

CHAPTER 75



STEELWORKER (SW)

NAVPERS 18068F-75H
Change 100

Updated: October 2024

TABLE OF CONTENTS STEELWORKER (SW)

SCOPE OF RATING	SW-3
GENERAL INFORMATION	SW-4
STEELWORKER	SW-5
ARC WELDING AND CUTTING	SW-5
CONCRETE CONSTRUCTION	SW-6
CONSTRUCTION MANAGEMENT	SW-6
EXPEDITIONARY CONSTRUCTION	SW-7
OXYFUEL GAS CUTTING AND WELDING	SW-7
REINFORCING STEEL (RST)	SW-8
SHEET METAL	SW-8
SPECIAL CONSTRUCTION	SW-8

NAVY ENLISTED OCCUPATIONAL STANDARD

FOR

STEELWORKER (SW)

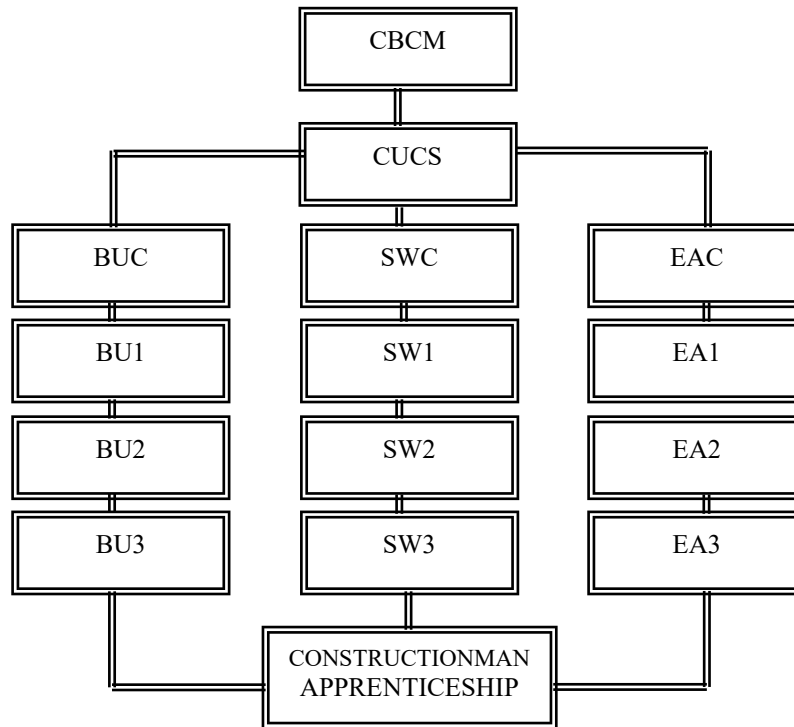


SCOPE OF RATING

Steelworkers (SW) perform tasks directly related to fabrication and erection of pre-engineered structures, including concrete and 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 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) in 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.

* Career path updated to reflect rating name change to Seabee Master Chief (CBCM) – NAVADMIN 054/21 refers

Job Title**Steelworker****Job Code****001770****Job Family**

Production

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 and other NECs as assigned

Job Description

Steelworkers (SW) perform tasks directly related to fabrication and erection of pre-engineered structures, including concrete and 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; prepare progress reports, time records, construction schedules, material, labor, and tool and equipment estimates for construction projects; act as project managers, planning, staffing, directing, and controlling 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 Relationship**Group Title**

Steelworking

DoD Code

171100

O*NET Relationship**Occupation Title**Welders, Cutters, Solderers, and
Brazers**SOC Code**

51-4121.00

Job Family

Production

Skills*Quality Control Analysis**Complex Problem Solving**Critical Thinking**Operation and Control**Equipment Selection**Management of Material Resources**Judgment and Decision Making**Mathematics**Reading Comprehension**Monitoring***Abilities***Problem Sensitivity**Deductive Reasoning**Information Ordering**Dynamic Strength**Inductive Reasoning**Oral Expression**Written Comprehension**Arm-Hand Steadiness**Visualization**Manual Dexterity***ARC WELDING AND CUTTING****Paygrade****Task Type****Task Statements**

E4

CORE

Cut ferrous metals using Plasma Arc Cutting (PAC) process

E4

CORE

Cut 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 (e.g., vertical, overhead, horizontal, etc.)

E6

CORE

Perform Certified Associate Welding Inspector (CAWI) functions

E7

CORE

Perform Certified Welding Inspector (CWI) functions

E4

NON-CORE

Perform destructive metal tests

E4

CORE

Perform flux cored arc welding operations in all positions (e.g., vertical, overhead, horizontal, etc.)

