Furniture, Marine, Steel	TSGS
	ASTM F 1322	Guide for Selection of Shipboard Incinerators	
52505	ASTM F 1331	Practice for Installation Procedures of Vinyl Deck Coverings on Portable Plates in Electrical and Electronic Spaces	
051510	ISO 21	Shipbuilding—Inland Navigation—Cable-lifters for Stud-link Anchor Chains	
051510	ISO 1704	Shipbuilding—Stud-link Anchor Chains	
051510	ISO 3652	Shipbuilding—Inland Vessels—Rope Reels	
051510	ISO 3913	Shipbuilding—Welded Steel Bollards	
051510	ISO 3913AD1	Inland Navigation—Welded Steel Bollards	
051510	ISO 4050	Shipbuilding—Inland Vessels—"Rhine" and Hall's Stockless Anchors	
051510	ISO 4127 PT	Shipbuilding—Inland Navigation—Fairleads—Part 1: Two-lip Fairleads	
051510	ISO 4127 PT	Shipbuilding—Inland Vessels—Fairleads—Part 2: Roller Fairleads	
051510	ISO 6325	Shipbuilding—Cable Stoppers	
051510	ISO 9437	Shipbuilding—Inland Vessels—Matrosov Anchors	
	ISO 9519	Shipbuilding and Marine Structures Rungs for Dog-Step Ladders	
051515	ISO 4085	Shipbuilding—Inland Navigation—Swing Derricks	
051515	ISO 6043	Shipbuilding and Marine Structures—Eye and Fork Assemblies Under Tension Load—Main Dimensions	
051515	ISO 6044	Shipbuilding and Marine Structures—Derrick Boom Heel Fittings—Main Dimensions	
051515	ISO 6045	Bearings for Derrick Goosenecks—Assemblies and Components	
051515	ISO 8146	Oval Eye-Plates	
051515	ISO 8148	Derrick Boom Headfittings—Fixed Type	
051515	ISO 8314	Trunnion Pieces for Span Bearings and Lead Block Bearings	
051515	ISO 8431	Fixed Jib Cranes—Ship-Mounted Type for General Cargo Handling	

Group 3 Hull Structure

ISO Code No.	Designation	Title	Approved For Incorporation In
	ABS Rules	Rules for Building and Classing Mobile Drilling Units	46 CFR 108.113; 108.705
51000	ASTM F 1053/F 1053M	Guide for Steel Hull Construction Tolerances	
102520	ASTM F 994	Specification for Design and Installation of Overboard Discharge Hull Penetration Connections	TSGS
102500	ASTM F 991M	Specification for Docking/Drain Plug and Boss Assemblies (Metric)	
102515	ASTM F 986	Specification for Suction Strainer Boxes	TSGS
	ASTM F 1455	Guide for Selection of Structural Details for Ship Construction	
102515	ISO 5621	Bilge Mud Boxes for Machinery Spaces and Tunnels—General Design Characteristics	
102515	ISO 6454	Strum Boxes	
	ISO 8193	Shipbuilding—Shell Plating Information	
	ABS	Rules for Building and Classing Single Point Moorings, 1975	33 CFR 150.405; 149.209

TABLE 1 *Continued*

ABS	Rules for Building and Classing Steel Vessels	46 CFR 32.15; 32.60; 32.65; 58.10; 58.20; 58.25; 62.25-1; 62.25-5; 62.25-30; 62.35; 62.50-30; 70.35-1; 71.15-1; 72.01; 90.35-1; 91.15-1; 92.01-10; 111.12; 111.30-31; 111.33-11; 111.35-1; 154.1; 167.15-27; 167.20-1; 188.35-1; 189.15-1; 190.01; TSGS	
ANSI/ASME PVH0-1	Pressure Vessels for Human Occupancy	46 CFR 197.204; 197.205; 197.300; 197.328	
Group 4 General Support Requirements			
ISO Code No.	Designation	Title	Approved For Incorporation In
ABYC H-25	Portable Fuel Systems (Standards Recommended)	46 CFR 147.7	
ANSI A17.1	Elevators, Escalators Committee Interpretations Nos. 2–13 June 1979–May	46 CFR 111.91-1	
ANSI Z89.1	Protective Headwear for Industrial Workers—Requirements	46 CFR 108.497; 33 CFR 150.509; 154.1400	
ASTM B209	Aluminum and Aluminum Alloy Sheet and Plate	46 CFR 182.15-25; 182.20-25; TSGS	
ASTM B209M	Aluminum and Aluminum-Alloy Sheet and Plate (Metric)		
IMO Resolut. A.264 (VIII)	Carriage of Grain, 1973	46 CFR 93.20-05	
IMO Resolut. A.265 (VIII)		46 CFR 170.135; 171.075; 171.082	
NFPA 306	Control of Gas Hazards on Vessels	46 CFR 35.01-1; 91.50-1; 109.573; 150.460	
NFPA 17	Dry Chemical Extinguishing Systems		
NFPA 17A	Wet Chemical Extinguishing Systems		
NFPA 302	Fire Protection Standard for Motor Craft, Pleasure and Commercial	46 CFR 28.335; 28.340; 28.345; 58.10	
NFPA 407	Standard for Aircraft Fuel Servicing	46 CFR 108.239	
UL 1102	Non-integral Marine Fuel Tanks		
API RP 14C	Analysis, Design, Installation, and Testing of Basic Surface Safety Systems for Offshore Production Platforms	46 CFR 58.60-9	
API RP 53	Blowout Prevention Equipment Systems for Drilling Wells	46 CFR 58.60-7	
USCG Dwg. No. F49-6-1	Life Preserver, Kapok, Adult	46 CFR 160.002-1	
USCG Dwg. No. F49-6-5	Life Preserver, Kapok, Child	46 CFR 160.002-1	
USCG Dwg. No. 160.005-1	Life Preserver, Fibrous Glass, Adult and Child (Jacket Type)	46 CFR 160.005-1	
USCG Dwg. No. 160.009	Cork and Balsa Wood Ring Life Buoy; Arrangement and Construction Details	46 CFR 160.009-1	
USCG Dwg. No. 160.013-1	Hatch (Lifeboat and Life Raft)	46 CFR 160.013-1-3	
USCG Dwg. No. 160.027-3	Rectangular Balsa Wood Life Float with Platform, Net and Rigging	46 CFR 160.027-1	
USCG Dwg. No. 160.043-1(b)	Jackknife (with Can Opener)	46 CFR 160.043-1	
USCG Dwg. No. 160.047-1	Buoyant Vest, Kapok or Fibrous Glass, Adult and Child	46 CFR 160.047-1	
USCG Dwg. No. 160.048-1	Buoyant Cushion, Fibrous Glass	46 CFR 160.048-1	
USCG Dwg. No. 160.049-1	Buoyant Cushion, Plastic Foam	46 CFR 160.049-1	
USCG Dwg. No. 160.052-1	Buoyant Vest, Unicellular Plastic Foam, Adult and Child	46 CFR 160.052-1	
USCG Dwg. No. 160-055-1A	Life Preservers, Unicellular Plastic Foam, Adult	46 CFR 160.055-1	
USCG Dwg. No. 160-055-1B	Life Preservers, Unicellular Foam, Child	46 CFR 160.055-1	
USCG Dwg. No. 160.060-1	Buoyant Vest, Unicellular Polyethylene Foam, Adult and Child	46 CFR 160.060-1	
USCG Dwg. No. 164.013-1	Pattern, Trigonal Slit, for Polyethylene Foam Slab Material	46 CFR 164.013-1	
NBS Special Pub. 440	Color: Universal Language and Dictionary of Names	46 CFR 160.010-1; 160.021-1; 160.022-1; 160.024-1; 160.036-1; 160.037-1; 160.057-1; 160.171-3; 160.174-3; 160.176-9; 169.115	
UL 1191	Components for Personal Flotation Devices	46 CFR 160.171-3; 160.176-8; 160.176-13	
ABYC A	Liquefied Petroleum Gas (LPG) Systems	46 CFR 169.115; 159.703; 184.05-1	
ABYC A-22	Compressed Natural Gas Systems Standards and Recommended Practices for Small Craft (1987–1988)	46 CFR 169.115; 169.703; 184.05	
Fed. Spec. BB-N-411C (DoDSSP)	Nitrogen, Technical, C	46 CFR 197.340	

TABLE 1 Continued

	Fed. Spec. BB-O-925A (DoDSSP) NFPA 306	Oxygen, Technical, Gas and Liquid, A	46 CFR 197.340
	NFPA 70	Control of Gas Hazards on Vessels	46 CFR 71.60-1; 167.30-1-0; 169.115; 169.236; 189.50-1
		National Electrical Code	46 CFR 111.05-33; 111.20-15; 111.25-5(a); 111.30-19(d), (f)(1); 111.50-3(c), (d), (f), (h); 111.50-7(a); 111.50-9; 111.53-1(a); 111.54-1(a); 111.55-1(a); 111.59-1(a); 111.60-7; 111.60-11(f); 111.60-13(b)(1), (2), (c); 111.70-1; 111.79-1(c); 111.81-5; 111.83-3(a); 111.89-1; 111.105-1; 111.105-5; 111.105-7; 111.105-39(b); 111.107-1(a); 146.29-35
	DHHS PUB. No. (PHS) 84-2024	The Ship's Medicine Chest and Medical Aid at Sea, Revised 1984	46 CFR 147.7
	UL 30	Metal Safety Cans	46 CFR 147.7
	UL 1185	Portable Marine Fuel Tanks	46 CFR 147.7
	UL 1313	Nonmetallic Safety Cans for Petroleum Products	46 CFR 147.7
	UL 1314	Special Purpose Metal Containers	46 CFR 147.7
	IMO RES. A212(VII)	Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk	46 CFR 153.2
	IMO RES. A328(IX)	Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk	46 CFR 154.1
	IMO	Code for Existing Ships Carrying Liquefied Gases in Bulk	46 CFR 154.1
	IMO	International Convention on Safety of Life at Sea	46 CFR
	IMO	Medical First Aid Guide for Use in Accidents Involving Dangerous Goods	46 CFR 153.930; 154.1; 154.1435; 154.1440
	ANSI 10.14-75	Requirements for Safety Belts, Harnesses, Lanyards, Lifelines, and Drop Lines for Construction and Industrial Use	33 CFR 140; 142
	ANSI A12.1	Safety Requirements for Floor and Wall Openings, Railings, and Toeboards	33 CFR 149.441
	ANSI/NSC Z41	Requirements for Men's Safety-Toe Footwear	33 CFR 140; 142; 150.509
	ANSI Z87.1	Practice for Occupational and Educational Eye and Face Protection	33 CFR 140.7; 142; 149.517; 150.509; 46 CFR 150.395; 150.457; 154.1; 154.1400
	ANSI Z88.2	Practices for Respiratory Protection	33 CFR 140.7; 142; 46 CFR 150.395; 150.457; 150.460; 197.550
	ANSI/UL 1123	Standard for Marine Buoyant Devices	33 CFR 140.7; 143.405
	USCG	Guidelines for Preparation of a Deepwater Ports Operations Manual, 1975	33 CFR 150.105
	IMO	Code for Construction and Equipment of Mobile Offshore Drilling Units (IMO Assembly Resolution A.414 (XI), Nov. 15, 1979)	33 CFR 140.7; 143.207; 146.205
	ICS	Clean Seas Guide for Oil Tankers, 1973	33 CFR 157.23
	OCIMF	International Safety Code for Oil Tankers and Terminals, Third Edition, 1988	33 CFR 154.106; 154.735; 154.810; 46 CFR 39.10-5; 39.20-9
	UL 781	Hazardous Location Equipment Directory, May 1979 Portable Lighting Units	33 CFR 149.539
	USCG 160.14	"Compass and Mounting, dated Dec. 14, 1944" (Specification for Compasses: Magnetic, Liquid-Filled, Mariners, Compensating, for Lifeboats (with Mounting) for Merchant Vessels), 1944	46 CFR 33.15-10; 75.20-15; 94.20-15; 192.20-15
	IMO A/ES III Res. 108 Annexes I thru IV dated Nov. 30, 1966 Amendments to Chapter II	International Convention for Safety of Life at Sea, 1960 (Adopted as Part of International Convention for the Safety of Life at Sea, 1974), 1966	46 CFR 80.20
101510	ISO 484 PT-1	Shipbuilding—Ship Screw Propellers—Manufacturing Tolerance—Part 1: Propellers of Diameter Greater than 2,50 m	TSGS
101510	ISO 484 PT-2	Shipbuilding—Ship Screw Propellers—Manufacturing Tolerances—Part 2: Propellers of Diameter Between 0,80 and 2,50 m Inclusive	TSGS
500505	ISO 449	Shipbuilding—Magnetic Compasses and Binnacles, Class A	
500505	ISO 613	Shipbuilding—Magnetic Compasses, Binnacles, and Azimuth Reading Devices—Class B	
500505	ISO R694	Positioning of Magnetic Compasses in Ships	
	ISO 2412	Shipbuilding—Colours of Indicator Lights	
500505	ISO 2269	Shipbuilding—Class A Magnetic Compasses, Azimuth Reading Devices and Binnacles—Tests and Certification	
	ISO 6954	Mechanical Vibration and Shock—Guidelines for the Overall Evaluation of Vibration in Merchant Ships	
500505	ISO 10316	Shipbuilding—Class B Magnetic Compasses—Tests and Certification	
700515	ISO 8385	Shipbuilding and Marine Structures—Dredgers—Classification	
700520	ISO 4175	Shipbuilding—Shipborne Barges, Series 1—Main Dimensions	
	ISO 4261	Petroleum Products—Fuels (Class F)—Specification of Gas Turbine Fuels for Industrial and Marine Applications	
	ISO 4559	Shipbuilding—Tracks for Yachts Interchangeability Dimensions	

