



DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
2000 NAVY PENTAGON
WASHINGTON, DC 20350-2000

OPNAVINST 9220.2B
N95
21 Jul 2014

OPNAV INSTRUCTION 9220.2B

From: Chief of Naval Operations

Subj: U.S. NAVY BOILER WATER AND FEEDWATER TEST AND TREATMENT
PROGRAM (NUCLEAR EXCLUDED)

1. Purpose

a. To establish training and certification requirements for personnel involved with the test and treatment of boiler water and feedwater for non-nuclear steam generators on U.S. Navy vessels.

b. To establish responsibilities of U.S. Navy commands with respect to the test and treatment of boiler water and feedwater for non-nuclear steam generators on U.S. Navy vessels.

c. This revision includes updated requirements for recertification; updated prerequisites for all boiler water and feedwater courses; added requirements for qualification and designation of ship's oil king; added requirements regarding certification and re-certification records; and updated required actions for Naval Surface Warfare Center, Carderock Division-Naval Ship Systems Engineering Station (NAVSURFWARCEN SHIPSYSENGSTA PHILADELPHIA PA), Naval Education and Training Command (NETC), Surface Warfare Officers School Command (SWOSCOLCOM), Command, Naval Supply Systems Command (COMNAVSUPSYSCOM), fleet commanders and ships' commanding officers (CO).

d. This instruction is a complete revision and should be reviewed in its entirety.

2. Cancellation. OPNAVINST 9220.2A.

3. Discussion. Continued high reliability of non-nuclear steam generators requires strict adherence to specified boiler water and feedwater controls. Training and qualification of personnel assigned to water chemistry duties requires: vigorous and disciplined application, safe and precise control and use of

chemicals, effective shipboard administrative controls, and a monitoring system that ensures aggressive compliance with all phases of the program.

4. Policy. Improvement of water chemistry maintenance in conventional steam propulsion ships and in ships equipped with auxiliary boilers and waste heat boilers can be achieved only by compliance with high standards at the shipboard level. Satisfactory water chemistry maintenance, through diligent efforts by properly trained personnel and using approved procedures and specified chemicals, is the goal of the U.S. Navy Boiler Water and Feedwater Test and Treatment Program.

a. Qualification. Only personnel holding a current certification obtained through successful completion of applicable boiler water and feedwater test and treatment certification courses are authorized to test and treat boiler water and feedwater, and manage boiler water and feedwater programs in conventional steam propulsion plants, auxiliary boilers, and waste heat boilers. In addition, engineering officers of the watch (EOOW), ship's oil king, and oil king assistant watchstanders (inport and underway) shall be qualified per the applicable personnel qualification standards (PQS) program.

b. Certification Requirements. All personnel who are required in the course of their duties to test, treat, and or manage boiler water and feedwater programs shall be certified by completing the applicable courses of this instruction as specified in subparagraph 4d. All certifications are valid for the duration of sea duty. Once a qualified Sailor transfers to shore duty, he or she shall re-certify prior to assuming duties afloat as specified in subparagraph 4a. All officers and enlisted personnel (E-6 to E-9) who are responsible for management and proper performance of the U.S. Navy Boiler Water and Feedwater Test and Treatment Program shall hold current certifications for their ship-specific boiler prior to reporting aboard ship. Ship oil kings and oil king assistant watchstanders shall hold current certification(s) for their ship-specific boiler type.

c. Prerequisites

(1) Boiler Water and Feedwater Chelant Basic Certification Course (A-651-0019):

(a) Shall be E-3 or above who has completed the water chemistry portions of water king or oil king PQS for propulsion boilers.

(b) Shall be a final EOWW candidate for qualification who has completed the fundamentals of the EOWW PQS.

(c) Shall be a commissioned officer.

(2) Boiler Water and Feedwater Test and Treatment Chelant Supervisor Course (A-651-0116):

(a) Shall be E-4 or above and graduate of the Boiler Water and Feedwater Chelant Basic Certification Course (A-651-0019).

(b) Shall be a commissioned officer and graduate of the Boiler Water and Feedwater Chelant Basic Certification Course (A-651-0019).

(3) Auxiliary Boiler Water and Feedwater Test and Treatment Certification Course (A-652-0189):

(a) Shall be E-3 or above who has completed the water chemistry portions of water king or oil king PQS for auxiliary boilers. Additionally, should have satisfactorily completed the Auxiliary Boilers Operations Course (J-651-0457), or have 6 months of experience in the operation and maintenance of auxiliary boilers.

(b) Shall be a final EOWW candidate for qualification who has completed the fundamentals of the EOWW PQS.

