

CHAPTER 75



STEELWORKER (SW)

NAVPERS 18068-75F
CH-77

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NAVY ENLISTED OCCUPATIONAL STANDARD

FOR

STEELWORKER (SW)



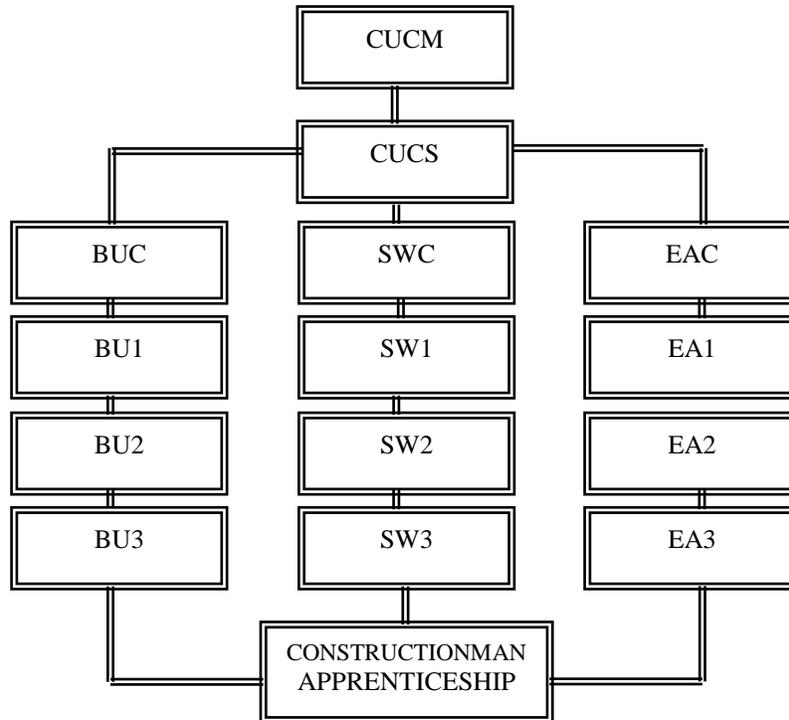
SCOPE OF RATING

Steelworkers (SW) perform tasks directly related to fabrication and erection of pre-engineered structures, including steel reinforcement; manage construction operations, deploy materials and equipment; direct and coordinate the composition of training and efforts of crews who fabricate, assemble, erect, position, and join structural members and fabricated sections; perform various welding and cutting operations; maintain individual combat readiness; and perform tasks required in combat and Defense Support of Civil Authorities (DSCA) and Humanitarian Assistance/Disaster Recovery (HADR) operations.

This Occupational Standard is to be incorporated in Volume I, Part B, of the Manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards (NAVPERS 18068F) as Chapter 75.

GENERAL INFORMATION

CAREER PATTERN



Normal path of advancement to Chief Warrant Officer and Limited Duty Officer categories can be found in OPNAVINST 1420.1.

For rating entry requirements, refer to MILPERSMAN 1306-618.

SAFETY

The observance of Operational Risk Management (ORM) and proper safety precautions in all areas is an integral part of each billet and the responsibility of every Sailor; therefore, it is a universal requirement for all ratings.

Job Title**Steelworkers****Job Code****001770****Job Family**

Construction and Extraction

NOC

TBD

Short Title (30 Characters)

STEELWORKER

Short Title (14 Characters)

STEELWORKER

Pay Plan

Enlisted

Career Field

SW

Other Relationships and Rules

NEC BXXX series, 717B, 718B, 804G, 833A and other NECs as assigned

Job Description

Steelworkers perform tasks directly related to fabrication and erection of pre-engineered structures, including steel reinforcement; manage construction operations, deploy materials and equipment; direct and coordinate the composition of training and efforts of crews who fabricate, assemble, erect, position, and join structural members and fabricated sections; perform various welding and cutting operations; and prepare progress reports, time records, construction schedules, material, labor, and tool and equipment estimates for construction projects. As project managers, they plan, staff, direct, and control multiple construction projects to include problem solving, planning, estimating, scheduling, cost control, and personnel management ensuring compliance with specifications, code requirements, plans, and contracts; and act as project supervisors and trainers for junior personnel.

