A DIRECTORY
OF SKILLED TRADES TRAINING COURSES
AND TRAINING AIDS
IN U.S. SHIPYARDS

Prepared for
NATIONAL SHIPBUILDING RESEARCH PROGRAM
by
SOCIETY OF NAVAL ARCHITECTS & MARINE ENGINEERS
SHIP PRODUCTION COMMITTEE
EDUCATIONAL TRAINING PANEL

December 1983

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<td>Naval Surface Warfare Center CD Code 2230 - Design Integration Tools Building 192 Room 128 9500 MacArthur Bldg Bethesda, MD 20817-5700</td>
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This Directory of Skilled Trades Training Courses and Training Aids in U.S. Shipyards and the companion report together list available training in U.S. shipyards and analyze the needs for training at the apprentice, mechanic, and management levels. The project was carried out under the National Shipbuilding Research Program, in conjunction with the University of Michigan - Professor Howard M. Bunch, Project Manager. Development work was accomplished under subcontract to the Institute of Applied Technology - Jay I. Leanse, Executive Director and Linda L. Jaekel, Project Director.

Training of shipyard employees affects many areas of productivity, such as the application of new technologies, improved work quality, and more efficient time and material usage. Private sector yards have introduced new technologies through the National Shipbuilding Research Program, including Japanese technology and management ideas. Some of these technologies emphasize design and manufacture integration, and detailed work organization and planning. These developments underscore the need for training for the skills being introduced at the apprentice level as well as training in management.

Information contained in this document was provided by the 24 shipyards which responded to the Shipyard Skilled Trades Training Survey in 1983 by supplying information on skilled trades training courses and related training aids. All 57 shipyards which responded to the survey (both those with training and those which did not indicate any training) are identified in Section C, Part 1 "List of Participating Shipyards" of this document.
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DEFINITIONS OF TERMS

A. TRADES

ALL TRADES
Encompasses all shipyard skilled trades.

AIR CONDITIONING EQUIPMENT MECHANIC
Installs, maintains, and repairs refrigeration and air/conditioning equipment.

BLASTER
Prepares surfaces for painting by abrasive blasting. Can be combined with painter in some yards.

BOILERMaker
Assembles boilers, tanks, and pressure vessels. Uses power tools and hand tools.

CARPENTER
Fabricates and assembles wooden structures, gratings, keel blocks, and shorings.

CHIPPER/GRINDER
Grinds and chips weld splatter, high spots, burrs, weld slag, and rust from metal surfaces, of ships to improve their appearance or prepare them for painting.

ELECTRICIAN
Installs, repairs, and maintains wiring, fixtures, and equipment for shipyard facilities and aboard ship – to include all general electrical work. This includes the trade of ‘Marine Electrician’ in some yards.

ELECTRICIAN (INSIDE)
Installs and maintains wiring, fixtures, and equipment for shipyard facilities.

ELECTRICIAN (OUTSIDE)
Installs and repairs wiring, fixtures, and equipment for all electrical services aboard ship.

ELECTRONICS MECHANIC
Works on various types of electronic equipment to put it in repaired operating condition.

ELECTROPLATER
Sets up, operates, and maintains metal plating baths to deposit metallic plating for protective purposes, decorative purposes, and to build up worn surfaces.
INSULATOR
Installs insulation in designated areas and on piping aboard ship.

JOINER
Installs finished panels, floor grouting, and tiling in shipboard living quarters.

LOFTSMAN
Lays out lines of ship to full scale on mold-loft floor and constructs templates and molds to be used as patterns and guides for layout and fabrication of various structural parts of ships.

MACHINIST
A general Machinist may be required to perform the duties of both Machinist (Inside) and Machinist (Outside), trades which are described below.

MACHINIST (INSIDE)
Sets up and operates machine tools as well as fits or assembles parts to make or repair metal parts, tools, or machines.

MACHINIST (OUTSIDE)
Installs ship machinery such as propulsion machinery, auxiliary motors, pumps, ventilating equipment, and steering gear.

MOLDERS
Heats and pours molten metal into hollow forms in order to produce all manner of metal parts. (Foundryman)

ORDNANCE EQUIPMENT MECHANIC
Repairs machinery and mechanical equipment such as cranes, pumps, motors, and conveyor systems associated with weapons systems.

PAINTER
Mixes and applies paint or other coating materials for protective and decorative purposes by means of spray gun, brush, roller, or immersion. May also perform surface preparation (blasting).

PATTERNMAKER
Plans, lays out and performs machine operations and benchwork to construct, alter and repair three-dimensional wood patterns and core boxes for use in making molds for foundry castings.

PIPEFITTER
Fabricates, lays out, installs, and maintains ships’ piping systems, such as steam heating, water, hydraulic, air pressure, and lubrication systems. Uses handtools and shop machines.

PIPEWELDER
Installs, repairs and maintains shipboard piping systems by means of applicable welding processes.
RIGGER/CRANE OPERATOR
Installs and repairs rigging and weight-handling gear. Attaches hoists and handling gear to rigging and operates cranes to lift, move, and position machinery, equipment, structural parts, and other heavy loads aboard ships.

SHEETMETAL MECHANIC
Fabricates, assembles, installs, and repairs sheet-metal.

SHIPIFITTER
Lays out and fits up metal structural parts (such as plates, bulkheads, and frames) and maintains them in position for welding.

SHIPIWRIGHT
Constructs or repairs wooden ships or ship sections, following blueprints or ship’s plans.

TACKER/BURNER
Cuts steel plate by burning. Washes welds and applies temporary welds to position metals for final welding.

WELDER
Makes or repairs structures or parts, using gas or electric welding equipment, soldering equipment, gas or electric cutting equipment, etc.

B. SKILL LEVELS

APPRENTICE
An entry-level employee in the process of learning the range of skills of a trade through a formal, structured training program, both on the job and in the classroom.

MECHANIC
An employee who is proficient in the basic job skills. (e.g., Journeyman, etc.)

MANAGER
An employee who is proficient in the job skills and supervises others in the trade. (e.g., Foreman, General Foreman, etc.)
C. TYPE OF COURSE

ACADEMIC
Instruction which provides knowledge essential to the ability to learn trade skills or trade principles. (e.g., English, Math, etc.)

TRADE THEORY
Classroom or structured on-the-job training dealing with specific job skills (and including safety instruction).
SECTION A

DIRECTORY OF COURSES

A List of Courses
For Skilled Trades
In United States Shipyards

December 1983
SECTION A

DIRECTORY OF COURSES

This directory provides skilled trades training course information for 27 trades including information on courses given to "All Trades" (primarily apprentice academics, safety, and supervisory related courses).

Information about each course is displayed in the following format:

<table>
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<th>NUMBER OF COURSE HOURS</th>
<th>TYPE OF COURSE</th>
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Course listings are provided under the alphabetized trade name, as found at the top of each page. The index on the following page provides the page number on which each trade begins.

Course listings within each trade are indexed according to level of training, beginning with the apprentice level and continuing through to the management level. The level of training is:

1 = Apprentice
2 = Mechanic
3 = Manager

Definitions for these three levels, for the type of course (Academic and/or Trade Theory), and each of the trades can be found on pages i-vi of this document.

Contact information on the training organization can be found in Section C, Part 1 "List of Participating Shipyards", or Part 2 "List of Supplementary Training Organizations".

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Course information is indexed within each trade category according to the level of training, in the following sequence:

1/2/3 = Apprentice, Mechanic & Manager
1/2 = Apprentice & Mechanic
1 = Apprentice
2/3 = Mechanic & Manager
2 = Mechanic
3 = Manager
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ALL TRADES
BLUEPRINT READING

ADVANCED BLUEPRINT READING
Level: 1/2/3
Hours: 80
Type: TRADE THEORY
GENERAL DYNAMICS/QUINCY

BASIC BLUEPRINT READING
Level: 1/3
Hours: 120
Type: TRADE THEORY
GENERAL DYNAMICS/QUINCY

BLUEPRINT READING
Level: 1/2
Hours:
Type: ACADEMIC
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<td>Hours: 6</td>
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<td>OP &amp; MAINT OF TORQUE MACHINES</td>
<td>Level: 2</td>
<td>Hours: 16</td>
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ALL TRADES
PRODUCTIVITY

PRODUCTIVITY IMPROVEMENT
Level: 3
Hours: 24
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD

QUALITY CIRCLES TRAINING
Level: 1/2/3
Hours: 9
Type: ACADEMIC
PETEerson BUILDERS, INC.
DIRECTORY OF COURSES

ALL TRADES

SAFETY

ANNUAL FIRE EXTINGUISHING  Level: 2/3
Hours: 
Type: TRADE THEORY
MISENER INDUSTRIES, INC.

BACK CARE CLASS  Level: 1/2/3
Hours: 1
Type: ACADEMIC
NATIONAL STEEL & SHIPBUILDING COMPANY

FIRST AID  Level: 1/2/3
Hours: 6
Type Not Indicated
JACKSONVILLE SHIPYARDS, INC.

FIRST AID/CARDIOPULMONARY RES .  Level: 1/2/3
Hours: 6.5
Type: TRADE THEORY
NATIONAL STEEL & SHIPBUILDING COMPANY

HAZARDOUS WASTE  Level: 1/2/3
Hours: 1
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

OIL POLLUTION AWARENESS  Level: 1/2/3
Hours: 2
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

OIL SPILL RESPONSE  Level: 1/2
Hours: 1
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

OIL TRANSFER  Level: 1/2
Hours: 2
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
DIRECTORY OF COURSES

ALL TRADES

SAFETY

ORIENTATION TO GOOD SAFETY
Level: 1/2/3
Hours: 2
Type: ACADEMIC
PETERSON BUILDERS, INC.

SAFETY
Level: 1/2/3
Hours:
Type: ACADEMIC
BETHLEHEM STEEL/SPARROWS POINT

SAFETY
Level: 1/2/3
Hours: 6
Type Not Indicated
JACKSONVILLE SHIPYARDS, INC.

SAFETY ORIENTATION
Level: 2/3
Hours:
Type: ACADEMIC
MISENER INDUSTRIES, INC.

SAFETY TIPS
Level: 2/3
Hours:
Type: TRADE THEORY
MISENER INDUSTRIES, INC.

SCAFFOLD SAFETY CLASS
Level: 1/2/3
Hours: 1
Type: TRADE THEORY
NATIONAL STEEL & SHIPBUILDING COMPANY
DIRECTORY OF COURSES

ALL TRADES
SUPERVISORY

ASSERITIVE SUPERVISION
Level: 3
Hours: 8
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD

BASIC SUPVR TECH TRAINING
Level: 3
Hours: 232
Type: ACADEMIC & TRADE THEORY
PEARL HARBOR NAVAL SHIPYARD

BUSINESS PRACTICES
Level: 3
Hours: 40
Type: ACADEMIC
DUNDALE COMMUNITY COLLEGE

CONFLICT MANAGEMENT
Level: 3
Hours: 24
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD

COUNSELING SKILLS FOR SUPVRS
Level: 3
Hours: 24
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD

DELEGATING FOR RESULTS
Level: 3
Hours: 8
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD

EFFECTIVE WRITING FOR SUPVR
Level: 3
Hours: 24
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD

EMPLOYEE MANAGEMENT RELATIONS
Level: 3
Hours: 24
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD
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ALL TRADES
SUPERVISORY

EXPANDING MANAGERIAL COMPETENCY
Level: 3
Hours: 16
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD

FIRST LINE SUPVR TRAINING II
Level: 3
Hours: 40
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD

FIRST LINE SUPVR TRAINING III
Level: 3
Hours: 24
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD

FIRST LINS SUPVR TRAINING I
Level: 3
Hours: 40
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD

LABOR RELATIONS CONF - DOD
Level: 3
Hours: 40
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD

LABOR RELATIONS TRNG FOR SUPVR
Level: 3
Hours: 24
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD

LEADERSHIP & SUPV INSTITUTE
Level: 3
Hours: 24
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LONG BEACH NAVAL SHIPYARD

LEADERSHIP TRAINING
Level: 3
Hours: 8
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ALL TRADES
SUPERVISORY

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LONG BEACH NAVAL SHIPYARD

TEAM BUILDING
Level: 3
Hours: 8
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD

WORKING WITH SUBORDINATES
Level: 3
Hours: 16
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD

WRITING & EDITING FOR SUPVR
Level: 3
Hours: 24
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD
## DIRECTORY OF COURSES

### A/C EQUIP MECH

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BOILERMAKER

APPRENTICESHIP
Level: 1
Hours: 6,144
Type: TRADE THEORY
INGALLS SHIPBUILDING DIVISION

APPRENTICESHIP
Level: 1
Hours: 6,000
Type: ACADEMIC & TRADE THEORY
BETHLEHEM STEEL/SPARROWS POINT

APPRENTICESHIP
Level: 1
Hours: 520
Type: ACADEMIC
TRIDENT TECHNICAL COLLEGE

APPRENTICESHIP
Level: 1
Hours: 84
Type: TRADE THEORY
CHARLESTON NAVAL SHIPYARD

APPRENTICESHIP
Level: 1
Hours: 1,000
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD

APPRENTICESHIP
Level: 1
Hours: 580
Type: TRADE THEORY
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DIRECTORY OF COURSES

CARPENTER

TOOL SHARPENING
Level: 1
Hours: 8
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

HAZARDOUS MATERIAL
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

FRAME CONSTRUCTION
Level: 1
Hours: 24
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

FRAMING SQUARE
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

MACHINE WOODWORKING
Level: 1
Hours: 40
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

DOORS
Level: 1
Hours: 12
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

STAIRS
Level: 1
Hours: 8
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

DECK COVERING
Level: 1
Hours: 12
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD
DIRECTORY OF COURSES

CARPENTER

SHIPBOARD INSULATION  Level: 1
Hours: 12
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

FORMICA  Level: 1
Hours: 8
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

TRESTLE  Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

STRENGTH OF MATERIAL  Level: 1
Hours: 8
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

OPTICAL EQUIPMENT  Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

TRADE DRAWING  Level: 1
Hours: 16
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

FRAMING SQUARE  Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

DECK COVERING  Level: 1
Hours: 16
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD
DIRECTORY OF COURSES

CARPENTER

CEILINGS
Level: 1
Hours: 8
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

INTERIOR FINISHING
Level: 1
Hours: 12
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

TOOL SHARPENING
Level: 1
Hours: 12
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

FORMICA
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

HAZARDOUS MATERIAL
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

CABINET MAKING
Level: 1
Hours: 20
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

LADDERS & TEMPORARY STAGING
Level: 1
Hours: 8
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

TRESTLES
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD
DIRECTORY OF COURSES

CARPENTER

BOX & CRATE CONSTRUCTION  Level: 1  
Hours: 8  
Type: TRADE THEORY  
PHILADELPHIA NAVAL SHIPYARD

HOUSE CONSTRUCTION  Level: 1  
Hours: 40  
Type: TRADE THEORY  
PHILADELPHIA NAVAL SHIPYARD

DOORS  Level: 1  
Hours: 12  
Type: TRADE THEORY  
PHILADELPHIA NAVAL SHIPYARD

STAIR BUILDING  Level: 1  
Hours: 12  
Type: TRADE THEORY  
PHILADELPHIA NAVAL SHIPYARD

MACHINE WOODWORKING  Level: 1  
Hours: 80  
Type: TRADE THEORY  
PHILADELPHIA NAVAL SHIPYARD

WORKBENCH & TABLE CONSTRUCTION  Level: 1  
Hours: 8  
Type: TRADE THEORY  
PHILADELPHIA NAVAL SHIPYARD

RADCON REVIEW  Level: 1/2  
Hours: 4  
Type: TRADE THEORY  
GENERAL DYNAMICS/ELECTRIC BOAT

GLOVE BAGS  Level: 1/2  
Hours: 4  
Type: TRADE THEORY  
GENERAL DYNAMICS/ELECTRIC BOAT
POLY BTL AND DROP CLOTH
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

CON BAG INSTALLATION
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

PRACTICAL FACTORS
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

GLOVE BAG REMOVAL
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

LINES OF SHIP
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

TOOLS, TERMS, AND MATERIAL
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

NEUTRON SHIELDING
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

LAYOUT OF EXPANSION GAPS
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
DIRECTORY OF COURSES

CARPENTER

TOLERANCES, INSPECTION
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

DRY NEUTRON SHIELDING
Level: 1/2
Hours: 2
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

NUCLEAR REFRESHER
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

CONDOR
Level: 1/2
Hours: 3
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

STUD WELDING
Level: 1/2
Hours: 8
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

REPAIR & REMODELING
Level: 2
Hours: 32
Type: TRADE THEORY
PORTSMOUTH NAVAL SHIPYARD
# DIRECTORY OF COURSES

## ELECTRICIAN

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C2 SPOKEN COMMUNICATION

Level: 1
Hours: 40
Type: ACADEMIC
TRIDENT TECHNICAL COLLEGE

APPRENTICESHIP

Level: 1
Hours: 1032
Type: TRADE THEORY
CHARLESTON NAVAL SHIPYARD

REVIEW OF ARITHMETIC

Level: 1
Hours: 32
Type: ACADEMIC
PHILADELPHIA NAVAL SHIPYARD

ALGEBRAIC ADDITION/SUBTRACTION

Level: 1
Hours: 16
Type: ACADEMIC
PHILADELPHIA NAVAL SHIPYARD

ALGEBRIC MULTIPLICATION/DIV.