TABLE 1 Continued

	ISO 4567	Shipbuilding—Yachts—Waste Water Fittings	
	ISO 4867	Code for the Measurement and Reporting of Shipboard Vibration Data	
	ISO 4868	Code for the Measurement and Reporting of Local Vibration Data of Ship Structures and Equipment	
	ISO 5483	Shipbuilding—Oil and Water Drain Screw	
	ISO 5572	Shipbuilding and Marine Structures—Numbering of Equipment and Structural Elements in Ships	
700520	ISO 5667–9	Water Quality—Sampling from Marine Water	
	ISO 6216	Shipbuilding—Inland Navigation—Pilot Craft—Classification and Basic Requirements	
700520	ISO 6217	Shipbuilding—Inland Navigation—Pilot Craft—Identification Painting and Inscriptions	
	ISO 6420	Liquid Flow Measurement in Open Channels—Position Fixing Equipment for Hydrometric Boats	
700520	ISO 6765	Shipbuilding—Shipborne Barges, Series 3—Main Dimensions	
700520	ISO 6766	Shipbuilding—Shipborne Barges, Series 4—Main Dimensions	
700520	ISO 7221	Shipbuilding and Marine Shipborne Barges, Series 1, on Barge Carriers—Principal Technical Requirements	
700520	ISO 7222	Shipbuilding—Shipborne Barges, Series 2—Main Dimensions	
	ISO 7840	Small Craft—Fire-Resistant Fuel Hoses	
	ISO 8216–1	Petroleum Products—Fuels (Class F)—Classification—Part 1: Categories of Marine Fuels	
	ISO 8216–2	Petroleum Products—Fuels (Class F)—Classification—Part 2: Categories of Gas Turbine Fuels for Industrial and Marine Applications	
700520	ISO 8217	Petroleum Products—Fuels (Class F)—Specifications of Marine Fuels	
	ISO 8303	Shipbuilding—Shipborne Barges, Series 3—Main Operational and Technical Requirements	
700520	ISO 8469	Small Craft—Non-Fire-Resistant Fuel Hose	
700520	ISO 9382	Shipborne Barges, All Series—Classification and Main Requirements	
701015	ISO 7607	Shipbuilding—Inland Navigation—Multi-Bucket Dredgers—Scale of Bucket Capacities	
701020	ISO 3786	Shipbuilding—Inland Navigation Towing Hooks—Scale of Tractive Efforts	
701020	ISO 6218	Shipbuilding—Inland Navigation—Coupling Winches for Push Tows—Main Dimensions	
701020	ISO 6764	Shipbuilding—Shipborne Barges, Series 1—Lifting Post Casting—Arrangement, Dimensions and Method of Testing	
701020	ISO 7236	Inland Navigation Vessels—Demountable Signal Masts for Push Tows—Mounting Attachment	
701020	ISO 7545	Shipbuilding and Marine Structures—Inland Navigation—Single-Lock Automatic Couplings for Push Tows	
	ISO 9367–1	Lashing and Securing Arrangements on Road Vehicles for Sea Transportation on Ro/Ro Ships—General Requirements—Part 1: Commercial Vehicles and Combinations of Vehicles, Semi-Trailers Excluded	
	ISO 9367–2	Lashing and Securing Arrangements on Road Vehicles for Sea Transportation on Ro/Ro Ships—General Requirements—Part 2: Semi-Trailers	
	ASTM F 841	Specification for Thrusters, Tunnel, Permanently Installed in Marine Vessels	
	ASTM F 991M	Specification for Docking/Drain Plug and Boss Assemblies	
	ASTM F 1272	Specification for Ball Joints of Flexible/Expansion Type for Marine Applications	
	ASTM F 1547	Guide Listing Relevant Standards and Publications for Commercial Shipbuilding	
	FHWA	Standard Alphabets for Highway Signs	33 CFR 118
102090	ASTM F 1198	Guide for Shipboard Fire Detection Systems	
90000	ASTM F 1166	Practice for Human Engineering Design for Marine Systems, Equipment, and Facilities	TSGS
90000	ASTM F 1337	Practice for Human Engineering Program Requirements for Ships and Marine Systems, Equipment, and Facilities	
30	ASTM F 1005	Practice for HVAC Duct Shapes; Identification and Description of Design Configuration	TSGS
102520	ASTM F 1179	Practice for Inspection Procedure for Use of Anaerobic Thread Locking Compounds with Studs	
35	ASTM F 1270	Practice for Preparing and Locating Emergency Muster Lists	
30	ASTM F 856	Practice for Mechanical Symbols, Shipboard Heating, Ventilation, and Air Conditioning (HVAC)	TSGS
30	ASTM F 1000	Practice for Piping System Drawing Symbols	TSGS
30	ASTM F 1332	Practice for Use of SI (Metric) Units in Maritime Applications (Committee F-25 Supplement to ANSI IEEE/ASTM SI 10)	
	ASTM F 1182	Specification for Anodes, Sacrificial Zinc Alloy	
	ASTM F 956	Specification for Bell, Cast, Sound Signalling	TSGS
101010	ASTM F 1075	Specification for Dehumidifier Shipboard, Mechanically Refrigerated, Self-Contained	
	ASTM F 957	Specification for Gong, Sound Signaling	TSGS
30	ASTM F 906	Specification for Letters and Numerals for Ships	

TABLE 1 Continued

100090	ASTM F 1347	Specification for Manually Operated Fueling Hose Reels	
51510	ASTM F 1348/F 1348M	Specification for Pneumatic Rotary Descaling Machines	
52520	ASTM F 1099/F 1099M	Specification for Rat Guards, Ship's (Metric)	
102525	ASTM F 1138	Specification for Spray Shields for Mechanical Joints	TSGS
102590	ASTM F 670	Specification for Tanks, 5- and 10-Gal (20- and 40-L) Lube Oil Dispensing	TSGS
50510	ASTM F 1145	Specification for Turnbuckles, Swaged, Welded, Cast, Forged	
	ASTM F 1321	Guide for Conducting a Stability Test (Lightweight Survey and Inclining Experiment) to Determine the Light Ship Displacement and Centers of Gravity of a Vessel	
30	ASTM F 1297	Guide for Location and Instruction Symbols for Evacuation and Lifesaving Equipment	
	ASTM F 1321	Guide for Conducting a Stability Test (Lightweight Survey and Inclining Experiment) to Determine the Light Ship Displacement and Center of Gravity of a Vessel	
	ASTM F 1808	Guide for Weight Control Technical Requirements for Surface Ships	
	ASTM F 1332	Practice for Use of SI (Metric) Units in Maritime Applications (Committee F-25 Supplement to E 380)	
	SAWE Number 12	Recommended Practice for Weight Control Technical Requirements for Surface Ships	
	SAWE Number 13	Recommended Practice for Standard Coordinate System for Reporting Mass Properties of Surface Ships and Submarines	
000030	ISO 1069	Magnetic Compasses and Binnacles for Sea Navigation—Vocabulary	
000030	ISO 1964	Shipbuilding—Indication of Details on the General Arrangement Plans of Ships	
000030	ISO 3715	Shipbuilding—Ship Screw Propellers—List of Equivalent Terms	
000030	ISO 3828	Shipbuilding and Marine Structures—Deck Machinery—Vocabulary	
000030	ISO 5571	Shipbuilding—Identification Colors for Schemes for Ventilation Systems	
000030	ISO 6050	Shipbuilding—Bulbous Bow and Side Thruster Symbols	
000030	ISO 6345	Shipbuilding and Marine Structures Windows and Side Scuttles—Vocabulary	
000030	ISO 7255	Shipbuilding—Active Control Units of Ships—Vocabulary	
000030	ISO 7606	Shipbuilding—Inland Navigation Vessels—Draught Scales	
000030	DIS 8147	Shipbuilding and Marine Derrick Rigs and Component Parts—Vocabulary	
000030	ISO 8384	Shipbuilding and Marine Structures—Dredgers—Vocabulary	
	ISO 8999	Reciprocating Internal Combustion Engines—Graphical Symbols	
	ISO 9093-1	Small Craft—Seacocks and Through-Hull Fittings	
	ISO 10087	Small Craft—Hull Identification Coding System	
	ISO 10088	Small Craft—Permanently Installed Fuel Systems and Fixed Fuel Tanks	
	ISO 10240	Small Craft—Owner's Manual	
	ISO 10253	Water Quality—Marine Algal Growth Inhibition Test with Skeletonema Costatum and Phaedactylum Tricornutum	
	ISO 10316	Shipbuilding—Class B Magnetic Compasses—Tests and Certification	
	ISO 10592	Small Craft—Hydraulic Steering Systems	
	ISO 11547	Small Craft—Start-in-Gear Protection	
	ISO 13617	Shipbuilding—Shipboard Incinerators—Requirements	
000035	ISO 3969	Shipbuilding—Inland Vessels—Operational Documentation	
052500	ISO 3827 PT I	Shipbuilding—Coordination of Dimensions in Ships' Accommodation—Part I: Principles of Dimensional Coordination	
052500	ISO 3827 PT II	Shipbuilding—Coordination of Dimensions in Ships' Accommodation—Part II: Glossary of Terms	
052500	ISO 3827 PT III	Shipbuilding—Coordination of Dimensions in Ship's Accommodation—Part III: Coordinating Sizes for Components and Assemblies	
052500	ISO 3827 PT IV	Shipbuilding—Coordination of Dimensions in Ship's Accommodation—Part IV: Controlling Dimensions	
052500	ISO 3827 PT V	Shipbuilding—Coordination of Dimensions in Ship's Accommodation—Part V: Coordination Sizes for Key Components	
052590	ISO 6205	Inland Navigation Vessels—Customs Sealing Systems—Basic Technical Requirements	

