

## **ABSTRACT**

for report on

### **“Electron-beam methods of titanium alloys processing”**

This report consists of 40 pages and includes preface, two main research blocks, conclusions and references including 13 references. Additionally, there are 16 pictures and 3 tables support this report.

The main goal of this reporting is to fix and review main skills and knowledges, acquired during the “Theory of scientific researches of the special metallurgy processes”, thus main aim is to perform the initial analysis of main data sources to support master degree project reporting.

This report contains analysis of significant titanium alloys properties, interreactions of alloys and environmental gases, different methods of titanium melting.

Moreover, the methods of vacuum-arc remelting of titanium alloys and their comparison to electron-beam methods were described, as well as electron-beam melting with intermediate container.

This report is dedicated to analysis of titanium alloys processing technologies using electron beam ovens.

#### **Key words:**

Titanium, electron-beam melting, phase diagrams, ingots founding.