(c) Shall be a commissioned officer.

(4) Waste Heat Boiler Water and Feedwater Test and Treatment Certification Course (A-652-0188):

(a) Shall be E-3 or above who has completed the water chemistry portions of the water king or oil king PQS for waste heat boilers. Additionally, should have 6 months of experience in the operation and maintenance of waste heat boilers.

(b) Shall be a final EOOW candidate for qualification who has completed the fundamentals of the EOOW PQS.

(c) Shall be a commissioned officer.

d. Training Requirements

(1) Conventional steam propulsion ships:

(a) All officers and enlisted personnel (E-6 to E-9) who are responsible for management and proper performance of the U.S. Navy Boiler Water and Feedwater Test and Treatment Program shall be a graduate of the Boiler Water and Feedwater Chelant Basic Certification Course (A-651-0019) and Boiler Water and Feedwater Test and Treatment Chelant Supervisor Course (A-651-0116). As a minimum requirement, this shall include the engineer officer, main propulsion assistant, division officers responsible for the boiler(s), EOOW, and ship's oil king.

(b) The ship's oil king shall be a senior petty officer (E-6 to E-9) machinist's mate (MM) designated by a letter signed by the CO. The oil king is the primary operator, tester, and record keeper for all actions relating to fuels and boiler water and feedwater testing and treatment and shall be a graduate of Boiler Water and Feedwater Test and Treatment Chelant Basic Certification Course (A-651-0019); Boiler Water and Feedwater Test and Treatment Chelant Supervisor Course (A-651-0116); and all required fuel testing courses. The ship's force steam generating plant inspector shall serve as the boiler water and feedwater program manager.

(c) All enlisted personnel assigned as oil king assistant watchstanders who test or treat boiler water and feedwater, or make treatment recommendations under supervision, shall complete the Boiler Water and Feedwater Chelant Basic Certification Course (A-651-0019) as a minimum requirement.

(2) Non-steam propulsion ships equipped with auxiliary or waste heat boilers:

(a) All officers and enlisted personnel (E-6 to E-9) who are responsible for management and proper performance of the U.S. Navy Boiler Water and Feedwater Test and Treatment Program shall complete the Auxiliary Boiler Water and Feedwater Test and Treatment Certification Course (A-652-0189) or Waste Heat Boiler Water and Feedwater Test and Treatment Certification Course (A-652-0188). As a minimum requirement, this shall include the engineer officer, main propulsion assistant, division officers responsible for the boiler(s), EOOW, and ship's oil king.

(b) The ship's oil king shall be a senior petty officer (E-6 to E-9) in a machinery rating (e.g., MM, gas turbine systems technician mechanic (GSM), or engineman (EN)) designated by a letter signed by the CO. The oil king is the primary operator, tester, and record keeper for all actions relating to fuels and boiler water and feedwater testing and treatment, and shall complete the Auxiliary Boiler Water and Feedwater Test and Treatment Certification Course (A-652-0189) or Waste Heat Boiler Water and Feedwater Test and Treatment Certification Course (A-652-0188), and all required fuel testing courses.

(c) All enlisted personnel assigned as oil king assistant watchstanders who test or treat boiler water and feedwater, or make treatment recommendations under supervision, shall complete the Auxiliary Boiler Water and Feedwater Test and Treatment Certification Course (A-652-0189) or Waste Heat Boiler Water and Feedwater Test and Treatment Certification Course (A-652-0188) as a minimum requirement.

5. Certification and Re-certification Records

a. Individuals who successfully complete a course supporting the U.S. Navy Boiler Water and Feedwater Test and Treatment Program will be issued a completion certificate by the authorized learning site and training support site. Certification will remain valid as outlined in subparagraph 4b.

b. Appropriate service record entries shall be made upon successful completion of boiler water and feedwater test and treatment courses.

c. A copy of current certificates for personnel aboard with a boiler water and feedwater certification shall be maintained in the oil lab.

6. Action

a. NAVSURFWARCEN SHIPSYSENGSTA, as the designated life cycle engineering manager, will:

(1) Specify treatment and testing methods and procedures for naval propulsion boilers, auxiliary boilers, and waste heat boilers as approved by the Commander, Naval Sea Systems Command (COMNAVSEASYSYSCOM) boiler technical warrant holder.

(2) Conduct technical audits of courses supporting the U.S. Navy Boiler Water and Feedwater Test and Treatment Program at a period not to exceed 3 years or when overarching guidance is revised to ensure technical accuracy and relevancy. Conduct audits per COMNAVSEASYSYSCOM Technical Training Audit Program, in coordination with SWOSCOLCOM.