DoD RelationshipGroup Title

Steelworking

DoD Code

171100

O*NET RelationshipOccupation Title

Welders, Cutters, Solderers, and Brazers

SOC Code

51-4121.00

Job Family

Construction and Extraction

Skills*Critical Thinking**Complex Problem Solving**Quality Control Analysis**Equipment Selection**Equipment Maintenance**Management of Personnel Resources**Reading Comprehension**Coordination**Monitoring**Mathematics***Abilities***Information Ordering**Problem Sensitivity**Deductive Reasoning**Oral Expression**Visualization**Written Comprehension**Inductive Reasoning**Manual Dexterity**Near Vision**Spatial Orientation***ARC WELDING AND CUTTING****Paygrade****Task Type****Task Statements**

E4

CORE

Conduct hardfacing operations

E4

CORE

Cut ferrous and nonferrous metals using Plasma Arc Cutting (PAC) process

E4

CORE

Fabricate metal components

E4

CORE

Interpret welding symbols and standards from drawings and specifications

E4

CORE

Maintain arc welding and cutting equipment

E4

CORE

Perform arc welding operations in all positions

E4

CORE

Perform maintenance welding operations

E4

CORE

Perform metal stress relieving measures

E5

CORE

Perform nondestructive metal tests

E4

CORE

Prepare surfaces for welding

E6

CORE

Supervise arc welding and cutting operations

E5

CORE

Supervise metal component fabrications

E6

CORE

Validate arc welding and cutting operations

E4

CORE

Weld ferrous and nonferrous metals using Gas Metal Arc Welding (GMAW) process

E4

CORE

Weld ferrous and nonferrous metals using Gas Tungsten Arc Welding (GTAW) process

E4

CORE

Weld ferrous and nonferrous metals using Shielded Metal Arc Welding (SMAW) process

CONSTRUCTION MANAGEMENT

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E6	NON-CORE	Conduct three-phase quality control inspections
E5	CORE	Develop construction activities
E5	CORE	Develop construction environmental protection plans
E4	CORE	Develop construction estimates
E5	CORE	Develop construction project packages
E4	CORE	Develop construction project sketches and diagrams
E5	CORE	Develop construction safety plans
E5	CORE	Develop master activities
E5	CORE	Develop project three-phase quality control plans
E6	CORE	Establish construction site layouts
E5	CORE	Input project data into construction management software and tools
E5	CORE	Inspect construction materials
E5	CORE	Interpret construction project drawings and specifications
E4	CORE	Inventory project tools and materials
E5	CORE	Lead construction project crew
E7	CORE	Manage construction project resources
E7	CORE	Manage construction project(s)
E7	CORE	Manage construction safety plans
E7	CORE	Manage job site construction operations (e.g., quality control and safety plan implementation, job site information board, level III chart, etc.)
E7	CORE	Manage project quality control plan(s)
E7	CORE	Manage three-phase quality control process
E6	NON-CORE	Monitor construction project contracts
E6	CORE	Supervise construction project crew(s)
E5	CORE	Supervise construction project safety operations
E6	CORE	Supervise environmental protection plans
E6	CORE	Supervise planning and estimating operations
E6	CORE	Supervise project three-phase quality control process
E5	CORE	Turnover construction project
E6	CORE	Validate construction project packages
E5	NON-CORE	Validate project surveys and elevation data

OXYFUEL GAS CUTTING AND WELDING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Bend pipes
E4	CORE	Conduct brazing operations
E4	CORE	Cut ferrous metals using oxyfuel gas cutting equipment
E4	CORE	Interpret oxyfuel gas cutting and welding symbols and standards from drawings and specifications
E4	CORE	Join metal using Brazing (B) process
E4	CORE	Maintain oxyfuel gas cutting and welding equipment

OXYFUEL GAS CUTTING AND WELDING (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Prepare metal joints for Oxyfuel Gas Welding (OFW) and Brazing (B) processes
E4	CORE	Prepare oxyfuel gas equipment for cutting and welding
E4	CORE	Solder metals
E6	CORE	Supervise oxyfuel gas cutting and welding operations
E6	CORE	Validate oxyfuel gas cutting and welding operations
E4	CORE	Weld metal joints using Oxyfuel Gas Welding (OFW) process

REINFORCING STEEL (RST)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Bend reinforcing steel (RST)
E4	CORE	Develop reinforcing steel (RST) bending schedules
E4	CORE	Fabricate reinforcing steel (RST) components
E4	CORE	Interpret reinforcing steel (RST) bending schedules
E4	CORE	Place reinforcing steel (RST) components
E5	CORE	Supervise reinforcing steel (RST) component fabrication and placement
E5	CORE	Validate reinforcing steel (RST) component fabrication and placement

