

## COOPERATION

Industrial enterprises, research and academic institutes of the department - Chirchik-Akhangaron basin management of irrigation systems, Association "Uzsvu'ta'mirsuvfoilanish" -71, ftikans@uzscience.net), UZGIP LLC (tel.: 71-242-27-76, uzgip@bk.ru), Hydroproject OJSC, (tel: 71-253-14-65 gdib @ inbox .uz) Uzbekgidroenergo JSC (tel. 71-230-33-50, office @ uzgidro.uz), Tashkent HPP cascade (tel .: 71-236-60-00, ktashges @ uzgidro.uz), Suv mash "" (tel .: 71-295-13-00, office @ suvmash.uz), Department of "Pumping stations, energy and communications" of the Ministry of Agriculture and Water Resources of the Republic of Uzbekistan (tel .: 71-241-17-72, nasos @ agro .uz), "On the work on the establishment of innovative corporate cooperation in the field of higher education, science and industry." In addition, there are branches of the department in the Research Institute "Irrigation and Water Problems" at TIIMSKH, the profile association "Uzsuvenergo" and JSC "Suv mash". A number of positive measures are being taken to ensure the implementation of the Decree of the President of the Republic of Uzbekistan dated 08.05.2018 No. PP-3702 on measures to radically improve the system of training highly qualified personnel at the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers. In particular, Uzbekgidroenergo OJSC and the Chirchik cascade of hydroelectric power plants and the Tashkent Institute of Irrigation and Agricultural Mechanization Engineers signed agreements on the establishment of innovative corporate cooperation in the field of higher education, science and industry. In order to consolidate theoretical knowledge in the process of direct production at the Chirchik HPP, an event was held dedicated to the opening of a branch of the department "Use of hydropower and pumping stations" of the Hydraulic Engineering Faculty. Sunnatov Inoyat Sokhibovich, head of the personnel department and higher educational institutions of Uzbekhydroenergo, Khurshid Lapasov, head of the personnel department of the Ministry of Water Resources of the Republic of Uzbekistan was solemnly opened. In the branch of the department there are 59 students of the 4th year of the bachelor's degree "The use of water energy in irrigation systems" in the subject "Use of hydropower equipment" and the master's degree in the specialties "Operation and diagnostics of pumping stations and equipment" and "Construction and operation of hydroelectric power plants" 17 1st and 2nd courses. Students consolidate the theoretical knowledge gained at the institute in practical classes in the specialties "Hydropower" and "Operation of Hydroelectric Power Plants". For this, the branch has 2 classrooms and laboratory rooms for 20 and 40 seats, equipped with modern teaching aids (Internet, video projector, television). Undergraduate students of the undergraduate program "Water energy use in irrigation systems" 46 hours in 7-8 semesters in the subject "Use of hydropower equipment" and master's degree students in the specialty "Operation and diagnostics of pumping stations and equipment" 80 hours each in the subject "Hydropower equipment". The Chirchik HPPs Cascade "will be conducted by leading and experienced specialists. Through practical exercises, students and undergraduates strengthen their knowledge and skills, directly linking topics such as the operating principle of hydroelectric power plants, turbines and hydrogenerators, auxiliary equipment, control systems, operation, maintenance and overhaul, reconstruction. The schedule of classes on systematic practice in the branch of the department was approved by the Vice-Rector for Academic Affairs of the TIIMSH, Professor B.S. Mirzaev. Also, in accordance with the cooperation agreement signed between the rector of TIAME O.P. Umurzakov and Chairman of JSC "Uzbekgidroenergo" A.A. Sanginov, in the cascades of the Chirchik hydroelectric power plants, annual training and practical training are conducted for up to 30 students in this area, to develop the ability to produce objects. In addition, undergraduate and graduate students participate in the operation of hydraulic structures that are part of a hydroelectric power station - canal derivation, pool pressure, water consumption, turbine and suction pipes, drainage, drainage canal, annual, semi-annual, quarterly, study the procedure for calculating water consumption and the amount produced electricity for a month and decades.

Professors and teachers of the department, with enterprises that have concluded cooperation agreements and established branches: organize lectures, seminars, laboratory and practical classes for students, scientific supervision of bachelor's and master's theses; provide access to laboratories and equipment for

master's and bachelor's degrees, as well as internships in bachelor's and master's degrees; creation of new textbooks and teaching aids in cooperation, organization of research work; Assistance in identifying research topics based on jointly created scientific and technological problems of the industry, candidate and doctoral dissertations; jointly conduct research in this area; organization of a training center or a branch of the department for the preparation of bachelors, masters of specialties, graduate students and doctoral students trained at the department; We agreed on cooperation in the employment of bachelors and masters who have successfully graduated from the institute.

In recent years, teachers have improved their qualifications in the specialties "Technology of design, planning and implementation of innovative education", "Course of innovative technologies in education" and other areas. Advanced training was carried out not only in higher educational institutions of our country, but also in foreign universities. Associate professor Majidov T.Sh. Erasmus Mundus returned from a three-month professional development course at Lund University in Sweden under the External Cooperation Window program. Now an agreement on the exchange of graduate students has been signed with Lund University.

Associate Professor T.Majidov visited the Japanese corporation "Kubota" from April 23 to May 2, 2012 to participate in the acceptance of pumping units for installation at pumping station No. 3 in the Jizzakh region, as well as in tests at the pumping unit manufacturers. to draw up an act on Between the plant and the administration of the institute, an agreement was signed on the annual internship of students of the department, internships at the Hirakata plant in Japan. The plant expressed a desire to allocate a certain amount of money for research and development work and equipment of the laboratory of the department.

The department has a very responsible approach to training, production and internships in the undergraduate program. In addition to familiarizing students with the laboratory of the department, the practice includes pumping stations in Tashkent and the Tashkent region, pump manufacturers and repair companies, hydroelectric power plants, the use of non-traditional energy sources - solar heating and electricity. Production operations, construction, repair and reconstruction of energy facilities are carried out. Hydroelectric power plants under construction under the Topalang reservoir in Surkhandarya, HPPs in the Chirchik-Bozsuv energy cascade, HPPs in Farkhod, Akhangaron and Ertoshsay, pumping station "Suv mash", the reconstructed pumping station "Norpay", power plants of the Republic of Karakalpakstan and the Republic of Karakalpakstan and communications "pumping stations, etc." , and materials on the objects in them are collected for the preparation of the final work.

Ensuring an integral connection of the Department of Hydropower and Pumping Stations of the Tashkent Institute of Irrigation and Melioration of the Cabinet of Ministers of the Republic of Uzbekistan with production, training of students and advanced training of teachers and strengthening the material and technical base, as well as current and production. According to the action plan for organizing internships, practical and sponsorship assistance, the department is attached to the specialized association "Uzsuvenergo" of the Ministry of Agriculture and Water Resources of the Republic of Uzbekistan, "Lower Syrdarya" and "Karshi Main Canal". Currently, as a result of the practical assistance of these organizations, the laboratories of the department are equipped with equipment, the educational process is fully provided with methodological and educational literature, students and teachers get acquainted with existing and under construction hydropower facilities, hydropower facilities are intended for students, operations are organized.

In addition to pedagogical work, professors and teachers of the department conduct field and training seminars on installation, operation, repair, efficient use of energy resources in the Republic of Karakalpakstan and regions under conditions of water shortage, media and television.