Group 5 Electrical, Electronics, and Automation

ISO Code No.	Designation	Title	Approved For Incorporation In
	ISA-RP 12.6	Installation of Intrinsically Safe Systems for Hazardous Classified Locations	46 CFR 111.105-15
	ANSI/ASME CSD-1	Controls and Safety Devices for Automatically Fired Boilers	46 CFR 63.10; 63.15; 63.20
	NAVSEA MIL-HDBK-299	Military Handbook, Cable Comparison Handbook Data Pertaining to Electrical Shipboard Cable, Notice 1-1991	46 CFR 111.60-1(a)(3); 183.10-20
	NFPA 77	Recommended Practice on Static Electricity, 1993	46 CFR 111.105-27
	NFPA 99	Standard for Health Care Facilities, 1996	46 CFR 111.105-37
	NFPA 496	Standard for Purged and Pressurized Enclosures for Electrical Equipment	46 CFR 108.425; 111.105-7(b)
	UL 198B	Class H Fuses	46 CFR 161.004-1
	UL 1196	Standard for Floating Waterlights, 2nd Edition	46 CFR 111.87-3(a); 161.010
	UL 98	Enclosed and Dead-Front Switches	
	UL 104	Elevator Door Locking Devices and Contacts	
	UL 197	Commercial Electric Cooking Appliances	46 CFR 183.01-15; 183.10-45
	UL 250	Household Refrigerators and Freezers	

TABLE 1 *Continued*

UL 347	High-Voltage Industrial Control Equipment	
UL 363	Knife Switches	
UL 399	Drinking-Water Coolers	
UL 471	Commercial Refrigerators and Freezers	
UL 486A	Wire Connectors and Soldering Lugs for Use with Copper Conductors	
UL 489	Molded-Case Circuit Breakers and Circuit-Breaker Enclosures	46 CFR 111.01–15(c); 111.54-(b); (Note); TSGS
UL 498	Attachment Plugs and Receptacles	
UL 508	Industrial Control Equipment	TSGS
UL 514	Fittings for Conduits and Outlet Boxes	46 CFR 111.81-13
UL 595	Marine-Type Electric Lighting Fixtures	46 CFR 111.75-20(a); 111.75–20(e); 183.01–15; TSGS
UL 749	Household Electric Dishwashers	
UL 845	Motor Control Centers	
UL 857	Busways and Associated Fittings	
UL 921	Commercial Electric Dishwashers	
UL 924	Emergency Lighting and Power Equipment	46 CFR 112.39-1(a)(4)
UL 1025	Electric Air Heaters	
UL 1042	Electric Baseboard Heating Equipment	46 CFR 111.87-3(a)
UL 1096	Electric Central Air Heating Equipment	46 CFR 111.87-3(a)
UL 1104	Marine Navigation Lights	46 CFR 111.75-17(d)
UL 1236	Battery Chargers for Charging Engine-Starter Batteries	TSGS
UL 783	Electric Flashlights and Lanterns for Use in Hazardous Classified Locations	46 CFR 154.1
UL 44	Standard for Rubber-Insulated Wire and Cable	46 CFR 111.60–11(c)
UL 62	Standard for Flexible Cord and Fixture Wire	46 CFR 111.60–13(a)
UL 83	Standard for Thermoplastic-Insulated Wires and Cables	46 CFR 111.60–1(c); 111.60–11(c)
UL 913	Standard for Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, and III Division 1, Hazardous (Classified) Locations	46 CFR 111.105–11(a)
UL 1072	Standard for Medium-Voltage Power Cables	46 CFR 111.60–1(e)
UL 1203	Standard for Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations	46 CFR 111.105–9
UL 1569	Standard for Metal-Clad Cables	46 CFR 111.60–23(a)
UL 1570	Standard for Fluorescent Lighting Fixtures	46 CFR 111.75–20
UL 1571	Standard for Incandescent Lighting Fixtures	46 CFR 111.75–20
UL 1572	Standard for High Intensity Discharge Lighting Fixtures	46 CFR 111.75–20
UL 1573	Standard for Stage and Studio Lighting Units	46 CFR 111.75–20
UL 1574	Standard for Track Lighting Systems	46 CFR 111.75–20
RTCMS	Paper 12-78/DO-100 Minimum Performance Standards (MPS Marine), LORAN C Receiving Equipment, Dec. 20, 1977	33 CFR 164.41
UL 506	Specialty Transformers	
ANSI/IEEE C37.04	AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis	46 CFR 111.54-1(c)
ANSI C37.12	AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis	46 CFR 111.54-1(c)
ANSI C37.14	Low-Voltage DC Power Circuit Breakers Used in Enclosures	46 CFR 111.54-1(c)
IEEE Std 100–1992	The New IEEE Standard Dictionary of Electrical and Electronics Terms	46 CFR 110.15-1(a)
IEEE Std 1202–1991	IEEE Standard for Flame Testing of Cables for Use in Cable Tray in Industrial and Commercial Occupancies	46 CFR 111.60–2; 111.60–6(a); 111.107–1(c)
IEC 60056	High-Voltage Alternating-Current Circuit Breakers	46 CFR 111.54–1
IEC 60068–2–52	Basic Environmental Testing Procedures. Part 2: Tests. Test KB: Salt Mist, Cyclic	46 CFR 110.15–1(b)
IEC 60079–0	Electrical Apparatus for Explosive Gas Atmospheres. Part 0: General Requirements	46 CFR 111.105–1; 111.105–3; 111.105–5; 111.105–7; 111.105–15(b); 1111.105–17(b)
IEC 60079–1	Electrical Apparatus for Explosive Gas Atmospheres. Part 1: Construction and Test of Flameproof Enclosures of Electrical Apparatus	46 CFR 111.105–3; 111.105–5; 111.105–9; 111.105–15(b); 1111.105–17(b)
IEC 60079–2	Electrical Apparatus for Explosive Gas Atmospheres. Part 2: Electrical Apparatus—Type of Protection “p”	46 CFR 111.105–3; 111.105–5; 111.105–7(b); 111.105–15(b); 1111.105–17(b)
IEC 60079–5	Electrical Apparatus for Explosive Gas Atmospheres. Part 5: Sand-Filled Apparatus	46 CFR 111.105–3; 111.105–5; 111.105–15(a); 111.105–15(b); 1111.105–17(b)
IEC 600796	Electrical Apparatus for Explosive Gas Atmospheres. Part 6: Oil-Immersion “o”	46 CFR 111.105–3; 111.105–5; 111.105–15(a); 111.105–15(b); 1111.105–17(b)
IEC 60079–7	Electrical Apparatus for Explosive Gas Atmospheres. Part 7: Increased Safety “e”	46 CFR 111.105–3; 111.105–5; 111.105–15(a); 111.105–15(b); 1111.105–17(b)
IEC 60079–11	Electrical Apparatus for Explosive Gas Atmospheres. Part 11: Intrinsic Safety “i”	46 CFR 111.105–3; 111.105–5; 111.105–11(a); 111.105–15(b); 1111.105–17(b)
IEC 60079–15	Electrical Apparatus for Explosive Gas Atmospheres. Part 15: Electrical Apparatus with Type of Protection “n”	46 CFR 111.105–3; 111.105–5; 111.105–15(a); 111.105–15(b); 1111.105–17(b)

