

BuildND.org

Boilermaker

Job Description

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.

Work Conditions

Boilermakers perform physically demanding and dangerous work. Many boilermakers must travel to worksites and live away from home for long periods.

How to Become a Boilermaker

Most boilermakers learn their trade through an apprenticeship program. Candidates are more likely to be accepted into training programs if they already have welding experience and certification. Many boilermakers choose to earn a welding certificate.

- **Education**

- A high school diploma or GED is generally required.
- High school courses in math and welding are considered to be useful.

- **Training**

- Most boilermakers learn their trade through a 4- or 5-year apprenticeship.
 - Each year, apprentices must have at least 144 hours of related technical training and 2,000 hours of paid on-the-job training.
 - On the job, apprentices learn to use the tools and equipment of the trade.
 - Those who already have welding experience complete training sooner than those without it.
 - During technical training, apprentices learn about metals and installation techniques, as well as basic mathematics, blueprint reading and sketching, general construction techniques, safety practices, and first aid.
 - When they finish the apprenticeship program, boilermakers are considered to be journey workers, performing tasks under the guidance of experienced workers.
- A few groups, including unions and contractor associations, sponsor apprenticeship programs. The basic qualifications to enter an apprenticeship program are as follows:
 - Minimum age of 18
 - High school education or equivalent
 - Physically able to do the work
 - In addition to satisfying these qualifications, candidates with [certification](#) or documented welding experience usually have priority over applicants without experience.
- Some boilermakers enter the trade through training in similar occupations, such as [pipefitters](#), [millwrights](#), [sheet metal workers](#), or [welders](#). Much of the core training of those occupations is similar to that of boilermakers.



Associated General Contractors of North Dakota
22 North Second Street, PO Box 1624, Bismarck, ND 58502
(800) 472-2120, (701) 223-2770
www.agcnd.org



BuildND.org

- **Important Qualities**
- **Physical stamina**
Workers must have high endurance because they spend many hours on their feet while lifting heavy boiler components.
- **Physical strength**
Workers must be strong enough to move heavy vat components into place.
- **Unafraid of confined spaces**
Because workers often work inside boilers and vats, they cannot be claustrophobic.
- **Unafraid of heights**
Some boilermakers must work at great heights. While installing water storage tanks, for example, workers may need to weld tanks several stories above the ground.

Wage Information:

The table below shows the estimated Employment Wage Statistics for individuals in North Dakota employed as Boilermakers in 2013.

| Rate Type | Entry level | Mean | Experienced |
|-------------|-------------|----------|-------------|
| Annual Wage | \$36,440 | \$53,270 | \$61,680 |
| Hourly Wage | \$17.52 | \$25.61 | \$29.65 |

For more information [click here](#).



Associated General Contractors of North Dakota
22 North Second Street, PO Box 1624, Bismarck, ND 58502
(800) 472-2120, (701) 223-2770

www.agcnd.org

