

## **ABSTRACT**

The work contains 73 pages, 23 figures, 14 tables, 19 references to the literature data.

The object of study depending on grain size and shape of the particles crushed carbide mark VK6 modes of grinding.

The aim is optimization of grinding waste of hard alloy rolls equipped with special plates.

Methods and apparatus: grinding powder carried on the roll mill IM-3 rolls with a diameter of 500 mm. Using complex physical material highly informative methods (electron microscopy and chemical analysis) investigated micro- and macrostructure, the chemical composition of the resulting powder of different sizes. Standard research methods technological characteristics powders (bulk density, density outage, the angle of repose).

The study found that fragments derived waste and carbide powders with sharp edges and virtually no variable chemical composition, and only particles less than 50 microns have excellent chemical composition of the total mass of fragments and particles.

Keywords: POWDERS, GRANULES, HARD ALLOYS, FORM OF PARTICLES, CHEMICAL COMPOSITION.