

National technical University
“Kharkov polytechnic institute”
Faculty “Power mechanical engineering”
Department of
“Steam generator building”



Areas of studying:

Thermal power installations

Designs, characteristics and manufacturing of steam boilers; fuel and combustion processes; water chemistry; metal structures and structural materials; computer aided technologies

Nuclear power installations

Designs, characteristics and manufacturing of nuclear reactors; nuclear fuel cycle; water chemistry; metal structures and structural materials; computer aided technologies

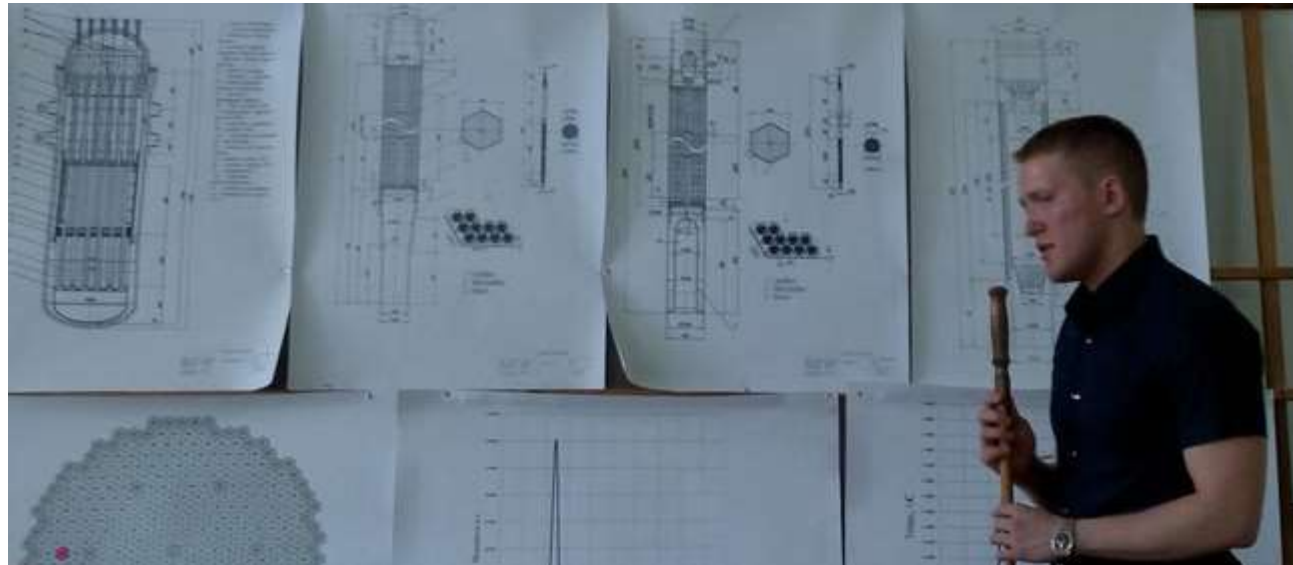
Steam generators for nuclear installations

Designs, characteristics and manufacturing of steam generators; steam generating processes; water chemistry; metal structures and structural materials; computer aided technologies



Automation of power installations

Designs, characteristics, manufacturing and assembling of automation system; automation processes; computer aided technologies of automation



Employment perspectives:

- Scientific organizations dealing with thermal and nuclear power installations and their means of automation issues
- Design organizations involved in the development of thermal and nuclear power installations and their means of automation
- Industrial enterprises engaged in the production of thermal and nuclear power installations and their means of automation
- Power generating companies, including thermal and nuclear power plants



General academic disciplines for the students of our department (bachelor's level in thermal and nuclear power installations)