Level: 1
Hours: 16
Type: ACADEMIC
PHILADELPHIA NAVAL SHIPYARD

EQUATIONS

Level: 1
Hours: 16
Type: ACADEMIC
PHILADELPHIA NAVAL SHIPYARD

POWERS OF TEN (ALGEBRA)

Level: 1
Hours: 16
Type: ACADEMIC
PHILADELPHIA NAVAL SHIPYARD

UNITS & DIMENSIONS (ALGEBRA)

Level: 1
Hours: 16
Type: ACADEMIC
PHILADELPHIA NAVAL SHIPYARD
DIRECTORY OF COURSES

ELECTRICIAN

PLANE TRIG/ANGLES/RT TRIANGLES Level: 1
Hours: 8
Type: ACADEMIC
PHILADELPHIA NAVAL SHIPYARD

PLANE TRIG/FUNCTIONS OF ANGLES Level: 1
Hours: 8
Type: ACADEMIC
PHILADELPHIA NAVAL SHIPYARD

DIGITAL LOGIC FUNDAMENTALS Level: 1
Hours: 28
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

SHIP NOMENCLATURE Level: 1
Hours: 8
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

ELEC CABLES & ACCESSORIES Level: 1
Hours: 8
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

ISOMETRIC WIRING DIAGRAMS Level: 1
Hours: 16
Type: TRADE THEORY
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ELECTRICAL SYSTEM DECK PLANS Level: 1
Hours: 16
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

ELEMENTARY WIRING DIAGRAMS Level: 1
Hours: 8
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD
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ELECTRICIAN

NUMBER SYSTEMS FOR COMPUTERS
Level: 1
Hours: 20
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

CONTROL & PROTECTIVE DEVICES
Level: 1
Hours: 24
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

A.C. POWER DISTRIBUTION
Level: 1
Hours: 24
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

SHIPBOARD GENERAL LIGHTING
Level: 1
Hours: 32
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

NAVIGATION & SIGNAL LIGHTS
Level: 1
Hours: 16
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

SHIPBOARD DEGAUSSING
Level: 1
Hours: 24
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

ELECTRIC MOTOR CONTROLS/BRAKES
Level: 1
Hours: 24
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

APPLICATIONS OF TEST EQUIPMENT
Level: 1
Hours: 12
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD
DIRECTORY OF COURSES
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ELECTRICIAN

VACUUM TUBE POWER SUPPLIES
Level: 1
Hours: 16
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

A.C. GENERATORS
Level: 1
Hours: 48
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

A.C. MOTORS
Level: 1
Hours: 72
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

A.C. MOTOR CONTROLLERS
Level: 1
Hours: 24
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

INSTRUMENTS AND METER
Level: 1
Hours: 16
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

MAGNETIC AMPLIFIERS
Level: 1
Hours: 32
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

SPEED AND VOLTAGE REGULATORS
Level: 1
Hours: 48
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

SYNCHROS
Level: 1
Hours: 50
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD
DIRECTORY OF COURSES

ELECTRICIAN

I.C. SYSTEMS
Level: 1
Hours: 40
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

ELEC CONDUCTORS/WIRING TECHN.
Level: 1
Hours: 20
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

ELECTRO-MAGNATISM
Level: 1
Hours: 28
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

D.C. GENERATORS
Level: 1
Hours: 48
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

D.C. MOTORS
Level: 1
Hours: 16
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

D.C. MOTOR CONTROLLERS
Level: 1
Hours: 16
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

A.C. FUNDAMENTALS
Level: 1
Hours: 16
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

A.C. SERIES & PARALLEL CIRCUIT
Level: 1
Hours: 16
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD
DIRECTORY OF COURSES
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ELECTRICIAN

TRANSFORMERS
Level: 1
Hours: 16
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

NOMENCLATURE/APPR REQ & DESCR.
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

TOOLS OF THE TRADE
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

SHIYARD SAFETY
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

MOLECULES, ATOMS, CONDTRS, INSUL.
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

METHODS OF PRODUCING A VOLTAGE
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

ELEC CURRENT & RESISTANCE
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

BATTERIES
Level: 1
Hours: 20
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD
DIRECTORY OF COURSES

ELECTRICIAN

OHMS LAW FOR D.C. CIRCUITS  Level: 1  Hours: 48  Type: TRADE THEORY  PHILADELPHIA NAVAL SHIPYARD

 PLANE TRIG/SOLVE RIGHT ANGLES  Level: 1  Hours: 16  Type: ACADEMIC  PHILADELPHIA NAVAL SHIPYARD

 PLANE TRIG - VECTORS  Level: 1  Hours: 16  Type: ACADEMIC  PHILADELPHIA NAVAL SHIPYARD

FRACTIONAL EQUATIONS  Level: 1  Hours: 32  Type: ACADEMIC  PHILADELPHIA NAVAL SHIPYARD

SIMULTANEOUS EQUATIONS  Level: 1  Hours: 16  Type: ACADEMIC  PHILADELPHIA NAVAL SHIPYARD

EXPONENTS AND RADICALS  Level: 1  Hours: 16  Type: ACADEMIC  PHILADELPHIA NAVAL SHIPYARD

QUADRATIC EQUATIONS  Level: 1  Hours: 20  Type: ACADEMIC  PHILADELPHIA NAVAL SHIPYARD

COMMON LOGARITHMS  Level: 1  Hours: 24  Type: ACADEMIC  PHILADELPHIA NAVAL SHIPYARD
DIRECTORY OF COURSES

ELECTRICIAN

APPRENTICESHIP
Level: 1
Hours: 8,000
Type: ACADEMIC & TRADE THEORY
NEWPORT NEWS SHIPBUILDING

APPRENTICESHIP
Level: 1
Hours: 1,950
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD

APPRENTICESHIP
Level: 1
Hours: 1,140
Type: TRADE THEORY
PEARL HARBOR NAVAL SHIPYARD

APPRENTICESHIP
Level: 1
Hours: 1,192
Type: ACADEMIC & TRADE THEORY
PORTSMOUTH NAVAL SHIPYARD

ELECTRICIAN
Level: 1/2
Hours:
Type: ACADEMIC & TRADE THEORY
TODD PACIFIC SHIPYARDS/ LOS ANGELES

MARINE ELECTRICITY
Level: 1/2
Hours: 90
Type: TRADE THEORY
FLORIDA JUNIOR COLLEGE - JACKSONVILLE

CIRCUIT BREAKER TRAINING
Level: 2
Hours: 40
Type: TRADE THEORY
PORTSMOUTH NAVAL SHIPYARD

D.C. DRIVES SCHOOL
Level: 2
Hours: 40
Type: TRADE THEORY
PORTSMOUTH NAVAL SHIPYARD
DIRECTORY OF COURSES

ELECTRICIAN

1984 NAT’L ELECT. CODE CHANGES Level: 2
Hours: 8
Type: TRADE THEORY
PORTSMOUTH NAVAL SHIPYARD

HIGH VOLTAGE CABLE SPlicing Level: 2
Hours: 32
Type: TRADE THEORY
PORTSMOUTH NAVAL SHIPYARD

SWITCHGEAR VOLTAGE MAINTENANCE Level: 2
Hours: 16
Type: TRADE THEORY
PORTSMOUTH NAVAL SHIPYARD

PLANT ELEC. MAINTENANCE
Level: 1
Hours: 8,000
Type: ACADEMIC
ICS-INTEXT

APPRENTICESHIP
Level: 1
Hours: 432
Type: ACADEMIC & TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

ORIENTATION TO PBI & ELEC DEPT Level: 1
Hours: 1
Type: ACADEMIC & TRADE THEORY
PETEERSON BUILDERS, INC.
DIRECTORY OF COURSES
----------------------

ELECTRICIAN

PRE-EMPLOYMENT
Level: 1
Hours: 120
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

WIRE WRAPPING
Level: 1/2
Hours: 2
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

LIGHTING
Level: 1/2
Hours: 16
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

HOOK-UP
Level: 1/2
Hours: 20
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

CABLE INSTALLATION
Level: 1/2
Hours: 8
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

CONNECTOR PLUGS
Level: 1/2
Hours: 80
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

BLUEPRINT READING
Level: 1/2
Hours: 20
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

PREP. HIGH TEMP. CABLES
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
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ELECTRICIAN

STUD WELDING (OPEN LOOP)  Level: 1/2
Hours: 8
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

WIRE WRAPPING  Level: 1/2
Hours: 2
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

VISUAL INSPECTION  Level: 3
Hours: 12
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
DIRECTORY OF COURSES

ELECTRICIAN (INSIDE)

PLANT ELEC. MAINTENANCE
Level: 1
Hours: 
Type: ACADEMIC
ICS-INTEXT

APPRENTICESHIP
Level: 1
Hours: 8,000
Type: ACADEMIC & TRADE THEORY
NEWPORT NEWS SHIPBUILDING
DIRECTORY OF COURSES
--------------------

ELECTRICIAN
(OUTSIDE)

BLUEPRINT READING
Level: 1
Hours: 22
Type: TRADE THEORY
PETERSON BUILDERS, INC.

ORIENTATION TO PBI & ELEC DEPT
Level: 1
Hours: 1
Type: ACADEMIC & TRADE THEORY
PETERSON BUILDERS, INC.

APPRENTICESHIP
Level: 1
Hours: 432
Type: ACADEMIC & TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

PRE-EMPLOYMENT
Level: 1
Hours: 120
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

WIRE WRAPPING
Level: 1/2
Hours: 2
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

LIGHTING
Level: 1/2
Hours: 16
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

HOOK-UP
Level: 1/2
Hours: 20
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

CABLE INSTALLATION
Level: 1/2
Hours: 8
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

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DIRECTORY OF COURSES

ELECTRICIAN
(OUTSIDE)

CONNECTOR PLUGS
Level: 1/2
Hours: 80
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

BLUEPRINT READING
Level: 1/2
Hours: 20
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

PREP. HIGH TEMP. CABLES
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

HOOK-UP NUCLEAR COMPONENTS
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

HOOK-UP KPI TERM BOX/SHIELD
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

HOOK-UP KP-C TERM BOX
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

PREP PI CABLE ENDS
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

LOCKWIRE NUCLEAR COMP.
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
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ELECTRONICS MECHANIC

WRITTEN COMMUNICATION
Level: 1
Hours: 40
Type: ACADEMIC
TRIDENT TECHNICAL COLLEGE

SPOKEN COMMUNICATION
Level: 1
Hours: 40
Type: ACADEMIC
TRIDENT TECHNICAL COLLEGE

APPRENTICESHIP
Level: 1
Hours: 1640
Type: TRADE THEORY
CHARLESTON NAVAL SHIPYARD

APPRENTICESHIP
Level: 1
Hours: 432
Type: ACADEMIC & TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

APPRENTICESHIP
Level: 1
Hours: 1,680
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD

APPRENTICESHIP
Level: 1
Hours: 1,783
Type: TRADE THEORY
PEARL HARBOR NAVAL SHIPYARD

APPRENTICESHIP
Level: 1
Hours: 1,736
Type: ACADEMIC & TRADE THEORY
PORTSMOUTH NAVAL SHIPYARD

SOFT SOLDERING
Level: 1/2
Hours: 8
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
DIRECTORY OF COURSES
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ELECTRONICS MECHANIC

2925-26
Level: 2
Hours: 
Type: ACADEMIC & TRADE THEORY
HARBOR OCCUPATIONAL CENTER
DIRECTORY OF COURSES

ELECTROPLATER

APPRENTICESHIP

Level: 1
Hours: 400
Type: ACADEMIC
TRIDENT TECHNICAL COLLEGE

APPRENTICESHIP

Level: 1
Hours: 320
Type: TRADE THEORY
KUSHNER ELECTROPLATING SCHOOL
## DIRECTORY OF COURSES

### INSULATOR

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JOINER

APPRENTICESHIP
Level: 1
Hours: 8,000
Type: ACADEMIC & TRADE THEORY
NEWPORT NEWS SHIPBUILDING
## DIRECTORY OF COURSES

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### LOFTSMAN

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MACHINIST

APPRENTICESHIP
Level: 1
Hours: 6,144
Type: TRADE THEORY
INGALLS SHIPBUILDING DIVISION

BLUEPRINT READING & BENCHWORK
Level: 1
Hours: 5
Type: ACADEMIC
NATIONAL STEEL & SHIPBUILDING COMPANY

BASIC ENGINE LATHE OPERATION
Level: 1
Hours: 5
Type: ACADEMIC
NATIONAL STEEL & SHIPBUILDING COMPANY

ADVANCED ENGINE LATHE OPER.
Level: 1
Hours: 5
Type Not Indicated
NATIONAL STEEL & SHIPBUILDING COMPANY

ADVANCED BLUEPRINT READING
Level: 1
Hours: 5
Type: ACADEMIC
NATIONAL STEEL & SHIPBUILDING COMPANY

INDEXING, CARBIDE CUTTER, ETC.
Level: 1
Hours: 5
Type: ACADEMIC
NATIONAL STEEL & SHIPBUILDING COMPANY

ANGULAR CIRCULATIONS
Level: 1
Hours: 5
Type: ACADEMIC
NATIONAL STEEL & SHIPBUILDING COMPANY

GEAR CUTTING, INSPECTION
Level: 1
Hours: 5
Type: ACADEMIC
NATIONAL STEEL & SHIPBUILDING COMPANY
DIRECTORY OF COURSES

MACHINIST

SPECIAL PROCESSES, HYDRAULICS
Level: 1
Hours: 5
Type: ACADEMIC
NATIONAL STEEL & SHIPBUILDING COMPANY

APPRENTICESHIP
Level: 1
Hours: 6,000
Type: ACADEMIC & TRADE THEORY
BETHLEHEM STEEL/SPARROWS POINT

APPRENTICESHIP
Level: 1
Hours: 560
Type: ACADEMIC
TRIDENT TECHNICAL COLLEGE

APPRENTICESHIP
Level: 1
Hours: 640
Type: TRADE THEORY
CHARLESTON NAVAL SHIPYARD

NOMENCLATURE/SAFETY/JOB DESC.
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

BOILER FUNCTIONS
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

EXHAUST & STEAM SYSTEMS
Level: 1
Hours: 30
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

PRESSURE/TEMP. MEASUREMENT
Level: 1
Hours: 16
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD
DIRECTORY OF COURSES

MACHINIST

TURBINE THEORY
Level: 1
Hours: 10
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

SHAFTING, PROPELLER & BEARINGS
Level: 1
Hours: 5
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

PLAIN BEARINGS
Level: 1
Hours: 3
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

BASIC HAND TOOLS
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

BASIC MACHINES
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

VALVES
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

LUBRICATION
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

AIR COMPRESSORS HP/LP
Level: 1
Hours: 5
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD
DIRECTORY OF COURSES

MACHINIST

STEERING SYSTEMS
Level: 1
Hours: 5
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

DECK WINCHES
Level: 1
Hours: 5
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

COUPLING ALIGNMENT
Level: 1
Hours: 5
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

ORDNANCE, BASIC TERMS
Level: 1
Hours: 3
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

GUN MOUNTS
Level: 1
Hours: 5
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

ORDNANCE MISSLE SYSTEMS
Level: 1
Hours: 18
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

INTRODUCTION TO SONAR
Level: 1
Hours: 8
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

ORDNANCE RECOIL & CON. REC.
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD
DIRECTORY OF COURSES
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MACHINIST

OPERATION OF BREECH
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

FIRING MECHANISMS
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

PUMPS (ALL TYPES)
Level: 1
Hours: 22
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

BLUEPRINT READING
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

ORDNANCE ALIGNMENT
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

ARRESTING GEAR & BARRICADE SYS
Level: 1
Hours: 15
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

CATAPULTS
Level: 1
Hours: 10
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

GEARS & GEARING SPUR GEARS
Level: 1
Hours: 14
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD
## MACHINIST

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MACHINIST

APPRENTICESHIP
Level: 1
Hours: 560
Type: TRADE THEORY
PEARL HARBOR NAVAL SHIPYARD

APPRENTICESHIP
Level: 1
Hours: 1,261
Type: ACADEMIC & TRADE THEORY
PORTSMOUTH NAVAL SHIPYARD

MACHINE SHOP I & II
Level: 1/2
Hours: 90
Type: TRADE THEORY
SO. WESTERN OREGON COMMUNITY COLLEGE

BLUEPRINT READING
Level: 1/2
Hours: 135
Type: TRADE THEORY
FLORIDA JUNIOR COLLEGE - JACKSONVILLE

DIESEL
Level: 1/2
Hours: 15
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

PRECISION MEASUREMENT
Level: 1/2
Hours: 30
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

BASIC HYDRAULICS
Level: 1/2
Hours: 30
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

AIR CONDITIONING/REFRIGERATION
Level: 1/2
Hours: 30
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD
DIRECTORY OF COURSES

MACHINIST

DISTILLATION UNITS
Level: 1/2
Hours: 20
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

MODERN ENGINEERING THEORY
Level: 1/2
Hours: 160
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

DIESEL ENGINES
Level: 1/2
Hours: 40
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

GOVERNORS SCHOOL
Level: 1/2
Hours: 30
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

MARINE GAS TURBINE SCHOOL
Level: 1/2
Hours: 30
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

DALIC PLATING
Level: 2
Hours: 40
Type: TRADE THEORY
PORTSMOUTH NAVAL SHIPYARD

BALANCING SEMINAR
Level: 2
Hours: 40
Type: TRADE THEORY
PORTSMOUTH NAVAL SHIPYARD

APPRENTICESHIP
Level: 1
Hours:
Type: ACADEMIC & TRADE THEORY
COMMUNITY COLLEGE OF ALLEGHENY COUNTY
DIRECTORY OF COURSES

MACHINIST

INSIDE MACHINIST
Level: 1
Hours: 520
Type: TRADE THEORY
R.E. DERECKTOR OF R.I., INC.

