



CONFIRMATION OF COLLABORATION WITH RUSSIAN UNIVERSITIES

DonNTU has always been the leader of international collaboration among the universities of Ukraine. The first State Prize in the nomination awarded to the university in 2011 proves it. In 2014 DonNTU had 83 collaboration agreements with the universities from abroad, 30 of them being with the institutions of the Russian Federation.

The problems created by the present government of Ukraine do not allow continuing the collaboration at the proper level and because of the current situation re-orientation of the collaboration vector towards Russia is of great importance. Of course other partner-countries will not be forgotten.

The following universities of Russia have confirmed the status of collaboration agreements (with the seal and address of the DPR) with DonNTU (Donetsk):

- St. Petersburg State University,
- St. Petersburg State Polytechnic University,
- Museum-Institute of the Roerich Family, St. Petersburg,
- Siberian State Geodesy Academy (Novosibirsk),
- All-Russian Research Institute of Agriculture Electrification (Moscow),
- Vyatka State University (Kirov),
- Bryansk State Technical University,
- Ural Federal University named after the first President of Russia B.N. Yeltsin (Yekaterinburg).

More than 20 other agreements are about to be signed and 12 are waiting for the decision to be made.

The Institute of International Collaboration (IIC) has analyzed new funds the staff of DonNTU can use (see the newsletter of the IIC). The IIC offers any assistance in getting and implementation of the grants in different fields as participation in international projects is a great help in getting funds and true confirmation of achievements of DonNTU and its subdivisions in scientific, academic and other spheres.

COLLABORATION WITH BELARUS NATIONAL TECHNICAL UNIVERSITY



Prof. A. Mikhailov, the Head of the Manufacturing Engineering Department visited Belarus National Technical University on December 8-12th. He discussed signing of the collaboration agreement between DonNTU and BNTU. The participants of the meeting expressed the wish to prepare working programs of collaboration between the university departments in research and training.

Prof. Mikhailov delivered some lectures on training bachelors, masters and specialists at DonNTU.



Meetings with the staff and students at Belarus National Technical University

Scientific collaboration oriented on priority directions of fundamental and applied research, practical application of scientific developments and support of young researchers is very promising nowadays. Prof. Mikhailov and his colleagues from Belarus coordinated the issues related to the joint research made by researchers, post-graduate students and doctoral students at the laboratories of both universities.

DonNTU and BNTU are of the same age and we have a common task which is to raise the education level and the personnel training quality.

We are sure the collaboration will be creative and fruitful, and the friendly relations between the universities will be strengthened and developed.

Prof. A.Mikhailov reported on the activity of the department he heads. Some aspects of it are given below.

MAIN RESULTS OF THE ACTIVITY OF THE DEPARTMENT OF MANUFACTURING ENGINEERING IN 2014



Complex geopolitical processes taking place in the world and the current situation in the Donbass region caused some problems at Donetsk National Technical University. It is connected with the war in the region, retirement of some members of the staff and transfer of some academics, students and postgraduate students of the university to Krasnoarmeysk, lack of payments and financing of the university activity.

The year of 2014 was very difficult as the above mentioned problems affected the work of the Department of Manufacturing Engineering. Despite this the staff did not lose

their hearts and resisted the negative events.

To make research and have laboratory class two laboratories were put into operation at the department:

- functional and ion-plasma technologies (2009);
- functionally oriented detonation technologies (2013).



Academic and scientific laboratory “Functionally oriented ion and plasma technologies”

Postgraduate students of the Department carried out some complex research on stabilization of spades of gas and turbine engine TB 3-117 at the expense of their recovery based on super hard and functionally oriented ion and plasma coating. The coating has characteristics that are changeable depending on gas and corrosion erosion of the spade surface. The spade stability was raised 8-10 times compared with the usual spades of the gas and turbine engine made of titanium alloy BT8M. The results of the research were recommended to be applied at Snezhnoye Machine-Building Plant and Lugansk Aircraft Repair Plant.

In 2014 the laboratory “Functionally oriented detonation technologies” improved the sputtering plant working with coating made of composition, ceramic, hard alloys and



Scientific and research laboratory “Functionally oriented technologies”

nonferrous materials. Modernization of the laboratory equipment allows producing machine components having special characteristics and parameters for region.

Besides, the Department started publishing the international and scientific journal “Information and Innovative Manufacturing Technology”. The first issue

was published in May. The papers are published only in English and further on the journal is expected to get European indices including the Scopus.

