What does it take to become a Boilermaker?

Boilermakers make and install boilers and other large containers that house gases or liquids such as oil. Job duties include reading blueprints, casting pieces and bending them into shape, and welding or bolting pieces together. Boilermakers also test completed boilers and perform routine maintenance. They often upgrade boilers to meet environmental standards and increase their efficiency. Boilermakers can work for refineries or construction or natural resource companies, or they can find careers as metal fabricators or power or water plant operators. Some install the huge pipes used in dams to send water to and from hydroelectric power generation turbines.

Skills and Knowledge

Boilermakers need to construct, assemble, maintain, and repair stationary steam boilers and boiler house auxiliaries. Align structures or plate sections to assemble boiler frame tanks or vats, following blueprints. Work involves use of hand and power tools, plumb bobs, levels, wedges, dogs, or turnbuckles. Assist in testing assembled vessels. Direct cleaning of boilers and boiler furnaces. Inspect and repair boiler fittings, such as safety valves, regulators, automatic-control mechanisms, water columns, and auxiliary machines. Boilermakers also need strong mechanical skills as they use and maintain a large variety of equipment, such as hoists and welding machines. They must also have high endurance because they spend many hours on their feet while lifting heavy boiler components. Boilermakers often work inside boilers and vats, so they cannot be claustrophobic. They should also not be afraid of heights, as they sometimes may need to weld tanks several stories above the ground.

Training

People who have welding training or a welding certificate should have the best opportunities to be selected for boilermaker apprenticeship programs. Training programmes at registered institutions typically cover both theoretical and practical components. Useful school subjects to secure enrollment include Mathematics and Science. During training, apprentices learn about metals and installation techniques, as well as, blueprint reading and sketching, general construction techniques and safety practices. On the job, they learn how to signal crane operators and use the tools and equipment of the trade. Assessment may include written, oral or practical assessment methods.

Working Conditions

Nearly all boilermakers work full -time and may experience extended periods of overtime when equipment is shut down for maintenance. Overtime work also may be necessary to meet construction or production deadlines. Boilermakers often use potentially dangerous equipment, such as acetylene torches and power grinders, handle heavy parts, and work on ladders or on top of large vessels. Work is physically demanding and may be done in cramped quarters inside boilers, vats, or tanks that are often

damp and poorly ventilated

Job Prospects

The demand for Boilermakers has increased largely because of growth in the local mining, manufacturing and construction sectors. As with many other construction workers, employment of boilermakers is sensitive to fluctuations of the economy. Nonetheless, maintenance and repair of boilers must continue even during economic downturns, so boilermaker mechanics in manufacturing and other industries generally have more stable employment than those in construction. While boilers typically last more than 50 years, the need to replace parts, such as boiler tubes, heating elements, and ductwork, is an ongoing process that will require the work of boilermakers. Some boilermakers may opt for similar occupations, such as draughtsman, pipefitters, millwrights, sheet metal workers, or welders. Much of the core training of those occupations is similar to that of boilermakers.

Having worke[illegible] Boilermaker, I can make key recommendations on the welding maps, the type of welding to be used, and at which area, and angles. As the Draughtswoman, I need to make the job easier for the Boilermaker.