

Work Processes Schedule

POWER-PLANT OPERATOR (UTILITIES)

RAPIDS: 0440N

O*NET/SOC: 51-8013.00

REVISION DATE: 03/2015

Control or operate machinery, such as steam-driven turbogenerators, to generate electric power, often through the use of panel boards, control boards, or semi-automatic equipment. Demonstrate knowledge and skills for qualifying as Journeyman. Applicable Job Qualification Requirements will be used as a guide in performing tasks and demonstrating knowledge in the following areas. Actual work time must be recorded in the Work Experience Log.

Applicable Ratings/MOS

USMC MOS None

USCG MK

USN CE, CM, EO, GS, MM, MMN, SW, UT

Related Instruction

Any trade related schools/courses totaling 432 hours.

Additional Requirement

USN CE, CM, EO, SW, and UT, must hold NEC 5633

Total Hours: **6000**

Skill	Description	Hours
A	<p>OPERATION AND MAINTENANCE OF TURBINE AUXILIARIES</p> <p>Control operation of and maintain condensate pumps, circulating pumps, lube-oil coolers; generator air coolers; air ejectors, condensers, low-pressure heaters, lube-oil filters, lube-oil purifiers (centrifuge), and auxiliary oil pumps.</p>	1000
B	<p>OILING</p> <p>Boiler feed pumps; high pressure heaters; low pressure heaters; draft fans; open heaters; closed heaters; aerators; miscellaneous pumps, steam and electric driven; air compressors evaporators.</p>	500
C	<p>WATER TESTING (BOILER)</p> <p>Perform tests on raw water. Test boiler water for hardness and oxygen content. P and M alkalinity readings. Test for phosphate content and sulfate content. Determine carbonate-sulfate ratio. Test for total chloride content. Determine total solids concentration. Take ph readings. Determine amount of chemical(s) needed to bring low reading up to predetermined normal; when to blow boilers; mixing and standardizing/normalizing testing solutions; and circulating cooling water.</p>	1000
D	<p>TURBINE OPERATION</p> <p>Recognize normal readings on instruments; steam pressure and vacuum gauges; oil pressures and temperatures; condenser vacuum, barometer; steam and water flow meters. Prepare turbine and auxiliaries for starting and bringing up to speed</p>	1000
	<p>SWITCHBOARD OPERATION</p>	

E	Use and interpret readings on switchboard instruments, watt-hour meters, voltmeters, voltage regulators, power factors, frequency meters, synchroscope; use of remote-control switches, hand-operated disconnects, oil circuit breakers; substation layout and switching. Synchronize incoming turbine.	1000
F	<p>OPERATE BOILER ROOM</p> <p>Use and interpret boiler room instruments, draft gauges, pressure gauges, CO indicators, recorders, proper combustion; use of super-heaters; induced and forced draft fans; boiler feed pumps; feed water regulators.</p>	1000
G	<p>LOGS AND LOG ENTRIES</p> <p>Prepare and interpret logs and log entries. Record malfunctions of equipment, instruments, or controls on log sheet.</p>	400
H	<p>SAFETY</p> <p>Conform to prescribed safety procedures.</p>	100