APPRENTICESHIP
Level: 1
Hours: 8,000
Type: ACADEMIC & TRADE THEORY
GENERAL DYNAMICS/QUINCY

APPRENTICESHIP
Level: 1
Hours: 8,000
Type: ACADEMIC & TRADE THEORY
DRAVO CORPORATION

APPRENTICESHIP
Level: 1
Hours: 6,000
Type: ACADEMIC & TRADE THEORY
BATH IRON WORKS CORPORATION

APPRENTICESHIP
Level: 1
Hours: 576
Type: ACADEMIC & TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

OUTSIDE MACHINIST
Level: 1
Hours: 520
Type: TRADE THEORY
R.E. DERECKTOR OF R.I., INC.

APPRENTICESHIP
Level: 1
Hours: 8,000
Type: ACADEMIC & TRADE THEORY
GENERAL DYNAMICS/QUINCY

APPRENTICESHIP
Level: 1
Hours: 6,000
Type: ACADEMIC & TRADE THEORY
BATH IRON WORKS CORPORATION
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PREP. TOOLS AND PROCEDURES  Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

LIP SEAL IN CONCON BAGS  Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

VALVE DISASSEMBLY & ASSEMBLY  Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

INTERNAL PLUGGING OF VALVES  Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

VALVE TAPPING  Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

REPACKING VALVES  Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

CANOPY FIT-UPS  Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

GRADE A CLEANING  Level: 1/2
Hours: 3
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
MACHINIST

REFRESHER SERIES - NUCLEAR
Level: 1/2
Hours: 6
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

DOCUMENTATION
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

STUD WELDING (MICROMARK)
Level: 1/2
Hours: 8
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

STUD WELDING (OPEN LOOP)
Level: 1/2
Hours: 8
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

VISUAL INSPECTION
Level: 3
Hours: 12
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
DIRECTORY OF COURSES

MACHINIST
(INSIDE)

APPRENTICESHIP

Level: 1
Hours:
Type: ACADEMIC & TRADE THEORY
COMMUNITY COLLEGE OF ALLEGHENY COUNTY

INSIDE MACHINIST

Level: 1
Hours: 520
Type: TRADE THEORY
R.E. DERECKTOR OF R.I., INC.

APPRENTICESHIP

Level: 1
Hours: 8,000
Type: ACADEMIC & TRADE THEORY
GENERAL DYNAMICS/QUINCY

APPRENTICESHIP

Level: 1
Hours: 8,000
Type: ACADEMIC & TRADE THEORY
DRAVO CORPORATION

APPRENTICESHIP

Level: 1
Hours: 6,000
Type: ACADEMIC & TRADE THEORY
BATH IRON WORKS CORPORATION

APPRENTICESHIP

Level: 1
Hours: 576
Type: ACADEMIC & TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
DIRECTORY OF COURSES

--MACHINIST--

(OUTSIDE)

OUTSIDE MACHINIST Level: 1
Hours: 520
Type: TRADE THEORY
R.E. DERECKTOR OF R.I., INC.

APPRENTICESHIP Level: 1
Hours: 8,000
Type: ACADEMIC & TRADE THEORY
GENERAL DYNAMICS/QUINCY

APPRENTICESHIP Level: 1
Hours: 6,000
Type: ACADEMIC & TRADE THEORY
BATH IRON WORKS CORPORATION

APPRENTICESHIP Level: 1
Hours: 576
Type: ACADEMIC & TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

APPRENTICESHIP Level: 1
Hours: 8,000
Type: ACADEMIC & TRADE THEORY
NEWPORT NEWS SHIPBUILDING

INTRO TO NUCLEAR Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

NEW CONSTRUCTION DOC. Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

LINES OF SHIP Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
DIRECTORY OF COURSES
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MACHINIST
(OUTSIDE)

PLAN READING
level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

TOOLS, AND THEIR USE
level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

PRECISION INSTRUMENTS
level: 1/2
Hours: 6
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

SURFACE & FITTING OF LINERS
level: 1/2
Hours: 8
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

THREADED FASTENERS
level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

COMPONENT ALIGNMENT
level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

INSTALLATION OF MOUNTS
level: 1/2
Hours: 8
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

LOCKING DEVICES
level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
DIRECTORY OF COURSES

MACHINIST
(OUTSIDE)

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Level: 1/2
Hours: 6
Type: TRADE THEORY
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Level: 1/2
Hours: 8
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

CANOPY CUTTING TOOLS
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

PREP. TOOLS AND PROCEDURES
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

LIP SEAL IN CONCON BAGS
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

VALVE DISASSEMBLY & ASSEMBLY
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

INTERNAL PLUGGING OF VALVES
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

VALVE TAPPING
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
DIRECTORY OF COURSES

MACHINIST
(OUTSIDE)

REPACKING VALVES
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

CANOPY FIT-UPS
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

GRADE A CLEANING
Level: 1/2
Hours: 3
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

REFRESHER SERIES - NUCLEAR
Level: 1/2
Hours: 6
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

DOCUMENTATION
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

STUD WELDING (MICROMARK)
Level: 1/2
Hours: 8
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

STUD WELDING (OPEN LOOP)
Level: 1/2
Hours: 8
Type: TRADE THEORY
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VISUAL INSPECTION
Level: 3
Hours: 12
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
DIRECTORY OF COURSES
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MOLDER

APPRENTICESHIP
Level: 1
Hours: 8,000
Type: ACADEMIC & TRADE THEORY
NEWPORT NEWS SHIPBUILDING

APPRENTICESHIP
Level: 1
Hours: 440
Type: ACADEMIC
TRIDENT TECHNICAL COLLEGE

APPRENTICESHIP
Level: 1
Hours: 16
Type: TRADE THEORY
CHARLESTON NAVAL SHIPYARD

CENTRIFugal CASTING
Level: 1
Hours: 6.67
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

TILT MACHINE CASTING
Level: 1
Hours: 6.67
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

ANALYSIS OF CASTING
Level: 1
Hours: 20
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

MARKING TABLE & INSPECTION
Level: 1
Hours: 6.67
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

NON-FER ALLOYS MOLD MAKING FDL
Level: 1
Hours: 6.67
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD
MOLDER

CHILLS, VENTS, FILLETS, POURING
Level: 1
Hours: 6.67
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

MOLD FUNDA/ALUM, MAGNESIUM ALLOY
Level: 1
Hours: 6.67
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

MOLDING FUNDA/FERROUS ALLOYS
Level: 1
Hours: 6.67
Type: TRADE THEORY
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Level: 1
Hours: 6.67
Type: TRADE THEORY
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Level: 1
Hours: 6.67
Type: TRADE THEORY
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HEAT TRANSFER & SOLIDIFICATION
Level: 1
Hours: 2.67
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

SHRINKAGE & RISERS
Level: 1
Hours: 10
Type: TRADE THEORY
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FEEDING DIST/ATMOSPHERIC PRESS
Level: 1
Hours: 5
Type: TRADE THEORY
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MOLDER

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Level: 1
Hours: 6.67
Type: TRADE THEORY
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Level: 1
Hours: 6.67
Type: TRADE THEORY
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HORIZONTAL GRATING III
Level: 1
Hours: 2.67
Type: TRADE THEORY
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VERTICAL GRATING I
Level: 1
Hours: 2.67
Type: TRADE THEORY
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Hours: 2.67
Type: TRADE THEORY
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VERTICAL GRATING III
Level: 1
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Type: TRADE THEORY
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HEAT TRANSFER & SOLIDIFICATION
Level: 1
Hours: 2.67
Type: TRADE THEORY
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Level: 1
Hours: 2.67
Type: TRADE THEORY
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MOLDER

CASTING INSPECTION

Level: 1
Hours: 2.67
Type: TRADE THEORY
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FLOW OF MOLTEN METAL I

Level: 1
Hours: 2.67
Type: TRADE THEORY
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FLOW OF MOLTEN METAL II

Level: 1
Hours: 2.67
Type: TRADE THEORY
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Level: 1
Hours: 2.67
Type: TRADE THEORY
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Level: 1
Hours: 2.67
Type: TRADE THEORY
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CEMENT AND CORE SANDS

Level: 1
Hours: 2.67
Type: TRADE THEORY
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SAND TESTING PROCEDURES

Level: 1
Hours: 2.67
Type: TRADE THEORY
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MOLD CORE WASH

Level: 1
Hours: 2.67
Type: TRADE THEORY
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MOLDER

CLASSIFICATION OF FOUNDRIES Level: 1
Hours: 2.67
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Hours: 2.67
Type: TRADE THEORY
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CORES CORE-MAKING PROCESS Level: 1
Hours: 2.67
Type: TRADE THEORY
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Hours:
Type: TRADE THEORY
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Hours: 2.67
Type: TRADE THEORY
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Level: 1
Hours: 1.33
Type: TRADE THEORY
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Level: 1
Hours: 2.67
Type: TRADE THEORY
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HAND & POWER TOOLS
Level: 1
Hours: 2.67
Type: TRADE THEORY
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Level: 1
Hours: 2.67
Type: TRADE THEORY
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Hours: 2.67
Type: TRADE THEORY
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Level: 1
Hours: 2.67
Type: TRADE THEORY
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Level: 1
Hours: 400
Type: TRADE THEORY
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ORDNANCE EQUIP
MECHANIC

APPRENTICESHIP

Level: 1
Hours: 720
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD
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PAINTER

APPRENTICESHIP
Level: 1
Hours: 8,000
Type: ACADEMIC & TRADE THEORY
GENERAL DYNAMICS/QUINCY

APPRENTICESHIP
Level: 1
Hours: 6,144
Type: TRADE THEORY
INGALLS SHIPBUILDING DIVISION

APPRENTICESHIP
Level: 1
Hours: 400
Type: ACADEMIC
TRIDENT TECHNICAL COLLEGE

APPRENTICESHIP
Level: 1
Hours: 126
Type: TRADE THEORY
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APPRENTICESHIP
Level: 1
Hours: 432
Type: ACADEMIC & TRADE THEORY
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Level: 1
Hours: 2
Type: TRADE THEORY
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NOMENCLATURE OF NAVAL VESSELS
Level: 1
Hours: 2
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

HEALTH, SAFETY & EQUIPMENT
Level: 1
Hours: 4
Type: TRADE THEORY
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DIRECTORY OF COURSES

PAINTER

CHEMICAL TERMS OF PAINT
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

USE OF SPRAY GUN
Level: 1
Hours: 4
Type: TRADE THEORY
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Level: 1
Hours: 4
Type: TRADE THEORY
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MAIN PIGMENTS IN PAINT
Level: 1
Hours: 4
Type: TRADE THEORY
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WHAT NOT TO PAINT AND WHY
Level: 1
Hours: 4
Type: TRADE THEORY
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PAINT REMOVAL
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

ANTI FOULING PAINT
Level: 1
Hours: 4
Type: TRADE THEORY
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PICKLING OF STEEL
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

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PAINTER

SPRAYING OF TANKS
Level: 1
Hours: 2.67
Type: TRADE THEORY
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BOTTOM PAINTING OF SHIPS
Level: 1
Hours: 2.67
Type: TRADE THEORY
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ESTABLISH WATER LINES
Level: 1
Hours: 2.67
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

DRAFT FIGURES AND NAMES
Level: 1
Hours: 2.67
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

SCALING OF DOMES
Level: 1
Hours: 2.67
Type: TRADE THEORY
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RUBBER ON SHAFTS
Level: 1
Hours: 2.67
Type: TRADE THEORY
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SOUND DAMPENING
Level: 1
Hours: 2.67
Type: TRADE THEORY
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VERMICULITE PAINT
Level: 1
Hours: 2.67
Type: TRADE THEORY
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PAINTER

MASKING OFF AREAS
Level: 1
Hours: 2.67
Type: TRADE THEORY
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USE OF DROP CLOTHES
Level: 1
Hours: 2.67
Type: TRADE THEORY
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FAIRWATERS, SKEGS
Level: 1
Hours: 2.67
Type: TRADE THEORY
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SPECIES OF WOOD
Level: 1
Hours: 2.67
Type: TRADE THEORY
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ABRASIVES
Level: 1
Hours: 2.67
Type: TRADE THEORY
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GLOSSARY OF TERMS
Level: 1
Hours: 2.67
Type: TRADE THEORY
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STAINING
Level: 1
Hours: 2.67
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DISADVANTAGES OF OIL STAINS
Level: 1
Hours: 2.67
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PAINTER

SOLVENTS AND DRIERS
Level: 1
Hours: 2.67
Type: TRADE THEORY
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PIGMENT OIL STAINS
Level: 1
Hours: 2.67
Type: TRADE THEORY
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WOODEN AND FIBERGLASS BOATS
Level: 1
Hours: 2.67
Type: TRADE THEORY
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STENCILLING
Level: 1
Hours: 2.67
Type: TRADE THEORY
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GILDING
Level: 1
Hours: 2.67
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COPPER BOTTOM PAINT
Level: 1
Hours: 2.67
Type: TRADE THEORY
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PRIMERS, EMULSION PAINTS
Level: 1
Hours: 4
Type: TRADE THEORY
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MATERIALS
Level: 1
Hours: 4
Type: TRADE THEORY
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PAINT FORMULAS
Level: 1
Hours: 4
Type: TRADE THEORY
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CODE NUMBERS OF PAINTS
Level: 1
Hours: 4
Type: TRADE THEORY
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USE OF IRON FILLERS
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

CARE OF EQUIPMENT
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

USE OF MATRILS IN BLDG 990 & 816
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

OPERATE SAND BLAST MACHINE
Level: 1
Hours: 4
Type: TRADE THEORY
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SPECIAL PROCESSES ON ANTENNAS
Level: 1
Hours: 4
Type: TRADE THEORY
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MIXING OF MATERIALS
Level: 1
Hours: 4
Type: TRADE THEORY
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PAINTER

USE OF RESPIRATORS
Level: 1
Hours: 4
Type: TRADE THEORY
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USE OF AIRLESS SPRAY
Level: 1
Hours: 4
Type: TRADE THEORY
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DECKING MATERIALS
Level: 1
Hours: 4
Type: TRADE THEORY
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PREPARING DECKS
Level: 1
Hours: 4
Type: TRADE THEORY
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USE OF MIXING MACHINES
Level: 1
Hours: 4
Type: TRADE THEORY
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NON-SKID DECK SURFACES
Level: 1
Hours: 4
Type: TRADE THEORY
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WOOD SURFACE PREPARATION
Level: 1
Hours: 4
Type: TRADE THEORY
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REMOVING OLD FINISH
Level: 1
Hours: 4
Type: TRADE THEORY
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PAINTER

USE OF REMOVERS
Level: 1
Hours: 4
Type: TRADE THEORY
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SHELLAC, LACQUER VARNISH
Level: 1
Hours: 4
Type: TRADE THEORY
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PAINTING OUTSIDE BUILDINGS
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

RIGGING, USE OF ROPES
Level: 1
Hours: 4
Type: TRADE THEORY
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PAINT FAILURES AND REMEDIES
Level: 1
Hours: 4
Type: TRADE THEORY
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WATER PAINTS
Level: 1
Hours: 4
Type: TRADE THEORY
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ACOUSTICAL PAINTS
Level: 1
Hours: 4
Type: TRADE THEORY
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WEATHER CONDITIONS
Level: 1
Hours: 4
Type: TRADE THEORY
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PAINTER

FURNITURE REFINISH
Level: 1
Hours: 4
Type: TRADE THEORY
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PAINTING PLASTER WALLS
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

PAINTING IRREGULAR SURFACES
Level: 1
Hours: 4
Type: TRADE THEORY
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PAINTING STRUTS, RUDDERS
Level: 1
Hours: 4
Type: TRADE THEORY
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TEFLON APPLICATION
Level: 1
Hours: 4
Type: TRADE THEORY
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ARABOL APPLICATION
Level: 1
Hours: 4
Type: TRADE THEORY
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PLANNING & ESTIMATING
Level: 1
Hours: 6.67
Type: TRADE THEORY
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TIME KEEPING
Level: 1
Hours: 6.67
Type: TRADE THEORY
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PAINTER

MATERIAL REQUEST
Level: 1
Hours: 6.67
Type: TRADE THEORY
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JOB ORDERS
Level: 1
Hours: 6.67
Type: TRADE THEORY
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NIGHT LETTERS
Level: 1
Hours: 6.67
Type: TRADE THEORY
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LEAVE SLIPS, SHOP REPORTS
Level: 1
Hours: 13.34
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

APPRENTICESHIP
Level: 1
Hours: 8,000
Type: ACADEMIC & TRADE THEORY
NEWPORT NEWS SHIPBUILDING

APPRENTICESHIP
Level: 1
Hours: 800
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD

APPRENTICESHIP
Level: 1
Hours: 400
Type: TRADE THEORY
PEARL HARBOR NAVAL SHIPYARD

APPRENTICESHIP
Level: 1
Hours: 600
Type: ACADEMIC & TRADE THEORY
PORTSMOUTH NAVAL SHIPYARD
PAINTER

PAINT & SURFACE PREPARATION
Level: 1/2
Hours: 5
Type: TRADE THEORY
PETE RSON BUILDERS, INC.

