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TECHNOLOGY HIGH READ IN THEIR COUNTRIES METALS WELDING ACCORDING TO TRAINING EQUIPMENT ORGANIZATION

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Abstract:
Nowadays, in the process of industrial development and the introduction of modern technologies, the welding industry is gaining importance. It is impossible to imagine all the existing production enterprises in our republic without welding, and the demand for welders is also increasing.

Introduction

The welding department in technical universities plays an important role not only in training specialists who meet the requirements of industry, but also in the sustainable development of the country's economy. With the innovative changes taking place in the industrial sector around the world, the introduction of automation, robotics and new materials, the need for welding technologies is increasing. The welding industry is actively used today not only in heavy industry, but also in energy, transport, construction, aviation, shipbuilding and even medicine.

The welding industry is the backbone of the industrial infrastructure of any country. There are hundreds and thousands of welded structures in such industries as mechanical engineering, oil and gas, railways, power plants and nuclear power. Their strength, reliability and long service life depend on high-quality welding work. Therefore, the demand for highly qualified welders and engineering technologists is increasing every year.

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The presence of a welding specialization in technical universities is of strategic importance in the system of training specialists. Through educational programs in this specialization, students:

-physical and chemical foundations of welding processes;

- every kind metal and mixtures characteristics ;

- welding methods and equipment and automated systems with work methods ;

- technological processes control to do and quality assessment methods ;

-they thoroughly study safety rules and labor protection requirements

Such preparation them to the real needs of the industry suitable and competitive frame as shapes.

Modern welding processes require speed, accuracy, and reliability. Therefore, students studying welding at technical universities are introduced to advanced technologies such as 3D modeling, robotic welding systems, laser welding, and ultrasonic inspection, and gain practical skills in applying them.

In particular, areas such as the introduction of digital technologies and the automation and remote control of welding processes within the framework of the Industry 4.0 concept play an important role in modern education.

The role of practical training in the training of specialists

In the educational process, it is of great importance to enrich theoretical knowledge with practical training. Through laboratories, simulators, production workshops and internship programs organized at universities, students are introduced to real work processes. Through this, they acquire the skills to apply theoretical knowledge in practice.

Practical training is crucial in the process of training qualified specialists in the field of welding. In this field, it is not enough to simply acquire theoretical knowledge, since welding is a work that requires practice, high accuracy and experience. Therefore, practical training is considered an integral part of education in technical universities.[1]

To approve the proposal of the Ministry of Higher Education, Science and Innovation, the Chamber of Commerce and Industry, and the Ministry of Poverty Reduction and Employment to gradually introduce dual education in the higher education system starting from the 2025/2026 academic year, including the establishment of the "Professional Owner" dual education system

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The Regulation on the procedure for organizing dual education in the higher education system, which provides for the following, shall be approved in accordance with the appendix: higher education institutions in which the dual education form will be introduced shall be determined by the Ministry of Higher Education, Science and Innovations and the Chamber of Commerce and Industry of the Republic of Uzbekistan, in agreement with the ministries and departments that have higher education institutions in their systems.

The duration of the theoretical and practical part of dual education is determined by the higher education institution in agreement with partner enterprises and organizations;

Coordination of student participation in the theoretical part of the educational process by the relevant professor-teacher at the higher education institution, and participation in the practical part related to production by the practice leader (mentor) attached from the enterprise;

Determining the procedure for organizing the "profession-owner" dual education system.

The "Professional Owner" dual education system will be organized on the basis of the online platform of the Chamber of Commerce and Industry, integrated into the information system of the Ministry of Higher Education, Science and Innovation and the Ministry of Poverty Reduction and Employment;

The program of practical training at the enterprise is approved by the higher educational institution in agreement with the enterprise and the Chamber of Commerce and Industry;

For students who complete their education directly at enterprises in the "Owner of Profession" dual education system (based on referral), up to 2 million soums of the salary calculated by the enterprise will be reimbursed each month from the State Employment Assistance Fund.

In this case, the funds allocated to cover wages from the State Employment Assistance Fund are transferred to a separate account of the relevant enterprise.

Students of technical universities, along with theoretical knowledge, learn how to use metal welding methods (fusion welding, pressure welding) and equipment through practical training. It is of great importance to know how a student behaves during the welding process of various metals and alloys. It is impossible to fully

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master this knowledge and skills through theoretical lessons, therefore, great attention is paid to practical training.

For welding specialists, first of all, "hands-on training" plays a very important role. Through practice, the student learns which welding technology to work with, what hand movements to use to achieve high quality, at what temperature the material melts and at what speed it is necessary to move.

Since the chemical and physical properties of each material are different, perfect results can only be achieved by conducting tests in a laboratory or production environment.

Practical training prepares the student for the production environment. Higher education in institutions organization achievable:

- educational-practical workshops ,
- innovation laboratories ,
- sectoral in enterprises internships ,

students to work in real life to the conditions close in the environment to work prepares. In these processes they industry standards, labor discipline, safety standards and in the team work such as important abilities they develop.

Industrial enterprises today are looking for personnel ready to enter the workforce directly in practice. That is, after students receive a diploma, there should be no need for additional retraining at the enterprise. In this regard, practical training adapts the student to the requirements of the employer, increases his competitiveness and improves his chances of employment.

Many universities have introduced modern welding simulators, CNC machines, robotic welding systems, and automated control equipment. Students learn to operate these equipment during practical training, which helps them develop into specialists who meet international standards.[2]

Conclusion

Organizing a welding course in technical universities is one of the main ways to provide the industry with highly qualified personnel. By organizing this process based on modern requirements, combining education and practice, and introducing innovative approaches, it is possible to train competitive, scientifically capable specialists in our country .

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