TABLE 1 *Continued*

IEC 60079-18	Electrical Apparatus for Explosive Gas Atmospheres. Part 18: Encapsulation "m"	46 CFR 111.105-3; 111.105-5; 111.105-15(a); 111.105-15(b); 111.105-17(b)
IEC 60092-101	Electrical Installations in Ships. Part 101: Definitions and General Requirements	46 CFR 110.15-1(a); 111.81-1(d)
IEC 60092-201	Electrical Installations in Ships. Part 201: System Design—General	46 CFR 111.70-3(a); 111.81-1(d)
IEC 60092-202	Electrical Installations in Ships. Part 202: System Design—Protection	46 CFR 111.50-3(c); 111.50-3(e); 111.50-3(g); 111.53-1(a); 111.54-1(a); 111.81-1(d)
IEC 60092-301	Electrical Installations in Ships. Part 301: Equipment—Generators and Motors	46 CFR 111.25-5(a); 111.70-1(a); 111.81-1(d)
IEC 60092-302	Electrical Installations in Ships. Part 302: Equipment—Switchgear and Controlgear Assemblies	46 CFR 111.30-1; 111.30-5(a); 111.30-19(a); 111.81-1(d)
IEC 60092-303	Electrical Installations in Ships. Part 303: Equipment—Transformers for Power and Lighting, 1980	46 CFR 111.205; 111.81-1(d)
IEC 60092-304	Electrical Installations in Ships. Part 304: Equipment—Semiconductor Converters	46 CFR 111.33-3(a); 111.33-5(b); 111.81-1(d)
IEC 60092-401	Electrical Installations in Ships. Part 401: Installation and Test of Completed Installation	46 CFR 111.05-9
IEC 60092-502	Electrical Installations in Ships. Part 502: Tankers—Special Features	46 CFR 111.81-1(d); 111.105-31(e)
IEC 60092-503	Electrical Installations in Ships. Part 503: Special Features—A.C. Supply Systems with Voltages in the Range Above 1 kV Up To and Including 11 kV	46 CFR 111.30-5(a); 111.81-1(d);
IEC 60092-504	Electrical Installations in Ships. Part 504: Special Features—Control and Instrumentation	46 CFR 111.81-1(d)
IEC 600331	Fire Resisting Characteristics of Electric Cables	46 CFR 113.30-25(i)
IEC 600332-1	Tests on Electric Cables Under Fire Conditions. Part 1: Test on a Single Vertical Insulated Wire or Cable	46 CFR 111.30-19(b)
IEC 600332-3	Tests on Electric Cables Under Fire Conditions. Part 3: Test on Bunched Wires or Cables	46 CFR 111.60-1(b); 111.60-2; 111.60-6(a); 111.107-1(c)
IEC 600363	Short-Circuit Current Evaluation with Special Regard to Rated Short-Circuit Capacity of Circuit-Breakers in Installations in Ships	46 CFR 111.52-5(c)
IEC 600529	Degrees of Protection Provided by Enclosures (IP Code)	46 CFR 111.01-9(a); 111.01-9(b); 111.01-9(c); 111.01-9(d); 111.01-9(Note); 113.10-7; 113.20-3; 113.25-11; 113.30-25(c); 113.30-25(h); 113.40-10(b)
IEC 600533	Electromagnetic Compatibility of Electrical and Electronic Installations in Ships	46 CFR 113.05-7
IEC 600947-2	Low-Voltage Switchgear and Controlgear. Part 2: Circuit Breakers	46 CFR 111.54-1(b)
IEC 60092-3	Electrical Installation in Ships; Part 3: Cable (Construction, Testing and Installation)	46 CFR 111.05-7; 111.60-1(a); 111.60-3(a); 111.60-3(c); 111.81-1(d)
IEC 60092-306	Electrical Installation in Ships; Part 306: Equipment—Luminaires and Accessories	46 CFR 111.75-20(a); 111.81-1(d)
IEC 60092-350	Electrical Installation in Ships; Part 350: Low-Voltage Shipboard Power Cables General Construction and Test Requirements	
IEC 60092-353	Electrical Installation in Ships; Part 353: Single and Multicore Non-Radial Field Power Cable with Extruded Solid Insulation for Rated Voltages 1 kV and 3 kV	
IEC 60092-354	Electrical Installation in Ships; Part 354: Single- and Three-Core Power Cables with Extruded Solid Insulation for Rated Voltages 6 kV, 10 kV and 15 kV	
IEC 60092-359	Electrical Installation in Ships; Part 359: Sheathing Materials for Shipboard Power and Telecommunication Cables	
IEC 60092-501	Electrical Installation in Ships; Part 501: Special Features—Electric Propulsion Plant	46 CFR 111.81-1(d)
IEC 600342-2	Safety Requirements for Electric Fans and Regulators Part 2: Fans and Regulators for Use in Ships	
IEC 600364-7-709	Electrical Installations of Buildings—Part 7: Requirements for Special Installations or Locations—Section 709: Marinas and Pleasure Crafts	
IEC 600872	Marine Automatic Radar Plotting Aids (ARIA) Operational Requirements—Methods of Testing and Test Results	
IEC 600945	Maritime Navigation and Radio Communications Equipment and Systems—General Requirements—Methods of Testing and Required Test Results	
IEC 600983	Miniature Lamps	
IEC 1023	Marine Speed and Distance Measuring Equipment (SDME) Operational and Performance Requirements—Methods of Testing and Required Test Results	
IEC 1097-1	Global Maritime Distress and Safety System (GMDSS)—Part 1: Radar Transponder-Marine Search and Rescue (SART)-Operational and Performance Requirements, Methods of Testing and Required Test Results	
IEC 60092-352	Electrical Installation in Ships—Choice and Installation of Cables for Low-Voltage Power Systems	46 CFR 111.60-3(a); 111.60-3(c); 111.60-5; 111.81-1(d)
IESNA RP-12	Recommended Practice for Marine Lighting	

TABLE 1 Continued

IEEE-C37.13	Low-Voltage AC Power Circuit Breakers Used in Enclosures (ANSI/IEEE C37.13-1981)	46 CFR 111.54-1(c); TSGS
IEEE No. 27	Switchgear Assemblies Including Metal-Enclosed Bus (ANSI/IEEE C37.20-69 and Supplements)	46 CFR 110.30-23
IEEE No. 45	Recommended Practice for Electric Installation on Shipboard	46 CFR 110.30-19(b); 111.05-7; 111.15-2(b); 111.30-1; 111.30-5(a); 111.30-19(a); 111.33-3(a); 111.33-5(a); 111.40-1; 111.60-1; 111.60-2; 111.60-3(b); 111.60-5(a); 111.60-(a); 111.60-11(c); 111.60-13(a); 111.60-19(b); 111.60-21; 111.60-23(d); 111.75-5(b); 111.105-3; 111.105-41; 111.107-1(c); 113.30-10; 113.65-5; 183.01-15; 183.05-45; 183.10-10; TSGS
IEEE 320	Application Guide for AC High-Voltage Circuit Breakers Rated on a Symmetrical Current Basis (ANSI/IEEE C37.010-1979)	46 CFR 111.54-1(c)
IEEE No. 331	Low-Voltage AC Nonintegrally Fused Power Circuit Breakers (Using Separately Mounted Current-Limiting Fuses) (ANSI C37.27-1972)	46 CFR 111.54-1(c)
IEEE No. 538	Low-Voltage AC Integrally Fused Power Circuit Breakers (ANSI C37.13a-1975)	46 CFR 111.54-1(c)(1)(ii); 111.57-1 (Note)
NAVSEA DDS 300-2	AC Fault Current Calculations	46 CFR 111.52-5(b)
UL 20	General Use Snap Switches	46 CFR 111.55-7
UL 50	Enclosures for Electrical Equipment	46 CFR 111.81-1(d)
UL 67	Panelboards	46 CFR 111.40-1
UL 73	Motor Operated Appliances	46 CFR 111.77-5(a)
ANSI/ASME A17.1	Safety Code for Elevators and Escalators	46 CFR 111.91-1
ANSI/ASME A17.1A	Addenda to ANSI/ASME A17.1. Safety Code for Elevators and Escalators	46 CFR 111.91-1
ASTM B 117	Practice for Operating Salt Spray (Fog) Apparatus	46 CFR 110.15-1(b)
ASTM D 4066	Specification for Nylon Injection and Extrusion Materials (PA)	46 CFR 111.60-1(c)
ASTM F 1207/F 1207M	Specification for Electrical Insulation Monitors for Monitoring Ground Resistance in Active Electrical Systems (Metric)	
ASTM F 1014	Specification for Flashlights on Vessels	46 CFR 33.15-10; 35.30-20; 77.35-5; 94.20-15; 96.35-5; 108.497; 154.1400; 160.051-7; 192.20-15; 195.35-5
ASTM F 1134	Specification for Insulation Resistance Monitor for Shipboard Electrical Motors and Generators	
ASTM F 1166	Practice for Human Engineering Design for Marine Systems, Equipment, and Facilities	
ASTM F 1003	Specification for Searchlights on Motor Lifeboats	
500510	ISO 8728	Marine Gyro-compasses
500510	ISO 8729	Marine Radar Reflectors
500510	ISO 8846	Small Craft—Electrical Devices—Protection Against Ignition of Surrounding Flammable Gases
500510	ISO 8849	Small Craft—Electrically Operated Bilge-Pumps
500510	ISO 9097	Small Craft—Electric Fans
500510	ISO 9875	Marine Echo-sounding Equipment
500510	ISO 9876	Marine Facsimile Receivers for Meteorological Charts
	ISO 10133	Small Craft—Electrical Systems—Extra-Low-Voltage d.c. Installations
	ISO 10134	Small Craft—Electrical Devices—Lightning Protection
	ISO TR 11447	Small Craft—Interchangeability Dimensions of Navigation Lights
	ISO 11606	Ships and Marine Technology—Marine Electromagnetic Compasses
	ISO 13297	Small Craft—Electrical Systems—Alternating Current Installations
	IES	Colors of Light Signals, 1975
	Mil-Spec.	Color, Aeronautical Lights and Lighting Equipment, 1963 (1971)
	MIL-C-25050	
	API	Recommended Practice 550, Manual on Installation of Refinery Instruments and Control Systems, Part II—Process Stream Analyzers, Section 5—Analyzers, 4th Ed., Feb. 1985
	IES	Lighting Handbook
	CIE	Standard Observer Diagram
	IEC 309-1	Plugs, Socket-Outlets and Couplers for Industrial Purposes: Part 1, General Requirements
	IEC 309-2	Plugs, Socket-Outlets and Couplers for Industrial Purposes: Part 2, Dimensional Interchangeability Requirements for Pin and Contact-Tube Accessories
	ANSI/NEMA WD6	Wiring Devices, Dimensional Requirements
	IEC 61892-7	Mobile and Fixed Offshore Units—Electrical Installations—Part 7: Hazardous Area
	API RP 500	Classification of Locations for Electrical Installations at Petroleum Facilities Classified as Class 1, Division 1, and Division 2
	API RP 505	Classification of Locations for Electrical Installations at Petroleum Facilities Classified as Class 1, Zone 0, Zone 1, and Zone 2