CONDOR
Level: 1/2
Hours: 3
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

PAINT SCHEDULE
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

DECONTAMINATION
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

HOUSEKEEPING
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

GRADE A
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

SHI PYARD COATING
Level: 3
Hours: 6
Type: TRADE THEORY
BETHLEHEM STEEL/SPARROWS POINT

CHIEF FUNCTIONS OF PAINT
Level: I
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHI PYARD
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PATTERNMAKER

APPRENTICESHIP
Level: 1
Hours: 8,000
Type: ACADEMIC & TRADE THEORY
NEWPORT NEWS SHIPBUILDING

APPRENTICESHIP
Level: 1
Hours: 640
Type: ACADEMIC
TRIDENT TECHNICAL COLLEGE

APPRENTICESHIP
Level: 1
Hours: 72
Type: TRADE THEORY
CHARLESTON NAVAL SHIPYARD

ADV PATTERNMAKING
Level: 1
Hours: 4
Type: TRADE THEORY
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ADV PATTERNMAKING, CONSTR OF.
Level: 1
Hours: 4
Type: TRADE THEORY
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SKELTON & SWEEP PATT/RED ELBOW
Level: 1
Hours: 4
Type: TRADE THEORY
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GEN SHIPWORK-SHIP LINE, MOCK-UP
Level: 1
Hours: 4
Type: TRADE THEORY
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REV OF TRIG & COMPOUND ANGLES
Level: 1
Hours: 4
Type: TRADE THEORY
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REV OF VAR METALS, WGT OF CAST
Level: 1
Hours: 4
Type: TRADE THEORY
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CAREER COURSE FOR PATTERNMAKER
Level: 1
Hours: 64
Type: TRADE THEORY
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STRUT PATTERNS
Level: 1
Hours: 4
Type: TRADE THEORY
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STRUT & SECTION DEV.
Level: 1
Hours: 4
Type: TRADE THEORY
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STRUT DEV: ARMS, PALM, CORE
Level: 1
Hours: 4
Type: TRADE THEORY
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PROPELLERS: LAYOUT
Level: 1
Hours: 4
Type: TRADE THEORY
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PROP DEV: A-HUB AND CORE BOY
Level: 1
Hours: 4
Type: TRADE THEORY
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PROP DEV: SPINDLE ALIGNMENT
Level: 1
Hours: 4
Type: TRADE THEORY
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PROP DEV: FILLETS, BATTENS, STOOL
Level: 1
Hours: 4
Type: TRADE THEORY
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HULL PRTNS: MOLD LOFT, SHIP LINE
Level: 1
Hours: 4
Type: TRADE THEORY
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SHIP LINES: DECK CAST, OFFSETS
Level: 1
Hours: 4
Type: TRADE THEORY
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LAYOUT: MOLD LOFT TEMPLATES
Level: 1
Hours: 4
Type: TRADE THEORY
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MOCK-UPS & MODELS: CONSTRUCTION
Level: 1
Hours: 4
Type: TRADE THEORY
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STRUT PTRNS: MOLD LOFT TEMPLATE
Level: 1
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Type: TRADE THEORY
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STRUT PATTERNS: LAYOUT
Level: 1
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STRUT LAYOUT
Level: 1
Hours: 4
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MOLD PRAC FOR STRUT PATTERNS
   Level: 1
   Hours: 4
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GLOBE VALVES: LAYOUT OF PATTERN
   Level: 1
   Hours: 4
   Type: TRADE THEORY
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GLOBE VALVES: PTRN CONSTR, MOLD
   Level: 1
   Hours: 4
   Type: TRADE THEORY
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GLOBE VALVES: PREP LUMBER, LATHE
   Level: 1
   Hours: 4
   Type: TRADE THEORY
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LATHE: TURNING GLOBE & BONNET
   Level: 1
   Hours: 4
   Type: TRADE THEORY
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GLOBE VALVES: PTRN MANU, FLANGES
   Level: 1
   Hours: 4
   Type: TRADE THEORY
   PHILADELPHIA NAVAL SHIPYARD

CORE-BOX FOR GLOBE VALVES
   Level: 1
   Hours: 4
   Type: TRADE THEORY
   PHILADELPHIA NAVAL SHIPYARD

CORE-BOX: CORE SEAT, JIG & GUIDE
   Level: 1
   Hours: 4
   Type: TRADE THEORY
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**PATTERNMAKER**

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<td>NOZZLES PATTERN: LAYOUT, TURNING</td>
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<td>LAGGING STAVE WORK: DEV &amp; ADV</td>
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DEV OF PATTERNS: BASIC LINES  Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

MANU OF PARTS FOR PATTERNS  Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

SHAPING: CONSTR LINES, CASTING  Level: 1
Hours: 4
Type: TRADE THEORY
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PATTERN COMPLETION  Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

HAND WHEELS: LAYOUT, METH MOLDIN  Level: 1
Hours: 4
Type: TRADE THEORY
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STOCK PREPARATION HAND WHEELS  Level: 1
Hours: 4
Type: TRADE THEORY
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ASSEMBLE & CHECKING HAND WHEEL  Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

STAVING: LAYOUT AND BUILDING  Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD
LATHE WORK: TYPES WOOD LATHES
Level: 1
Hours: 4
Type: TRADE THEORY
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LATHE TOOLS: TYPES, GRINDING
Level: 1
Hours: 4
Type: TRADE THEORY
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TURNING MATERIAL: SEL OF STOCK
Level: 1
Hours: 4
Type: TRADE THEORY
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MOUNTING: METHODS OF TURNING
Level: 1
Hours: 4
Type: TRADE THEORY
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LATHE WORK: TECHNIQUES & TOOLS
Level: 1
Hours: 4
Type: TRADE THEORY
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FACE PLATE: LATHES & MOUNTING
Level: 1
Hours: 4
Type: TRADE THEORY
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FILLETS: TYPES & APPLICATIONS
Level: 1
Hours: 4
Type: TRADE THEORY
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SAFETY PRECAUTIONS
Level: 1
Hours: 4
Type: TRADE THEORY
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PATTERNMAKER

PATTERN SHOP PROCESSES/TECHNIQ Level: 1
Hours: 4
Type: TRADE THEORY
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CORE PRINTS: CONSTRUCTION OF Level: 1
Hours: 4
Type: TRADE THEORY
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TEMPLATES: PURPOSE & DEVELOPMENT Level: 1
Hours: 4
Type: TRADE THEORY
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SEGMENTS: ADV, DEV FROM LAYOUT Level: 1
Hours: 4
Type: TRADE THEORY
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SEGMENTS: LAYOUT, CUTTING, GLUING Level: 1
Hours: 4
Type: TRADE THEORY
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LAGGING: PATTERN MODIFICATION Level: 1
Hours: 4
Type: TRADE THEORY
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RELATED PRACTICES: BLUEPRINTS Level: 1
Hours: 4
Type: TRADE THEORY
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RELATED PRAC: FLASK FOR MOLDING Level: 1
Hours: 4
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<td>PATTERN CONSTR &amp; MACHINERY</td>
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<td>HAND TOOLS: BENCH PLANES, GRIND</td>
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MACHINERY: WOODLATHES, SAFE FACT Level: 1
Hours: 4
Type: TRADE THEORY
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LAYOUT: BOARDS & GEOMETRY Level: 1
Hours: 4
Type: TRADE THEORY
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MOLDING TECH: LOOSE PIECES Level: 1
Hours: 4
Type: TRADE THEORY
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FOUNDRIES: FERROUS/NON-FERROUS Level: 1
Hours: 4
Type: TRADE THEORY
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INTRO TO TRADE: HISTORY & TERMS Level: 1
Hours: 4
Type: TRADE THEORY
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PHASES OF PATTERNMAKING Level: 1
Hours: 4
Type: TRADE THEORY
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LUMBER: TYPES/ PLASTER Level: 1
Hours: 4
Type: TRADE THEORY
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PATTERN SUPPLIES: GLUE, EXPOXIES Level: 1
Hours: 4
Type: TRADE THEORY
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PATTERNMAKER

CONSTR TOOLS: HAMMERS, BRACE, ETC
Level: 1
Hours: 4
Type: TRADE THEORY
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POWER DRIVE PORTABLE HAND TOOL
Level: 1
Hours: 4
Type: TRADE THEORY
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LAYOUT TOOLS/MEASURING TOOLS
Level: 1
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

GENERAL SAFETY
Level: 1
Hours: 6
Type: TRADE THEORY
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APPRENTICESHIP
Level: 1
Hours: 660
Type: TRADE THEORY
PEARL HARBOR NAVAL SHIPYARD
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PIPEFITTER

HEATING SYS & TROUBLE SHOOTING
Level: 1
Hours: 160
Type: TRADE THEORY
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CAULKING JOINTS
Level: 1
Hours: 37
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

BASIC HYDRAULICS
Level: 1
Hours: 40
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

BASIC PNEUMATICS
Level: 1
Hours: 40
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

DRAINAGE SYSTEMS
Level: 1
Hours: 210
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

BASIC PLUMBING
Level: 1
Hours: 132
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

PRE-EMPLOYMENT
Level: 1
Hours: 200
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

ON THE JOB TRAINING
Level: 1
Hours: 400
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
 DIRECTORY OF COURSES
------------------------

PIPEFITTER

APPRENTICESHIP
Level: 1
Hours: 432
Type: ACADEMIC & TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

THREADING PIPE
Level: 1
Hours: 64
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

APPRENTICESHIP
Level: 1
Hours: 8,000
Type: ACADEMIC & TRADE THEORY
NEWPORT NEWS SHIPBUILDING

MARINE PIPEFITTING: BASIC
Level: 1
Hours: 160
Type: TRADE THEORY
SAN DIEGO TECHNICAL INSTITUTE

2935-06
Level: 1
Hours:
Type: ACADEMIC
HARBOR OCCUPATIONAL CENTER

PIPEFITTER LEARNER TRAINING
Level: 1
Hours:
Type: TRADE THEORY
BAKER MARINE CORP.

APPRENTICESHIP
Level: 1
Hours: 8,000
Type: ACADEMIC & TRADE THEORY
GENERAL DYNAMICS/QUINCY

PIPEFITTER
Level: 1
Hours: 520
Type: ACADEMIC & TRADE THEORY
R.E. DERECKTOR OF R.I., INC.
### DIRECTORY OF COURSES

**PIPEFITTER**

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PIPEFITTER

APPRENTICESHIP
Level: 1
Hours: 800
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD

SHOP ORIENTATION
Level: 1/2
Hours: 24
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

THREADING AND CLEANING
Level: 1/2
Hours: 24
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

CLASSIFICATION OF PIPE
Level: 1/2
Hours: 24
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

BLUEPRINT READING
Level: 1/2
Hours: 24
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

LAYING COMP. BENDS
Level: 1/2
Hours: 27
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

DEV. BRANCH PATTERNS
Level: 1/2
Hours: 26
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

TEMPLATE FABRICATION
Level: 1/2
Hours: 12
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

A-100
DIRECTORY OF COURSES
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PIPEFITTER

LIFING AND HANDLING
Level: 1/2
Hours: 8
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

PROTECTION OF PIPE AND CABLE
Level: 1/2
Hours: 2
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

VALVE ORIENTATION
Level: 1/2
Hours: 2
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

PIPE DAMAGE
Level: 1/2
Hours: 2
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

FITTING FLEXIBLE CON.
Level: 1/2
Hours: 3
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

NUCLEAR REFRESHER
Level: 1/2
Hours: 12
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

ORIGINATING PAPER
Level: 1/2
Hours: 3
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

MATERIAL IDENTIFICATION
Level: 1/2
Hours: 2
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
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## PIPEFITTING

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PIPEFITTER

CHT SYSTEMS
Level: 1/2
Hours: 8
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

SHIP SERV. SYSTEM
Level: 1/2
Hours: 8
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

INSULATION PRACTICES
Level: 1/2
Hours: 25
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

SKETCHING FROM PRINTS
Level: 1/2
Hours: 28
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

PIPEFITTING
Level: 1/2
Type: ACADEMIC & TRADE THEORY
TODD PACIFIC SHIPYARDS/LOS ANGELES

MARINE PIPEFITTING
Level: 1/2
Hours: 90
Type: TRADE THEORY
FLORIDA JUNIOR COLLEGE - JACKSONVILLE

QUALITY REVIEW
Level: 1/2/3
Hours: 1
Type: TRADE THEORY
GENERAL DYNAMICS\ELECTRIC BOAT

SHIP SILENCING
Level: 1/2/3
Hours: 2
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
DIRECTORY OF COURSES
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PIPEFITTER

SILVER BRAZING
Level: 2
Hours: 160
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

MARINE PIPEFITTING
Level: 2
Hours: 300
Type: ACADEMIC & TRADE THEORY
SAN DIEGO CITY COLLEGE

BLUEPRINT READING
Level: 2
Hours: 40
Type: ACADEMIC & TRADE THEORY
DRAVO CORPORATION

PROJECT MANAGEMENT
Level: 3
Hours: 32
Type: ACADEMIC
PORTSMOUTH NAVAL SHIPYARD
DIRECTORY OF COURSES

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PIEPFITTER

ACERTS/CAL SYSTEM
Level: 1/2
Hours: 3
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

LIFTING AND HANDLING
Level: 1/2
Hours: 8
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

FLEXIBLE CONNECTORS
Level: 1/2
Hours: 3
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

MIL STANDARDS & SPECIFICATIONS
Level: 1/2
Hours: 12
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

MAIN STEAM
Level: 1/2
Hours: 8
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

CONDENSATE SYSTEM
Level: 1/2
Hours: 8
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

AUXILLARY STEAM SYSTEM
Level: 1/2
Hours: 24
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

STEAM DRAINS
Level: 1/2
Hours: 12
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

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DIRECTORY OF COURSES
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PIPEFITTER

FUELOIL SYSTEMS
Level: 1/2
Hours: 16
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

LO AND BALLASTING SYSTEMS
Level: 1/2
Hours: 12
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

HP, LP, MP SYSTEMS
Level: 1/2
Hours: 20
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

HYDRAULIC SYSTEMS
Level: 1/2
Hours: 14
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

DIESEL SYSTEMS
Level: 1/2
Hours: 8
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

DISTILLATION SYSTEMS
Level: 1/2
Hours: 8
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

REFREGERATION & AIR CONDITIONING
Level: 1/2
Hours: 4
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD

FRESH AND SEA WATER PIPING
Level: 1/2
Hours: 20
Type: TRADE THEORY
PHILADELPHIA NAVAL SHIPYARD
DIRECTORY OF COURSES

PIPEWELDER

APPRENTICESHIP
Level: 1
Hours: 6,144
Type: TRADE THEORY
INGALLS SHIPBUILDING DIVISION

PIPEWELDER
Level: 2
Hours: 20
Type: TRADE THEORY
JEFFBOAT, INC.

SELECTION PROG.
Level: 2
Hours: 104
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

DIAMETRICS
Level: 2
Hours: 160
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

BI-METALLIC
Level: 2
Hours: 32
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

CARBON STEEL
Level: 2
Hours: 80
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

CRES
Level: 2
Hours: 80
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

CUNI
Level: 2
Hours: 96
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
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## PIPEWELDER

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PIPEWELDER

MATERIAL IDENTIFICATION

Level: 2
Hours: 3
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
### DIRECTORY OF COURSES

#### RIGGER

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Hours:  
Type: TRADE THEORY  
NUS-TRAINING CORPORATION

RIGGER SAFETY TRAINING  Level: 2  
Hours:  
Type: ACADEMIC  
ICS-INTEXT

CRANE & RIGGING SAFETY CONSID.  Level: 2/3  
Hours:  
Type: ACADEMIC & TRADE THEORY  
BOB DEBENEDICTIS, INC.
DIRECTORY OF COURSES

SHEETMETAL
MECHANIC

APPRENTICESHIP
Level: 1
Hours: 8,000
Type: ACADEMIC & TRADE THEORY
NEWPORT NEWS SHIPBUILDING

SHEETMETAL: BASIC
Level: 1
Hours: 160
Type: TRADE THEORY
SAN DIEGO TECHNICAL INSTITUTE

2935-07
Level: 1
Hours: 8,000
Type: ACADEMIC
HARBOR OCCUPATIONAL CENTER

APPRENTICESHIP
Level: 1
Hours: 8,000
Type: ACADEMIC & TRADE THEORY
GENERAL DYNAMICS/QUINCY

APPRENTICESHIP
Level: 1
Hours: 6,144
Type: TRADE THEORY
INGALLS SHIPBUILDING DIVISION

APPRENTICESHIP
Level: 1
Hours: 6,000
Type: ACADEMIC & TRADE THEORY
BETHLEHEM STEEL/SPARROWS POINT

APPRENTICESHIP
Level: 1
Hours: 6,000
Type: ACADEMIC & TRADE THEORY
BATH IRON WORKS CORPORATION

APPRENTICESHIP
Level: 1
Hours: 520
Type: ACADEMIC
TRIDENT TECHNICAL COLLEGE
### DIRECTORY OF COURSES

**SHEETMETAL MECHANIC**

**APPRENTICESHIP**
- Level: 1
- Hours: 32
- Type: TRADE THEORY
  - CHARLESTON NAVAL SHIPYARD

**APPRENTICESHIP**
- Level: 1
- Hours: 432
- Type: ACADEMIC & TRADE THEORY
  - GENERAL DYNAMICS/ELECTRIC BOAT

**PRE-EMPLOYMENT**
- Level: 1
- Hours: 200
- Type: TRADE THEORY
  - GENERAL DYNAMICS/ELECTRIC BOAT

**ORIENTATION**
- Level: 1
- Hours: 
- Type: TRADE THEORY
  - PHILADELPHIA NAVAL SHIPYARD

**SAFETY**
- Level: 1
- Hours: 
- Type: TRADE THEORY
  - PHILADELPHIA NAVAL SHIPYARD

**NOMENCLATURE/SHIP TERMS**
- Level: 1
- Hours: 
- Type: TRADE THEORY
  - PHILADELPHIA NAVAL SHIPYARD

**METALS & THEIR PROPERTIES**
- Level: 1
- Hours: 
- Type: TRADE THEORY
  - PHILADELPHIA NAVAL SHIPYARD

**HAND TOOLS**
- Level: 1
- Hours: 
- Type: TRADE THEORY
  - PHILADELPHIA NAVAL SHIPYARD

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### Sheetmetal Mechanic

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DIRECTORY OF COURSES

SHIPFITTER

TACKING/WELDING CLASS
Level: 1
Hours: 24
Type: TRADE THEORY
PETERSON BUILDERS, INC.