Software Engineering in Energy

Computer Science in Engineering

Thermal measurement and instruments

Mathematical methods and models of power equipment in the computer calculations

Heat and Mass Transfer

Water treatment and water treatment boilers

Furnace processes and devices

Thermal and nuclear power stations

Hydraulic processes in boilers and reactors

Technology of production of boilers and reactors

Basics of designing boilers

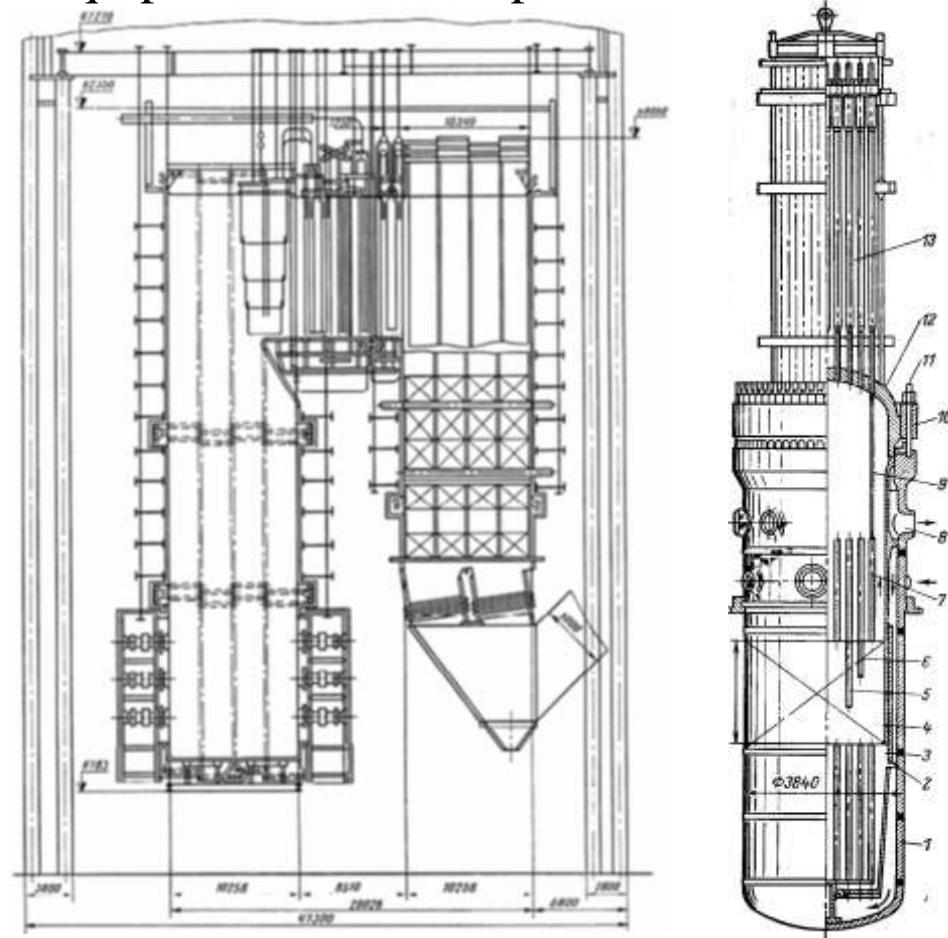
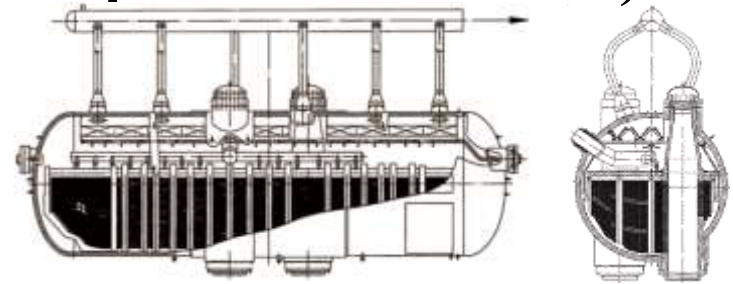
Automation of processes of energy generation facilities

NPP reactors and steam generators

Mathematical Foundations of Computer

Aided Design

Software Aided Design



General academic disciplines for the students of our department (master's level in thermal and nuclear power installations)

