THE COMPLEX WASTELESS TECHNOLOGY OF PROCESSING
THE FILIZCHY POLYMETALLIC ORES

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The complicated material composition of the ores from the Filizchy deposits, the
fine-grained structure of the mineral aggregates, their mutual germination, as well
as a significant isomorphism, caused a difficult dressing the ores and a necessity of
finding the rational technology of their complex processing.

In the present report some perspective ways of chemical separation of the non-
ferrous metals, iron and sulphur from the Filizchy polymetallic ores passing the
preliminary stage of the physical enrichment have been considered.

The suggested scheme includes the pyritous roast of pyrite-containing raw and the
autoclave lixiviation of pyrite made industrial product.

Two schemes of complex processing the pyrrhotine material (pyrrhotine 80%,
sphalerite-9.8%, galenite -4.52%) with exposure of their positive and negative
sides; were offered:

- the oxygen autoclave-oxidizing technology enabling to transfer the main part of
the non-ferrous metals into the solution, the main mass of oxide of iron, the
elementary sulphur, sulphite of lead into the insoluble residium;
- the anhydride autoclave technology permitting to introduce the most part of iron
into the solution, practically, without the affecting the non-ferrous metals.

On the grounds of the studies carried out the technological parameters of the
autoclave lixiviation of the pyrrhotine material both in the atmosphere of oxygen and
in the atmosphere of the sulphurous gas have been determined.