

## Industrial thermal power engineering

Field of professional activity:

The field of professional activity of graduates is design, operational, settlement and design.



Graduates can hold the following positions:

- ❖ chief power engineer;
- ❖ deputy, chief power engineer;
- ❖ head of boiler house, CHP, GRES, HPP, NPP;
- ❖ power engineer of the enterprise;
- ❖ shift supervisor (for example, in a boiler room or at a thermal power plant);
- ❖ chief technologist;
- ❖ deputy Chief Technologist;
- ❖ technologist at enterprises using thermal processes in the main technological processes;
- ❖ head of compressor and gas distribution stations;
- ❖ chief Engineer of management companies (housing and communal services);
- ❖ designer of heat engineering equipment, heating networks, heating of buildings and structures;
- ❖ chief, deputy. head of the dispatching service for the distribution and accounting of thermal energy and gas;
- ❖ senior master;
- ❖ the master of the production site.

Our partners are companies for employment and internship:

- ✚ OAO Lukoil;
- ✚ PJSC "TNS Energo";
- ✚ JSC "RUSSIAN Railways";
- ✚ Rostselmash CJSC;
- ✚ Rostvertol PJSC;
- ✚ Teplokommunenergo;
- ✚ JSC "Donenergo";
- ✚ CJSC "Mezhregiongaz";
- ✚ Ingenium LLC;
- ✚ LLC "Astera".

In the course of training, disciplines will be studied:

- ✓ Renewable and unconventional energy sources;
- ✓ Superchargers and heat engines;
- ✓ Heating, ventilation and air conditioning;
- ✓ Heat and mass transfer equipment of enterprises;
- ✓ Boiler installations;
- ✓ Fuel and gorenje processes;
- ✓ Heat supply sources and systems;
- ✓ Design of thermal technology installations and systems;
- ✓ Professional information systems;
- ✓ Transport energy;
- ✓ Refrigeration and heat pump installations;
- ✓ Heating networks;
- ✓ Operation of thermal power equipment;
- ✓ Gas and water supply of enterprises;
- ✓ Water treatment of boiler plants;
- ✓ Water treatment processes and devices;
- ✓ The use of gas in industry and transport.

## Electromechanics

### Field of professional activity:

- ✚ enterprises related to the operation, repair, maintenance, design and construction of electric motors, electric generators and systems of manual and automated control of them;
- ✚ electric machinery and electric drive repair companies;
- ✚ enterprises for the production of products on automated lines;
- ✚ organizations designing automated production lines;
- ✚ power plants;
- ✚ electrical substations, etc.



### Graduates can hold the following positions:

- ✓ chief engineer;
- ✓ chief power engineer;
- ✓ director of a small enterprise; individual entrepreneur;
- ✓ design engineer;
- ✓ electrical engineer;
- ✓ research associate;
- ✓ specialist in the operation and repair of electrical equipment;
- ✓ electrical equipment designer;
- ✓ engineer for control and measuring devices and automatic machines;
- ✓ master of the electrical stage;
- ✓ shop manager;
- ✓ electrical equipment selection manager.

### Our partners are companies for employment and internship:

- PJSC IDGC of the South;
- JSC "Sevkavelektroremont";
- TRANSENERGO – branch of JSC "Russian Railways";
- Rostselmash OJSC;
- Rostvertol PJSC;
- enterprises of the Transmashholding association;
- electrical substations and power plants;
- design bureaus and departments,
- research organizations and educational institutions,
- any enterprises with electrical facilities.

### In the course of training, disciplines will be studied:

- Metrology, standardization and certification;
- Theoretical foundations of electrical engineering;
- General energy;
- Power electronics;
- Thermal calculations in electromechanics;
- Electrical and electronic devices;
- Automated electric drive systems;

- Basics of electric drive;
- Theory of automatic control;
- Technologies of production and repair of electric drive systems;
- Electric machines;
- Reliability of electric drive systems;
- Reliability of electrical devices;
- Production practice, project practice;
- Electromagnetic calculations;
- Design of electric drive systems;
- Special electric machines and micromachines;
- Transformative technology;
- Traction electric drive;
- Professional information systems;
- Design of electric machines;
- Traction electric machines;
- Modern methods of diagnostics of electric drive systems;
- Industrial practice, pre-graduate practice.