(3) Develop in-service training for boiler water and feedwater test and treatment instructors, and coordinate delivery with SWOSCOLCOM.

(a) Develop and maintain job qualification requirements (JQR) for boiler water and feedwater test and treatment instructors.

(b) Coordinate with local steam generating plant inspectors to implement the JQR.

b. NETC will:

(1) Act as training agent for courses supporting the U.S. Navy Boiler Water and Feedwater Test and Treatment Program.

(2) Designate SWOSCOLCOM as curriculum control authority for courses supporting the U.S. Navy Boiler Water and Feedwater Test and Treatment Program.

c. SWOSCOLCOM will:

(1) Execute the course requirements per the approved training plans at all learning sites authorized to conduct boiler water and feedwater test and treatment training in support of the standards identified by the program life cycle engineering manager and the COMNAVSEASYS COM boiler technical warrant holder. The Boiler Water and Feedwater Chelant Basic Certification Course (A-651-0019) is a prerequisite for the Boiler Water and Feedwater Test and Treatment Chelant Supervisor Course (A-651-0116) for officers, senior petty officers, and oil kings. The Waste Heat Boiler Water and Feedwater Test and Treatment Certification Course (A-652-0188) and the Auxiliary Boiler Water and Feedwater Test and Treatment Certification Course (A-652-0189) each provide a single course for supervisors and personnel who manage the waste heat boiler and auxiliary boiler water and feedwater program and or who test and treat the boiler water and feedwater.

(2) Designate SWOSCOLCOM Director, Enlisted Engineering Training (N77) as course curriculum model manager for courses supporting the U.S. Navy Boiler Water and Feedwater Test and Treatment Program and designate and propose additional learning sites authorized to conduct training per Naval Education Training (NAVEDTRA) 130B (13 August 2009).

(3) Develop and maintain an instructor certification plan per NAVEDTRA 135C (16 March 2010) and NETCINST 1500.5B. Incorporate NAVSURFWARCEN SHIPSYSENGSTA developed JQR per subparagraph 6a(3)(a).

(4) Coordinate in-service training with life cycle engineering manager.

(5) Conduct formal course reviews per NAVEDTRA 135C (16 March 2010).

(6) Approve or disapprove waiver requests, submitted per subparagraph 6f(3), following NAVEDTRA 140 (base document of 21 November 2012).

d. The COMNAVSUPSYSCOM, as the designated logistic agent, will:

(1) Issue formal procedures for stocking, distributing, and controlling mission-critical boiler water and feedwater test

and treatment equipment and chemicals for conventionally powered steam ships.

(2) Verify that supply activities, which stock or distribute boiler water and feedwater test and treatment equipment and chemicals, provide continuous source of chemicals with shelf lives that have not expired in units of issue consistent with shipboard requirements, as defined in the coordinated shipboard allowance list.

(3) Verify applicable quality control procedures are invoked in supply support procedures and procurement documents.

(4) Conduct periodic audits of supply activities responsible for providing test and treatment chemicals to fleet units to ensure compliance with issuing and quality requirements.

e. The fleet commanders will:

(1) Stress the importance of proper water chemistry maintenance to the fleet units and monitor fleet performance.

(2) Verify that test, treatment, and management of boiler water and feedwater in conventional steam propulsion plants and ships that have auxiliary boilers or waste heat boilers, are performed by certified personnel.

(3) Establish monitoring procedures, which ensures compliance with the policies of this instruction.

f. COs will:

(1) Ensure and verify proper administration and execution of the U.S. Navy Boiler Water and Feedwater Test and Treatment Program within their command.

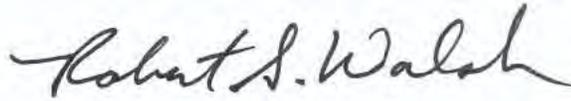
(2) Ensure and verify personnel who are responsible for the management and performance of the U.S. Navy Boiler Water and Feedwater Test and Treatment Program are qualified per the requirements in this instruction.

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(3) Submit, via chain of command, NETC 1500/8 Pre-Requisite Waiver Request to curriculum control authority for consideration per NAVEDTRA 140A, January 2014.

7. Records Management. Records created as a result of this instruction, regardless of media and format, shall be managed per Secretary of the Navy Manual 5210.1 of January 2012.

8. Forms. NETC 1500/8 Pre-Requisite Waiver Request is available for download on Naval Forms Online <https://navalforms.documentservices.dla.mil/web/public/home>.



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