DEVELOPMENT OF TECHNOLOGY OF COMPLEX TREATMENT OF MAGNETITE MINERALS FROM DASHKESAN WITH EXTRACTION OF COPPER-COBALT CONCENTRATE.

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Magnetite minerals of the largest in the Caucasus Dashkesan field are cobalt-bearing. Cobalt, besides its own minerals – cobaltine and sufflorite, is contained in pyrites, pirrotine and holkopyrites as an isomorphic admixture. At present only magnetite are extracted from these minerals, but all other valuable components are missed with the tails of treatment.

The technology of complex treatment of the magnetite minerals with extraction of the copper-magnetite concentrate was developed in the institute.

Technology of complex treatment of magnetite minerals includes dry and watery magnet treatment of ore at the step-change magnetic fields with extraction of conditioned magnetite superconcentrate (70%Fe) for pellets production, and also flotation of rest mass at pH-8 by butilxantogenat with extraction of copper-cobalt concentrate, in which also other valuable components are concentrated. Output of superconcentrate from the source minerals is up to 70%, and output of copper-cobalt concentrate is 1.5-3%. In the latter the content of the cooper is up to 2-6%; cobalt - 0.15-0.3%; zinc - 0.7-1%; manganese - 0.7-1%; plumbum - 0.3-0.7% and argent - 0.005%; together with the iron sulphides.