

**ANNOTATION**  
**course work on discipline**  
**"The special metallurgy in mechanical engineering"**  
**student group FS-22**  
**Mamatchenko Mikhail Ivanovich**  
**on "The technology of manufacturing casting parts "Gear" method of**  
**investment casting metal plasma arc melting"**

The course work was presented technology manufacturing technology of casting parts "Gear" method of investment casting wax metal plasma arc melting.

Course project is presented on 19 pages of printed text and drawing two A4. Explanatory note consists of an introduction, six chapters, conclusions, list of references and contains two figures, 15 formulas, 3 tables.

In the introduction disclosed are method of investment casting, its management and prospects.

The first part of the explanatory note the initiation characteristics of the process of production of castings by this method. This section describes the different ways to manufacture castings.

The second part contains the main calculations. These include payment of the casting mass, pouring rate and duration of hydrolysis of ethyl silicate, gating system elements.

In the third part of the explanatory note presented technology of casting.

The fourth part is devoted to safety and health for the environment.

In the fifth part of a calculation of technical and economic indicators showing the efficiency of this method.

At the end of the course project the advantages and disadvantages of this method of casting, to assess the sustainable use of it.

**Keywords:** METHOD OF INVESTMENT CASTING, CALCULATE THE MASS OF CASTING, MANUFACTURING OPERATIONS, SAFETY, OCCUPATIONAL SAFETY, TECHNICAL AND ECONOMIC INDICATORS