



Hazards Associated With Shipbreaking

Shipbreaking is the process of dismantling an obsolete vessel's structure for scrapping or disposal. Conducted at a pier, drydock or dismantling slip, it includes a wide range of activities, from removing all gear and equipment to cutting down and recycling the ship's infrastructure. Shipbreaking is a challenging process, due to the structural complexity of the ships and the many environmental, safety, and health issues involved.

Shipbreaking operations expose workers to a wide range of hazards or workplace activities or conditions likely to cause injury or illness. These include the following:

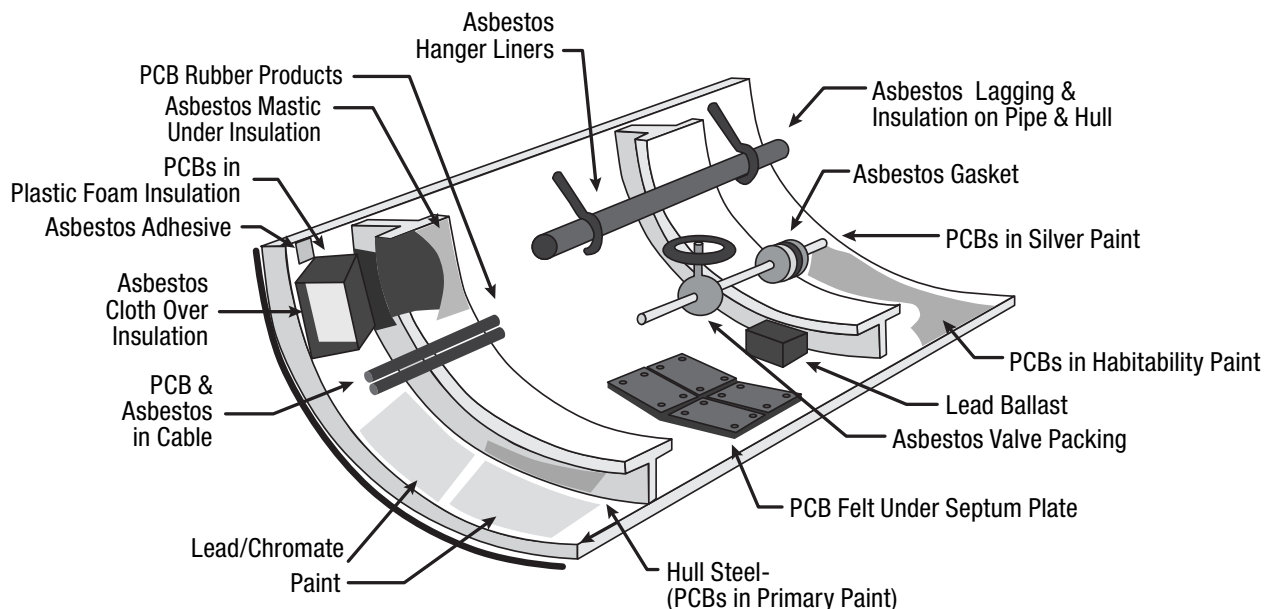
Hazardous Exposures

- **Asbestos**—in hanger liners, mastic under insulation, cloth over insulation, cable, lagging and insulation on pipes and hull, adhesive, gaskets on piping connections, and valve packing.
- **Polychlorinated biphenyls (PCBs)**—in rubber products such as hoses, plastic foam insulation, cables, silver

paint, habitability paint, felt under septum plates, plates on top of the hull bottom, and primary paint on hull steel.

- **Lead**—from lead and chromate paint, lead ballast, batteries, generators, and motor components.
- **Hazardous material and chemicals**—including heavy metals in ship transducers, ballast, and paint coatings; mercury in fluorescent light tubes, thermometers, electrical switches, light fittings, fire detectors, and tank-level indicators; and chlorofluorocarbons (CFCs) in self-contained refrigeration devices such as water coolers and small freezer units.

Potential Locations of Hazardous Materials



What Protections Does OSHA Offer Workers?

OSHA promotes workplace safety to save lives, prevent injuries, and protect the health of America's workers. The agency's Shipyard Industry standards (Title 29 Code of Federal Regulations, Part 1915) address many aspects of shipbreaking operations. Health and safety issues not specifically covered by these standards are covered by OSHA's General Industry Standards.

In addition, OSHA recently launched a national emphasis program to improve workplace safety in this high-hazard industry. Under the program, OSHA will conduct targeted comprehensive inspections of known shipbreaking operations.

- **Excess noise**—associated with grinding, hammering, metal cutting, and other activities.
- **Fire**—from ignited insulation, matting, lagging, and residual fuel; and from lubricants and other flammable liquids.

Hazardous Work Activities

- Entry into confined, enclosed, and other dangerous atmospheres.
- Paint removal.
- Metal cutting and disposal.
- Powered industrial truck operations.
- Work on elevated surfaces, particularly near deck openings and edges.
- Bilge and ballast water removal.
- Oil and fuel removal and tank cleaning.
- Removal and disposal of ship's machinery.
- Operations involving cranes, gear, and equipment for material handling.

- Cutting and welding operations and use of compressed gas.
- Activities involving scaffolds, ladders, and working services.

Hazardous Work Conditions

- Inadequate worker training.
- Lack of or improper personal protective equipment (PPE).
- Inadequate fire protection measures.
- Lack of appropriate emergency response, rescue, and first-aid personnel and services.

Where Can I Get More Information?

For more information about the hazards associated with shipbreaking operations and tips to protect yourself, visit the OSHA website at www.osha.gov. Select M, then Maritime Safety, then Maritime Compliance Information. Your nearest OSHA office can also provide more information.

For the telephone number, check your phone book for the "U.S. Department of Labor" listing or call OSHA toll-free at (800) 321-OSHA (6742). The teletypewriter (TTY) number is (877) 889-5627.

For assistance, contact us. We can help. It's confidential.



This fact sheet is not a standard or regulation, and it creates no new legal obligations. It contains recommendations as well as descriptions of mandatory safety and health standards. The recommendations are advisory in nature, informational in content, and are intended to assist employers in providing a safe and healthful workplace. The Occupational Safety and Health Act requires employers to comply with safety and health standards and regulations promulgated by OSHA or by a state with an OSHA-approved State Plan. In addition, the Act's General Duty Clause, Section 5(a)(1), requires employers to provide their employees with a workplace free from recognized hazards likely to cause death or serious physical harm. This information will be made available to sensory-impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: (877) 889-5627.

