



*National technical
University
“Kharkov polytechnic
institute”*

***POWER ENGINEERING Faculty
Department of HYDRAULIC
MACHINES***



Department the "Hydraulic machines" the name after an academician G. Proskura conducts preparation:

Specializations of bachelors:

- 1) Machines and mechanisms of oil and gas fields
- 2) Hydraulic and pneumatic automatics oil and gas equipment
- 3) Hydroenergetics



Specializations of masters:

- 1) Hydraulic turbines, pumps and other hydroenergetic equipment of HPP and PSPS
- 2) Hydraulic and pneumatic automatics of hydroenergetics
- 3) Hydraulic equipment of oil and gas industry
- 4) Mechanical equipment and devices of automatics of oil and gas industry
- 5) Hydraulic and pneumatic machines
- 6) Volumetric hydromachines, systems of hydraulic drives and hydraulic and pneumatic automatics

General academic disciplines for the students of our department (bachelor's level)

Production of hydraulic turbine equipment of hydroelectric power plants

Hydromechanical equipment of hydroelectric and pumped storage plants

Hydroelectric and pumped storage power plants and pumping stations

Basics of automatic designing systems of blade hydraulic machines



Construction and calculation of hydrodynamic machines

Mounting and testing hydraulic pneumatic systems

Basics of Control Theory of hydraulic pneumatic devices

Energy saving and bases of hydropower engineering

Basics of automatic design systems of hydraulic pneumatic systems

Reliability, operation and maintenance of hydraulic machines

Machinery and equipment for oil and other hydrocarbons mining

Basics of technology of drilling and operation of gas wells

Machines and equipment for drilling oil and gas wells

Hydraulic and pneumatic motors and transmission

**Hydraulic and pneumatic
supercharger**

**Operation and repair of gas
equipment**



General academic disciplines for the students of our department (master's level)

Design and production of oil and gas equipment

Hydropneumoautomatics in the oil and gas industry

Design of volumetric hydraulic machines and hydraulic drives of oil and gas fields



Methods and technologies of increase well production

Modern methods of computer simulation, analysis and optimization of hydraulic engineering

Methods of computer modeling of oil and gas equipment





Pneumatic hydraulic system of control and automation of production processes

Mathematical modeling of work processes of hydro devises and machines

Mechanical and auxiliary equipment of hydroelectric and pumped storage plants

Hydroturbines and inverse hydromachines

Systems of automation of turbines and other hydromachines

Systems of the automatic design of turbines, inverse hydro machines, small, mini - and micro hydropower plants

Hydraulic unsteadiness of hydraulic units of hydroelectric and pumped storage plants and flow visualization



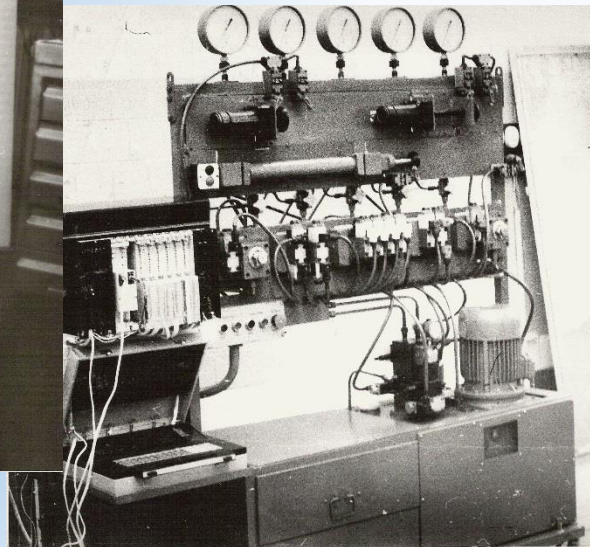
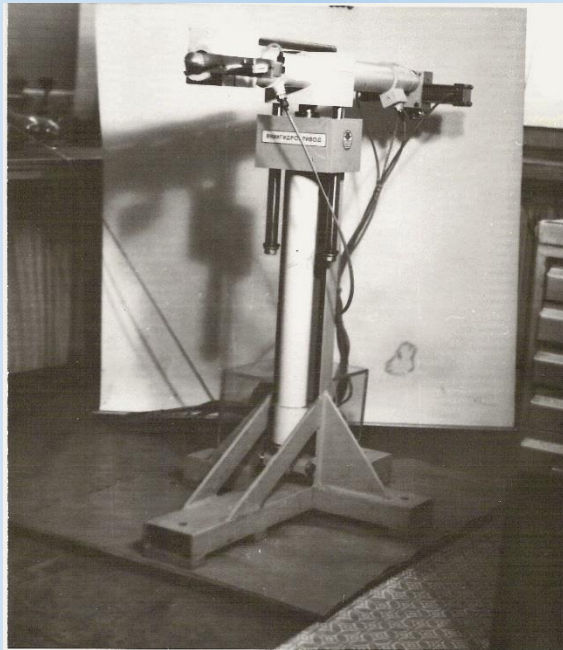
Employment perspectives:

- in companies that drill onshore wells and platform wells,
- in companies that exploitation of oil or gas,
- on enterprises that produce or design equipment of oil and gas industry,
- on enterprises that conduct repair of holes,
- on enterprises that liquidate accidents on holes,





- on enterprises that produce or design an equipment for HPP or PSPS,
- on HPP or PSPS,
- in companies that produce or design the equipment of the systems of hydraulic and pneumatic automatics,
- in scientific research institutes



The preparation of specialists is carried out by teachers of department who have a high level knowledge and big experience in those fields. Besides that, the leading specialists of the different companies are involved to the educational process



(for example, PJSC "Turboatom", Institute For Mechanical Engineering Problems, PJSC "Turbogaz", Corporation "Hidroeleks", The subsidiary "Militarized salvage and rescue service "LIKVO", etc)

The staff of the Department



The Head of the department –
Professor, Doctor of Engineering
Mikhail Cherkashenko



Professor – Associate
professor, Ph.D.
Victor Drankovskiy



Professor – Professor,
Doctor of Engineering
Zinoviy Lurie



Professor – Associate
professor, Ph.D.
Oleg Potetenko

Bulgakov Vladimir (PhD)

Gasyuk Aleksandr (PhD)

Grishin Aleksandr

Dmitriyenko Olga (PhD)

Krupa Yevgeniy (PhD)

Kukhtenkov Yuriy (PhD)

Marakhovskiy Mikhail (PhD)

Mironov Konstantin (PhD)

Panamareva Olga (PhD)

Rezvaya Kseniya

Rymchuk Danilo (PhD)

Solodov Valeriy (PhD)

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