SEABEE COMMON CORE

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Apply combat life saving techniques
E5	NON-CORE	Assess airfield damage
E6	NON-CORE	Assist Maritime Prepositioning Force (MPF) operations
E4	NON-CORE	Conduct convoy security operations
E4	NON-CORE	Conduct crew-served weapons operational checks
E4	CORE	Conduct field communications equipment operational checks
E7	NON-CORE	Conduct Humanitarian Assistance and Disaster Relief (HADR)
E4	CORE	Conduct personal protection and decontamination (DECON) procedures
E4	CORE	Conduct small arms operational checks
E4	CORE	Employ Advance Base Functional Component (ABFC) systems
E4	NON-CORE	Employ crew-served weapons
E4	CORE	Employ field communications equipment
E4	CORE	Employ grenades, mines, and pyrotechnics
E4	CORE	Employ land survival techniques
E4	CORE	Employ small arms
E4	CORE	Maintain Personal Gear Issue (PGI)
E4	NON-CORE	Palletize cargo and equipment
E4	CORE	Patrol assigned areas
E5	NON-CORE	Perform arrival and departure airfield control group (AACG&DACG) procedures
E4	NON-CORE	Perform Chemical, Biological, Radiological, and Nuclear Defense (CBRND) reconnaissance (i.e., surveying, monitoring, and marking)
E7	CORE	Perform command and control of a company

SEABEE COMMON CORE (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Perform command and control of a fire team
E6	CORE	Perform command and control of a platoon
E5	CORE	Perform command and control of a squad
E4	NON-CORE	Perform detailed troop and equipment decontamination (DECON)
E5	NON-CORE	Plan Advance Base Functional Component (ABFC) systems setup
E5	NON-CORE	Plan Airfield Damage Repair (ARD)
E5	NON-CORE	Plan convoy operations
E7	NON-CORE	Plan convoy security operations
E5	NON-CORE	Plan load for embarkation
E6	NON-CORE	Plan unit embarkation
E4	CORE	Prepare cargo and equipment for transport (e.g., weight, balance, and marking)
E4	NON-CORE	Prepare hazardous materials (HAZMAT) for transport
E4	NON-CORE	Repair damaged airfields
E4	CORE	Set tactical defenses
E6	NON-CORE	Supervise Advance Base Functional Component (ABFC) setup
E7	NON-CORE	Supervise Airfield Damage Repair (ADR) operations
E7	NON-CORE	Supervise Chemical, Biological, Radiological, and Nuclear Defense (CBRND) operations
E6	NON-CORE	Supervise convoy operations
E6	NON-CORE	Supervise convoy security operations
E7	NON-CORE	Supervise embarkation and debarkation operations
E4	CORE	Transport troops and equipment (e.g., convoy)

SHEET METAL

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Assemble advanced duct systems
E4	CORE	Assemble duct components
E4	CORE	Develop sheet metal patterns
E4	CORE	Develop sheet metal sketches and diagrams
E4	CORE	Fabricate sheet metal components
E4	CORE	Interpret sheet metal drawings and specifications
E4	CORE	Maintain sheet metal tools and equipment
E6	CORE	Supervise sheet metal component fabrication
E6	CORE	Validate sheet metal component installation

SPECIAL CONSTRUCTION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	NON-CORE	Conduct launch and recovery bridging systems operations (e.g., Mabey Johnson, MGB, heavy timber)
E5	NON-CORE	Construct non-standard bridging (gap crossing)
E5	CORE	Erect pre-engineered structures (i.e., K-Span, tension fabric, pre-engineered buildings, fabricated steel buildings, steel towers, and antennas)

SPECIAL CONSTRUCTION (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Interpret special construction drawings and specifications
E7	CORE	Manage special construction assembly operations
E6	CORE	Supervise assembly of special construction operations