TABLE 1 *Continued*

ISO Code No.	Designation	Title	Approved For Incorporation In
NFPA 70	National Electrical Code		33 CFR 127.003; 154.106; 154.735; 154.808; 154.812; 183.5; 183.435 46 CFR 28.350; 28.370; 39.10-5; 111.05-33; 111.20-15; 111.25-5(a); 111.50-3(c); 111.50-7; 111.50-9; 111.53-1(a); 111.54-1(a); 111.55-1(a); 111.59-1; Table 111.60-7; 111.60-11(f); 111.60-13(a); 111.60-13(b); 111.60-13(c); 111.60-23; 111.81-1(d); 111.83-3(a); 111.105-1; 111.105-1 (Note); 111.105-3; 111.105-5; 111.105-7; 111.105-9; 111.105-15(a); 111.105-17(b); 111.107-1(b); 169.115; 183.05; TSGS
Group 6 Machinery			
ASTM B 111		Specification for Copper and Copper-Alloy Seamless Condenser Tubes and Ferrule Stock	46 CFR 56.60-1; TSGS
ASTM B 111M		Specification for Copper and Copper-Alloy Seamless Condenser Tubes and Ferrule Stock (Metric)	
ASTM B 234		Specification for Aluminum and Aluminum-Alloy Drawn Seamless Tubes for Condensers and Heat Exchangers	46 CFR 56.60-1
ASTM B 234M		Specification for Aluminum and Aluminum-Alloy Drawn Seamless Tubes for Condensers and Heat Exchangers (Metric)	
TEMA		Heat Exchangers, Class "B," "C," or "R," 1978	46 CFR 54.01-3
UL 296		Oil Burners	46 CFR 63.15-5
UL 1111		Marine Carburetors Flame Arresters	46 CFR 58.10
ASTM A 178/A 178M		Specification for Electric-Resistance-Welded Carbon Steel and Carbon-Manganese Steel Boiler and Superheater Tubes	46 CFR 56.60-1
ASTM A 179/A 179M		Specification for Seamless Cold-Drawn Low-Carbon Steel Heat-Exchanger and Condenser Tubes	46 CFR 56.60-1
ASTM A 192/A 192M		Specification for Seamless Carbon Steel Boiler Tubes for High-Pressure Service	46 CFR 55.60-1
ASTM A 199/A 199M		Specification for Seamless Cold-Drawn Intermediate Allow-Steel Heat-Exchanger and Condenser Tubes	46 CFR 56.60-1
ASTM A 210/A 210M		Specification for Seamless Medium-Carbon Steel Boiler and Superheater Tubes	46 CFR 56.60-1
ASTM A 213/A 213M		Specification for Seamless Ferritic and Austenitic Alloy-Steel Boiler, Superheater, and Heat-Exchanger Tubes	46 CFR 56.60-1
ASTM A 214/A 214M		Specification for Electric-Resistance-Welded Carbon Steel	46 CFR 56.60-1
ASTM A 226/A 226M		Specification for Electric-Resistance-Welded Carbon Steel Boiler and Superheater Tubes for High-Pressure Service	46 CFR 56.60-1; TSGS
ASTM A 234/A 234M		Specification for Piping Fittings for Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service	46 CFR 56.60-1
ASTM A 249/A 249M		Specification for Welded Austenitic Steel Boiler, Superheater, Heat-Exchanger, and Condenser Tubes	46 CFR 56.60-1
ASTM A 520		Specification for Supplementary Requirements for Seamless and Electrical-Resistance-Welded Carbon Steel Tubular Products for High-Temperature Service Conforming to ISO Recommendations for Boiler Construction	46 CFR 56.60-1
SAE-J1928-89		Devices Providing Backfire Flame Control for Gasoline Engines in Marine Applications	46 CFR 58.10
ABYC-P-1-73		Exhaust Systems	169.115; 169.609; 182.15
100515	ASTM F 975	Specification for Auxiliary Single Stage Steam Turbines for Shipboard Use	
101005	ASTM F 998	Specification for Centrifugal Pump, Shipboard Use	TSGS
	ASTM F 916	Specification for Elevators, Shipboard, Electromechanical Passenger, and Stores	TSGS
	ASTM F 841	Specification for Thrusters, Tunnel, Permanently Installed in Marine Vessels	TSGS
51510	ASTM F 1106	Specification for Warping Heads, Rope Handling (Gypsy Head, Capstan Head)	
51510	ASTM F 765	Specification for Wildcats, Ship Anchor Chain	TSGS
51510	ASTM F 1309	Practice for Installation Procedures for Fitting Chocks to Marine Machinery Foundations	
100505	ASTM F 1338	Guide for Main Propulsion Medium Speed Marine Diesel Engines Covering Performance and Minimum Scope of Assembly	
	ASTM F 1510	Specification for Rotary Positive Displacement Pumps, Commercial Ships Use	
	ASTM F 1718	Specification for Rotary Positive Displacement Fuel Pumps	
51525	ISO 6067	Winches for Lifeboats	
051535	ISO 3078	Shipbuilding—Cargo Winches	
051535	ISO 3730	Shipbuilding—Mooring Winches	
051535	ISO 4051	Shipbuilding—Inland Vessels—Steering Gear—Values of Torques	

TABLE 1 Continued

051535	ISO 4568	Shipbuilding—Seagoing Vessels—Windlasses and Anchor Capstans	
051535	ISO 6218	Shipbuilding—Inland Navigation—Coupling Winches for Push Tows—Main Dimensions	
051535	ISO 6219	Shipbuilding—Inland Vessels—Windlasses and Anchor Capstans	
051535	ISO 6482	Shipbuilding—Deck Machinery—Warping End Profiles	
051535	ISO 6555	Shipbuilding—Topping Winches	
051535	ISO 7364	Deck Machinery—Accommodation Ladder Winches	
051535	ISO 7365	Deck Machinery—Towing Winches for Deep Sea Use	
051535	ISO 7824	Shipbuilding and Marine Structures—Lubrication Nipples—Cone and Flat Types	
051535	ISO 7825	Shipbuilding—Deck Machinery—General Requirements	
	ISO 8528-1	Receiprocating Internal Combustion Engine Driven Alternating Current Generating Sets—Part 1: Application, Ratings and Performance	
	ISO 8528-2	Receiprocating Internal Combustion Engine Driven Alternating Current Generating Sets—Part 2: Engines	
	ISO 8528-3	Receiprocating Internal Combustion Engine Driven Alternating Current Generating Sets—Part 3: Alternating Current Generators for Generating Sets	
	ISO 8528-4	Receiprocating Internal Combustion Engine Driven Alternating Current Generating Sets—Part 4: Controlgear and Switchgear	
	ISO 8528-5	Receiprocating Internal Combustion Engine Driven Alternating Current Generating Sets—Part 5: Generating Sets	
	ISO 8528-6	Receiprocating Internal Combustion Engine Driven Alternating Current Generating Sets—Part 6: Test Methods	
	ISO 8528-7	Receiprocating Internal Combustion Engine Driven Alternating Current Generating Sets—Part 7: Technical Declarations for Specification and Design	
	ISO 8528-8	Receiprocating Internal Combustion Engine Driven Alternating Current Generating Sets—Part 8: Requirements and Tests for Low-Power Generating Sets	
	ISO 8528-9	Receiprocating Internal Combustion Engine Driven Alternating Current Generating Sets—Part 9: Measurement and Evaluation of Mechanical Vibrations	
	ISO 8665	Small Craft—Marine Propulsion Engines and Systems—Power Measurements and Declarations	
051535	ISO 9089	Marine Structures—Mobile Offshore Units—Anchor Winches	
701025	ISO 6115	Shipbuilding—Travel Winches	
	UL 1128	Marine Blowers	33 CFR 183.5; 183.610
	ASME	Boiler and Pressure Vessel Code: Section 1, Power Boilers, July 1989 with 1989 Addenda	46 CFR 52.01; 52.05; 52.15; 52.20; 52.25; 58.30; 59.10; TSGS
	ASME	Section I, Power Boilers, 1986 Ed., thru 1988 Addenda	46 CFR 56.15-1; 56.15-5; 56.60-1; 56.70-15; 56.95-10
	ASME	Section III, Division I, Rules for the Construction of Nuclear Power Plant Components, July 1989 with 1989 Addenda	46 CFR 55.01; 55.05; 55.10; 55.15; 55.20; 55.25; 58.30
	ASME	Section III, Rules for the Construction of Nuclear Power Plant Components, 1986 Ed. thru 1988 Addenda	46 CFR 56.60-1
	ASME	Section IV, Heating Boilers, July 1989 with 1989 Addenda	46 CFR 53.01; 53.05; 53.10; 53.12

Group 7 Piping Systems

ISO Code No.	Designation	Title	Approved For Incorporation In
	AGA Z21.22	Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems	
	ASME B16.1	Cast Iron Pipe/Flanged Flanges and Fittings	46 CFR 56.60
	ASME B16.3	Malleable Iron Threaded Fittings (Classes 150 and 300)	46 CFR 56.60-1
	ASME B16.4	Gray Iron Threaded Fittings (Classes 125 and 250)	46 CFR 56.60-1
	ASME B16.9	Factory-Made Wrought Steel Buttwelding Fittings	46 CFR 56.60-1
	ASME B16.10	Face-to-Face and End-to-End Dimensions of Valves	46 CFR 56.60-1
	ASME B16.11	Forged Steel Fittings, Socket-Welding and Threaded	46 CFR 56.30-5; 56.60-1; 151.50-10; TSGS
	ASME B16.14	Ferrous Pipe Plugs, Bushings, and Locknuts with Pipe Threads	46 CFR 56.60-1
	ASME B16.15	Cast Bronze Threaded Fittings, Classes 125 and 250	46 CFR 56.60-1
	ASME B16.18	Cast/Copper Alloy Solder Joint Pressure Fittings	46 CFR 56.60-1
	ASME B16.20	Metallic Gaskets for Pipe Flanges—Ring-Joint, Spiral	46 CFR 56.60-1
	ASME B16.21	Nonmetallic Flat Gaskets for Pipe Flanges	46 CFR 56.60-1
	ASME B16.22	Wrought Copper and Copper Alloy Solder Joint Pressure Fittings	46 CFR 56.60-1; TSGS
	ASME B16.23	Cast Copper Alloy Solder Joint Drainage Fittings—DWV	46 CFR 56.60-1
	FCI-69-1	Pressure Rating Standard for Steam Traps	46 CFR 56.60-1
	UL 174	Household Electric Storage Tank Water Heaters	46 CFR 63.25-3
	UL 343	Pumps for Oil-Burning Appliances	46 CFR 63.15-3
	UL 1102	Nonintegral Marine Fuel Tanks	46 CFR 58.50-15
	UL 1453	Electric Booster and Commercial Storage Tank Water Heaters	46 CFR 63.25-3
	ASME	Boiler and Pressure Vessel Code: Section 1	TSGS
	ASME	Boiler and Pressure Vessel Code: Par. PG-110—Stamping of Safety Valves 1977–1979	

