



WORLD CONSTRUCTION CHAMPIONSHIP

Qualification criteria for applicants in the individual nomination "Building Systems (Technological) Design"

APPLICANTS

Currently employed specialists; students; and independent applicants.

COUNTRIES

Russia,
Kazakhstan,
Kyrgyzstan,
Uzbekistan,
Tajikistan,
Belarus,
Armenia,
Azerbaijan,
Moldova,
Turkmenistan.

SPECIALISATIONS:

- Design of heat and gas supply and ventilation systems in capital construction projects;
- Design of water supply and disposal systems in capital construction projects.

REQUIREMENTS FOR CURRENTLY EMPLOYED SPECIALISTS AND INDEPENDENT APPLICANTS

- Higher education.
- Position — employee of a design company or design and engineering department (subdivision): design engineer (of any category).
- At least 3 years of general work experience
- At least 2 years of related work experience in the given profession.

REQUIREMENTS FOR STUDENTS

- Education — Bachelor's programme (4th year), Specialist programme (5th-6th years), Master's programme (1st-2nd years).
- Degree/major in engineering in heat, gas, water supply, waste disposal, and sewerage systems.

KNOWLEDGE REQUIREMENTS

- ethical behaviour principles;
- design development algorithm within the competence of one's own specialisation;
- regulatory and technical documentation, regulations in the field of design;
- professional computer software for systems design;
- modern technical solutions to heat and gas supply and ventilation systems, water supply and disposal in capital construction projects;
- principles of determining the main technical and economic indicators;

- thermal and process flows;
- methods of thermal and hydraulic calculations;
- principles of initiating layout solutions and compiling flow charts;
- rules and conditions for the selection of equipment (pumps, heat exchangers, control and process fittings, pipelines, and their parts); and
- rules ensuring safety of building systems.

SKILLS REQUIREMENTS

- calculate heat and hydraulic parameters, categorise premises for explosion and fire hazard;
 - select heat-exchange and pumping equipment, control and process fittings, parts of pipelines;
 - draw equipment and engineering network layouts;
 - use applicable regulations and technical documentation when developing design solutions;
 - prepare reports on design solutions;
 - apply professional computer software tools for designing, systems calculation, and equipment selection;
- and
- make schematic diagrams.

WORK EXPERIENCE REQUIREMENTS

Experience in developing design solutions to heat and gas supply and ventilation systems, water supply and water disposal of capital construction projects (for students — at the level of course and/or diploma design).