APPRENTICESHIP
Level: 1
Hours: 6,000
Type: ACADEMIC & TRADE THEORY
BETHLEHEM STEEL/SPARROWS POINT

APPRENTICESHIP
Level: 1
Hours: 6,000
Type: ACADEMIC & TRADE THEORY
BATH IRON WORKS CORPORATION

APPRENTICESHIP
Level: 1
Hours: 6,000
Type: ACADEMIC & TRADE THEORY
BATH IRON WORKS CORPORATION

APPRENTICESHIP
Level: 1
Hours: 560
Type: ACADEMIC
TRIDENT TECHNICAL COLLEGE

APPRENTICESHIP
Level: 1
Hours: 132
Type: TRADE THEORY
CHARLESTON NAVAL SHIPYARD

APPRENTICESHIP
Level: 1
Hours: 432
Type: ACADEMIC & TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

ON THE JOB TRAINING
Level: 1
Hours: 440
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

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DIRECTORY OF COURSES

SHIPFITTER

PRE-EMPLOYMENT
Level: 1
Hours: 240
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

APPRENTICESHIP
Level: 1
Hours: 560
Type: TRADE THEORY
PEARL HARBOR NAVAL SHIPYARD

APPRENTICESHIP
Level: 1
Hours: 1,000
Type: ACADEMIC & TRADE THEORY
PORTSMOUTH NAVAL SHIPYARD

APPRENTICESHIP
Level: 1
Hours: 1,080
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD

SHIPFITTER TRAINING COURSE
Level: 1/2
Hours: 96
Type: ACADEMIC & TRADE THEORY
ALABAMA MARITIME CORPORATION

SHIPFITTING
Level: 1/2
Hours: 90
Type: TRADE THEORY
FLORIDA JUNIOR COLLEGE - JACKSONVILLE

BLUEPRINT READING
Level: 1/2
Hours: 90
Type: TRADE THEORY
FLORIDA JUNIOR COLLEGE - JACKSONVILLE

LIFTING AND HANDLING
Level: 1/2
Hours: 8
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
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DIRECTORY OF COURSES

SHIPFITTER

PAPERWORK
Level: 2
Hours: 2
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

POST EMPLOYMENT
Level: 2
Hours: 40
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
DIRECTORY OF COURSES

SHIPWRIGHT

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DIRECTORY OF COURSES

SHIPWRIGHT

APPRENTICESHIP

Level: 1
Hours: 116
Type: TRADE THEORY
CHARLESTON NAVAL SHIPYARD

APPRENTICESHIP

Level: 1
Hours: 440
Type: TRADE THEORY
PEARL HARBOR NAVAL SHIPYARD

APPRENTICESHIP

Level: 1
Hours: 740
Type: ACADEMIC & TRADE THEORY
PORTSMOUTH NAVAL SHIPYARD

APPRENTICESHIP

Level: 1
Hours: 1700
Type: ACADEMIC & TRADE THEORY
LONG BEACH NAVAL SHIPYARD
DIRECTORY OF COURSES

TACKER/
BURNER

PROTECTION OF PIPE & COMPONENT
Level: 2
Hours: 2
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
DIRECTORY OF COURSES

WELDER

APPRENTICESHIP
Level: 1
Hours: 8,000
Type: ACADEMIC & TRADE THEORY
NEWPORT NEWS SHIPBUILDING

ARC WELDING FITTING
Level: 1
Hours: 200
Type: TRADE THEORY
SAN DIEGO TECHNICAL INSTITUTE

APPRENTICESHIP
Level: 1
Hours: 2000
Type: ACADEMIC & TRADE THEORY
HBC BARGE, INC.

WELDING
Level: 1
Hours:
Type: TRADE THEORY
TODD PACIFIC SHIPYARDS/LOS ANGELES

APPRENTICESHIP
Level: 1
Hours: 8,000
Type: ACADEMIC & TRADE THEORY
GENERAL DYNAMICS/QUINCY

APPRENTICESHIP
Level: 1
Hours: 6,144
Type: TRADE THEORY
INGALLS SHIPBUILDING DIVISION

QUALIFICATIONS TRAINING
Level: 1
Hours: 24
Type: TRADE THEORY
PETERSON BUILDERS, INC.

WELDING
Level: 1
Hours: 280
Type: TRADE THEORY
NATIONAL STEEL & SHIPBUILDING COMPANY
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WELDER

COMB/WELDER
Level: 1/2
Hours: 1040
Type: ACADEMIC & TRADE THEORY
SAN DIEGO CITY COLLEGE

WELDING COURSE I
Level: 1/2
Hours: Not Indicated
Type: TRADE THEORY
SO. WESTERN OREGON COMMUNITY COLLEGE

UPGRADING & CERT. OF WELDERS
Level: 1/2
Hours: Not Indicated
Type: TRADE THEORY
ALABAMA INSTITUTE DEV. TRAINING INST.

BASIC WELDING
Level: 1/2
Hours: 320
Type: TRADE THEORY
GENERAL DYNAMICS/QUINCY

SEMI AUTOMATIC WELDING
Level: 1/2
Hours: 120
Type: TRADE THEORY
GENERAL DYNAMICS/QUINCY

AUTOMATIC WELDING
Level: 1/2
Hours: 80
Type: TRADE THEORY
GENERAL DYNAMICS/QUINCY

WELDING
Level: 1/2
Hours: 225
Type: TRADE THEORY
FLORIDA JUNIOR COLLEGE - JACKSONVILLE

PRE-HEAT
Level: 1/2
Hours: 4
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT
WELDER

MACHINE BREAKDOWN
Level: 1/2
Hours: 16
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

CERAMIC TILE (PULSE)
Level: 1/2
Hours: 40
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

CERAMIC TILE (SMAW)
Level: 1/2
Hours: 32
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

FLUX CORE, NON-NUCLEAR
Level: 1/2
Hours: 80
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

FLUX CORE, NUCLEAR
Level: 1/2
Hours: 80
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

GNAW MACHINE SPRAY
Level: 1/2
Hours: 120
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

GMAW MACHINE PULSE
Level: 1/2
Hours: 120
Type: TRADE THEORY
GENERAL DYNAMICS/ELECTRIC BOAT

COMB WELDING
Level: 2
Hours: 600+
Type: TRADE THEORY
CENTRE CITY SKILL CENTER
## DIRECTORY OF COURSES

### WELDER

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SECTION B

DIRECTORY OF TRAINING AIDS

A List of Resources Available
For Skilled Trades Training

December 1983
SECTION B

DIRECTORY OF TRAINING AIDS

This directory contains information on training aids which supplement skilled trades training courses for 20 trades, including those offered to "All Trades".

Information about each training aid is displayed in the following format:

<table>
<thead>
<tr>
<th>TITLE</th>
<th>TYPE OF TRAINING AID</th>
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SOURCE OF TRAINING AID

Training aids are listed according to trade name in alphabetical order, as found at the top of each page. The index on the next page provides the reader with the page number on which each trade begins.

Within each trade, information is indexed according to the type of training aid, in the following order:

- Article
- Book
- Charts/Posters
- Manual
- Movie
- Slides
- Videotapes
- Workbook

The level of training is:

1 = Apprentice
2 = Mechanic
3 = Manager

Definitions for these three levels, as well as for the trades, can be found on pages i-iv of this document.

Contact information for the source of the training aids can be found in Section C, Part 1 “List of Participating Shipyards” if it is a shipyard source, or in section C, Part 3 “List of Sources for Training Aids”.

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# DIRECTORY OF TRAINING AIDS

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DIRECTORY OF TRAINING AIDS

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ALL TRADES

WEEKLY SAFETY TIPS
OFFICE SAFETY & HEALTH ADMINISTRATION
BOOK
LEVEL: 2/3

BACK OWNER'S MANUAL
PATIENT INFORMATION MANUAL
BOOK
LEVEL: 1/2/3

MERCHANT SHIP CONSTRUCTION
BROWN, SON & FERGUSON, LTD.
BOOK
LEVEL: 1/2/3

SHIP DESIGN & CONSTRUCTION
SNAME
BOOK
LEVEL: 1/2/3

SHIP & AIRCRAFT FAIRING & DEV
CORNELL MARITIME PRESS
BOOK
LEVEL: 1/2/3

ENGINEERING DRAWING
MCGRaw–HIlL BOOK COMPANY
BOOK
LEVEL: 1/2/3

SHIPFITTING HANDBOOK
GENERAL DYNAMICS/QUINcY
BOOK
LEVEL: 1/2/3

NATL SHIPBLDG RESEARCH PROG REPORTS
MARITIME ADMINISTRATION
BOOK
LEVEL: 1/2/3

MACHINE TOOL OPERATIONS
MCGRaw–HIlL BOOK COMPANY
BOOK
LEVEL: 1/2/3
MODERN SHOP PRACTICES
   AMERICAN TECHNICAL SOCIETY
   BOOK
   LEVEL: 1/2/3

INTRO TO STEEL SHIPBUILDING
   MCGRAW-HILL BOOK COMPANY
   BOOK
   LEVEL: 1

PRACTICAL MATHEMATICS
   AUTHOR: PALMER, BIBB, JARVIS & MRACHEK
   BOOK
   LEVEL: 1

MATHEMATICS - A BASIC COURSE
   CAMBRIDGE BOOK COMPANY
   BOOK
   LEVEL: 1

BASIC INDUSTRIAL MATH
   MCGRAW-HILL BOOK COMPANY
   BOOK
   LEVEL: 1

MATHEMATICS FOR TECH & VOC SCHOOLS
   JOHN WILEY & SONS, INC.
   BOOK
   LEVEL: 1

PRACTICAL MATHEMATICS
   MCGRAW-HILL BOOK COMPANY
   BOOK
   LEVEL: 1

MATHEMATICS, VOLUME I
   NAVPERS 10069-C
   BOOK
   LEVEL: 1

INTRO TO TECHNICAL MATHEMATICS
   CUMMINGS PUBLISHING COMPANY
   BOOK
   LEVEL: 1
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ELEMENTARY METALLURGY  
DOVER PUBLICATIONS, INC.  
LEVEL: 1

BASIC BLUEPRINT READING & SKETCHING  
DELMAR PUBLISHERS  
LEVEL: 1

MECHANICAL DRAWING  
MCGRRAW-HILL BOOK COMPANY  
LEVEL: 1

BLUEPRINT READING & SKETCHING  
NAVPERS 10077-D  
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SIZE AND FORMAT  
AMERICAN NATIONAL STANDARDS INSTITUTE, INC.  
LEVEL: 1

LINE CONVENTIONS, SECTIONING, LETTE  
AMERICAN NATIONAL STANDARDS INSTITUTE, INC.  
LEVEL: 1

PROJECTIONS  
AMERICAN NATIONAL STANDARDS INSTITUTE, INC.  
LEVEL: 1

PICTORIAL DRAWING  
AMERICAN NATIONAL STANDARDS INSTITUTE, INC.  
LEVEL: 1

DIMENSIONING & TOLERANCING (ENGNR)  
AMERICAN NATIONAL STANDARDS INSTITUTE, INC.  
LEVEL: 1
DIRECTORY OF TRAINING AIDS

ALL TRADES

SCREW THREADS
AMERICAN NATIONAL STANDARDS INSTITUTE, INC
LEVEL: 1

GEARS, SPLINES AND SERRATIONS
AMERICAN NATIONAL STANDARDS INSTITUTE, INC
LEVEL: 1

GEAR DRAWING STANDARDS
AMERICAN NATIONAL STANDARDS INSTITUTE, INC
LEVEL: 1

FORGINGS
AMERICAN NATIONAL STANDARDS INSTITUTE, INC
LEVEL: 1

METAL STAMPINGS
AMERICAN NATIONAL STANDARDS INSTITUTE, INC
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PLASTICS
AMERICAN NATIONAL STANDARDS INSTITUTE, INC
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MECHANICAL ASSEMBLIES
AMERICAN NATIONAL STANDARDS INSTITUTE, INC
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ELECTRICAL & ELECTRONICS DIAGRAMS
AMERICAN NATIONAL STANDARDS INSTITUTE, INC
LEVEL: 1

INTERCONNECTION DIAGRAMS
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**DIRECTORY OF TRAINING AIDS**

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WOODRUFF KEY AND KEYSLOT DIMENSIONS
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KEYS AND KEYSETS
AMERICAN NATIONAL STANDARDS INSTITUTE, INC

LOCK WASHERS
AMERICAN NATIONAL STANDARDS INSTITUTE, INC

PLAIN WASHERS
AMERICAN NATIONAL STANDARDS INSTITUTE, INC

SURFACE TEXTURE
AMERICAN NATIONAL STANDARDS INSTITUTE, INC

MECHANICAL DRAWING
MCGRAW-HILL BOOK COMPANY

INTERPRETING ENGINEERING DRAWINGS
DELMAR PUBLISHERS

PRACTICES FOR RESPIRATORS
AMERICAN NATIONAL STANDARDS INSTITUTE, INC

MODERN SHIP DESIGN
NAVAL INSTITUTE PRESS
PRACTICAL MATHEMATICS, 6TH ED.

AUTHOR: PALMER, BIBB, JARVIS & MARCHEK

LEVEL: 1

METALLURGY, 5TH ED.

AUTHOR: JOHNSON & WEEKS

LEVEL: 1

INTRODUCTION TO APPLIED PHYSICS

AUTHOR: HARRIS & HEMMERLING

LEVEL: 1

STRENGTH OF MATERIALS, 3RD ED.

AUTHOR: BRENEMAN

LEVEL: 1

ELEMENTS OF MACHINE DESIGN

AUTHOR: ROSENTHAL & BISCHOF

LEVEL: 1

WRITING SKILLS FOR TECH STUDENTS

DELAWARE TECHNICAL & COMMUNITY COLLEGE

LEVEL: 1

HUMAN BEHAVIOR

NAVEDTR 016-01-69-80

LEVEL: 1

INTERPRETING ENGINEERING DRAWINGS

AUTHOR: JENSEN & HINES

LEVEL: 1

MECHANICAL DRAWING, 9TH ED.

MCGRaw-HILL BOOK COMPANY

LEVEL: 1
DIRECTORY OF TRAINING AIDS
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ALL TRADES

ELEM MATH FOR THE TECHNICIAN
   MCGRAW-HILL BOOK COMPANY
   BOOK
   LEVEL: 1

PLANE TRIGONOMETRY
   MCGRAW-HILL BOOK COMPANY
   BOOK
   LEVEL: 1

APPLIED PHYSICS
   MCGRAW-HILL BOOK COMPANY
   BOOK
   LEVEL: 1

INTRO TO STEEL SHIPBUILDING
   MCGRAW-HILL BOOK COMPANY
   BOOK
   LEVEL: 1

LABOR - MANAGEMENT RELATIONS
   MCGRAW-HILL BOOK COMPANY
   BOOK
   LEVEL: 1

STRENGTH OF MATERIALS
   MCGRAW-HILL BOOK COMPANY
   BOOK
   LEVEL: 1

INTERMEDIATE ALGEBRA
   MCGRAW-HILL BOOK COMPANY
   BOOK
   LEVEL: 1

HOW TO SOLVE WORD PROB IN ALGEBRA
   MCGRAW-HILL BOOK COMPANY
   BOOK
   LEVEL: 1

WEBSTER'S NEW COLLEGIATE DICTIONARY
   G. & C. MERRIAM COMPANY
   BOOK
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# Directory of Training Aids

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PRAC. FOR RESPIRATORY PROTECTION  MANUAL
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AERIAL LIFTS: OPER. & SAFETY MANUALS  MANUAL
MARR SCAFFOLDING  LEVEL: 2

TIME MANAGEMENT  MANUAL
HAWAII EDUCATIONAL COUNCIL  LEVEL: 3

DANGER ZONE: YOUR BACK  MOVIE
VISUCOM  LEVEL: 1/2/3

NEW BREATH OF LIFE  MOVIE
PYRAMID FILMS  LEVEL: 1/2/3

MULTIMEDIA STANDARD FIRST AID  MOVIE
AMERICAN RED CROSS SOCIETY  LEVEL: 1/2/3

PRODUCTION OF COPPER  MOVIE
CHARLESTON NAVAL SHIPYARD  LEVEL: 1

PRODUCTION OF STEEL  MOVIE
CHARLESTON NAVAL SHIPYARD  LEVEL: 1

HOW TO ELIMINATE & CONTROL ABSENTEE  MOVIE
BUREAU OF BUSINESS PRACTICES  LEVEL: 3
DIRECTORY OF TRAINING AIDS

ALL TRADES

AVOIDING COMMUNICATION BREAKDOWN
BNA

THIS MATTER OF MOTIVATION
DARTNELL CORP.

