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INTEGRATED ENVIRONMENTAL PROTECTION AND WASTE MINIMIZATION IN THE AREA OF COPPER MINE BOR, SERBIA

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Abstract

This paper discusses some environmental problems caused by the mine waste from the Copper Mine Bor in Serbia. The Copper Mine Bor and the Smelter generated about 2×10^9 tones of waste materials, located in the vicinity of the Bor. They cover mining, flotation tailings and smelting slag wastes. The existing mine waste have been formed during a hundred-year-old of mining and metallurgical activities in Bor. Also, new quantities of wastes (up to ten thousand tones) have been produced daily by using different mining and metalurgical processes.

The chemical composition of mine wastes, the locations of the waste dumps and flotation tailings ponds near the town Bor and surroundings, make these wastes are major polluters of the soil, water and air. On the other hand, the contents of useful components in these wastes, first of all copper and precious metals, are a few times higher than in the primary copper ores. Therefore, mine wastes present a very important resource, which could be processed in the future.

Key words: Copper Mine Bor, mine wastes, mining, pollution, smelting slag, tailings

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