

Engineering Examination Reference Library

This lists the publications currently in use by the Engineering Exam Branch (NMC-22) at the National Maritime Center. These are the primary references being used to develop questions for engineering and rating endorsements. While these publications are currently in use, any authoritative, recognized publication, similar to the texts listed, can substitute as a study resource.

United States Coast Guard Publications

A Manual for Safe Handling of Flammable Liquids – CG 174
Chemical Data Guide for Bulk Shipment by Water - M16616.6
Firefighting Manual for Tank Vessels - CG 329

United States Navy Publications

Electricity - NAVPERS 10086-A
Basic Electronics Vol 1 - NAVPERS 10087-C
Basic Electronics Vol 2 - NAVEDTRA 10087-C1
Basic Machines - NAVPERS 10624-A
Blue Print Reading and Sketching - NAVEDTRA - 10077-F
Boilermaker 1 & C - NAVPERS 10537
Boiler Technician 1 & C - NAVEDTRA 10536-E
Boiler Technician 3 & 2 - NAVEDTRA 10535-H
Diesel Engines - NAVEDT1IA 10625
Diesel Engines Maintenance - NAVEDTRA 16179
Electrician's Mate 1 & C - NAVEDTRA 10547-E
Electrician's Mate 3 & 2 - NAVEDTRA 10546-E
Electronic Technician 3 & 2 Vol 1
Electronic Technician 3 & 2 Vol 2 - NAVEDTRA 10195-A1
Engineman 1 & C - NAVEDTEA 10543-E
Engineman 3 & 2 - NAVEDTRA 10541-C1
Fire and Firefighting - NAVEDTRA 465-02-00-83
Fireman - NAVEDTRA 10 520-G
Fluid Power - NAVPERS 16193-B
Fundamentals of Diesel Engines - NAVPERS 16178-A
Fundamentals of Petroleum - NAVEDTRA 10883-B
Halon 1301 - NAVEDTRA 465-15-00-83
Machinist's Mate 1 & C - NAVEDTRA 10525-D
Machinist's Mate 3 & 2 - NAVPERS 10524-C
Machinery Repairman 1 & C - NAVPERS 10531-C
Machinery Repairman 3 & 2 - NAVEDTRA 10530-E
Principle of Naval Engineering - NAVPERS 10788-B
Refrigeration & Air Conditioning - NAVPERS 16163-A

Shipboard Electrical Systems - NAVEDTRA 10864-B
Shipboard Electronic Equipment - NAVEDTRA 10794-B
Tools and Their Uses - NAVEDTRA 10085-B1

Miscellaneous Government Publications

Marine Fire Prevention, Firefighting & Fire Safety - Maritime Administration
The Ships Medicine Chest & Medical Aid at Sea - Department of Health, Education & Welfare
33 CFR Parts 1 - 199 : Pollution
46 CFR Parts 1 - 199 : Shipping

Auxiliaries

Applied Marine Hydraulics - Stutman
Basic Applied Fluid Power – Oster
Centrifugal Pumps, Selection, Operation & Maintenance - Karassik & Carter
Compressed Air and Gas Data - Ingersoll-Rand
Deck Machinery - Smith
Handbook of Hydraulics - King, Brater
Hydraulics & Pneumatics - Andrew Parr
Industrial Hydraulics - Pippenger and Hicks
Industrial Hydraulics Manual - Sperry, Vickers
Industrial Mechanics & Maintenance - Larry Chastian
Maintenance Engineering Handbook - Keith Mobley
Marine Auxiliary Machinery - Souchette, Smith
Piping System Fundamentals - Ray T. Hardee
Pneumatics and Hydraulics - Stewart
Pump Handbook - Karassik, Krutzch, Fraser, Messina
Pump Operation and Maintenance - Hicks
Pump Questions and Answers - Carter, Karassik & Wright
Sealing & Sealing Handbook - Robert K. Flitney
Simplified Hydraulics – McNickle
Standard Industrial Hydraulics - Elonka, Johnson

