



Slag Valorisation of Reductive Smelting Process by Shaft Furnace in the Lead Metallurgy of “Trepça” Complex with Economical and Environmental Effects

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Abstract: Slag exploration using reductive smelting of the lead agglomerate to many manufacturers as well as to the lead smelter Of “Trepça” is a process followed by economical and environmental effects. Main objective of this paper consists in determining of useful metals in slag, in selecting of the technological process and corresponding equipments for the slag treatment in the recycle process. Based on analyses of the chemical composition for solid slag (around 2.5 million ton) and data collected by the slag of process, as a more rational technological process has been taken the fuming process. There are done 354 samples, as a result is concluded that the obtained values for the slag chemical composition are within the permissible limits. Determination of technological parameters for the process is completed through the material balance. Quantity of useful metals in slag (Pb, Zn, Cu, Ag, Tl, In, Ge *etc*) is favourable in order to meet economical effects of the process. Advancement of such a study consist in the fact that the product gained through fuming process will be processed further, until obtaining high purity metals, what can be achieved by using present equipments in the sector of zinc metallurgy plant of Trepça complex. On the other hand, the remaining slag can be used in the construction industry, this way has been achieved the full scale use of raw material including environmental positive effects.

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