

**ANNOTATION**  
**on research practice report**  
**student group FS-41m**  
**Novichkov Maxim Olegovich**  
**on the theme: "Influence of plastic deformation on the structure and properties**  
**of the alloy T110 construction purposes"**

The report on the research results of practical work on the study of the effect of plastic deformation on the structure and properties of the T110 alloy.

The report on the research practice is set out on page 42 of the printed text. The report consists of an introduction, three chapters, the list of used literature and contains 10 figures and 7 tables.

In the introduction the urgency of research topics, describe the purpose of research practices and its objectives.

The first part of the report is devoted to analysis of the literature on the topic of work. It provides basic information on the materials used for the production of passive armor. The methods of production of titanium and its alloys.

In the second part of the report presents a titanium alloy production technology T110 in the electron-beam installation with intermediate capacity. A description of the equipment used for research and metallographic structure of the device for MEMS research.

In the third part of the report presents the results of research metallographic structure of the alloy samples T110, determination of the chemical composition and microhardness phase components.

Conducted a literature review on the topic of research, developed a method of research carried out research itself: As a result of research practice the following tasks have been solved.

According to the results of the research practices following conclusions:

1) Theoretically, the expediency of using a titanium alloy for the production of armor elements T110.

2) To investigate the microstructure of the alloy, to determine the chemical composition and microhardness of the phase of the alloy components.

3) A dynamic load prototype armor elements and received samples for further investigation.

**Keywords:** TITANIUM ALLOY T110, ELECTRON BEAM TECHNOLOGY, PASSIVE ARMOR, METALLOGRAPHIC STRUCTURE, MICROHARDNESS, TOUGHNESS