UNDERWATER CONSTRUCTION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	NON-CORE	Conduct corrective maintenance on certified Diver's Life Support Systems (DLSS)
E5	NON-CORE	Conduct corrective maintenance on Self-Contained Underwater Breathing Apparatus (SCUBA) diving equipment
E5	NON-CORE	Conduct corrective maintenance on Surface Supplied Diving (SSD) equipment
E5	NON-CORE	Conduct corrective maintenance on underwater construction equipment and tools
E5	NON-CORE	Conduct maritime defensive operations
E5	NON-CORE	Conduct oceanographic surveys
E5	NON-CORE	Conduct preventive maintenance on cable systems
E5	NON-CORE	Conduct preventive maintenance on certified Diver's Life Support Systems (DLSS)
E5	NON-CORE	Conduct preventive maintenance on fleet moorings
E5	NON-CORE	Conduct preventive maintenance on pipelines
E5	NON-CORE	Conduct preventive maintenance on Self-Contained Underwater Breathing Apparatus (SCUBA) diving equipment
E5	NON-CORE	Conduct preventive maintenance on Surface Supplied Diving (SSD) equipment
E5	NON-CORE	Conduct preventive maintenance on underwater construction equipment and tools
E5	NON-CORE	Conduct preventive maintenance on waterfront facilities
E5	NON-CORE	Conduct terrestrial construction demolition using explosives
E5	NON-CORE	Conduct underwater construction demolition using explosives
E5	NON-CORE	Conduct underwater search and recovery operations
E5	NON-CORE	Construct cable systems
E5	NON-CORE	Construct fleet moorings
E5	NON-CORE	Construct pipelines
E5	NON-CORE	Construct waterfront facilities
E5	NON-CORE	Deploy underwater vehicles (e.g., Remotely Operated Vehicle (ROV) / Autonomous Underwater Vehicle (AUV) / Unmanned Underwater Vehicle (UUV))
E5	NON-CORE	Inspect cable systems
E5	NON-CORE	Inspect fleet moorings
E5	NON-CORE	Inspect pipelines
E5	NON-CORE	Inspect waterfront facilities
E7	NON-CORE	Manage diving emergency incidents
E7	NON-CORE	Manage diving equipment maintenance and certification (e.g., Self-Contained Underwater Breathing Apparatus (SCUBA), Surface Supplied Diving (SSD), Diver's Life Support System (DLSS))
E7	NON-CORE	Manage light salvage operations
E7	NON-CORE	Manage Ocean Facilities inspection

UNDERWATER CONSTRUCTION (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E7	NON-CORE	Manage Ocean Facilities maintenance
E7	NON-CORE	Manage oceanographic survey teams
E7	NON-CORE	Manage Offshore Petroleum Distribution System (OPDS) operations
E7	NON-CORE	Manage terrestrial explosive construction demolition operations
E7	NON-CORE	Manage underwater construction equipment and tools maintenance
E7	NON-CORE	Manage underwater construction projects
E7	NON-CORE	Manage underwater explosive construction demolition operations
E7	NON-CORE	Manage underwater search and recovery operations
E7	NON-CORE	Manage watercraft program
E5	NON-CORE	Perform diving emergency procedures
E5	NON-CORE	Perform light salvage operations
E5	NON-CORE	Perform Offshore Petroleum Distribution System (OPDS) operations
E6	NON-CORE	Plan terrestrial explosive construction demolition
E6	NON-CORE	Plan underwater explosive construction demolition
E5	NON-CORE	Provide diving assistance during Maritime Prepositioning Force (MPF) operations
E5	NON-CORE	Repair cable systems
E5	NON-CORE	Repair fleet moorings
E5	NON-CORE	Repair pipelines
E5	NON-CORE	Repair waterfront facilities
E6	NON-CORE	Supervise construction of fleet moorings, waterfront facilities, pipelines, and cable systems
E6	NON-CORE	Supervise diving emergency incidents
E6	NON-CORE	Supervise diving equipment maintenance and certification (e.g., Self-Contained Underwater Breathing Apparatus (SCUBA), Surface Supplied Diving (SSD), Diver's Life Support System (DLSS))
E6	NON-CORE	Supervise hyperbaric treatments
E6	NON-CORE	Supervise inspection of fleet moorings, waterfront facilities, pipelines, and cable systems
E6	NON-CORE	Supervise light salvage operations
E6	NON-CORE	Supervise oceanographic survey team
E6	NON-CORE	Supervise Offshore Petroleum Distribution System (OPDS) operations
E6	NON-CORE	Supervise preventive maintenance of fleet moorings, waterfront facilities, pipelines, and cable systems
E6	NON-CORE	Supervise repairs of fleet moorings, waterfront facilities, pipelines, and cable systems
E6	NON-CORE	Supervise terrestrial explosive construction demolition operations
E6	NON-CORE	Supervise underwater construction equipment and tools maintenance
E6	NON-CORE	Supervise underwater explosive construction demolition operations
E6	NON-CORE	Supervise underwater search and recovery operations
E6	NON-CORE	Supervise watercraft crew during operations
E5	NON-CORE	Transport divers, personnel, and equipment using watercraft