

## The Risk of Occupational Health in the Shipbuilding Industry in Bangladesh

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**Abstract :** The shipbuilding industry in Bangladesh had become a fast-growing industry in recent years when it began to export newly built ships. The various activities of shipbuilding industries in their limited, confined spaces added occupational worker exposures to chemicals, dusts, and metal fumes. The aim of this literature search is to identify the potential sources of occupational health hazards in shipyards and to promote the regulation of appropriate personal protective equipment (PPE) for the workers. In shipyards, occupational workers are involved in various activities, such as the manufacture, repair, maintenance, dismantling of boats and ships, building small ocean-going vessels and ferries. The occupational workers in the shipbuilding industry suffer from a number of hazardous issues, such as asthma, dermatitis, hearing deficits, and musculoskeletal disorders. The use of modern technologies, such as underwater plasma welding, electron beam welding, and friction stir welding and laser cutting and welding, and appropriate PPE (i.e., long-sleeved shirt and long pants, shoes plus socks, safety masks, chemical resistant gloves, eyewear, face shield, and respirators) can help reduce the occupational exposure to environmental hazards created by different activities in the shipyards. However, most shipyards in Bangladesh use traditional methods, e.g., flame cutting and arc, that add hazardous waste and pollutants to the environment in and around the shipyard. The safety and security of occupational workers in the shipyard workplace are very important. It is the primary responsibility of employers to ensure the safety and security of occupational workers in the shipyards. Employers must use advanced technologies and supply adequate and appropriate PPE for the workers. There are a number of accidents and illnesses that happen daily in the shipyard industries in Bangladesh due to the negligence and lack of adequate technologies and appropriate PPE. In addition, there are no specific regulations and implementations available to use the PPE. It is essential to have PPE regulations and strict enforcement for the adoption of PPE in the shipbuilding industries in Bangladesh. Along with the adoption of PPE with regular health examinations, health education to the workers regarding occupational hazards and lifestyle diseases are also important and require reinforcement. Monitoring health and safety hazards in shipyards are essential to enhance worker protection, and ensure worker safety, and mitigate workplace injuries and illnesses.

**Keywords :** shipbuilding Industries, health education, occupational health hazards, personal protective equipment, shipyard workers, occupational workers, shipyards

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