

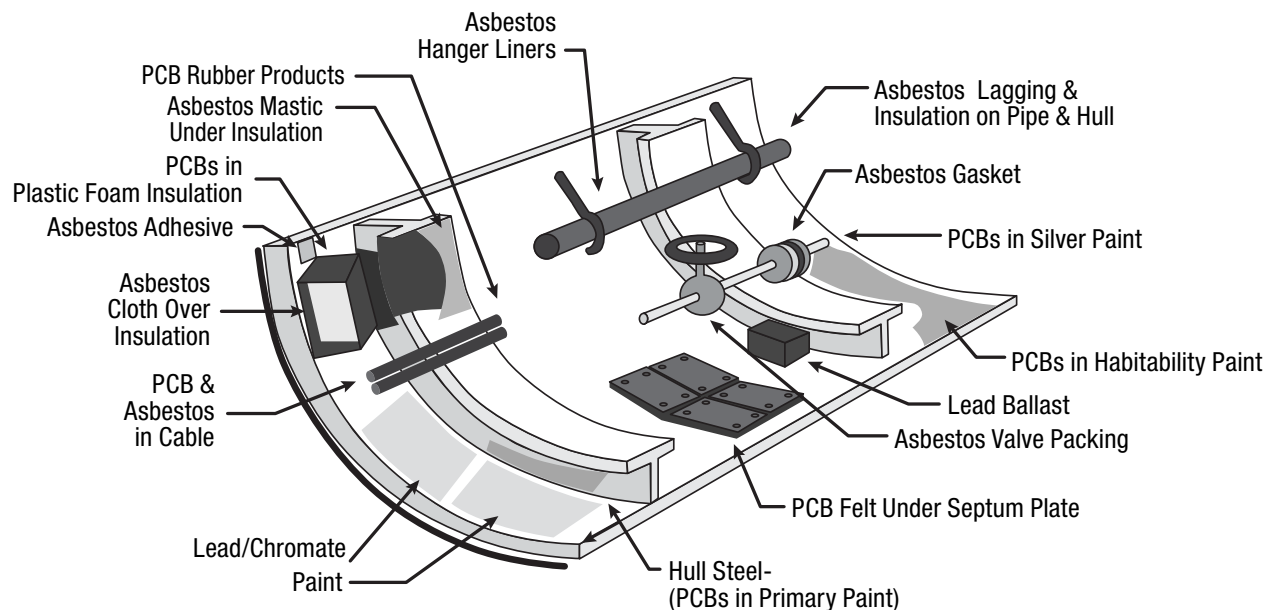
# Hazards Associated with Shipbreaking

Shipbreaking is the process of dismantling an obsolete vessel's structure for scrapping or disposal. Workers are exposed to a wide range of hazards or workplace activities or conditions that can cause injury or illness. 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.

## 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.

### Workers' Rights

Workers have the right to:

- Working conditions that do not pose a risk of serious harm or violate OSHA standards.
- Receive information and training (in a language and vocabulary the worker understands) about workplace hazards, methods to prevent them, and the OSHA standards that apply to their workplace.
- Review records of work-related injuries and illnesses.
- File a complaint asking OSHA to inspect their workplace if they believe there is a serious hazard or that their employer is not following OSHA's rules. OSHA will keep all identities confidential.
- Exercise their rights under the law without retaliation, including reporting an injury or raising health and safety concerns with their employer or OSHA. If a worker has been retaliated against for using their rights, they must file a complaint with OSHA as soon as possible, but no later than 30 days after learning of the adverse action.

For additional information, see OSHA's Workers page ([www.osha.gov/workers](http://www.osha.gov/workers)).

### How to Contact OSHA

Under the Occupational Safety and Health Act of 1970, employers are responsible for providing safe and healthful workplaces for their employees. OSHA's role is to help ensure these conditions for America's workers by setting and enforcing standards, and providing training, education and assistance. For more information, visit [www.osha.gov](http://www.osha.gov) or call OSHA at 1-800-321-OSHA (6742), TTY 1-877-889-5627.



This is one in a series of informational fact sheets highlighting OSHA programs, policies or standards. It does not impose any new compliance requirements. For a comprehensive list of compliance requirements of OSHA standards or regulations, refer to Title 29 of the Code of Federal Regulations. This information will be made available to sensory-impaired individuals upon request. The voice phone is (202) 693-1999; teletypewriter (TTY) number: 1-877-889-5627.