E5

NON-CORE

Perform maintenance welding operations

E4

NON-CORE

Perform metal stress relieving measures

E4

CORE

Perform non-destructive metal tests

E4

CORE

Prepare surfaces for welding

E5

CORE

Supervise arc welding and cutting operations

ARC WELDING AND CUTTING (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	CORE	Supervise flux cored arc welding operations
E5	CORE	Supervise metal component fabrications
E5	CORE	Validate weld in accordance with Welding Procedure Specifications (WPS)
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

CONCRETE CONSTRUCTION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	NON-CORE	Construct concrete forms
E5	NON-CORE	Establish building lines and elevations
E4	NON-CORE	Perform concrete finishes
E4	NON-CORE	Perform concrete mixing operations
E4	NON-CORE	Perform concrete placements
E4	NON-CORE	Place concrete formwork
E5	NON-CORE	Place embedments in formwork

CONSTRUCTION MANAGEMENT

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E6	CORE	Conduct construction project turnovers
E5	NON-CORE	Conduct safety inspections of projects
E6	NON-CORE	Conduct Three-Phase Quality Control inspections
E4	CORE	Develop construction activities
E4	CORE	Develop construction estimates
E5	CORE	Develop construction project packages
E4	CORE	Develop construction project sketches, diagrams, and shop drawings
E5	NON-CORE	Develop construction safety plans
E5	CORE	Develop environmental protection plans
E5	CORE	Develop master activities listing
E5	NON-CORE	Develop project Three-Phase Quality Control plans
E5	CORE	Establish construction site layouts
E4	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
E4	CORE	Lead construction project crews
E6	CORE	Manage construction projects
E5	CORE	Manage construction safety plans
E6	CORE	Manage project Quality Control (QC) plans
E6	CORE	Manage Three-Phase Quality Control process

CONSTRUCTION MANAGEMENT (CONT'D)

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E7	CORE	Monitor construction project contracts
E5	CORE	Supervise construction project crews
E5	CORE	Supervise construction project safety operations
E5	CORE	Supervise construction projects
E5	CORE	Supervise environmental protection plans
E5	CORE	Supervise job site construction operations (e.g., Quality Control (QC) and safety plan implementation, job site information board, level III chart, etc.)
E5	CORE	Supervise planning and estimating operations
E5	CORE	Supervise project Three-Phase Quality Control process
E6	CORE	Validate construction project packages
E5	CORE	Validate project surveys and elevation data

EXPEDITIONARY CONSTRUCTION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	NON-CORE	Assess airfield damages (data collection)
E5	NON-CORE	Assess pier damages
E5	NON-CORE	Plan Airfield Damage Repairs (ADR) (e.g., operational length determination, repair quality criteria, operating surface selection, etc.)
E5	NON-CORE	Plan Pier Damage Repairs (PDR)
E4	NON-CORE	Repair damaged airfields (e.g., debris clearing, material staging, spall repair, crater repair, etc.)
E4	NON-CORE	Repair damaged piers
E7	NON-CORE	Supervise Airfield Damage Repair (ADR) operations
E7	NON-CORE	Supervise Pier Damage Repair (PDR) operations

OXYFUEL GAS CUTTING AND WELDING

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	NON-CORE	Bend pipes
E4	CORE	Cut ferrous metals using Oxyfuel Gas Cutting (OFC) equipment
E4	CORE	Fabricate pipes
E4	CORE	Interpret Oxyfuel Gas Cutting and Welding (OFC and OFW) symbols and standards from drawings and specifications
E4	CORE	Join metal using Brazing (B) process
E4	CORE	Maintain Oxyfuel Gas Cutting and Welding (OFC and OFW) equipment
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
E5	CORE	Supervise Oxyfuel Gas Cutting and Welding (OFC and OFW) operations
E5	CORE	Validate cutting process
E5	CORE	Validate Oxyfuel Gas Cutting and Welding (OFC and OFW) 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

SHEET METAL

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E4	CORE	Assemble sheet metal components
E5	CORE	Assemble sheet metal systems
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
E5	CORE	Supervise sheet metal component fabrication operations
E5	CORE	Validate sheet metal component installations

SPECIAL CONSTRUCTION

<u>Paygrade</u>	<u>Task Type</u>	<u>Task Statements</u>
E5	NON-CORE	Conduct launch and recovery bridging systems operations (e.g., Mabey Johnson, Medium Girder Bridge (MGB), heavy timber)
E4	NON-CORE	Construct non-standard bridging (gap crossing)
E4	CORE	Erect pre-engineered structures (i.e., K-Span, tension fabric, Pre-Engineered Buildings (PEB), fabricated steel buildings, steel towers, and antennas)
E4	NON-CORE	Fabricate cold-formed steel floor, wall, and roof assemblies
E4	NON-CORE	Install cold-formed steel framing components and prefabricated assemblies
E4	NON-CORE	Install cold-formed steel wall and roof sheathing
E4	CORE	Interpret special construction drawings and specifications
E6	CORE	Manage special construction assembly operations
E5	NON-CORE	Manufacture cold-formed steel framing components
E5	NON-CORE	Manufacture cold-formed steel wall and roof sheathing
E5	CORE	Supervise special construction assembly operations