THE LAST ROUND
JOURNAL FILMS, INC.

MEANINGS ARE IN PEOPLE
BNA

KNOWING YOUR EMPLOYEES INDV DIFFER
AMERICAN MANAGEMENT ASSOCIATION

DELEGATING
BRM - MCGRAW-HILL FILMS

A PERFECTLY NORMAL DAY
CALLY-CURTIS COMPANY

THE TIME OF YOUR LIFE
CALLY-CURTIS COMPANY

SHIPBUILDING TECHNOLOGY TRANSFER
AVMAST

MOVIE
LEVEL: 3

MOVIE
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MOVIE
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SHIPBUILDING TODAY
AVMAST

REAPS (RSCH & ENGR FOR AUTO/PROD)
AVMAST

NATIONAL SHIPBUILDING RESEARCH PROG
AVMAST

THE APPRENTICE EXPERIENCE
NEWPORT NEWS SHIPBUILDING

SHIPBUILDING . . . TRADES THAT MAKE IT
NEWPORT NEWS SHIPBUILDING

I CHRISTEN THEE...
NEWPORT NEWS SHIPBUILDING

SKILL AND SOPHISTICATION
AVMAST

REBIRTH OF A TANKER
BETHLEHEM STEEL SHIPYARD

CROSS TYPE CONVERSION
MITSUBISHI HEAVY INDUSTRIES, INC.
DIRECTORY OF TRAINING AIDS

ALL TRADES

MITSUBISHI HEAVY INDUSTRIES
MITSUBISHI HEAVY INDUSTRIES, INC.

TOKYO MARU
AVMAST

TO BUILD GIGANTIC SHIPS
AVMAST

SHIPYARD SAFETY
AMERICAN WATERWAYS SHIPYARD CONFERENCE

SHIPYARD OVERVIEW
R.E. DERECKTOR OF R.I., INC.

SCAFFOLD SAFETY
NATIONAL STEEL & SHIPBUILDING COMPANY

SKYCLIMBER SAFETY
NATIONAL STEEL & SHIPBUILDING COMPANY

FACTS ON BACKS
AWS CONFERENCE: SHIPYARD SAFETY TRAINING

QUALITY CIRCLES
PRODUCTIVITY DEVELOPMENT SYSTEMS

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DIRECTORY OF TRAINING AIDS

ALL TRADES

MANAGEMENT DEVELOPMENT
BATH IRON WORKS CORPORATION

THE APPRENTICE EXPERIENCE
NEWPORT NEWS SHIPBUILDING

INDUSTRIAL WEIGHTLIFTER II
INTERNATIONAL FILM BUREAU

NEW PULSE OF LIFE
LONG BEACH NAVAL SHIPYARD

DON'T PUSH YOUR LUCK
LONG BEACH NAVAL SHIPYARD

THE SOUND OF SOUND
LONG BEACH NAVAL SHIPYARD

COLOR OF DANGER
LONG BEACH NAVAL SHIPYARD

ANATOMY OF A GRIEVANCE
LONG BEACH NAVAL SHIPYARD

DELIBERATE MALPRACTICE
LONG BEACH NAVAL SHIPYARD

SLIDES, MOVIE, VIDEO
LEVEL: 3

VIDEOTAPE
LEVEL: 1

VIDEOTAPE
LEVEL: 1/2/3

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DIRECTORY OF TRAINING AIDS

ALL TRADES

TRAINING FOR READINESS
LONG BEACH NAVAL SHIPYARD

ASBESTOS–AN INTRO FOR NEW EMPLOYEES
LONG BEACH NAVAL SHIPYARD

THE LIMITED ASBESTOS WORKER
LONG BEACH NAVAL SHIPYARD

ONLY NUMBER ONE
LONG BEACH NAVAL SHIPYARD

ARBITRATION OF A GRIEVANCE
LONG BEACH NAVAL SHIPYARD

SUPERVISION
LONG BEACH NAVAL SHIPYARD

DRUG ABUSE
LONG BEACH NAVAL SHIPYARD

LABOR MANAGEMENT RELATIONS
LONG BEACH NAVAL SHIPYARD

SAFETY & HEALTH
LONG BEACH NAVAL SHIPYARD

VIDEOTAPE
LEVEL: 1
DIRECTORY OF TRAINING AIDS

ALL TRADES

ZAP: STATIC AWARENESS
    LONG BEACH NAVAL SHipyARD
    VIDEOTAPE
    LEVEL: 1

WOMEN MOVING UP
    LONG BEACH NAVAL SHipyARD
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    LEVEL: 1

SUBMARINE DOCKING
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SHIP NOMENCLATURE
    LONG BEACH NAVAL SHipyARD
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    LEVEL: 1

SHIPYARD SIGNS & SYMBOLS
    LONG BEACH NAVAL SHipyARD
    VIDEOTAPE
    LEVEL: 1

A CALL TO ARMS
    NASHUA CORPORATION
    VIDEOTAPE
    LEVEL: 1

MACHINE TOOL OPERATION
    MCGRaw-HILL BOOK COMPANY
    WORKBOOK
    LEVEL: 1/2/3

BUSINESS ENGLISH ESSENTIALS, 6TH ED
    MCGRaw-HILL BOOK COMPANY
    WORKBOOK
    LEVEL: 1

BASIC MATH SKILLS - A WORKBOOK
    MCGRaw-HILL BOOK COMPANY
    WORKBOOK
    LEVEL: 1
DIRECTORY OF TRAINING AIDS

BOILERMAKER

STEEL SHIPBUILDING
   JACKSON COUNTY JUNIOR COLLEGE

METALLURGY
   JACKSON COUNTY JUNIOR COLLEGE

FIREMAN
   NAVPERS 10520-C

BOILERMAKER 1 & C
   NAVPERS 10537

BOILER TECHNICIAN 3 & 2
   NAVPERS 10535-5

SHEETMETAL PATTERN DRAFTING PROBLEM
   CHARLES A. BENNETT CO., INC.

MECHANICAL MAINT TRAINING: BOILERS
   LONG BEACH NAVAL SHIPYARD

MECHANICAL MAINT TRAINING: BOILERS
   LONG BEACH NAVAL SHIPYARD

HYDROSTATIC TESTING OF BOILERS
   LONG BEACH NAVAL SHIPYARD

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BOILERMAKER

BASIC TECHNICAL DRAWING
INGALLS SHIPBUILDING DIVISION

BLUEPRINT READING FOR SHIPFITTERS
INGALLS SHIPBUILDING DIVISION

WORKBOOK
LEVEL: 1

WORKBOOK
LEVEL: 1
DIRECTORY OF TRAINING AIDS

CARPENTER

WOODWORKING FOR INDUSTRY
CHARLES A. BENNETT CO., INC.
BOOK/WORKBOOK
LEVEL: 1

DEVELOPED IN-HOUSE
R.E. DERECKTOR OF R.I., INC.
SLIDES
LEVEL: 1

BASIC TECHNICAL DRAWING
INGALLS SHIPBUILDING DIVISION
WORKBOOK
LEVEL: 1

BLUEPRINT READING FOR CARPENTERS
INGALLS SHIPBUILDING DIVISION
WORKBOOK
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CARPENTRY I
INGALLS SHIPBUILDING DIVISION
WORKBOOK
LEVEL: 1

CARPENTRY II
INGALLS SHIPBUILDING DIVISION
WORKBOOK
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CARPENTRY III
INGALLS SHIPBUILDING DIVISION
WORKBOOK
LEVEL: 1

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DIRECTORY OF TRAINING AIDS

ELECTRICIAN

BASIC ELECTRICITY & MARINE APPL
HADEN BOOK COMPANY
LEVEL: 1

COMB CIRCUITS, MAGNETISM, & AC THEOR
HADEN BOOK COMPANY
LEVEL: 1

AC THEORY, METERS & BATTERIES
HADEN BOOK COMPANY
LEVEL: 1

MOTORS, GENERATORS & ALTERNATORS
HADEN BOOK COMPANY
LEVEL: 1

ELEC MOTOR CONTROL & BASIC ELECTRON
JACKSON COUNTY JUNIOR COLLEGE
LEVEL: 1

ADV ELECTRONICS & STATIC MOTOR CONT
JACKSON COUNTY JUNIOR COLLEGE
LEVEL: 1

ELECTRICITY ONE-SEVEN
LIBRARY OF CONGRESS: GENERAL SERV. ADMIN.
LEVEL: 1

ELECTRICITY ONE-SEVEN
HAYDON BOOK COMPANY
LEVEL: 2

RELATED INFO: ELECTRICITY VOL I - IV
DELMAR PUBLISHERS
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SOLID STATE ELECTRONICS
  AUTHOR: TEDESCHI AND TABER
  DELMAR PUBLISHERS
  BOOK
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PULSE AND LOGIC CIRCUITS
  DELMAR PUBLISHERS
  BOOK
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ESSENTIALS-ELECTRICITY/ELECTRONICS
  MCGRAW-HILL BOOK COMPANY
  BOOK
  LEVEL: 1

INTRODUCTORY APPLIED PHYSICS
  MCGRAW-HILL BOOK COMPANY
  BOOK
  LEVEL: 1

APPLIED AND INDUSTRIAL ELECTRONICS
  HALL, BRODHEAD-GARRETT COMPANY
  BOOK
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ALTERNATING CURRENT FUNDAMENTALS
  DELMAR PUBLISHERS
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SYNCHROS
  NAVORD OP 1303
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FIRE MARSHALL/GAS ENGINEERS MANUAL
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ELECTRONIC CIRCUITS/SYSTEMS/SUPPLEM
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ELECTRICIAN

ESSENTIALS OF COMMUNICATIONS ELECTR
MCGRaw-HILL BOOK COMPANY

RADAR ELECTRONICS FUNDAMENTALS
NAVSHIPS 900,016

RADAR SYSTEM FUNDAMENTALS
NAVSHIPS 900,017

ELECTRONIC COMMUNICATION
MCGRaw-HILL BOOK COMPANY

FUNDAMENTALS OF ELECTRONICS
AIR FORCE MANUAL 101-8

DIGITAL ELECTRONICS
MCGRaw-HILL BOOK COMPANY

ACTIVES MANUAL FOR DIGITAL ELECTRON
MCGRaw-HILL BOOK COMPANY

TEACHER’S MANUAL FOR DIGITAL ELECTR
MCGRaw-HILL BOOK COMPANY

BASIC ELECTRICITY
MCGRaw-HILL BOOK COMPANY
DIRECTORY OF TRAINING AIDS
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ELECTRICIAN

ELECTRICIAL MACHINES: AC & DC
MCGRAW-HILL BOOK COMPANY

ELECTRICITY (PRINCIPLES & APPL)
MCGRAW-HILL BOOK COMPANY

ELECTRONICS (PRINCIPLES & APPL)
MCGRAW-HILL BOOK COMPANY

ELECTRICAL WIRING RESIDENTIAL
DELMAR PUBLISHERS

ELECTRIC MOTOR CONTROL
DELMAR PUBLISHERS

NATIONAL ELECTRICAL CODE
NATIONAL FIRE PROTECTION ASSOCIATION

PLANT ELECTRICAL MAINTANENCE
ICS-INTEXT

CURRENT FLOW: WHAT IT IS
NATIONAL STEEL & SHIPBUILDING COMPANY

WHAT CAUSES CURRENT FLOW
NATIONAL STEEL & SHIPBUILDING COMPANY

BOOK LEVEL: 1
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SPLIT PHASE MOTOR
NATIONAL STEEL & SHIPBUILDING COMPANY
MOVIE
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MOTORS & GENERATORS
NATIONAL STEEL & SHIPBUILDING COMPANY
MOVIE
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DC CURRENT GENERATORS
NATIONAL STEEL & SHIPBUILDING COMPANY
MOVIE
LEVEL: 1

INDUCTANCE IN AC CIRCUITS
NATIONAL STEEL & SHIPBUILDING COMPANY
MOVIE
LEVEL: 1

PULLING & INSTALLING CABLE
NATIONAL STEEL & SHIPBUILDING COMPANY
MOVIE
LEVEL: 1

SHIPBOARD INSTALL. OF WIREWAYS
NATIONAL STEEL & SHIPBUILDING COMPANY
SLIDES
LEVEL: 1

ELECTRICIAN
LONG BEACH NAVAL SHIPYARD
VIDEOTAPE
LEVEL: 1

VARIOUS ELEC EQUIP: CNTRL & MOTORS
HAYDON BOOK COMPANY
WORKBOOK
LEVEL: 2
DIRECTORY OF TRAINING AIDS

ELECTRICIAN
(INSIDE)

ELECTRICITY ONE-SEVEN
HAYDON BOOK COMPANY

BOOK
LEVEL: 2

PLANT ELECTRICAL MAINTENANCE
ICS-INTEXT

BOOK/WORKBOOK
LEVEL: 1

VARIOUS ELEC EQUIP: CNTRL & MOTORS
HAYDON BOOK COMPANY

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DIRECTORY OF TRAINING AIDS

ELECTRONIC MECHANIC

ELECTRONIC CIRCUIT ANALYSIS VOL. I
MCGRaw-HIll BOOK COMPANY

TRANSISTOR CIRCUIT DESIGN & ANALYSIS
CRC PRESS

ELECTRONICS MECHANIC
LONG BEACH NAVAL SHIPYARD

BOOK
LEVEL: 1

BOOK
LEVEL: 1

VIDEOTAPE
LEVEL: 1
DIRECTORY OF TRAINING AIDS

ELECTROPATER

ELECTROPLATING

LONG BEACH NAVAL SHIPYARD

ELECTROPLATING (CHROMIMUM)

LONG BEACH NAVAL SHIPYARD
DIRECTORY OF TRAINING AIDS

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INSULATOR

SHEETMETAL PATTERN DRAFTING PROBLEM
CHARLES A. BENNETT CO., INC.

INSULATOR
LONG BEACH NAVAL SHIPYARD

BOOK
LEVEL: 1

VIDEOTAPE
LEVEL: 1
DIRECTORY OF TRAINING AIDS

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LOFTSMAN

BASIC ALKON

SHIPPING RESEARCH SERVICES

BOOK/TRANSPARENCIES
LEVEL: 1

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# DIRECTORY OF TRAINING AIDS

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## MACHINIST

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DIRECTORY OF TRAINING AIDS

MACHINIST

FRAME BENDER
NAVAL OCEAN SYSTEMS COMMAND & NASSCO

MACHINIST
LONG BEACH NAVAL SHIYARD

SHAFT ALINGMENT
LONG BEACH NAVAL SHIYARD

VALVE SEAT REPAIR
LONG BEACH NAVAL SHIYARD

BABBIT SLEEVE BEARINGS
LONG BEACH NAVAL SHIYARD

POURING SPELTERED SOCKETS
LONG BEACH NAVAL SHIYARD

MACHINE TECHNOLOGY
LONG BEACH NAVAL SHIYARD

STUFFING TUBES
LONG BEACH NAVAL SHIYARD

BLUEPRINT READING FOR MACHINIST
INGALLS SHIPBUILDING DIVISION

MOVIE
LEVEL: 1

VIDEOTAPE
LEVEL: 1

VIDEOTAPE
LEVEL: 1

VIDEOTAPE
LEVEL: 1

VIDEOTAPE
LEVEL: 1

VIDEOTAPE
LEVEL: 1

VIDEOTAPE
LEVEL: 1

VIDEOTAPES
LEVEL: 1

WORKBOOK
LEVEL: 1
DIRECTORY OF TRAINING AIDS

MACHINIST

MACHINE SHOP
INGALLS SHIPBUILDING DIVISION

MARINE ENGINEERING
INGALLS SHIPBUILDING DIVISION

WORKBOOK
LEVEL: 1
DIRECTORY OF TRAINING AIDS

MACHINIST
(OUTSIDE)

MODERN MARINE ENGINEERING MANUAL

MANUAL
LEVEL: 1

CORNELL MARITIME PRESS
DIRECTORY OF TRAINING AIDS

MOLDER

PRINCIPLES OF METAL CASTING

AMERICAN FOUNDRYMENS SOCIETY

BOOK
LEVEL: 1
DIRECTORY OF TRAINING AIDS

ORDNANCE EQUIP.
MECHANIC

FIRE CONTROL

LONG BEACH NAVAL SHIPYARD

VIDEOTAPE
LEVEL: 1
DIRECTORY OF TRAINING AIDS
-----------------------------

PAINTER

APPL. MAN. FOR PAINT & PROTECTIVE
MCGRAW-HILL BOOK COMPANY
BOOK
LEVEL: 1

AUTO BODY REPAIRING & REPAINTING
GOODHEART-WILLCOX, INC.
BOOK
LEVEL: 1

BENCH WOODWORK
CHARLES A. BENNETT CO., INC.
BOOK
LEVEL: 1

COLORING, FINISHING & PAINTING WOOD
CHARLES A. BENNETT CO., INC.
BOOK
LEVEL: 1

CORROSION CONTROL PRINCIP. & METHODS
AMERON CORROSION CONTROL DIVISION
BOOK
LEVEL: 1

FINISHING MATERIALS & METHODS
MCKNIGHT & MCKNIGHT
BOOK
LEVEL: 1

FURNITURE REPAIR & REFINISHING
RESTON PUBLISHING CO., INC.
BOOK
LEVEL: 1

GUIDENCE MANUAL
NAT'L JOINT PAINTING, DECOR. APPR. TRAIN.
BOOK
LEVEL: 1

HANDBOOK OF SURFACE PREPARATION
PALMERTON PUBLISHING CO., INC.
BOOK
LEVEL: 1

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DIRECTORY OF TRAINING AIDS
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PAINTER

HOBBY & CRAFT GUIDE TO AIR BRUSHING
BADGER AIR BRUSH CO.