Mathematical software and hardware for automatic design

Production and installation of boilers and reactors

Automation of boilers and reactors

Operation of boilers and reactors

Environmental protection at TPP and NPP

Auxiliary systems of boilers and reactors

The current state and prospects of boiler and reactor construction

Energy and resource conservation in energy

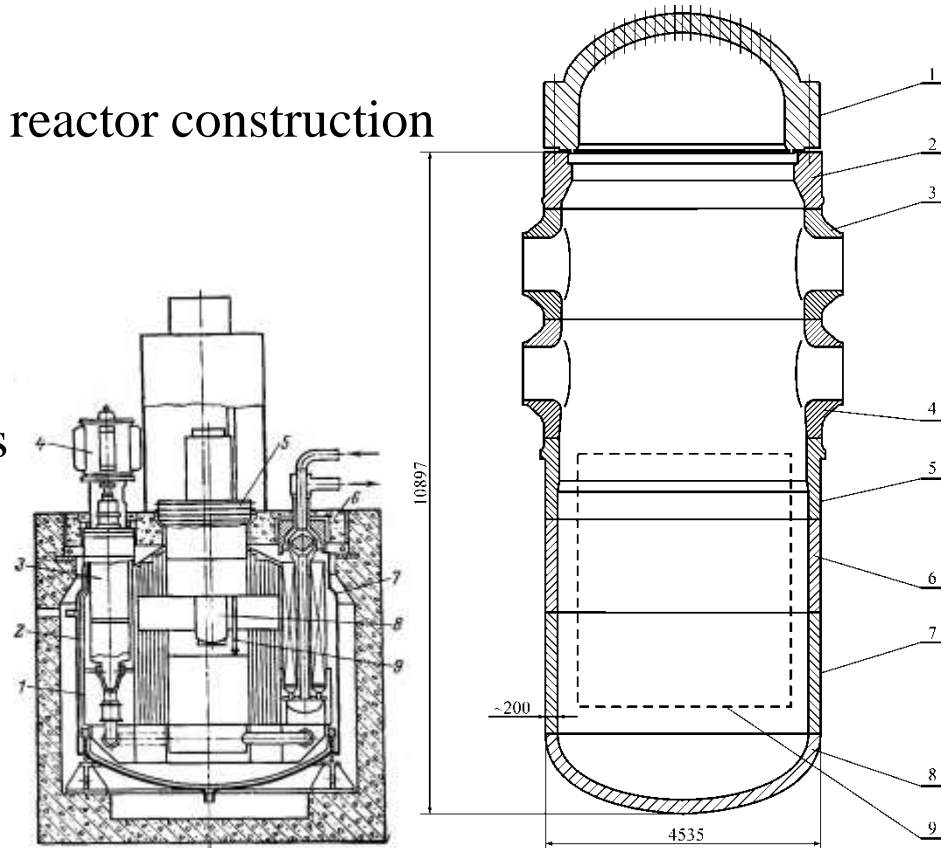
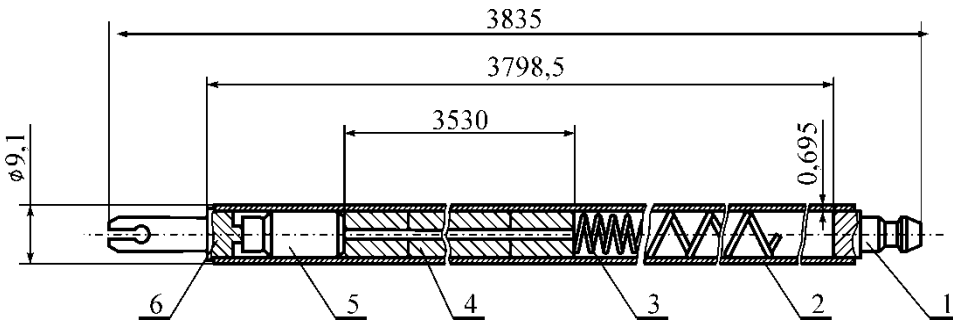
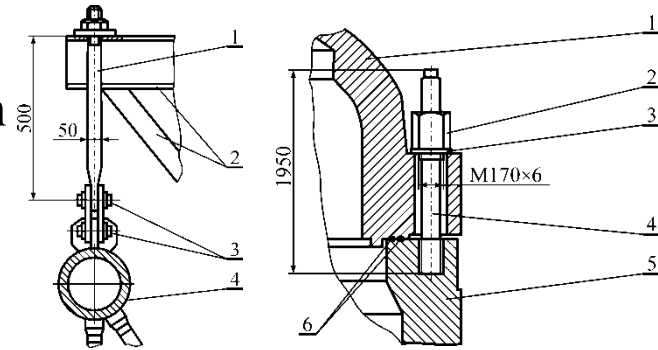
Energy and industrial boilers