Electrical

Analog Electronics: Circuits, Systems, & Signal Processing - D.I. Crecraft
Basic Electricity - Marcus
Basic Electricity - Van Valkenburgh, Nooger and Neville.
Basic Electronics - Grob
Control of Electrical Devices - Werner Leonhard
Digital Computer Principles - Burroughs Corp.
Digital Electronics: Principles, Devices & Applications - Anil K. Maini

Direct and Alternating Current Machinery - Rosenblatt & Friedman
Electrical Circuits - Siskind
Electric Circuits and Machines - Lister
Electrical Engineering Vol. II – Dawes
Electrical Installations in Hazardous Locations - Peter Schram
Electrical Machines - Siskind
Electrical Motor Controls & Circuits - Fuchs, Carstang
Electrical Safety Handbook – John Cadick
Electric Motor Control Fundamentals – McIntyre
Electricity One-Seven – Mileaf
Electronic Navigation Systems – Laurie Tetley
Elements of Electricity - Timbie
Elements of Electronics - Hickey, Villines
Grounding, Bonding, Shielding & Surge Protection - G. Vijayaraghavan
Industrial Electricity & Motor Controls - Rex Miller
Industrial Motor Control - Stephen L. Herman
Recommended Practice for Electric Installations - IEEE Standard 45-1971
Instruments and Measurements for Electronics – Herrick
Marine Electrical Practice - Watson
Modern Electricity and Electronics - Smith
Practical Electricity - McPartland, Novak
Programmable Logic Controllers - W. Bolton
Protection of Industrial Power Systems - T. Davies
Preventive Maintenance of Electrical Equipment - Hubert
Standard Electronics Q & A - Elonka, Bernstein
Standard Handbook for Electrical Engineers - Fink, Carroll
Storage Batteries - Vinal
Transistors – Kiver

Hull and Welding

Construction of Marine & Offshore Structures - Ben C. Gerwick Jr.
Fabrication & Welding Engineering – Roger Timings
Introduction to Naval Architecture – Eric Tupper
Introduction to Physical Metallurgy - Avner
Introduction to Steel Shipbuilding - Baker
Modern Welding - Althouse, Turnquist, Bracciano
Naval Architecture for Marine Engineers - Muckle
Oxyacetylene Welding - Potter
Procedure Handbook of Arc Welding - Lincoln Electric Company

Rules for Building and Classing Steel Vessels – American Bureau of Shipping
Ship Construction - David J. Eyres
Welding Engineering - Rossi
Welding Metallurgy - Henry, Claussen
Metals and How to Weld Them - Jefferson and Woods

Instrumentation and Controls

ABC's of Pneumatic Circuits - Stewart, Storer
Automatic Control Engineering - Raven
Basic Instrumentation - O'Higgins
Control Engineers Handbook - Truxal
Encyclopedia of Instrumentation and Control - Considine
Feedback Control System - Brims, Saunders
Feedback Control System Analysis and Synthesis - D'Azzo, Houpis
Handbook of Applied Instrumentation - Considine & Ross
Handbook of Automation Computation and Control, Vol. 1, 2, & 3 - Grabbe, Ramo, Wooldridge
Handbook of Instrumentation and Controls – Kallen
Industrial Control Handbook - E.A. Parr
Industrial Instrument Servicing Handbook - Carroll
Industrial Instrumentation Fundamentals - Fribance
Instrumentation - Kirk, Rimboi
Instrumentation for Process Measurement and Control - Anderson
Introduction to Control System Technology - Robert Bateson
Measurement & Instrumentation Principles - Allan S. Morris
Modern Control Technology - Christopher Kilian
Process Automation Handbook - Jonathan Love
Standard Instrumentation Q & A Vol. I & II - Elonka, Parsons

Internal Combustion Engines

Diesel and High Compression Gas Engines - Kates & Luck
Diesel Engine Engineering - Andrei Makartchouk
Diesel Engines - Anderson
Diesel Engines - Block
Diesel Engine Manual - Black
Diesel Engine Operation & Maintenance - Maleev
Diesel Engine Reference Book - Lilly
Diesel Engineering Handbook - Stinson
Diesel: Fundamentals, Service and Repair - Toboldt
Diesel Generator Auxiliary Systems & Instruments - M.R. Abdulqader

