

ABSTRACT

The paper: 81 p., 17 pic., 11 table., 38 sources.

The object of study is a mixture of iron powder with additives of carbon. Purpose – study of the process of free samples of osadena and iron system iron – carbon.

Research method – static analysis of process parameters.

One effective method of increasing the density is the surface free of sediment

In this work, a study was conducted of the process of the free precipitation of the powder material. Thus, it was examined the influence of quantity of carbon on the process of deposition. For the experiment was used a mixture based on iron powder with additions of graphite in various quantities. The pressing was carried out in air, at a pressure of 700 MPa with annealing in hydrogen at a temperature of 800 0C for 1 hour. When doing research were the dependences of the porosity and hardness of samples on the basis of iron from the pressure of pressing and the amount of graphite. It was found the promising use of free precipitation to increase the density of samples of iron and system iron - carbon.

Keywords: IRON POWDER, CARBON, PRECIPITATE, DENSITY, POROSITY.