

ABSTRACT

Thesis: 125 p., 23 fig., 21 tab., 57 sources, 1 application.

Object of study - foundry cores and samples of core mixtures, reinforced hot snap.

Purpose - to strengthen laws establishing theoretical formulations of phosphoric acid with inorganic salts of sodium and development on the basis of their core mixtures.

Research Methodology - used standard research methods of physical and mehaninyh properties of mixtures, differential thermal analysis, planning experiments, correlation analysis.

Results and novelty - a mixture of rod designed to strengthen the hot snap, based on the chemical interaction of phosphoric acid with nitrate, chloride or sodium carbonate. It was established that the interaction in these systems occurs when heating from 200 ° C.

Key figures - are characterized by a mixture of core strength in compression from 2.6 to 3.0 MPa, crumbliness within 0.4 ... 1.2% stronger at 200 ... 300 ° C and gives a quality castings of iron alloys.

The degree of implementation - a mixture passed laboratory tests for castings from gray cast iron and high-heat resistant steel.

Scope - foundry cores or shell forms a hot snap receipt of casting iron alloys.

Economic efficiency - conditional economic effect 90919.50 UAH.

Projected assumptions about the object of research - studies of the structure mixes after rising, after pouring and introducing them to the most Casting iron alloys.

CASTING, BINDING COMPONENTS, SODIUM CARBONATE, STRENGTH, SODIUM NITRATE, CRUMBLINESS, PHOSPHORIC ACID, STEEL, CORE MIXTURES, SODIUM CHLORIDE