Diesel Motor Ships Engines & Machinery Text & Drawings - Knak
Internal-Combustion Engines - U.S. Naval Institute
Internal Combustion Engines & Air Pollution - Obert
Marine Diesel Engines - Pounder
Marine Diesel Engines - Akber Ayub
Marine Diesel Standard Practices - DEMA
Medium & High Speed Diesel Engines for Marine Use - Henshall
Questions and Answers on the Marine Diesel Engine - Lamb
Pounder's Marine Diesel Engines & Gas Turbines – Doug Woodyard
Prime Movers - Staniar
Standard Practices for Stationary Diesel and Gas Engines – DEMA

Refrigeration

2009 ASHRAE Handbook -ASHRAE
Automatic Control of Heating and Air Conditioning – Haines
Commercial and Industrial Refrigeration – Nelson
Food Transportation - Marek Kierstan
Handbook of Air Conditioning Systems Design - Carrier
Marine Air Conditioning and Refrigeration – Shulters
Modern Air Conditioning Practice - Harris, Conde
Modern Refrigeration & Air Conditioning - Althouse, Turnquist, Bracciano
Modern Refrigeration Practice - King
Principles of Refrigeration - Dossat
Principles of Refrigeration - Marsh, Olivo
Refrigeration, Air Conditioning and Cold Storage - Gunther
Refrigeration and Air Conditioning - Jordan, Priester
Refrigeration Servicing – Goliber
Standard Refrigeration and Air Conditioning Q & A - Elonka, Minich
Understanding Electricity & Wiring Diagrams for HVAC/R - Chantenever

Safety

Firefighting Strategy and Leadership - Walsh
Marine Firefighting, First Edition - International Fire Service Training Assoc.

Steam

Boiler Room Questions and Answers - Higgins, Elonka
Boilers, Types, Characteristics, and Functions - Shield
Combustion Engineering - Fryling
Introduction to Marine Engineering - Latham
Marine Steam Boilers - Milton

Marine Steam Engines and Turbines - McBirnie & Fox
Practical Boiler Water Treatment - Pincus
Standard Boiler Operator Questions & Answers - Elonka, Kohan
Steam/Its Generation and Use - Babcock & Wilcox
Steam and Gas Turbines, Vol I & II - Stodula & Loewenstein
Steam Turbines – Church

General

Basic Thermodynamics - Skrotzki
Deepwater Floating Drilling Operations - Harris
De Laval Engineering Handbook - Gartmann
Engineering Drawing - French, Vierck
Engineering Manual - Perry
Engineering Tables - ASME
Engineering Technical Drafting and Graphics - Giachino, Beukema
Engineering Training: How Simulators Can Help – Kallimani & Yardley
Gear Handbook - Dudley
Handbook of Engineering Mechanics - Flugge
How to Read Shop Drawings with Special Reference to Arc Welding - Lincoln Electric
How to Run a Lathe - South Bend Lathe
Lubrication – Gunther
Machinery's Handbook, 28th Edition – Olberg & Jones
Machine Tool Metalworking - Feirer, Tatro
Machine Tool Operation - Burghardt, Axlerod, Anderson
Marine Chemistry - Martin
Marine Engineering, Vol. I & Vol. II - Seward
Marine Engineering - Harrington
Marine Power Plant Guide – Paterson
Marine Propellers & Propulsion - J.S. Carlton
Maritime Engineering Reference Book - Anthony F. Molland
Mathematical Handbook for Scientists and Engineers – Korn
Mathematics for Engineers & Technologists - Huw Fox
Modern Marine Engineer's Manual, Vol. I - Osbourne
Modern Marine Engineer's Manual, Vol. II - Osbourne
Petroleum Products Handbook - Guthrie
Piping Handbook - Crocker, King
Rotary Air Compressor Instruction Manual - Sullair Corporation
Tanker Operations - Marton
The New American Machinist's Handbook - Le Grand

Troubleshooting Handbook for Mechanical Systems - Emerick
Valve Actuators - Instruction Manual - Limitorque Valve Controls
Work Boat Engineer and Oiler Book 1 & 2 – Ward