TABLE 1 *Continued*

ASME	Boiler and Pressure Vessel Code: Section IV—Par. HG-402 Discharge Capacities of Safety and Safety Relief Valves, 1980	46 CFR 162.012-1; 162.013-1
ASME	Boiler and Pressure Vessel Code: Section VIII—Par. UG-131 Certification of Capacity for Pressure Relief Valves, 1980	46 CFR 162.018-1
ASTM A 338	Specification for Malleable Iron Flanges, Pipe Fittings, and Valve Parts for Railroad, Marine, and Other Heavy Duty Service at Temperatures Up to 345 Degrees C	
ASTM B 161	Specification for Nickel Seamless Pipe and Tube	46 CFR 56.60-1
ASTM B 165	Specification for Nickel-Copper Alloy (UNS N04400) Seamless Pipe and Tube	46 CFR 56.60-1
ASTM B 167	Specification for Nickel-Chromium-Iron Alloys (UNS N06600, N06601, and N06690) Seamless Pipe and Tube	46 CFR 56.60-1
ASTM B 171/B 171M	Specification for Copper-Alloy Plate and Sheet for Pressure Vessels, Condensers, and Heat Exchangers	46 CFR 56.60-2; TSGS
ASTM B 210/B 210M	Specification for Aluminum and Aluminum-Alloy Drawn Seamless Tubes	46 CFR 56.60-1; TSGS
ASTM B 241/B 241M	Specification for Aluminum and Aluminum-Alloy Seamless Pipe and Seamless Extruded Tube	46 CFR 56.60-1
ASTM B 315	Specification for Seamless Copper Alloy Pipe and Tube	46 CFR 56.60-1
ASTM B 361	Specification for Factory-Made Wrought Aluminum and Aluminum-Alloy Welding Fittings	46 CFR 56.60-1
ASTM D 1785	Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120	46 CFR 56.60-25
ASTM D 2241	Specification for Poly(Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR-Series)	46 CFR 56.60-25
ASTM D 2464	Specification for Threaded Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80	46 CFR 56.60-25
ASTM D 2466	Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40	46 CFR 56.60-25
ASTM D 2467	Specification for Socket-Type Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80	46 CFR 56.60-25
ASTM D 2665	Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings	46 CFR 56.60-25
ASTM F 1370	Specification for Pressure-Reducing Valves for Water Systems, Shipboard	
ASTM F 1431	Specification for Water Trap for Diesel Exhaust	
CGA-S-1.2	Pressure Relief Device Standards Part 2—Cargo and Portable Tanks for Compressed Gases	
CGA-S-1.2.5.2	Flow Test of Safety Relief Valves, 1979	46 CFR 54.15-10; 162.018-1
MSS-SP-6-85	Finished for Contact Faces of Pipe Flanges and Connecting-End Flanges of Valves and Fittings	46 CFR 56.25-10; 56.60-1
MSS-SP-9-87	Spot-Facing for Bronze, Iron, and Steel Flanges	46 CFR 56.60-1
MSS-SP-25	Standard Marking System for Valves, Fittings, Flanges, and Unions, 1978	46 CFR 54.01-25
MSS-SP-42	Class 150 Corrosion Resistant Gate, Globe, Angle, and Check Valves with Flanged and Buttwelded Weld Ends	46 CFR 56.60-1
MSS-SP-44	Steel Pipe Line Flanges	46 CFR 56.60-1
MSS-SP-45	Bypass and Drain Connection	46 CFR 56.20-20; 56.60-1
MSS-SP-51	Class 150 LW Corrosion Resistant Cast Flanges and Flanged Fittings	46 CFR 56.60-1
MSS-SP-55	Visual Inspection	46 CFR 56.60-1
MSS-SP-58	Pipe Hangers and Supports—Materials, Design and Manufacture	46 CFR 56.60-1
MSS-SP-61	Pressure Testing of Steel Valves	46 CFR 56.60-1
MSS-SP-67	Butterfly Valves	46 CFR 56.60-1
MSS-SP-69	Pipe Hangers and Supports—Selection and Application	46 CFR 56.60-1
MSS-SP-72	Ball Valves with Flanged or Buttwelded Welding Ends for General Service	46 CFR 56.60-1
MSS-SP-73	Brazing Joints for Copper and Copper Alloy Pressure Fittings	46 CFR 56.60-1
MSS-SP-83	Class 3000 Steel Pipe Unions Socket-Welding and Threaded	46 CFR 56.60-1
ASTM A 53/A 53M	Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless	46 CFR 56.10-5; 56.60-1; TSGS
ASTM A 106	Specification for Seamless Carbon Steel Pipe for High-Temperature Service	46 CFR 56.60-1; TSGS
ASTM A 126	Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings	46 CFR 56.60-1
ASTM A 134	Specification for Pipe, Steel, Electric-Fusion (Arc)-Welded (Sizes NPS 16 and Over)	46 CFR 56.60-1
ASTM A 135	Specification for Electric-Resistance-Welded Steel Pipe	46 CFR 56.60-1
ASTM A 139	Electric-Fusion (Arc)-Welded Steel Pipe (NPS 4 and Over)	46 CFR 56.60-1
ASTM A 182/A 182M	Specification for Forged or Rolled Alloy-Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High-Temperature Service	46 CFR 56.60-105; TSGS
ASTM A 268/A 268M	Specification for Seamless and Welded Ferritic and Martenistic Stainless Steel Tubing for General Service	46 CFR 56.60-1
ASTM A 312/A 312M	Specification for Seamless and Welded Austenitic Stainless Steel Pipes	46 CFR 56.50-105; 56.60-1; TSGS
ASTM A 320/A 320M	Specification for Alloy-Steel Bolting Materials for Low-Temperature Service	46 CFR 56.50-105
ASTM A 333/A 333M	Specification for Seamless and Welded Steel Pipe for Low-Temperature Service	46 CFR 56.50-106; 56.60-1
ASTM A 334/A 334M	Specification for Seamless and Welded Carbon and Alloy-Steel Tubes for Low-Temperature Service	46 CFR 56.50-106; 56.60-1
ASTM A 335/A 335M	Specification for Seamless Ferritic Alloy-Steel Pipe for High-Temperature Service	46 CFR 56.60-1

TABLE 1 Continued

	ASTM A 350/A 350M	Specification for Carbon and Low Alloy-Steel Forgings Requiring Notch Toughness Testing for Piping Components	46 CFR 56.50-105
	ASTM A 358/A 358M	Specification for Electric-Fusion-Welded Austenitic Chromium-Nickel Alloy Steel Pipe for High-Temperature Service	46 CFR 56.60-1
	ASTM A 369/A 369M	Specification for Carbon and Ferritic Alloy Steel Forged and Bored Pipe for High-Temperature Service	46 CFR 56.60-1
	ASTM A 376/A 376M	Specification for Seamless Austenitic Steel Pipe for High-Temperature Central-Station Service	46 CFR 56.07-10; 56.60-1; 56.60-2
	ASTM A 395/A 395M	Specification for Ferritic Ductile Iron Pressure-Retaining Castings for Use at Elevated Temperatures	46 CFR 56.60-1; TSGS
	ASTM A 403/A 403M	Specification for Wrought Austenitic Stainless Steel Piping Fittings	46 CFR 56.60-1; TSGS
	ASTM A 420/A 420M	Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Low-Temperature Service	46 CFR 56.50-105; 56.60-1
	ASTM A 430/A 430M	Specification for Forged and Bored Pipe for High-Temperature Service	46 CFR 56.60-1
	ASTM A 522/A 522M	Specification for Forged or Rolled 8 and 9 % Nickel Alloy Steel Flanges, Fittings, Valves, and Parts for Low-Temperature Service	46 CFR 56.50-15
	ASTM A 536	Specification for Ductile Iron Castings	46 CFR 56.60-1
	ASTM B 42	Specification for Seamless Copper Pipe, Standard Sizes	46 CFR 56.60-1
	ASTM B 43	Specification for Seamless Red Brass Pipe, Standard Sizes	46 CFR 56.60-1
	ASTM B 68	Specification for Seamless Copper Tube, Bright Annealed	46 CFR 56.60-1
	ASTM B 68M	Specification for Seamless Copper Tube, Bright Annealed (Metric)	
	ASTM B 75	Specification for Seamless Copper Tube	46 CFR 56.60-1
	ASTM B 75M	Specification for Seamless Copper Tube (Metric)	
	ASTM B 88	Specification for Seamless Copper Water Tube	46 CFR 56.60-1; TSGS
	ASTM B 88M	Specification for Seamless Copper Water Tube (Metric)	
	ANSI/ASME B16.5	Steel Pipe Flanges and Flanged Fittings	33 CFR 154.106; 154.500; 154.808; 154.810; Part 155, Appendix A 46 CFR 39.10-5; 39.20-1; 56.20; 56.30; 56.60; 151.50-35; 153.94; 153.940; 750.480
	ANSI/ASME B16.24	Cast Copper Alloy Pipe Flanges and Flanged Fittings Class 150, 300, 400, 600, 900, 1500, and 2500	33 CFR 154.106; 154.500; 154.808 46 CFR 56.60-1; 150.480; 153.940
	ANSI/ASME B31.3-87	Chemical Plant and Petroleum Refinery Piping	33 CFR 154.106; 154.510; 154.808
	ANSI/ASME B31.4-74	Liquid Transportation Systems for Hydrocarbons, Liquid Petroleum Gas, Anhydrous Ammonia, and Alcohols	33 CFR 149.205
	API/STD Standard 2000	Venting Atmospheric and Low-Pressure Storage Tanks (Nonrefrigerated and Refrigerated)	33 CFR 154.106; 154.814 46 CFR 39.10-5
	NFPA 10	Portable Fire Extinguishers	33 CFR 127.003
	NFPA 11A	High-Expansion Foam Systems	33 CFR 149.481
	NFPA 12	Carbon Dioxide Extinguishing Systems	33 CFR 149.481
	NFPA 12A	Halon 1301 Fire Extinguishing Systems	33 CFR 149.481
	NFPA 13	Installation of Sprinkler Systems	33 CFR 149.481
	NFPA 30	Flammable and Combustible Liquids Code	33 CFR 127.003
	NFPA 59A	Production, Storage, and Handling of Liquefied Natural Gas (LNG)	33 CFR 127.003
	NFPA 407	Aircraft Fueling Services	33 CFR 149.213
	ASTM F1273	Tank Vent Flame Arresters	46 CFR 32.20-10
	ANSI/ASME B16.25	Buttwelding Ends	46 CFR 56.30-5; 56.60-1; 56.70-10
	ANSI/ASME B16.28	Wrought Steel Buttwelding Short Radius Elbows and Returns	46 CFR 56.60-1
	ANSI/ASME B16.29	Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings—DWV	46 CFR 56.60-1
	ANSI/ASME B16.34	Valves-Flanged, Threaded, and Welding End	46 CFR 56.20-1; 56.60-1; TSGS
	ANSI/ASME B16.42	Ductile Iron Pipe Flanges and Flanged Fittings, Classes 150 and 300	46 CFR 56.60-1
	ANSI/ASME B18.2.1	Square and Hex Bolts and Screws, Inch Series	46 CFR 56.25-20; 56.60-1; TSGS
	ANSI/ASME B18.2.2	Square and Hex Nuts (Inch Series)	46 CFR 56.25-20; 56.60-1; TSGS
	ANSI/ASME B31.1.1	Power Piping	46 CFR 197.204; TSGS
	ANSI/ASME B31.3	Chemical Plant and Petroleum Refinery Piping	46 CFR 58.60
	ANSI/ASME B31.5	Refrigeration Piping	46 CFR 58.20
	ANSI/ASME B36.10M	Welded and Seamless Wrought Steel Pipe	46 CFR 56.07-5; 56.30-20; 56.60-1
	ANSI/ASME B36.19M	Stainless Steel Pipe	46 CFR 56.07-5; 56.60-1
	ANSI/NFPA B93.5	Practice for the Use of Fire Resistant Fluids in Industrial Hydraulic Fluid Power Systems	46 CFR 58.30-10
	ANSI/AGA Z21.22	Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems	46 CFR 63.15-30
102520	ASTM F 708	Practice for Design and Installation of Rigid Pipe Hangers	TSGS
102520	ASTM F 1076	Practice for Expanded Welded and Silver Brazed Socket Joints for Pipe and Tube	
102520	ASTM F 704	Practice for Selecting Bolting Lengths for Piping System Flanged Joints	TSGS
	ASTM F 1155	Practice for Selection and Application of Piping System Materials	
811515	ASTM F 683	Practice for Selection and Application of Thermal Insulation for Piping and Machinery	TSGS
102510	ASTM F 1030	Practice for Selection of Valve Operators	TSGS
102520	ASTM F 681	Practice for Use of Branch Connections	TSGS
102520	ASTM F 1298	Specification for Flexible, Expansion-Type Ball Joints for Marine Applications	
102515	ASTM F 1199	Specification for Cast (All Temperatures and Pressures) and Welded Pipe Line Strainers (150 psig and 150°F maximum)	46 CFR 56.60-1