The Department published 3 proceedings of DonNTU “Progressive Technologies and Machine-Building Systems”. The papers for candidate and doctoral dissertations can be published here. The proceedings have the Russian index of scientific citing.



International scientific and technical journals and proceedings published in 2014

In August the city of Donetsk was empty because of the constant artillery attacks many people left the city. Despite this the Department made a decision to go on holding international scientific and technical conference in Sevastopol. The Ministry of Education and Science of the Donetsk People's Republic and the government of the Russian Federation supported the idea. The government of the city of Sevastopol allocated premises for the conference and waved the accommodation fee for the participants from Donetsk and Lugansk.

The traditional XXI international scientific and technical conference "Machine-Building and Technosphere of the XXI Century" was held in Sevastopol on September 14-20th. Delegates from 6 countries arrived to the conference.



The panel of the XXI international scientific and technical conference "Machine-Building and Technosphere of the XXI Century" in Sevastopol

The goal of the conference was to exchange scientific and technical information, defining of promising ways of creation and development of new technologies, joint programs and international collaboration, establishing of business contacts and commercial links in the field.

Previously there were representatives of 16-18 countries at the conference. The

current conference consolidated researchers, specialists and business representatives to assist further development of the technosphere under the global economy which is changing. The XV forum of the Manufacturing Engineer Union that unites 21 countries of the world was held within the frameworks of the conference.

At the end of September the Department issued the proceedings of the VIII international scientific and methodological conference "Modern problems of Technosphere and Engineer Training" in French. The conference is traditionally held in Tunisia every year. This year three Tunisian universities took part in organization of the conference in October 2014.

Much attention was paid to integration into the European system of university education and development of joint research programs.

Representatives of 6 countries of the world including 2 from the EU arrived to the conference. The University of Medjez el Bab, with which we have a collaboration agreement and which undergraduate and master's students have practice at DonNTU (about 20-30 every year), was a very active participant.

In October the Department issued the international students' scientific and technical journal "Engineer" and held the students' conference "Automation, Technology and Quality in Engineering Industry". The international contest of students' projects in automation in engineering industry, progressive, special and non-traditional technologies, highly efficient technological equipment, and design and product quality in engineering industry, machine-building organization and management was organized within the frameworks of the conference. The students' projects from DonNTU, Yekaterinburg, and Minsk was recognized the best ones.



Discussion of the participants of the VIII international scientific and methodological conference in Hammamet, Tunisia

The researchers of the Department visited Kazakh National Technical University (Almaty), Belarus National Technical University (Minsk) and the National Academy of Science of Belarus in December. Some collaboration agreements were signed and presentations on DonNTU were made.

Besides, there were negotiations with the administration of Bryansk State Technical University on re-signing of the agreement on international collaboration and training

of our students both in Bryansk and Donetsk for them to get two diplomas.



The meeting at the Department of Manufacturing Engineering of Kazakh National Technical University and a mountain tour to Tianshan

The Department is very active as to training of postgraduate students and is forming the scientific board on defense of dissertations in the Donetsk and Lugansk regions.

In 2015 the Department is planning to finish laboratory modernization, restructure training process and hold some international scientific and technical conferences.



STUDENTS OF DONNTU –THE WINNERS OF INTERNATIONAL CONTESTS IN FRANCE



There were two contests of students' projects in automation and control in France in June-July. Our students took part in both of them. It was only them who got the first level diplomas!

The students from Poland, Germany, Kazakhstan and Russia took part in them.

According to the program the students were to have a test in mathematics. Their score was 86 out of

100. The result proves that our system of education is very good and our academics are excellent. Then the participants made some presentations on a narrower subject-matter.

The participants also went sightseeing. They visited the Louvre, the Notre Dame de Paris, la tour Eiffel and les Champs- Elysees. They were impressed by La Défense, the business district of Paris.



THE WORLD CHAMPION IS OUR GRADUATE!

The sports life is going on at DonNTU. Despite the extreme conditions we are living in the participation of our students in sports groups is 40-50% higher than last year. Only about 10% of academics left the Sports Department, so the training process is going on. There were

competitions in judo, rock climbing, volley-ball, and athletics in the Republic. The teams of DonNTU were among the winners.

The graduate of DonNTU Daniil Boldyrev won the title of the rock climbing world champion in Spain in September. There were 56 athletes from 19 countries at the championship. Besides, he holds the world record in the nomination of “speed”- 5.60 sec.



The Newsletter is prepared by the International Office of DonNTU.

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