Energy and Recycling boilers

Steam generators of NPP

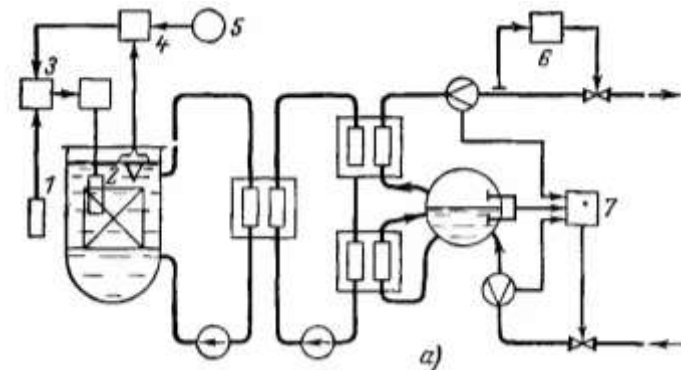
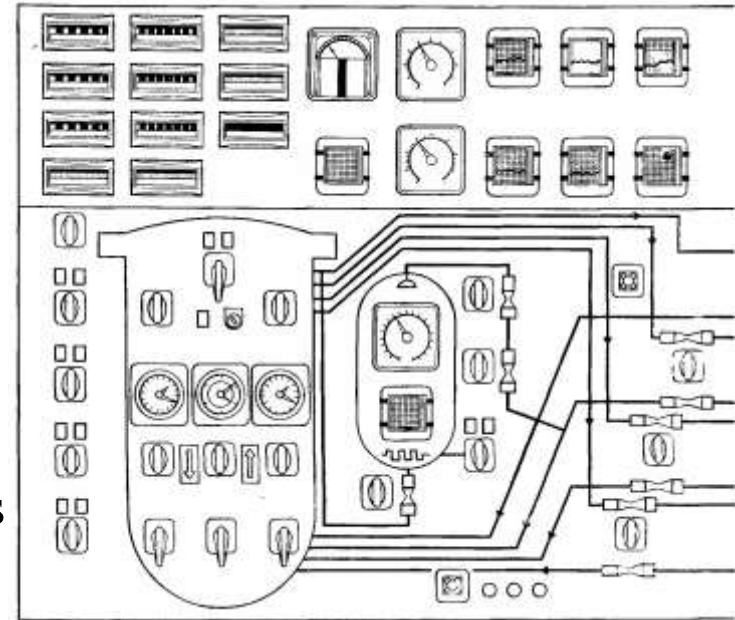
Designing the core of power nuclear reactors

