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Reg No: 2018/301179/07 VAT No: 4540283225

## Boilermakers

### Duties

Boilermakers may specialize in rigging and hoisting, preparation and layout, or welding.

Depending on your speciality, your duties may include the following:

- Building and installing boilers
- Laying out a plate or sheet steel and marking cuts, bends and welds
- Fitting and welding metal sections together
- Maintaining and repairing boilers
- Directing crane operators during installation or repair of boilers
- Reading and interpreting blueprints





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## What skills and abilities are required to become a Boilermaker?

- Active Listening
- Time Management
- Equipment Selection
- Equipment Maintenance
- Quality Control Analysis
- Mathematics
- Critical Thinking



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## Important Qualities for Boilermakers

- Mechanical skills

Boilermakers use and maintain a large variety of equipment, such as hoists and welding machines.

- Physical stamina

Boilermakers must have high endurance because they spend many hours on their feet while lifting heavy boiler components.

- Physical strength.

Boilermakers need to be strong enough to move heavy vat components into place.

- Unafraid of confined spaces.

Boilermakers often work inside boilers and vats.

- Unafraid of heights.

Some boilermakers work at great heights.





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Boilermakers may help erect and repair:

- Air pollution abatement equipment
- Blast furnaces
- Water treatment plants
- Storage and process tanks
- Smokestacks

Boilermakers also install refractory brick and other heat-resistant materials in fireboxes or pressure vessels. Some install and maintain the huge pipes used in dams to send water to and from hydroelectric power generation turbines.

Boilers, tanks, and vats are used in many buildings, factories, and ships. Boilers heat water or other fluids under extreme pressure to generate electric power and to provide heat. Large tanks and vats are used to process and store chemicals, oil, beer, and hundreds of other products.

Boilers are made out of steel, iron, copper, or stainless steel. Manufacturers are increasingly automating the production of boilers to improve the quality of these vessels. However, boilermakers still use many tools to assemble and maintain boilers.





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For example, they often use hand and power tools and flame-cutting torches to align, cut and shape pieces for a boiler. Boilermakers also use plumb bobs, levels, wedges, and turnbuckles to align pieces accurately.

During a boiler installation, boilermakers first line up boilerplates and parts and then use metalworking machinery and other tools to remove irregular edges so that the parts fit together properly. If the plate sections are very large, boilermakers signal crane operators to lift the parts into place. Boilermakers then join the parts by bolting, welding, and riveting them together.

Boilers last a long time—sometimes 50 years or more—and boilermakers must maintain them regularly by repairing and replacing parts. They inspect fittings, feed pumps, safety and check valves, water and pressure gauges, and boiler controls.



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