



Process Operators

Petroleum Pump System Operators, Refinery Operators and Gaugers, Gas and Oil Plant Operators

What's this job all about?

Gas and oil plant operators – also called “process operators” – control the refining process for crude oil or natural gas.

Alaska is blessed with lots of oil and gas resources. These natural resources are a big part of Alaska's economy and the oil industry provides many job opportunities throughout the state. In its natural form, however, oil (usually called "crude oil") is not very useful. However, because of oil's chemical makeup, it can be easily changed, and the different results become a wide variety of finished products.

To make these oil-based products, the oil has to be refined. Gas and oil plant operators work at refineries. These are factories where crude oil and natural gas are transformed into other products. At refineries, oil and gas go through processing to get the final products.

There are many types of gas and oil plant operators. Gas distribution operators work for companies such as power plants and steel mills. They manage the gas or oil flow to fuel the furnaces or boilers. Petroleum pump system operators control the movement of products from processing to holding tanks. Gaugers test and control oil and gas flows at wells, tank farms, and refineries.

Here's what Process Operators do:

- Monitor all steps of the refining process.
- Make sure the proper temperatures are maintained and the right ingredients are mixed together.
- Take samples to inspect the quality of what is being produced.
- Use gauges or meters to check the color and quality of the product.
- Keep logs of meter readings, test results, and adjustments they make.
- Inspect equipment for safety problems, leaks, or wear.
- Look for problems that may require stopping production to make repairs.
- Check flow meters and panel lights for correct information.
- Discuss repairs with maintenance staff or perform their own repairs.
- Shut down machines in an emergency.

How much money can I make?

Median wage: \$24.96 per hour.

Wage information for petroleum pump system operators in Alaska is not available. Nationally, the median wage for gas plant operators is \$4,326 per month (\$24.96 per hour). Half of all gas plant operators earn between \$3,742 and \$5,016 per month (\$21.59 and \$28.94 per hour). Wages are similar for oil plant operators. Wages vary by the operator's level of experience and training. Union workers tend to be paid more than non-union workers. Many employers offer benefits such as health, dental and retirement plans, vacations and sick leave. Some major oil companies offer cash bonuses and profit-sharing plans.

How long does it take to receive training?

To work as a process operator, you must have a high school diploma or GED; and complete on-the-job training. Some gas and oil plant operators earn a certificate. A few professional technical schools and two-year colleges offer programs related to this field. Larger companies have their own training programs. Smaller companies usually send new employees to training workshops.

HELPFUL HIGH SCHOOL COURSES

A high school degree is almost always required to work as a process operator. You need courses in English, math, science, and social studies, physical education, health, and applied art or second language. Here is a list of high school courses that will help prepare you:

Computer and Information Sciences

General Computer Applications

English Language and Literature

English and Language Arts (Four years)

Industrial and Technology Education

Exploration of Careers

Materials and Processes

Industrial Safety and First Aid

Technology Systems, Emerging Technologies

Equipment Maintenance and Repair

Industrial and Technology Education Work Experience

Life and Physical Sciences

Physical Science

Chemistry and Advanced Chemistry

Physics

Mathematics

General Math

Pre-Algebra, Algebra

Geometry

Trigonometry

Calculus

Many gas and oil plant operators learn their skills on the job from experienced workers. Professional organizations, businesses, universities, and community colleges all offer training workshops. On-the-job training includes classroom and hands-on work experience. Your training may also include computer simulated plant operations. After training, another worker supervises your work for a period of time. Training may last up to 12 months.

When I'm ready to work, will there be job openings?

According to Alaska industry representatives there is indication for a higher than average growth for process operators through 2014. This is a high growth field not only because of retirees in the oil companies, but because it will be needed with the building of a gasline project.

Please see the Training Programs section of this booklet to find out more about training in these career fields in Alaska.