TABLE 1 *Continued*

102520	ASTM F 1120	Specification for Circular Metallic Bellows Type Expansion Joints for Piping Applications	46 CFR 56.60-1
102515	ASTM F 1333 ASTM F 1006	Specification for Construction of Fire and Foam Station Cabinets Specification for Entrainment Separators for Use in Marine Piping Applications	46 CFR 56.60-1
102510	ASTM F 885	Specification for Envelope Dimensions for Bronze Globe Valves NPS 1/4 to 2	
102510	ASTM F 1098	Specification for Envelope Dimensions for Butterfly Valves NPS 2 to 24	
102505	ASTM F 1173	Specification for Thermosetting Resin Fiberglass Pipe and Fittings to be Used for Marine Applications	46 CFR 56.60; TSGS
102515	ASTM F 1200	Specification for Fabricated (Welded) Pipe Line Strainers (Above 150 psig and 150°F)	46 CFR 56.60-1
102510	ASTM F 1245	Specification for Faucets, Single and Double, Compression and Self-Closing Type, Shipboard	TSGS
	ASTM F 1201	Specification for Fluid Conditioner Fittings in Piping Applications Above 0°F	46 CFR 56.60-1
102020	ASTM F 1172	Specification for Fuel Oil Meters of the Volumetric Positive Displacement Type	46 CFR 56.60-1
	ASTM F 721	Specification for Gage Piping Assemblies	
102520	ASTM F 1121	Specification for International Shore Connections for Marine Fire Applications	46 CFR 34.10; 56.60-1; 76.10; 95.10; 108.427; 193.10
102520	ASTM F 1311	Specification for Large-Diameter Fabricated Carbon Steel Flanges	
102510	ASTM F 1020	Practice for Line Blind Valves for Marine Applications	46 CFR 56.60-1; TSGS
102045	ASTM F 707/F 707M	Specification for Modular Gage Boards	TSGS
102520	ASTM F 1123	Specification for Non-Metallic Expansion Joints	46 CFR 56.60-1
102520	ASTM F 1007	Specification for Pipe-line Expansion Joints of the Packed Slip Type for Marine Application	46 CFR 56.60-1; TSGS
102520	ASTM F 1122	Specification for Quick Disconnect Couplings	46 CFR 150.480; 153.940
102510	ASTM F 1271	Specification for Spill Valves for Use in Marine Tank Liquid Overpressure Protections Applications	46 CFR 39.105; 30.20-9; 153.365
102510	ASTM F 1139	Specification for Steam Traps and Drains	46 CFR 56.60-1
102590	ASTM F 992	Specification for Valve Label Plates	TSGS
102510	ASTM F 993	Specification for Valve Locking Devices	TSGS
102505	ASTM F 722	Specification for Welded Joints for Shipboard Piping Systems	
102520	ASTM F 682	Specification for Wrought Carbon Steel Sleeve-Type Pipe Couplings	46 CFR 56.60-1; TSGS
829000	ASTM F 1330 ASTM F 1476	Guide for Metallic Abrasive Blasting to Descale the Interior of Pipe Specification for Performance of Gasketed Mechanical Couplings for Use in Piping Applications	46 CFR 56.30–35
	ASTM F 1548	Specification for the Performance of Fitting for Use with Gasketed Mechanical Couplings Used in Piping Applications	46 CFR 56.30–35
051525	ISO 3935	Shipbuilding—Inland Navigation—Fire-fighting Water System—Pressures	
51525	ISO/TR 5987	Inland Navigation—Water Fire-Fighting System—Couplings of Fire Hoses—General Technical Requirements	
052090	ISO 5620 PT-1	Shipbuilding and Marine Structures—Filling Connection for Drinking Water Tanks—Part 1: General Requirements	
052090	ISO 5620 PT-2	Shipbuilding and Marine Structures—Filling Connection for Drinking Water Tanks—Part 2: Components	
052090	ISO 5625	Welded Bulkhead Pieces with Flanges for Steel Pipework—PN 6, PN 10 and PN 16	
101015	ISO 3948	Inland Vessels—Compressed-Air Systems—Pressure Ranges	
102520	ISO 3926	Inland Navigation—Couplings for Oil and Fuel Reception—Mating Dimensions	
103505	ISO 7608	Inland Navigation—Couplings for Disposal of Oily Mixture and Sewage Water	
	ISO 8099	Small Craft—Toilet Retention and Recirculating Systems for the Treatment of Toilet Waste	
	ISO 10420	Petroleum and Natural Gas Industries Flexible Pipe Systems for Subsea and Marine Riser Applications	

Group 8 Computer Applications

ISO Code No.	Designation	Title	Approved For Incorporation In
001000	ISO 5572	Numbering of Equipment and Structural Elements in Ships	
001000	ISO 6582	Numerical Control of Machines—ESSI Format	
001000	ISO 7460	Ship-lines—Identification of Geometric Data	
001000	ISO 7461	Numerical Representation of Elements of the Hull Geometry	
001000	ISO 7462	Principal Ship Dimensions—Terminology and Definitions for Computer Applications	
001000	ISO 7463	Symbols for Computer Applications	
001000	ISO 7838	Ship-lines—Formats and Data Organization	
001000	ISO 8193	Shell Plating Information	
001000	ISO 8277	Pipework—Information Transfer	
001000	ISO 9203 PT-1	Topology of Ship Hull Structure Elements—Part 1: Location of Elements	
001000	ISO 9203 PT-2	Topology of Ship Hull Structure Elements—Part 2: Description of Elements	
001000	ISO 9203 PT-3	Topology of Ship Hull Structure Elements—Part 3: Relations of Elements	

TABLE 1 *Continued*

ASTM F 1716		Guide for Transition and Performance of Marine Software Systems Maintenance	
ASTM F 1756		Guide for Implementation of a Fleet Management System Network	
Group 9 Heating, Ventilation, and Air Conditioning			
ISO Code No.	Designation	Title	Approved For Incorporation In
052520	ISO 3372	Inland Navigation Vessels—Mushroom Type Ventilator Heads	
052520	ISO 7547	Air-Conditioning and Ventilation of Accommodation Spaces on Board Ships—Design Conditions and Basis of Calculations	
052520	ISO 8861	Engine Room Ventilation in Diesel-Engined Ships—Design Requirements and Basis of Calculations	
052520	ISO 8862	Air-Conditioning and Ventilation of Machinery Control Rooms on Board Ships—Design Conditions and Basis of Calculations	
052520	ISO 8863	Ship's Wheelhouse Windows—Heating by Hot Air of Glass Panes	
052520	ISO 8864	Air-Conditioning and Ventilation of Wheelhouse on Board Ships—Design Conditions and Basis of Calculations	
052520	ISO 9099	Air-Conditioning and Ventilation of Dry Provision Rooms on Board Ships—Design Conditions and Basis of Calculations	
052520	ISO 9785	Ventilation of Cargo Spaces Where Internal Combustion Engine Vehicles May be Driven—Calculation of Theoretical Total Airflow Required	
052520	ISO 9943	Ventilation and Air-treatment of Galleys and Pantries with Cooking Appliances	
700520	ISO 8304	Shipborne Barges, Series 3—Ventilation System—Principal Mating Dimensions	
	ISO 11105	Small Carft—Ventilation of Petrol Engine and/or Petrol Tank Compartments	
	ASTM F 1716	Guide for Transition and Performance of Marine Software Systems Maintenance	
	AMCA-210	Laboratory Methods of Testing Fans for Ratings	33 CFR 183.5; 183.610; TSGS
	ANSI/ASHRAE-34	Number Designation and Safety Classification of	46 CFR 147.7
	ABYC-H-24	Fuel Systems—Gasoline	46 CFR 169.115
	ABYC-H-2.5	Ventilation of Boats Gasoline	46 CFR 169.115; 169.629

TABLE 2 Countries Delegating Statutory Responsibilities to the Following Classification Societies^A

Flag Administration	Load Line	Tonnage	SOLAS	MARPOL
Algeria	ABS	ABS	ABS	
	BV	BV		BV
	DNV		DNV	
	GL		GL	
	LR	LR	LR	LR
	NK	NK	NK	NK
Antigua & Barbuda	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
	DNV	DNV	DNV	DNV
	GL	GL	GL	GL
	LR	LR	LR	LR
	NK	NK	NK	NK
Argentina			LR	
	NK		NK	
Aruba			ABS	ABS
	LR		LR	LR
Australia	ABS	ABS	ABS	ABS
	BV			BV
	DNV		DNV	DNV
	GL		GL	GL
	LR		LR	LR
	NK		NK	NK
Austria	ABS	ABS		
	BV	BV	BV	
	DNV		DNV	DNV
	GL		GL	GL
Bahamas	LR	LR	LR	
	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
	DNV	DNV	DNV	DNV
	GL	GL	GL	GL
	LR	LR	LR	LR
Bahrain	NK	NK	NK	NK
	ABS	ABS	ABS	
	BV	BV	BV	BV
	DNV	DNV	DNV	
	GL	GL	GL	
	LR	LR	LR	LR

Flag Administration	Load Line	Tonnage	SOLAS	MARPOL
Bangladesh	NK	NK	NK	NK
	ABS	ABS	ABS	
	BV	BV	BV	BV
	DNV	DNV	DNV	
	GL	GL	GL	
Barbados	LR	LR	LR	LR
	NK	NK	NK	NK
	ABS	ABS	ABS	
	BV	BV	BV	BV
	DNV	DNV	DNV	
Belgium	GL	GL	GL	
	LR	LR	LR	LR
	NK	NK	NK	NK
	ABS	ABS	ABS	
	BV	BV	BV	
Belize	DNV	DNV	DNV	
	GL	GL	GL	
	LR	LR	LR	LR
	NK	NK	NK	NK
	ABS	ABS	ABS	
Bermuda	BV	BV	BV	BV
	DNV	DNV	DNV	
	GL	GL	GL	
	LR	LR	LR	LR
	NK	NK	NK	NK
Brazil	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
	DNV	DNV	DNV	DNV
	GL	GL	GL	GL
	LR	LR	LR	LR
Brunei	NR	NR	NR	NR
	NK	NK	NK	NK
	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
	DNV	DNV	DNV	DNV
Cameroon	GL	GL	GL	GL
	LR	LR	LR	LR
	NK	NK	NK	NK
	ABS	ABS	ABS	
	BV	BV	BV	BV
Canada	DNV	DNV	DNV	DNV
	GL	GL	GL	GL
	ABS	ABS	ABS	
Cayman Islands	BV	BV	BV	BV
	DNV	DNV	DNV	DNV
	GL	GL	GL	GL
	LR	LR	LR	LR
	NK	NK	NK	NK
Chile	ABS	ABS	ABS	
	BV	BV	BV	
	DNV	DNV	DNV	
Columbia	GL	GL	GL	
	LR	LR	LR	LR
	NK	NK	NK	NK
	ABS	ABS	ABS	
	BV	BV	BV	BV
Congo	DNV	DNV	DNV	DNV
	GL	GL	GL	GL
	LR	LR	LR	LR
Cyprus	NK	NK	NK	NK
	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
	DNV	DNV	DNV	DNV
	GL	GL	GL	GL