HOME PAINT BOOK
GALAHAD BOOKS

INTERIOR PAINTING, WALLPAPERING
RESTON PUBLISHING CO., INC.

MARINE COATING TECHNOLOGY
TRACOR, INC.

MARINE FOULING & IT'S PREVENTION
UNITED STATES NAVAL INSTITUTE

MATHEMATICS FOR PAINTING TRADES
DELMAR PUBLISHERS, INC.

MODERN CARPENTRY
GOODHEART-WILLCOX, INC.

ORGANIC COATINGS, PROP., SEL. & USE
UNITED STATES DEPARTMENT OF COMMERCE

PAINT FILM DEFECTS - CAUSES & CURES
REINHOLD PUBLISHING CORP.

B-42
PAINTER

PAINT FINISHING IN INDUSTRY  
ROBERT DRAPER, LTD.  BOOK  LEVEL: 1

PAINT TECHNOLOGY MANUALS, VOL. I-VI  
REINHOLD PUBLISHING CORP.  BOOK  LEVEL: 1

PAINTING & DECORATING MANUAL/TEXT  
PAINTING & DECORATING CONTRACTORS OF USA  BOOK  LEVEL: 1

PAINT & DECORATING ENCYCLOPEDIA  
GOODHEART-WILLCOX, INC.  BOOK  LEVEL: 1

PAINTS & COATINGS HANDBOOK  
STRUCTURES PUBLISHING COMPANY  BOOK  LEVEL: 1

PICTORIAL SURFACE PREP. STANDARDS  
STEEL STRUCTURES PAINTING COUNCIL  BOOK  LEVEL: 1

PREPARATION OF METALS FOR PAINTING  
REINHOLD PUBLISHING CORP.  BOOK  LEVEL: 1

PROTECTIVE COATING SYSTEMS  
MOBIL CHEM. MAINT. & MARINE COATINGS  BOOK  LEVEL: 1

DEV. IN ARCHITECTURAL/MAINT. PAINT  
FED. OF SOCIETIES FOR PAINT TECHNOLOGY  BOOK  LEVEL: 1
DIRECTORY OF TRAINING AIDS

PAINTER

SCREEN PRINTING
HUNT MANUFACTURING COMPANY
BOOK
LEVEL: 1

STEEL STRUCTURES PAINTING MANUAL
STEEL STRUCTURES PAINTING COUNCIL
BOOK
LEVEL: 1

THE COMPLETE AIRBRUSH BOOK
WILLIAM PENN PUBLISHING CORP.
BOOK
LEVEL: 1

THESAURUS OF PAINT & ALLIED TECH.
FED. OF SOCIETIES FOR PAINT TECHNOLOGY
BOOK
LEVEL: 1

TRAINING FOR PAINTING/DECOR. TRADE
UNITED STATES DEPARTMENT OF THE INTERIOR
BOOK
LEVEL: 1

UNDERSTANDING PAINT
AMERICAN PAINT JOURNAL COMPANY
BOOK
LEVEL: 1

WOOD FINISHING
CHARLES A. BENNETT CO., INC.
BOOK
LEVEL: 1

WOODWORKING FOR INDUSTRY
CHARLES A. BENNETT CO., INC.
BOOK
LEVEL: 1

STANDARD FIRST AID & PERSONAL SAFE
AMERICAN RED CROSS SOCIETY
BOOK
LEVEL: 1

B-44
PAINT & SURFACE PREPARATION
INSTITUTE OF APPLIED TECHNOLOGY
LEVEL: 2/3

PAINTER
LONG BEACH NAVAL SHIPYARD

PAINTING
LONG BEACH NAVAL SHIPYARD

BOOK/SLIDES
LEVEL: 1

VIDEO TAPE
LEVEL: 1
DIRECTORY OF TRAINING AIDS

PATTERNMAKER

WOODWORKING TECH: JOINT APPLICATIONS
   AUTHOR: R.J. DECRISTOFORO

CABINETMAKING AND MILLWORK
   AUTHOR: JOHN L. FEIRER

AUDEL'S CARPENTERS & BUILDERS LIBRy
   AUDEL & COMPANY, PUBLISHERS

FUNDAMENTALS OF CARPENTRY, 5TH ED.
   AUTHOR: WALTER E. DURBAHN

BOOK LEVEL: 1

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DIRECTORY OF TRAINING AIDS

PIPEFITTER

PIPEFITTER & PIPEWELDER HANDBOOK
GLENCOE PUBLISHERS
BOOK
LEVEL: 1

PIPE MATH
JACKSON COUNTY JUNIOR COLLEGE
BOOK
LEVEL: 1

AUDEL'S LIBRARY
AUDEL & COMPANY, PUBLISHERS
BOOK
LEVEL: 2

PIPE TEMPLATE LAYOUT
SAN DIEGO TECHNICAL INSTITUTE
BOOK
LEVEL: 1

GENERAL MATH, SHOP
SAN DIEGO TECHNICAL INSTITUTE
BOOK
LEVEL: 1

THE PIPEFITTER'S & WELDER'S HANDBOOK
BENZIGER, BRUCE & GLENCOE/ INC.
BOOK
LEVEL: 1

POSTERS ON PIPE BEVELS & FITTUP
LINCOLN WELDING COMPANY
CHARTS/POSTERS
LEVEL: 2

PIPEFITTERS HANDBOOK
SAN DIEGO TECHNICAL INSTITUTE
MANUAL
LEVEL: 1

PIPEFITTER
LONG BEACH NAVAL SHIPYARD
VIDEOTAPE
LEVEL: 1
DIRECTORY OF TRAINING AIDS
-----------------------------

PIECE FITTER

PIPE TEMPLATE BENDING
LONG BEACH NAVAL SHIPYARD

CLEANLINESS CONTROL ON SHIP PIPING
LONG BEACH NAVAL SHIPYARD

AVONDALE SEMI-AUTOMATED PIPE SHOP
AVONDALE SHIPYARDS

BLUEPRINT READING FOR PIPEFITTERS
INGALLS SHIPBUILDING DIVISION

MARINE PIPEFITTING
INGALLS SHIPBUILDING DIVISION

FRANKLIN PIPEFITTERS HANDBOOK
BENZIGER, BRUCE & GLENCOE

B-48
DIRECTORY OF TRAINING AIDS

PIPEWELDER

WELDING METALLURGY

AMERICAN WELDING SOCIETY

WELDING THEORY & TECHNIQUE

INGALLS SHIPBUILDING DIVISION

WELDING PROCEDURES

INGALLS SHIPBUILDING DIVISION

BOOK
LEVEL: 1

MANUAL
LEVEL: 1

MANUAL
LEVEL: 1
DIRECTORY OF TRAINING AIDS

-------------------

RIGGER

RIGGING

ICS-INTEXT

CRANE HANDBOOK

CONSTRUCTION SAFETY ASSN OF ONTARIO

RIGGING MANUAL

CONSTRUCTION SAFETY ASSN OF ONTARIO

CRANE & RIGGING HANDBOOK

GENERAL DYNAMICS/QUINCY

ROSSNAGEL HANDBOOK OF RIGGING

MCGRaw-HILL BOOK COMPANY

RIGGER TRAINING

NUS TRAINING CORPORATION

RIGGER

LONG BEACH NAVAL SHIPYARD

RIGGING: REMOVAL OF LARGE SHIP OBJ

LONG BEACH NAVAL SHIPYARD

BODY ROUND BOLTS

LONG BEACH NAVAL SHIPYARD

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DIRECTORY OF TRAINING AIDS
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RIGGER

CRANE SAFETY AND SIGNALS  VIDEOTAPE
LONG BEACH NAVAL SHIPYARD  LEVEL: 1
DIRECTORY OF TRAINING AIDS

SHEETMETAL
MECHANIC

SHEETMETAL SHOP PRACTICES
AUTHOR: LEO A. MEYER
BOOK
LEVEL: 1

SHEETMETAL PATTERN DRAFTING & SHOP
AUTHOR: DAUGHERTY
BOOK
LEVEL: 1

SHEET METAL PATTERN DRAFTING & SHOP
CHARLES A. BENNETT CO., INC.
BOOK
LEVEL: 1

SHEETMETAL PATTERN DRAFTING
MCGRAW-HILL BOOK COMPANY
BOOK
LEVEL: 1

SHEETMETAL SHOP PRACTICE
AMERICAN TECHNICAL PUBLISHERS, INC.
BOOK
LEVEL: 1

SHEETMETAL PATTERN DRAFTING PROBLEM
CHARLES A. BENNETT CO., INC.
BOOK
LEVEL: 1

SHEETMETAL FABRICATION BOOK
NATIONAL STEEL & SHIPBUILDING COMPANY
BOOK/WORKBOOK
LEVEL: 2

BLUEPRINT READING FOR SHEETMETAL
INGALLS SHIPBUILDING DIVISION
WORKBOOK
LEVEL: 1

LAYOUT I
INGALLS SHIPBUILDING DIVISION
WORKBOOK
LEVEL: 1
DIRECTORY OF TRAINING AIDS

SHEETMETAL
MECHANIC

LAYOUT II
INGALLS SHIPBUILDING DIVISION

LAYOUT III
INGALLS SHIPBUILDING DIVISION

WORKBOOK
LEVEL: 1

WORKBOOK
LEVEL: 1
THE MOTOR SHIP
THE QUADRANT SULTON SURVEY

INTRO TO STEEL SHIPBUILDING
ALTHOUSE, TURNOUIST, BOUDITCH

PRACTICAL MATH FOR SHIPFITTERS
PITMAN PUBLISHERS

AUDEL'S SHIPFITTER'S HANDBY BOOK
AUDEL & COMPANY, PUBLISHERS

AN INTRODUCTION TO SHIPFITTING
GOVERNMENT PRINTING OFFICE

NOMENCLATURE OF NAVAL VESSELS
GOVERNMENT PRINTING OFFICE

SHIPFITTING SIMPLIFIED
MCGRRAW-HILL BOOK COMPANY

WORKING, HEAT TREATING & WELDING STE
JOHN WILEY & SONS, INC.

THE MANU & PROP OF IRON & STEEL
HILL PUBLISHING COMPANY

ARTICLE
LEVEL: 2

BOOK
LEVEL: 2

BOOK
LEVEL: 1/2/3

BOOK
LEVEL: 1

BOOK
LEVEL: 1

BOOK
LEVEL: 1

BOOK
LEVEL: 1

BOOK
LEVEL: 1
DIRECTORY OF TRAINING AIDS

SHIPFITTER

THE FLEET TYPE SUBMARINE
NAVPERS 16160

SHEETMETAL PATTERN DRAFTING PROBLEM
CHARLES A. BENNETT CO., INC.

READING BLUEPRINTS
INDUSTRIAL MEDIA

SHIPFITTER HANDBOOK
R.E. DERECKTOR OF R.I., INC.

RIGGING
J & R FILM COMPANY

BLDG A SHIP OF TATCO SHIPBLDG CORP
NATIONAL STEEL & SHIPBUILDING COMPANY

BLUEPRINT READING
SAN DIEGO TECHNICAL INSTITUTE

BLUEPRINT READING FOR SHIPFITTERS
SAN DIEGO TECHNICAL INSTITUTE

BLUEPRINT READING FOR SHIPFITTERS
JOHN SPENCER, INC
DIRECTORY OF TRAINING AIDS
------------------------------

SHIPWRIGHT

WOODWORKING TECH: JOINT APPLICATION
   AUTHOR: R.J. DECRISTOFORO
   BOOK
   LEVEL: 1

CABINETMAKING AND MILLWORK
   AUTHOR: JOHN L. FEIRER
   BOOK
   LEVEL: 1

AUDEL'S CARPENTERS & BUILDERS LIBRY
   AUDEL & COMPANY, PUBLISHERS
   BOOK
   LEVEL: 1

FUNDAMENTALS OF CARPENTRY, 5TH ED.
   AUTHOR: WALTER E. DURBAHN
   BOOK
   LEVEL: 1

MODERN SHIP DESIGN
   NAVAL INSTITUTE PRESS
   BOOK
   LEVEL: 1

HANDBOOK FOR SHIPWRIGHTS
   MCGRAW-HILL BOOK COMPANY
   BOOK
   LEVEL: 1

STAGE BUILDING AND SHIP CARPENTRY
   PENN. DEPT. OF PUBLIC INSTRUCTION
   BOOK
   LEVEL: 1

SHIP JOINERY, BULLETIN 345-S
   PENN. DEPT. OF PUBLIC INSTRUCTION
   BOOK
   LEVEL: 1

BUILDER 3 & 2
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DIRECTORY OF TRAINING AIDS

WELDER

WELDING DESIGN & FABRICATION
AMERICAN WELDING SOCIETY

BLUEPRINT MACHINES/STRUCTURE/SHIPYA
MCGRaw-Hill BOOK COMPANY

WELDING PRINCIPLES
MCGRaw-Hill BOOK COMPANY

MODERN WELDING
ALTHOUSE, TURNIST, BOUDITCH

NEW LESSONS IN ARC WELDING
LINCOLN WELDING COMPANY

OXY. ACET. HANDBOOK
LIND OXY. ACET. HANDBOOK

AMER WELDING SOCIETY HANDBOOK
AMERICAN WELDING SOCIETY

PROCEDURE HANDBOOK OF ARC WELDING
LINCOLN WELDING COMPANY

BLUEPRINT READING FOR WELDERS
DELMAR PUBLISHERS

ARTICLE
LEVEL: 2

BOOK
LEVEL: 1/2

BOOK
LEVEL: 1/2

BOOK
LEVEL: 2

BOOK
LEVEL: 2

BOOK
LEVEL: 2

BOOK
LEVEL: 2

BOOK
LEVEL: 2

BOOK
LEVEL: 1/2/3

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### DIRECTORY OF TRAINING AIDS

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DIRECTORY OF TRAINING AIDS

WELDER

SUPERWELDER
EDUCATIONAL RESOURCES FOUNDATION

MOVIE
LEVEL: 2

ARC WELDING ALL POSITIONS
SAN DIEGO TECHNICAL INSTITUTE

MOVIE
LEVEL: 1

NAT’L SHIPBUILDING WELDING RSCH PGM
AVMAST

MOVIE
LEVEL: 1

INDIVIDUAL
SAN DIEGO CITY COLLEGE

SLIDES
LEVEL: 1/2

WELDING
LONG BEACH NAVAL SHIPYARD

VIDEOTAPE
LEVEL: 1

ARC WELDING FUNDAMENTALS
LONG BEACH NAVAL SHIPYARD

VIDEOTAPE
LEVEL: 1

WELDING I
LONG BEACH NAVAL SHIPYARD

VIDEOTAPE
LEVEL: 1

WELDING III
LONG BEACH NAVAL SHIPYARD

VIDEOTAPE
LEVEL: 1

BLUEPRINT WORKBOOKS
MCGR AW - HILL BOOK COMPANY

WORKBOOK
LEVEL: 1/2

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DIRECTORY OF TRAINING AIDS

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WELDER

BLUEPRINT READING FOR WELDERS
BENNERT & SLY

ARC WELDING
SAN DIEGO TECHNICAL INSTITUTE

WORKBOOK
LEVEL: 2

WORKBOOK
LEVEL: 1
SECTION C

SOURCES OF INFORMATION
FOR SKILLED TRADES TRAINING

1. A List of Participating Shipyards
2. A List of Supplementary Training Organizations
3. A List of Sources for Training Aids

December 1983
SECTION C

SOURCES OF INFORMATION FOR SKILLED TRADES TRAINING

Part 1: List of Participating Shipyards

This section lists contact information on all yards which responded to the 1983 Skilled Trades Training Survey.

Part 2: List of Supplementary Training Organizations

Contact information is provided here for those non-shipyard organizations which provide some skilled trades training courses to shipyards. This information was supplied by participating shipyards in Part 1.

Part 3: List of Sources for Training Aids

This list indicates contact information for the non-shipyard organizations listed in Section B, "Directory of Training Aids". Names of the organizations were provided by the participating shipyards in Part 1.

