

NAVY ENVIRONMENTAL HEALTH CENTER PROTECTS NAVY AND MARINE CORPS WORKERS FROM INHALATION HAZARDS

Most people take the air they breathe for granted, but respiratory protection is



Navy Respirator Course students inspect respirators during the workshop

vitaly important for Navy personnel who work around toxic airborne hazards that can be released to the air during tasks such as welding, brazing, and paint removal.

Respiratory protection prevents workers from inhaling toxic and potentially deadly gases, vapors, mists, and fumes. Respiratory protection also prevents suffocation when Navy personnel enter locations where there may not be enough oxygen to keep them alive during firefighting or maintenance of confined spaces. This success story highlights the continuous

improvement in Navy respiratory protection efforts over the past 20 years.

For decades the Navy Environmental Health Center (NEHC) has answered respiratory protection inquiries from Navy activities, advised top Navy



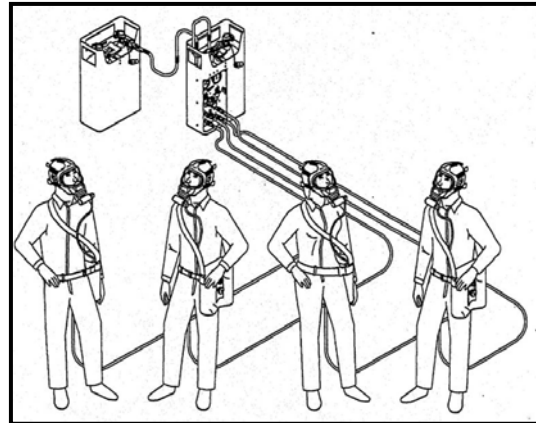
Self Contained Breathing Apparatus for Shipboard Firefighting and Damage Control

management on developments in the field of respiratory protection and has recommended new operational procedures for improving and updating Navy respirator program policy. For example, almost two decades ago, NEHC helped establish the Paperless Ordering Placement System designed to ensure that only National Institute for Occupational Safety & Health (NIOSH)-approved respirators and respirator parts are received by commands ordering through the National Stock System in a paperless manner.

In the late 1980's, the Naval Inspector General encouraged Navy commands to improve their respiratory protection programs. The Chief of Naval Operations tasked NEHC to develop a week-long course to train Respiratory Protection Program Managers (RPPMs). Since then, hundreds of RPPMs have successfully completed this course, resulting in a significant tuition savings to the Navy. As a direct result of RPPMs receiving proper training, the Naval

Inspector General has concluded that the Navy's respirator program is among the best of the Navy's occupational health programs.

In 1993, the Naval Sea Systems Command (NAVSEA) requested that NEHC provide long-term industrial hygiene assistance to improve shipboard respiratory protection, including: (1) new respirators for entering immediately dangerous to life or health (IDLH) atmospheres and rescuing personnel from IDLH spaces; (2) new and improved respirators for sailors to escape from spaces aboard ship that have become IDLH due to fire or other shipboard disaster; and (3) a replacement respirator for the outdated Oxygen Breathing Apparatus used for firefighting and damage control.



Shipboard IDLH Respirator

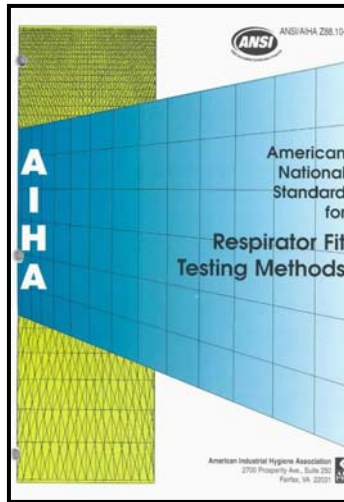
Additionally, NEHC assisted with development of technical specifications and requirements for these respirators and development of shipboard respiratory protection safety procedures in the *Naval Ships' Technical Manual*. These procedures include direction to Sailors wearing IDLH respirators on entering IDLH spaces, IDLH gas-free engineering procedures, and IDLH rescue procedures. NEHC also developed a two-day respirator course to train top NAVSEA program managers in respiratory protection.



New Respirator for Escape from IDLH Atmospheres

In recent years, NEHC has become more involved in development of American National Standards Institute (ANSI) respirator standards. NEHC represents the Navy on the ANSI Z88 Committee for Respiratory Protection, which is responsible for drafting and updating all of the ANSI respirator standards. NEHC served on the ANSI Z88.10 Subcommittee, which developed the ANSI Standard

on *Methods for Respirator Fit Testing* and currently serves on the ANSI Z88.2 *American National Standard for Practices for Respiratory Protection* Subcommittee. By serving on ANSI committees, NEHC is able to provide technical guidance regarding the respiratory protection standards that the Navy is required to follow. At committee meetings, NEHC provides the Navy's perspective on issues covered by these standards and endeavors to bring to these deliberations the very best knowledge and professional judgment available. Through service on ANSI committees, NEHC informs the Navy Bureau of Medicine and Surgery, the Chief of Naval Operations, and the



ANSI Z88.10 is the Industry Standard for Respirator Fit Testing

against chemical, biological, radiological, and nuclear (CBRN) warfare and terrorist attacks. The JSGPM will also provide protection against toxic industrial materials (TIMs). Fielding of the JSGPM will begin late in 2006. The new mask features improved field of view; reduced weight and bulk; improved protection against CBRN agents and TIMs; lower breathing resistance; and improved compatibility with other warfighting systems.



JSGPM prototype

NEHC posts important respirator information on the NEHC Respirator Homepage at http://www-nehc.med.navy.mil/ih/Respirator/Resp_index.htm. This page provides up-to-date information to U.S. Navy industrial hygienists and safety specialists worldwide. Website features developed by NEHC include a generic respirator standard operating procedure that can be completed online <http://www-nehc.med.navy.mil/downloads/IH/GENERIC SOP.doc>.

NEHC's Industrial Hygiene Directorate, Respiratory Protection Program ensures Department of the Navy personnel can work, fight fires, and respond to other emergency situations involving inhalation hazards and entry into oxygen deficient environments. Through its long tradition of providing respiratory protection assistance and services to the Navy, NEHC preserves the lives and health of Navy and Marine Corps workers.

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