Flag Administration	Load Line	Tonnage	SOLAS	MARPOL
Czech Republic	NK	NK	NK	NK
	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
	DNV	DNV	DNV	DNV
Denmark	GL	GL	GL	GL
	LR	LR	LR	LR
	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
Dominican Republic	DNV	DNV	DNV	DNV
	GL	GL	GL	GL
	LR	LR	LR	LR
	NK	NK	NK	NK
Ecuador	NK	NK	NK	NK
	ABS	ABS	ABS	ABS
	DNV	DNV	DNV	DNV
	GL	GL	GL	GL
Egypt	LR	LR	LR	LR
	NK	NK	NK	NK
	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
Estonia	DNV	DNV	DNV	DNV
	GL	GL	GL	GL
	LR	LR	LR	LR
	NK	NK	NK	NK
Ethiopia	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
	DNV	DNV	DNV	DNV
	LR	LR	LR	LR
Fiji	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
	DNV	DNV	DNV	DNV
	LR	LR	LR	LR
Finland	NK	NK	NK	NK
	ABS	ABS	ABS	ABS
	DNV	DNV	DNV	DNV
	GL	GL	GL	GL
Gabon	LR	LR	LR	LR
	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
	DNV	DNV	DNV	DNV
Gambia	GL	GL	GL	GL
	LR	LR	LR	LR
	DNV	DNV	DNV	DNV
	NK	NK	NK	NK
Ghana	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
	DNV	DNV	DNV	DNV
	GL	GL	GL	GL
Gibraltar	LR	LR	LR	LR
	NK	NK	NK	NK
	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
Greece	DNV	DNV	DNV	DNV
	GL	GL	GL	GL
	LR	LR	LR	LR
	NK	NK	NK	NK
Haiti	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
	DNV	DNV	DNV	DNV
	LR	LR	LR	LR
Honduras	GL	GL	GL	GL
	ABS	ABS	ABS	ABS
	DNV	DNV	DNV	DNV
	LR	LR	LR	LR

Flag Administration	Load Line	Tonnage	SOLAS	MARPOL
Hong Kong	NK	NK	NK	
	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
	DNV	DNV	DNV	DNV
	GL	GL	GL	GL
Hungary	LR	LR	LR	LR
	NK	NK	NK	NK
	DNV		DNV	DNV
	GL	GL	GL	GL
Iceland	LR		LR	LR
	ABS		ABS	
	BV		BV	BV
	DNV		DNV	
India	GL		GL	GL
	LR		LR	
	ABS	ABS	ABS	ABS
	BV		BV	BV
	DNV		DNV	DNV
Indonesia	GL		GL	GL
	LR		LR	LR
	NK		NK	NK
	ABS	ABS		
	BV			
Iran	DNV		DNV	
	LR		LR	LR
	GL		GL	
	NK		NK	NK
	ABS	ABS		
Ireland	BV		BV	BV
	DNV		DNV	
	GL		GL	
	LR	LR	LR	
	NK		NK	NK
Isle of Man	ABS	ABS	ABS	ABS
	BV	BV	BV	
	DNV	DNV	DNV	DNV
	LR	LR	LR	LR
	NK	NK	NK	NK
Israel	ABS	ABS	ABS	ABS
	BV	BV	BV	
	DNV		DNV	
	GL	GL	GL	GL
	LR	LR	LR	
Ivory Coast	NK	NK	NK	NK
	ABS	ABS		
	DNV	DNV	DNV	DNV
	GL	GL	GL	
	LR	LR	LR	
Jamaica	ABS	ABS		
	BV		BV	
	DNV		DNV	
	LR		LR	
Japan	NK		NK	
				NK
Jordan		ABS		
	BV	BV	BV	
	DNV			
Korea	LR	GL	GL	
	NK	LR	LR	
		NK	NK	
		ABS		
Kuwait	DNV			
	ABS	ABS	ABS	
	BV	BV	BV	BV
	DNV	DNV	DNV	
	GL	GL	GL	
Latvia	LR	LR	LR	LR
	NK	NK	NK	NK
	BV	BV	BV	BV

Flag Administration	Load Line	Tonnage	SOLAS	MARPOL
Lebanon	DNV	DNV	DNV	DNV
	LR	LR	LR	LR
	BV	ABS	BV	BV
	DNV	BV		
Liberia	GL	DNV	GL	
	LR	LR	LR	
	NK	NK	NK	
	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
	DNV	DNV	DNV	DNV
Libya	LR	LR	LR	LR
	GL	GL	GL	GL
	NK	NK	NK	NK
	ABS			
Luxembourg	BV		BV	
	GL		GL	
	LR	LR	LR	LR
	NK	NK	NK	NK
Maderia	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
	DNV	DNV	DNV	DNV
	NK	NK	NK	NK
Malaysia	ABS	ABS	ABS	ABS
	BV		BV	BV
	DNV	DNV	DNV	
	GL		GL	
Maldives	LR	LR	LR	LR
	NK	NK	NK	NK
	ABS	ABS	ABS	
	BV	BV	BV	BV
Malta	DNV	DNV	DNV	
	GL		GL	
	LR	LR	LR	LR
	NK	NK	NK	NK
Marshall Islands	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
	DNV	DNV	DNV	DNV
	GL	GL	GL	GL
Mauritius	LR	LR	LR	LR
	NK	NK	NK	NK
	ABS	ABS	ABS	
	BV	BV	BV	BV
Mexico	DNV	DNV	DNV	
	GL	GL	GL	
	LR	LR	LR	LR
	NK	NK	NK	NK
Morocco	NK	NK	NK	NK
	ABS			
	BV	BV		BV
	DNV			
Myanmar (Burma)	GL		GL	
	LR	LR	LR	LR
	NK	NK	NK	NK
	ABS	ABS	ABS	
Netherlands and Territories	DNV	DNV	DNV	DNV
	GL	GL	GL	GL
	LR	LR	LR	LR
	NK	NK	NK	NK

Flag Administration	Load Line	Tonnage	SOLAS	MARPOL
New Zealand	LR		LR	LR
	NK		NK	NK
	ABS	ABS	ABS	
	BV	BV	BV	
	DNV	DNV	DNV	
Nigeria	GL		GL	
	LR	LR	LR	LR
	ABS		ABS	
	BV		BV	BV
Norway	GL	GL	GL	
	LR	LR	LR	LR
	ABS		ABS	ABS
	BV		BV	BV
Oman	DNV	DNV	DNV	DNV
	GL		GL	
	LR	LR	LR	LR
	ABS	ABS	ABS	
Pakistan	BV	BV	BV	
	DNV	DNV	DNV	
	GL		GL	
	LR	LR	LR	LR
Panama	NK	NK	NK	NK
	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
	DNV	DNV	DNV	DNV
Papua, New Guinea	GL		GL	GL
	LR	LR	LR	LR
	NK	NK	NK	NK
	ABS	ABS	ABS	
Philippines	BV	BV	BV	BV
	DNV	DNV	DNV	
	GL		GL	
	LR	LR	LR	LR
Portugal	NK	NK	NK	NK
	ABS			
	DNV			
	GL		GL	GL
Qatar	LR		LR	
	NK		NK	NK
	ABS	ABS	ABS	
	BV	BV	BV	BV
St Vincent & The Grenadines	DNV	DNV	DNV	
	GL		GL	
	LR	LR	LR	LR
	NK	NK	NK	NK
Saudi Arabia	ABS	ABS	ABS	
	BV	BV	BV	BV
	DNV	DNV	DNV	
	GL	GL	GL	
Seychelles	LR	LR	LR	LR
	NK	NK	NK	NK
	BV	BV	BV	BV
	DNV	DNV	DNV	
	GL	GL	GL	
	LR		LR	
	NK	NK	NK	NK

Flag Administration	Load Line	Tonnage	SOLAS	MARPOL
Sri Lanka	ABS	ABS	ABS	
	BV	BV	BV	BV
	DNV		DNV	
	GL	GL	GL	
	LR	LR	LR	LR
Singapore	NK	NK	NK	NK
	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
	DNV	DNV	DNV	DNV
	GL	GL	GL	GL
Somalia	LR	LR	LR	LR
	NK	NK	NK	NK
	ABS	ABS		
	BV	BV	BV	
	DNV	DNV		
South Africa	GL	GL		
	LR	LR		
	NK	NK	NK	
	ABS		ABS	ABS
	BV		BV	
Spain	GL			GL
	LR		LR	
	NK		NK	NK
	ABS		ABS	ABS
	LR		LR	LR
Sweden	ABS		ABS	ABS
	BV		BV	BV
	DNV		DNV	DNV
	GL		GL	GL
	LR		LR	LR
Switzerland	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
	DNV	DNV	DNV	DNV
	GL	GL	GL	GL
	LR	LR	LR	LR
Thailand	NK	NK	NK	NK
	ABS	ABS	ABS	
	BV	BV	BV	BV
	DNV	DNV	DNV	
	LR	LR	LR	LR
Togo	NK	NK	NK	NK
	BV	BV	BV	
	GL	GL	GL	GL
Tonga	LR	LR		LR
	BV	BV	BV	
	DNV	DNV	DNV	
	GL	GL	GL	
	LR	LR	LR	
Trinidad & Tobago	NK	NK	NK	NK
	ABS	ABS	ABS	ABS
	BV		BV	BV
Trust Territory of Pacific islands	LR	LR	LR	
	ABS		ABS	
Tunisia	ABS			
	BV	BV		BV
	DNV	DNV		DNV
	GL	GL	GL	GL
	LR			
United Arab Emirates	NK		NK	NK
	ABS	ABS	ABS	
	BV	BV	BV	BV
	GL	GL	GL	
	LR	LR	LR	LR
United Kingdom	NK		NK	
	ABS	ABS	ABS	ABS
	DNV	DNV	DNV	DNV
U.S.A.	LR	LR	LR	
	ABS	ABS	ABS	
Uruguay	BV			
	DNV			
	LR	LR		

Flag Administration	Load Line	Tonnage	SOLAS	MARPOL
Vanuatu	NK		NK	
	ABS	ABS	ABS	ABS
	BV	BV	BV	BV
	DNV	DNV	DNV	DNV
	GL	GL	GL	GL
Venezuela	LR	LR	LR	LR
	NK	NK	NK	NK
	ABS	ABS		
	BV			
Vietnam	LR		LR	LR
	NK	NK	NK	NK
	GL	GL	GL	GL
Western Somoa				
Zaire	GL	ABS	GL	
Zambia	LR	LR	LR	
		ABS		
	LR		LR	

[^]The following abbreviations in a flag administration's box indicates that the Classification Society has been recognized and authorized to carry out all or some surveys and issue some international certificates under the above conventions. Please contact the Classification Society of your choice for more detailed information. Special authorization cases are not included. Classification Societies are not included if the country is not a signatory to the specific convention.

ABS—American Bureau of Shipping

BV—Bureau Veritas

DNV—Det Norske Veritas

GL—Germanischer Lloyd

LR—Lloyd's Register

NK—Nippon Kaiji Kyokai

SOLAS—Safety of Life at Sea

MARPOL—International Convention for the Prevention of Pollution from Ships

ASTM International takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM International Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, at the address shown below.

This standard is copyrighted by ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959, United States. Individual reprints (single or multiple copies) of this standard may be obtained by contacting ASTM at the above address or at 610-832-9585 (phone), 610-832-9555 (fax), or service@astm.org (e-mail); or through the ASTM website (www.astm.org).