Pages C-ii to C-iv list the participating shipyards according to a three digit numeric code, enabling the directory user to correlate the name of the supplementary training organization with the shipyard accessing it.
<table>
<thead>
<tr>
<th>CODE</th>
<th>SHIPYARD</th>
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<tr>
<td>110</td>
<td>BETHLEHEM STEEL, SPARROWS POINT</td>
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<td>112</td>
<td>AMERICAN SHIP BLDG CO-AMSHIP DIVISION</td>
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<tr>
<td>113</td>
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<td>BATH IRON WORKS CORP.</td>
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<td>PERTH AMBOY DRY DOCK COMPANY</td>
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<td>148</td>
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C-iii
## LIST OF SHIPYARD CODES

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<td>PINELLAS VOCATIONAL TECH</td>
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C-v
SUPPLEMENTARY TRAINING ORGANIZATIONS WITH CORRESPONDING SHIPYARD CODES

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<tr>
<td>R.S. MEANS CO., INC.</td>
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<td>REILLY, HARRY - MACHINIST</td>
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<td>SAINT PAUL AREA VOCATIONAL INST.</td>
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<td>SAN DIEGO CITY COLLEGE</td>
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<td>SAN DIEGO TECHNICAL INSTITUTE</td>
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<td>SIFCO SELECTIVE PLATING</td>
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<td>SOUTHWESTERN OREGON COMM. COLLEGE</td>
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<tr>
<td>ALABAMA MARITIME CORPORATION</td>
<td>205-690-7810</td>
</tr>
<tr>
<td>P.O. Box 3026</td>
<td>Jerry Patrick</td>
</tr>
<tr>
<td>Mobile AL 36652</td>
<td>General Foreman</td>
</tr>
<tr>
<td>AMERICAN MARINE CORPORATION</td>
<td>504-242-5200</td>
</tr>
<tr>
<td>P.O. Box 8126</td>
<td>Birk Herrath</td>
</tr>
<tr>
<td>New Orleans LA 70182</td>
<td>Personnel Director</td>
</tr>
<tr>
<td>AMERICAN SHIP BLDG CO-AMSHIP DIVISION</td>
<td>216-288-1234</td>
</tr>
<tr>
<td>400 Colorado Ave. Lorain OH 44052</td>
<td>Richard P. Casserly</td>
</tr>
<tr>
<td>ASSOCIATED NAVAL ARCHITECTS, INC.</td>
<td></td>
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<tr>
<td>3400 Shipwright St. Portsmouth VA 23703</td>
<td>Brandt Everhart</td>
</tr>
<tr>
<td>BRANDT Everhart</td>
<td>Administrative Assistant</td>
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<tr>
<td>ASTORIA MARINE CONSTRUCTION COMPANY</td>
<td>503-325-4121</td>
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<tr>
<td>403 SW Front St Astoria OR 97103</td>
<td>Donald Fastabend</td>
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<tr>
<td>AVONDALE Shipyards INC.</td>
<td>504-436-5110</td>
</tr>
<tr>
<td>P.O. BOX 50280 New Orleans LA 70150</td>
<td>Ernie Griffin</td>
</tr>
<tr>
<td>New Orleans LA 70150</td>
<td>Personnel Director</td>
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<tr>
<td>BAKER MARINE CORPORATION</td>
<td>512-883-9271x234</td>
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<tr>
<td>FM 1069 &amp; Bay, P.O. 190</td>
<td>Glenn R. Graham</td>
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<tr>
<td>Ingleside TX 78362</td>
<td>Personnel Director</td>
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<tr>
<td>BARBOUR BOAT WORKS, INC.</td>
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<td>P.O. Box 1069</td>
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<tr>
<td>New Bern NC 28560</td>
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<tr>
<td>BATH IRON WORKS CORP.</td>
<td>207-443-3311</td>
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<tr>
<td>700 Washington St. Bath ME 04530</td>
<td>Fred J. Kahrl</td>
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<tr>
<td>BAY SHIPBUILDING CORPORATION</td>
<td>414-743-5524</td>
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<tr>
<td>605 N 3rd Avenue Sturgeon Bay WI 54235</td>
<td>Jordan Woods</td>
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<tr>
<td>BETHLEHEM STEEL, SPARROWS POINT</td>
<td>301-388-5721</td>
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<tr>
<td>Sparrows Point MD 21219</td>
<td>Joseph V. Daddura</td>
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<td></td>
<td>Safety Engineer</td>
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# LIST OF PARTICIPATING YARDS

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<th>Contact Person</th>
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<tr>
<td>BLOUNT MARINE CORPORATION</td>
<td>401-245-8300</td>
<td>461 Water St.</td>
<td>Gino L. Maini</td>
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<tr>
<td></td>
<td></td>
<td>Warren</td>
<td>Personnel Manager</td>
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<tr>
<td>CHARLESTON NAVAL SHIPYARD</td>
<td>803-743-5366</td>
<td>180.2 Bldg. 199</td>
<td>M. Wayne Poland</td>
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<tr>
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<td>Charleston SC 29408</td>
<td>Code 180</td>
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<tr>
<td>DILLINGHAM SHIP REPAIR</td>
<td>503-285-1111</td>
<td>P.O. Box 4367</td>
<td>H.G. Lyons</td>
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<tr>
<td></td>
<td></td>
<td>Portland OR 97208</td>
<td>Director Human Resources</td>
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<tr>
<td>DRAVO CORPORATION</td>
<td>412-777-5210</td>
<td>4800 Grand Avenue</td>
<td>H.R. Brown</td>
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<td>Pittsburgh PA 15225</td>
<td>Employee Relations Manager</td>
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<tr>
<td>ELLICOTT MACHINE CORPORATION</td>
<td>301-837-7900x217</td>
<td>1611 Bush Street</td>
<td>Harry E. Eyler</td>
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<td>Baltimore MD 21230</td>
<td>Personnel Director</td>
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<tr>
<td>FRASER SHIPYARDS, INC</td>
<td>715-394-7787</td>
<td>P.O. Box 997</td>
<td>Al Rivord</td>
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<tr>
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<td>Superior WI 54880</td>
<td>Industrial Relations</td>
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<td>GENERAL DYNAMICS - QUINCY SHIPBUILDING</td>
<td>617-471-4200</td>
<td>97 E Howard ST</td>
<td>R. D. Ramio</td>
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<tr>
<td></td>
<td></td>
<td>Quincy MA 02191</td>
<td>Chief Trades Trainer</td>
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<tr>
<td>GENERAL DYNAMICS/ELECTRIC BOAT DIVISION</td>
<td>203-446-7587</td>
<td>Eastern Point Road</td>
<td>John T. Latham</td>
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<td></td>
<td></td>
<td>Groton CT 06340</td>
<td>Chief, Trade Training:Dept 642</td>
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<tr>
<td>H B C BARGE INC</td>
<td>412-785-6100</td>
<td>Box 510</td>
<td>Richard L. Oesterling</td>
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<tr>
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<td>Brownsville PA 15417</td>
<td>Plant Manager</td>
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<td>HALTER MARINE, INC.</td>
<td>504-246-8900</td>
<td>P.O. Box 29266</td>
<td>John Chantrey</td>
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<td>New Orleans LA 70189</td>
<td>V.P., Human Resources</td>
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<tr>
<td>INGALLS SHIPBUILDING DIVISION</td>
<td>601-935-5102</td>
<td>P.O. Box 149</td>
<td>C M Davenport</td>
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<tr>
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<td>Pascagoula MI 39567</td>
<td>Mgr. Hourly Employment &amp; Trng.</td>
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</tbody>
</table>
LIST OF PARTICIPATING YARDS

JACKSONVILLE SHIPYARDS, INC.
750 E. Bay Street
25cksonville FL 32203
904-355-1711
O.N. Morgan
Asst. Manager for Training

JEFFBOAT
1030 East Market
Jeffersonville IN 42701
812-288-0435
Don Bewley
Mgr. of Labor Relations

LIVINGSTON SHIPBUILDING CO.
P.O. BOX 968
Orange TX 77630
409-883-3521
Mr. Romano

LONG BEACH NAVAL SHIPYARD
Long Beach CA 90822
213-547-6171
Mr. Bill Hardie
Code 180

MARATHON LeTOURNEAU COMPANY
LeTOURNEAU Rural Station
Vicksburg MS 39180
601-636-4132x202
Charles T. Germany
Personnel Manager

MARCO SEATTLE
2300 W Commodore Way
Seattle WA 98199
206-285-2300
Jim Edwards
Personnel Coordinator

MARINE CONCRETE STRUCTURES, INC.
1250 L&A Road
Metaire LA 70004
504-833-1901
W.V. Campbell
Vice President

MARINE WAYS CORPORATION
P.O. Box 03038
Portland OR 97203
503-286-8385
R.H. Youngman
General Manager

MARINE WELDING & REPAIR WORKS
P.O. Box 1559
Greenville MS 38701

MAXON MARINE INDUSTRIES, INC.
P.O. Box 349
Tell City IN 47586
812-547-2341
Ralph W. Emerson
V.P./General Manager

MISENER INDUSTRIES, INC.
5353 Tyson Avenue
Tampa FL 33681
813-837-8522
Dave Baylies
Accident Prevention Admin.
LIST OF PARTICIPATING YARDS

NATIONAL STEEL & SHIPBUILDING COMPANY
P.O. Box 85278
San Diego CA 92138
Bill Falls
Mgr. of Employment & Training
619-232-4011

NEWPARK SHIPBUILDING & REPAIR, INC
P.O. Box 5426
Houston TX 77262
Richard L. Lamirand
Manager, Industrial Relations
713-928-5051

NEWPORT NEWS SHIPBUILDING
4104 Washington Avenue
Newport News VA 23607
Mr. J.E. Wallace
Director of Training & Dev.
804-380-2723

PACIFIC DRYDOCK & REPAIR COMPANY
321 Embarcadero
Oakland CA 94501
Bob Hartsock
General Manager
415-893-7020

PEARL HARBOR NAVAL SHIPYARD
PEARL HARBOR HI 96860
Ms. Wanda McHenry
Code 180
808-471-8407

PENNSYLVANIA SHIPBUILDING COMPANY
Foot of Morton Avenue
Chester PA 19013
Edward Kordalski
Manager of Employment
215-499-2207

PERTH AMBOY DRY DOCK COMPANY
P.O. Box 348, Ft. of Commerce
Perth Amboy NJ 08862
George F. Fallen
Vice President-General Manager
201-826-5000

PETE RSON BUILDERS, INC
101 PENNSYLVANIA ST. PO BOX 47
Sturgeon Bay WI 54235
Douglas A. Washburn
Director
414-743-5577

PHILADELPHIA NAVAL SHIPYARD
Code 180.2
Philadelphia PA 19112
James Valentine
Supv. Employee Dev. Specialist
215-755-4768

PORTSMOUTH NAVAL SHIPYARD
Kittery ME 03904
Mr. Ernie Kassner
Code 180
207-439-2226

QUALITY SHIPBUILDERS, INC
P.O. Box 704
Moss Point MS 39563
Carlton Hempstead, Jr.
Personnel Director
601-475-6758
**LIST OF PARTICIPATING YARDS**

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<th>Contact Person</th>
<th>Position</th>
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<tr>
<td>R.E. DERECKTOR OF R.I., INC</td>
<td>401-847-6589</td>
<td>Coddington Cove, Middletown, RI</td>
<td>Virginia L. King</td>
<td>Asst. Personnel Director</td>
</tr>
<tr>
<td>REYNOLDS SHIPYARD CORPORATION</td>
<td>212-981-2800</td>
<td>200 Edgewater Street, Staten Island, NY</td>
<td>Michael R. Reynolds</td>
<td>President</td>
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<tr>
<td>ROANOKE ISLAND STEEL &amp; BOAT WORKS INC.</td>
<td>919-473-5884</td>
<td>P.O. Box 340, Wanchese, NC</td>
<td>Carl Bock, Jr.</td>
<td>President</td>
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<tr>
<td>SERVICE MACHINE GROUP</td>
<td>504-631-0511</td>
<td>P.O. Box 2664, Morgan City, LA</td>
<td>Sylvia Mahler</td>
<td>Personnel Assistant</td>
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<tr>
<td>SOUTHERN OREGON MARINE</td>
<td>503-269-2116</td>
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<td>Jack L. Wilskey</td>
<td>Vice President/General Manager</td>
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<td>P.O. BOX 13308, San Diego, CA</td>
<td>Kinsey Roos</td>
<td>Industrial Relations Director</td>
</tr>
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<td>SWYGERT SHIPYARDS, INC</td>
<td>803-559-0346</td>
<td>P.O. BOX 308, Johns Island, SC</td>
<td>P.H. Speights</td>
<td>General Superintendent</td>
</tr>
<tr>
<td>TACOMA BOAT</td>
<td>206-572-3600</td>
<td>1840 Marine View Drive, Tacoma, WA</td>
<td>Susan McLain</td>
<td>Compensation &amp; Benefits Mgr.</td>
</tr>
<tr>
<td>TODD PACIFIC SHIPYARDS/SEATTLE DIVISION</td>
<td>206-623-1635x244</td>
<td>1801 16th Ave., SW, Seattle, WA</td>
<td>Lynda Zimmerman</td>
<td>Assistant Manager, Personnel</td>
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<tr>
<td>TODD PACIFIC SHIPYARDS CORP/LOS ANGELES</td>
<td>213-832-3361</td>
<td>710 Front Street, San Pedro, CA</td>
<td>Terry Croskrey</td>
<td>Training Coordinator</td>
</tr>
<tr>
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<td>415-621-8633x296</td>
<td>P.O. Box 7263, San Francisco, CA</td>
<td>Mr. Arlyn Kjelmyr</td>
<td>Training Coordinator</td>
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</table>
LIST OF PARTICIPATING YARDS

TWIN CITY SHIPYARD, INC
P.O. BOX 43032
St. Paul    MN 55164

UNION DRY DOCK & REPAIR COMPANY
Foot of Pershing Road
Weehawken    NJ 07087

John A. Mathews
Personnel Director

Juan Perez
Personnel Director

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201-867-0904
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2540 Fairlane Dr. Bldg 4
Montgomery, AL 36116
Mr. George Howard
Director

AMERICAN MANAGEMENT ASSOCIATION
P.O. Box 319
Saranac Lake, NY 12983

CIBELLA, ROSS
1412 Stoltz Road
Bethel Park, PA 15102
Ross Cibella
Consultant

COMMUNITY COLLEGE/ALLEGHENY CNTY
1030 Perry Highway
Pittsburgh, PA 15237
William Hiles
Director, Cooperative Ed.

CONNELLEY SKILLS LEARNING CTR
1501 Bedford Avenue
Pittsburgh, PA 15222
Thomas Goettman
Placement Coordinator

CRANE INSPECTION & CERTIFICATION BUREAU
7200 Lake Ellenor Drive
Orlando, FL 32809

DUNDAK COMMUNITY COLLEGE
7200 Soilers Pt. Rd.
Baltimore, MD 21222
Dr. James Burns
Director of Business

DeBENDICTIS, BOB INC.
4016 Henley Road
Orlando, FL 32805
Bob DeBenedictis
President

FL JUNIOR COLLEGE/JACKSONVILLE
101 West State Street
Jacksonville, FL 32203
Leon Dorsett
Head, Industrial Training

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Foxboro, MA 02035

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Meridian, CT 06450
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Erie PA 16531

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Janesville WI 53547

GOULD, INCORPORATED
120 Gibraltar St., Suite 218
Horsham PA 19044

HARBOR COLLEGE
1111 Figueroa St.
Wilmington CA 90744

HARBOR OCCUPATIONAL CENTER
740 N. Pacific Avenue
San Pedro CA 90733

HONOLULU COMMUNITY COLLEGE
874 Dillingham Boulevard
Honolulu HI 96817

HYTORC OF NEW ENGLAND
605 Penfield Road
Fairfield CT 06430

IBM CORPORATION
9500 Godwin Drive
Manassas VA 22110

ICS-INTEXT
315 Post Road West
Westport CT 06880

INSTITUTE OF APPLIED TECHNOLOGY
P.O. Box 32331
Washington DC 20007

INT'L CORRESPONDENCE SCHOOL
P.O. BOX 50218
Columbia SC 29250

213-518-1000
Industrial Education Counselor
Gene Rohr
213-547-5551
Counselor
808-845-9226
Assistant Dean of Instruction
203-227-0891
Frederick A. Dyka, Jr.
Account Manager
202-342-2241
Jay I. Leanse
Executive Director
803-256-0661
Russ Bellamy
Account Manager
LIST OF SUPPLEMENTARY TRAINING ORGANIZATIONS

KUSHNER, J.B. ELECTROPLATING SCHOOL
P.O. Box 1060, Lee Branch
Cleveland OH 44120
Arthur S. Kushner, PH.D
Director

NATIONAL FIRE PROTECTION AGENCY
Battery March Park
Quincy MA 02269

NUS TRAINING CORPORATION
1350 Piccard Drive
Rockville MD 20850
Bob Weinstein
Training Program Consultant

P&H HARNISCHFEGER INSTITUTE
P.O. Box 554
Milwaukee WI 53201
Bob Kowach
Instructor

PINELLAS VOCATIONAL TECH
6100 154th Avenue North
Clearwater FL 33520

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154 Construction Plaza
Kingston MA 02364

REILLY, HARRY - MACHINIST
112 Richland Drive
Pittsburgh PA 15236
Harry Reilly
Consultant

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St. Paul MN 55102
Bob Christofferson
Welding Instructor

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San Diego CA 92101
Marty Anaya
Dean, School of Trade

SAN DIEGO TECHNICAL INSTITUTE
1490 Island Avenue
San Diego CA 92101
Harry DeMillo
Director of Training

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5708 Schaff Road
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George C. Nordenholt Manager of Technical Training

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