**Reference Bibliography as Indicated in IMO Model Courses EOICW , and
Chief Engineer / Second Engineering Officer**

L. Jackson and T.D. Morton
General Engineering Knowledge for Marine Engineers, 5th Edition
Thomas Reed Publications Ltd., 1990 (ISBN 0-947637-761)

Jackson, L.
Instrumentation and Control Systems, 4th Edition
Thomas Reed Publications Ltd., 1992 (ISBN 0-94763-786-9)

J. Hannah - Hillier
Applied Mechanics
Longman, 1995 (ISBN 0582-5632-1)

R. Joel
Basic Engineering Thermodynamics in S.I. Units, 5th Edition
Longman, 1996 (ISBN 0-5822-5629-1)

D. Titherington and J.G. Rimmer
Applied Mechanics, 2nd Edition
McGraw Hill, 1982 (ISBN 0-07-084659-6)

C. H. Simmons and D. E. Maguire
Progressive Engineering Drawing for T.E.C. Students
Hodder and Stoughton Ltd., 1983 (ISBN 0-340-26196-X)

J. Carvill
The Student Engineer's Companion
Butterworth, 1980 (ISBN 0-408-00438-X)

M. A. Parker and F. Pickup
Engineering Drawing with Worked Examples
Hutchinson, 1976 (ISBN 0-09-126451-0)

J. C. Rowlands and B. Angell
Corrosion for Marine and Offshore Engineers
Institute of Marine Engineers, 1976 (ISBN 0-900976-55-1)

S. H. Frederick and H. Capper
Materials for Marine Machinery
Institute of Marine Engineers, 1976 (ISBN 0-900976-42-X)

J. D. Skelley
Water Treatment
Institute of Marine Engineers, 1976 (ISBN 0-900976-66-7)

G. T. H. Flanagan
Feed Water Systems and Treatment
Stanford Maritime Ltd., 1978 (ISBN 0-540-07343-1)

C. R. Flood
Fabrication, Welding, & Metal Joining Processes
Butterworth, 1981 (ISBN 0-408-00448-7)

R. T. Pritchard
Technician Workshop Processes and Materials
Hodder and Stoughton, 1979 (ISBN 0-340-22100-3)

T. D. Morton
Motor Engineering Knowledge for Marine Engineers, 3rd Edition
Thomas Reed Publications Ltd., 1994 (ISBN 0-901 281 565)

D. A. Taylor
Introduction to Marine Engineering, 2nd Edition
Butterworth, 1990 (ISBN 07-50-6253-9)

Merchant Ship Construction, 3rd Edition
Institute of Marine Engineers, 1992 (ISBN 0-9072-0646-8)

Code of Safe Working Practices for Merchant Seamen
The Stationary Office Publications Center (ISBN 0115518363)

Holder, L.A.
Training and Assessments On Board, 2nd Edition
Witherby & Co., 1997 (ISBN 1 85609 123 6)

A. Norris

Operation of Machinery in Motor Ships : Main Diesels, Boilers & Auxiliary Plant

The Institute of Marine Engineers, 1981 (ISBN 0-900976-14-2)

E.G.R. Kraal

Basic Electrotechnology for Engineers, 3rd Edition

Thomas Reed Publications Ltd., 1985 (ISBN 0-900335-96-3)

D.T. Hall

Practical Marine Electrical Knowledge

Witherby & Co. Ltd., 1984 (ISBN 0-900886-87-0)

Glossary of Marine Technical Terms

The Institute of Marine Engineers, 1980 (ISBN 0-907206-19-0)

D.J. Eyres

Ship Construction, 4th Edition

Heinemann, 1994 (ISBN 0-7506-1842-6)

S. H. Henshall

Slow Speed Diesel Engines

Institute of Marine Engineers, 1978 (ISBN 0-900976-79-9)

Marine Medium Speed Diesel Engines

Institute of Marine Engineers, 1972 (ISBN 0-900976-09-8)

R. G. Smith

Application of Automatic Machinery and Alarm Equipment in Ships

Institute of Marine Engineers, 1974 (ISBN 0-900976-15-2)

Derrett

Ship Stability for Masters and Mates, 4th Edition

Stanford Maritime, 1984 (ISBN 0-540-07388-1)