

Marine Chemists FAQs

Responses to FAQs are prepared by NFPA technical staff to assist users in reading and understanding NFPA codes and standards. The responses do not necessarily represent the official position of the NFPA or its Technical Committees. In addition, the responses are neither intended, nor should be relied upon, to provide professional consultation or services.

1. What qualifications are necessary to be an NFPA Certificated Marine Chemist?

A combination of academic, work experience, vessel confined space inspection hours achieved with certificated Marine Chemists, and completion of a self-study program related to safety and maritime issues. The Marine Chemist Directory, which includes the Rules for Certification and Recertification of Marine Chemists, explains these requirements in detail. To obtain a copy, contact NFPA's Marine Field Service at (617) 984-7418, or check out the online Directory.

2. What are the requirements of the shipyard competent person?

Although NFPA conducts training for those individuals seeking to be designated shipyard competent persons (SCP) by their employers, OSHA details the requirements for SCPs in 29 CFR 1915.7. Briefly, the SCP must be able to understand the instructions left by a Marine Chemist or other authorized person; have knowledge of the Subparts of 29 CFR 1915; know the structure and location of spaces; know how to calibrate and use atmospheric testing instruments; know how to perform the required tests; and maintain the required records.

3. What NFPA standards address entry and work in confined spaces?

NFPA currently has two standards that address confined space issues, specifically NFPA 306, Control of Gas Hazards on Vessels, and NFPA 326, Safeguarding Tanks and Containers for Entry, Cleaning, and Repair. NFPA 306 provides the requirements for Marine Chemists to permit entry and work on tanks and confined spaces on vessels or in the shipyard. NFPA 326 deals with entry and work on aboveground and underground tanks, confined spaces, and containers that are not located in shipyards.

4. What regulations cover entry and work in vessel or shipyard confined spaces?

In the Code of Federal Regulations, 29 CFR 1915, Shipyard Industry, OSHA addresses the recognition, evaluation, and control of atmospheric hazards. The regulation also provides the requirements for safely performing hot work, general working conditions, rigging and materials handling, tools, personal protective equipment, electrical machinery, toxic substances, and many other topics. The U. S. Coast Guard regulations concerning vessel confined space entry are found in several sections of Title 46 CFR, Shipping.

5. What regulations cover entry and work in aboveground and underground storage tanks?

Those regulations are found in OSHA 29 CFR 1910.146, Permit-required confined spaces.

6. Is shipboard abrasive blasting considered a hot work operation?

Yes. Although the amount of heat generated by the blasting process can vary, there is the potential for ignition. OSHA includes abrasive blasting in the definition of hot work in 29 CFR 1915, Subpart B.

7. Is it necessary to test hollow structures like railings before doing hot work on them?

Yes. The small amount of air that is present inside railings and similar hollow structures must be tested before performing hot work. Usually, small holes are cold-drilled in order to provide an opening as a means to insert atmospheric testing instrument probes. On vessels and in shipyards, the interior of structures like masts, stanchions, skegs, and bilge keels are required to be tested. Hollow structures may contain preservatives or coatings

8. Is a Marine Chemist Certificate the same as a hot work permit?

The Marine Chemist Certificate is an example of a hot work permit. On vessels and in shipyards, the Marine Chemist must authorize work in, or in spaces adjacent to, spaces that contain or have contained flammable, combustible, or other materials capable of creating a hazardous condition. NFPA 51B defines a permit authorizing individual (PAI) as one designated by management to authorize hot work in general industry. In some cases, the local fire authority may issue a hot work permit after a qualified person has performed an inspection of a confined space or other area where hot work is to be performed.

9. Are fire watches required for hot work operations?

NFPA 306 does not mandate a requirement for fire watches however a Marine Chemist may require a fire watch for certain hot work activities. The OSHA Shipyard Standard, 29 CFR 1915, Sub Part P does contain specific requirements for fire watches in the maritime industry. NFPA 51B states that a fire watch is required by the permit authorizing individual (PAI) when hot work is performed in a location where other than a minor fire might develop, or where several conditions exist.