Nuclear reactor for NPP



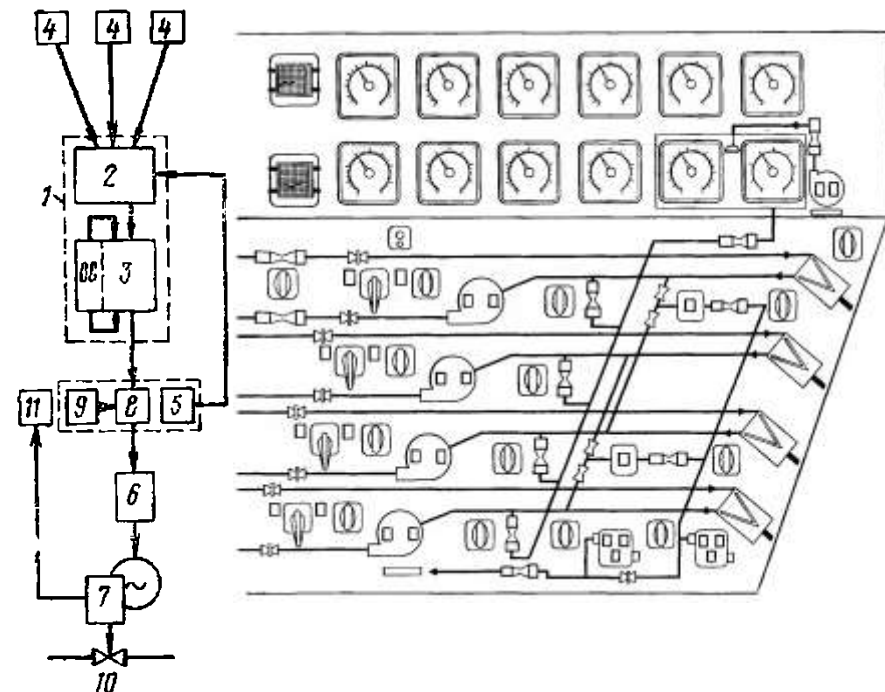
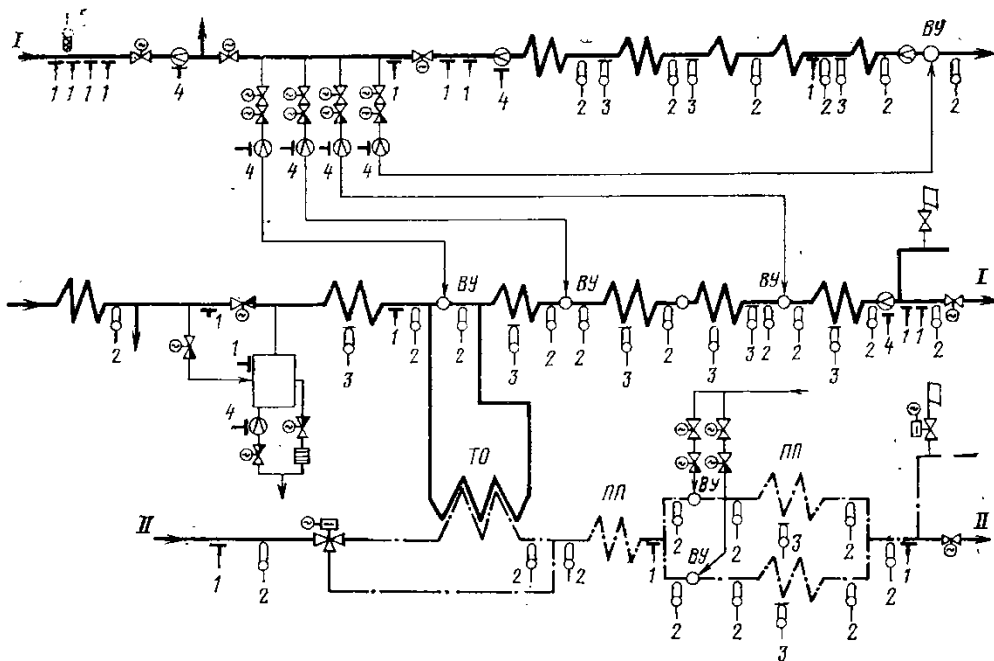
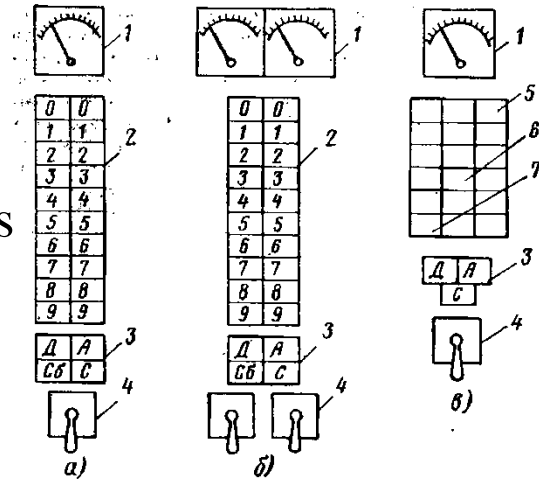
General academic disciplines for the students of our department (bachelor's level in automation of power installations)

Reliability and diagnostics of control systems
Software Engineering in Energy
Thermal measurement and instruments
The methods of heating and processing information
Processes and objects of power generation and heat
Fundamentals of objects of power generation and heat
Thermal power stations and nuclear power plants
Reactors and steam generators of nuclear power plants
Energy, industrial and low-power boilers
Alternative energy sources
Mathematical modeling of processes of energy generation facilities
Information management system of power generating facilities
Mathematical Foundations of Computer Aided Design
Automation of processes of energy generation facilities
Automation of power generating facilities
Energy and environmental systems
Certification of power generation facilities



General academic disciplines for the students of our department (master's level in automation of power installations)

Environmental security in the energy sector
Software Computer Integrated Systems
System Analysis and Design of Computer Information Systems
process control systems
Computer networks
Computer Integrated system management of field
Network automated control systems



Our contacts:

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