



DEPARTMENT OF THE NAVY

OFFICE OF THE CHIEF OF NAVAL OPERATIONS

2000 NAVY PENTAGON

WASHINGTON, DC 20350-2000

OPNAVINST 9220.2A

N86

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OPNAV INSTRUCTION 9220.2A

From: Chief of Naval Operations

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

1. Purpose. To issue policy for subject program and assign responsibilities for its execution. This instruction has been administratively revised and should be reviewed in its entirety.
2. Cancellation. OPNAVINST 9220.2
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 the monitoring system must ensure 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, using approved procedures and specified chemicals, is the goal of the U.S. Navy Boiler Water and Feedwater Test and Treatment Program.
 - a. Qualification. The ship's Oil and Water King and Assistant Oil King watchstanders (inport and underway) must be qualified in accordance with the 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/feedwater programs will be certified by completing the applicable course of instruction as specified in paragraph 4c. All certifications are valid for the duration of sea duty, with the exception of the Boiler Water/Feedwater Chelant Basic Certification Course (A-651-0019) which is required to be taken only once during a career. Once personnel

transfer to shore duty, they must re-certify prior to assuming duties as specified in paragraph 4c with the exception of Steam Generating Plant Inspectors, ISIC engineering plant trainers, Afloat Training Group trainers, Board of Inspection and Survey assessors and Afloat Training Group N43 examiners. Assistant Oil King watchstanders (inport and underway) and the ship's Oil and Water King must hold current certification for their ship-specific boiler type.

c. Training Requirements

(1) All officers and enlisted personnel on steam propulsion ships who are responsible for management and proper performance of the program will complete the Boiler Water/Feedwater Test and Treatment Chelant Supervisor Course (A-651-0116). As a minimum requirement, this will include the Engineer Officer, Main Propulsion Assistant (MPA), Division Officers responsible for the boiler(s), Engineering Officers of the Watch (EOOW), ship's Oil and Water King, and Assistant Oil King watchstanders.

(2) All officers and enlisted personnel on non-steam propulsion ships equipped with auxiliary boilers who are responsible for management and proper performance of the program will complete the Auxiliary Boiler Water/Feedwater Test and Treatment Certification Course (A-652-0189). As a minimum requirement, this will include the Engineer Officer, Main Propulsion Assistant (MPA), division officers responsible for the boiler(s), Engineering Office of the Watch (EOOW), ship's Oil and Water King, and Assistant Oil King watchstanders.

(3) All officers and enlisted personnel on non-steam propulsion ships equipped with waste heat boilers who are responsible for management and proper performance of the program will complete the Waste Heat Boiler Water/Feedwater Test and Treatment Certification Course (A-652-0188). As a minimum requirement, this will include the Engineer Officer, Main Propulsion Assistant (MPA), division officers responsible for the boiler(s), Engineering Office of the Watch (EOOW), ship's Oil and Water King, and Assistant Oil King watchstanders.

(4) All enlisted personnel assigned as Assistant Oil Kings who test or treat boiler water/feedwater or make treatment recommendations under supervision, will be required to complete either the Boiler Water/Feedwater Basic Certification Course (A-

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651-0019), the Auxiliary Boiler Water/Feedwater Test and Treatment Certification Course (A-652-0189), or the Waste Heat Boiler Water/Feedwater Test and Treatment Certification Course (A-652-0188), whichever is appropriate for the ship-specific boiler type.

d. Prerequisites

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

(a) Must be E-3 and above.

(b) Must have completed the water chemistry portions of Water King/Oil King PQS (NAVEDTRA 43116-5G) for propulsion boilers.

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

(a) Must be E-4 or above and have completed the Boiler Water/Feedwater Basic Certification Course (A-651-0019).

(b) Or, must be a final candidate for EOOW qualification who has completed the fundamentals of the EOOW PQS, or a commissioned officer.

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

(a) Must be E-3 or above.

(b) Must have completed the water chemistry portions of the Water King/Oil King PQS (NAVEDTRA 43116-5G) for auxiliary boilers.

(c) Should have satisfactorily completed the Auxiliary Boilers Operations Course (J-651-0457) or have six months experience in the operation and maintenance of auxiliary boilers.

(d) Or, must be a final candidate for EOOW qualification who has completed the fundamentals of the EOOW PQS, or a commissioned officer.

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

(a) Must be E-3 or above

(b) Must have completed the water chemistry portions of the Water King/Oil King PQS (NAVEDTRA 43116-5G) for waste heat boilers.

(c) Should have six months experience in the operation and maintenance of waste heat boilers.

(d) Or, must be a final candidate for EOOW qualification who has completed the fundamentals of the EOOW PQS, or a commissioned officer.

5. Action

a. The Commander, Naval Surface Warfare Center, Carderock Division - Ship Systems Engineering Station, as the designated program technical coordinator, will:

(1) Specify treatment and testing methods and procedures for naval propulsion boilers, auxiliary boilers, and waste heat boilers.

(2) Review training course plan materials for technical content.

(3) Conduct periodic technical audits of activities authorized to conduct training for compliance with technical requirements outlined in the approved training course plans.

b. The Commanding Officer, Center for Naval Engineering will:

(1) Approve and issue the training course plan and materials for use by all activities authorized to conduct boiler water/feedwater test and treatment training in support of the standards identified by the program technical coordinator. The propulsion course plans and materials shall provide for an advanced course for officers, senior petty officers, and Oil Kings. They shall provide a basic course for enlisted personnel who are required to test and treat boiler water/feedwater and make recommendations for treatment. The waste heat boiler and

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auxiliary boiler course plans and material should provide a single course for supervisors and personnel who test and treat boiler water/feedwater.

(2) Designate activities authorized to conduct training.

(3) Execute a program to train and certify Boiler Water/Feedwater Test and Treatment instructor personnel.

(4) Conduct periodic audits of activities authorized to conduct training for compliance with requirements outlined in the approved training course plans.

c. The Commander, Naval Supply Systems Command, as the designated logistic agent will:

(1) Issue formal procedures for stocking, distributing, and controlling mission-critical boiler water/feedwater test and treatment equipment and chemicals for conventionally powered ships.

(2) Ensure that supply activities, which stock or distribute boiler water/feedwater test and treatment equipment and chemicals, provide a continuous source of chemicals with shelf lives that have not expired in units of issue consistent with shipboard requirements.

(3) Ensure applicable quality control procedures are invoked in procurement contracts.

(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.

d. The Fleet Commanders will:

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

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

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

e. Commanding Officers will:

(1) Ensure proper administration and execution of the boilerwater/feedwater test and treatment program within their command.

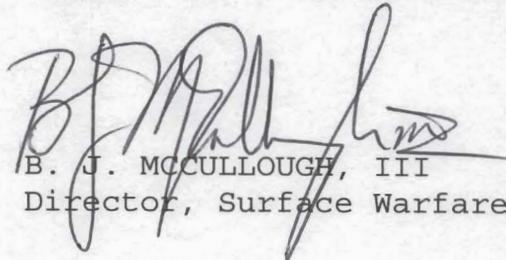
(2) Ensure personnel who are responsible for the management and performance of the boiler water/feedwater test and treatment program are qualified in accordance with the requirements as set forth in this instruction.

6. Certification/Re-certification Records

a. Individuals successfully completing the boiler water/feedwater test and treatment course will be issued a certificate by the authorized site. Certification will remain valid as outlined in paragraph 4b.

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

c. A copy of the certificate for current personnel onboard with boilerwater/feedwater certification shall be maintained in the oil lab.



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