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

IN REPLY REFER TO  
OPNAVINST 9220.2  
OP-03P  
MAR 27 1986

OPNAV INSTRUCTION 9220.2

From: Chief of Naval Operations

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

1. Purpose. To issue policy for subject program and assign responsibilities for its execution.

2. Cancellation. OPNAVINST 9560.1.

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 require rigorous and disciplined application, control and use of chemicals must be safe and precise, shipboard administrative controls must be effective, and a monitoring system must ensure aggressive compliance with all phases of the program. (R)

4. Policy. Improvement of water chemistry maintenance in conventional steam propulsion ships and in ships equipped with auxiliary boilers and waste heat recovery 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, properly using approved procedures and specified chemicals is the goal of the U.S. Navy Boiler Water and Feedwater Test and Treatment Program. (R)

a. Qualification. Only personnel holding a current certification obtained through successful completion of an approved boiler water/feedwater test and treatment training course are authorized to test and treat boiler water/feedwater and manage boiler water and feedwater programs in conventional steam propulsion plants, auxiliary boilers and waste heat recovery boilers. In addition, Engineering Officer of the Watch (EOOW), Oil King, and oil king assistants must be qualified in accordance with the Personnel Qualification Standards (PQS) Program. In support of policy to improve water chemistry maintenance, and as part of the general professional development of personnel in the boiler technician rating, completion of the (PQS) for Oil and Water King (NAVEDTRA 43116-5C) must be accomplished prior to advancement to paygrade E-6. (R)

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 (A)

paragraph 4c. All certifications obtained after May 1984 are valid for 36 months. For personnel whose 36 months expire, and are in a billet requiring certification, their certification will remain valid until transferred. Steam propulsion oil kings must hold current certification in both the main propulsion Basic (A-651-0019) and main propulsion Supervisor (A-651-0115) courses.

c. Training Requirements

- A) (1) All officers and enlisted personnel on steam propulsion ships who are responsible for management and proper performance of the program will complete the Main Propulsion Boiler Water/Feedwater Test and Treatment Supervisors Course (A-651-0115). As a minimum requirement, this will include the Engineer Officer, Main Propulsion Assistant (MPA), Boiler Officer, Engineering Officer of the Watch (EOW) and the Oil King.
- A) (2) All officers and enlisted personnel on non-steam propulsion ships equipped with auxiliary or waste heat 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-652-0221) or the Waste Heat Recovery Boiler Water/Feedwater Test and Treatment Certification Course (A-651-0054). As a minimum requirement this will include the Engineer Officer, cognizant division officer, EOWs and the Oil King.
- A) (3) All enlisted personnel assigned as oil king assistants who test or treat boiler water/feedwater or make treatment recommendations will be required to complete either the Main Propulsion Boiler Water/Feedwater Test and Treatment Certification Basic Course (A-651-0019), the Auxiliary Boiler Water/Feedwater Test and Treatment Certification Course (A-652-0221) or the Waste Heat Recovery Boiler Water/Feedwater Test and Treatment Certification Course (A-651-0054), whichever is appropriate.
- A) (4) Personnel standing distilling plant watches are not required to be certified in boiler water/feedwater test and treatment procedures. Distilling plant operators must be PQS qualified to perform chloride and hardness tests on evaporator distillate.

d. Prerequisites

- A) (1) Main Propulsion Boiler Water/Feedwater Supervisor Course (A-651-0115)

(a) Must be E-5 or above, and

(b) Must have completed the Main Propulsion Boiler Water/Feedwater Test and Treatment Basic Course (A-651-0019); or

(c) E00W candidates must complete the fundamentals, systems and boiler water/feedwater chemistry watchstation sections of E00W PQS and be a final candidate for E00W qualification; or

(d) Students attending the E00W, Department Head Engineering Specialty, or Limited Duty Officer/Warrant Engineering Officer Course curricula at Surface Warfare Officers School Command Newport, RI and Coronado, CA or the Senior Enlisted Propulsion Engineering Course (SEPEC) (A-651-0110) must complete the preparatory boiler water/feedwater training provided by those courses.

(2) Main Propulsion Boiler Water/Feedwater Test and Treatment Certification Basic Course (A-651-0019)

(a) Must be engineering department personnel E-4 and above, and

(b) Must have completed the water chemistry portions of Oil and Water King PQS (NAVEDTRA 43116-5C)

(3) Waste Heat Recovery Boiler Water/Feedwater Test and Treatment Certification Course (A-651-0054)

(a) Must be engineering department personnel E-3 and above, and

(b) Must have satisfactorily completed the waste heat recovery boiler maintenance course (A-652-0073), or

(c) Must have 6 months shipboard experience in the operation and maintenance of waste heat boilers

(4) Auxiliary Boiler Water/Feedwater Test and Treatment Certification Course (A-652-0221)

(a) Must be engineering department personnel E-3 and above and

(b) Must have satisfactorily completed the auxiliary boiler maintenance and operator course (J-651-0457) or

(c) Must have 6 months experience in the operation and maintenance of auxiliary boilers.

- R) e. Recertification. When recertification is required it shall be obtained through successful completion of the applicable boiler water/feedwater course.

5. Action

a. The Commander, Naval Sea Systems Command will:

- R) (1) Function as program technical coordinator, in which capacity shall:

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

(b) Review training course plan and materials for technical content.

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

b. The Chief of Naval Education and Training will:

- R) (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 boiler course plans and materials should provide for an advanced course for officers, senior petty officers, and Oil Kings. They should 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 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 the training.

(3) Execute a program to train and certify Boiler Water/Feedwater Test and Treatment instructor personnel, and ensure that instructors of the training courses attend the instructor certification course.

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

(1) Issue formal procedures for stocking, distributing and controlling 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 current chemicals in units of issue consistent with shipboard requirements. R)

(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 Chief of Naval Personnel will: Require the completion of the personnel qualification standards (PQS) for Oil and Water King (NAVEDTRA 43116-5C) as a prerequisite for advancement to the E-6 pay grade in the Boiler Technician rating. This requirement may be waived, at the discretion of the commanding officer, for E-5 personnel serving in shore duty billets in which the completion of the PQS is not possible. However, those personnel advanced to E-6 under this provision may not be recommended to paygrade E-7 until completion of the waived PQS. In addition, those personnel in the Boiler Technician rating who are deficient in color aptitude shall be granted a waiver for that portion of the PQS dealing with color tests and may not be assigned to test boiler water and feedwater.

e. The Fleet Commanders in Chief will:

(1) Stress the importance of proper water chemistry maintenance to 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 and waste heat recovery boilers, are performed by certified personnel.

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

f. Commanding Officers will:

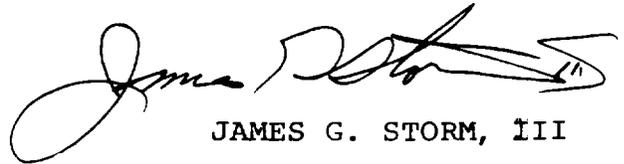
(1) Ensure proper administration and execution of the boiler- water/feedwater test and treatment program within their command.

(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/Recertification Records

A) a. Individuals successfully completing the boiler water/feedwater test and treatment course will be issued a "certificate of certification" by the school attended. Certification will remain valid as outlined in paragraph 4b.

b. Appropriate service record entries will be made verifying each individuals successful completion of boiler water/feedwater test and treatment courses.



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