

THEORY OF WELDING PROCESSES

(name of the discipline)

ANNOTATION

TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

Specialty 1-36 01 06 “Equipment and technology of welding production”

Direction of specialty _____

Specialization _____

	form of higher education	
	Full time (daytime)	Correspondence abbreviated
Course	2	2 - 3
Semester	3, 4	4 - 5
Lectures, hours	84	12
Practical (seminar) classes, hours	--	4
Laboratory studies	32	12
Classroom examination (semester, hours)	-	5 (2 hours)
Credit, semester	3	4
Exam, semester	4	5
Classroom hours per academic discipline	116	30
Independent work, hours	100	186
Total hours in academic discipline / credit units	216/6,0	216/6.0

1. Brief content of the discipline

The purpose of the discipline is to develop students' knowledge of the physical foundations and classification of welding methods, welding sources of thermal energy, thermal and metallurgical processes during welding, crystallization and formation of weld metal, processes occurring in the heat-affected zone of a welded joint, stresses and deformations during welding, weldability of metals.

2. Learning outcomes

As a result of mastering the academic discipline, the student must

know:

- welding sources of thermal energy; fundamentals of physical, metallurgical and thermal deformation processes in welding; phase and structural transformations during welding;

be able to:

- to classify welding processes according to physical, technical and technological features; determine the nature and characteristics of metallurgical, thermal deformation and physico-chemical processes in the welding of metals; evaluate the weldability of metals;

own:

- knowledge for solving theoretical and practical problems for the formation of welded joints when welding various metals and alloys; physical bases of welding processes; processes occurring in the heat-affected zone of the welded joint.

3. Formed competencies

BPC-7: Own the physical foundations of welding methods, knowledge for solving theoretical and practical problems of obtaining welded joints of various metals and alloys, issues of technological weldability of metals and alloys

4. Requirements and forms of current and intermediate certification.

When studying the discipline, a module-rating system for assessing knowledge is used. Used assessment tools for the academic discipline are stored at the department.