

ABSTRACT

Graduate work: 113 pages, 27 drawings, 22 tables, 74 literature sources.

The purpose of the work: investigation of peculiarities of forming the structure and properties of antifrictional materials on the base of XH55BMTKIO with CaF_2 , admixtures at the temperature range of 600–800°C.

Research methods: metallographic, X-Ray analysis, hardness test and tribotechnical tests.

Object of study: the process of forming structure and properties of antifriction materials based on XH55BMTKIO for the temperature 600-800°C.

Subject of study: composite powder material based on XH55BMTKIO with CaF_2 admixtures.

Scientific novelty: was developed in materials approach is to create a heterogeneous structure Tribological anti-friction material based on high nickel alloy XH55BMTKIO.

The recommendations for use: antifrictional composite materials on the base of XH55BMTKIO with 8% CaF_2 , admixtures possible to recommend for operating at the such temperatures as 600–800°C. The slide bearings of power engineering, metallurgical and termal equipment accord to such operating conditions.

ANTIFRICTIONAL MATERIALS, XH55BMTKIO, CaF_2 , FACTOR OF FRICTION, INTENSITY OF WEAR, METALLOGRAPHIC STRUCTURE, X-RAY ANALYSIS, PHYSICAL AND MECHANICAL CHARACTERISTICS, HEAT-RESISTENCE.