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# AN INVESTIGATION ON THE POTENTIAL OF METAL RECOVERY FROM THE MUNICIPAL WASTE INCINERATOR IN SHANGHAI, CHINA

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**As one of the world's fastest developing countries with an average annual GDP growth of 8%, resource shortages and solid waste management problems have become a key constraint for China's sustainable development. To face these challenges, resources recycling and its supervision are important issues and China has launched several strategies such as striving towards a resource conserving society and promoting "circular economy", related laws and policies are entering an accelerated legislative process. Incineration of municipal solid waste (MSW) is being one of the major disposal ways for MSW in some large cities of China. In this study, an investigation on the potential of metal recovery from the municipal waste incinerator in Shanghai, China was done. This study aimed to identify distribution of metals and to estimate the amount of these metals that can be potentially recovered from incineration residues. First, the partitioning behaviour of Cr, Cu, Fe, Cd, Al, Zn, and Pb in bottom ash and fly ash was investigated in one large municipal waste incinerator in Shanghai. In addition, the material flow analysis (MFA) method was used to estimate the material flux of metals within incinerator plant, and to calculate the amount of metal recovery. According to the findings of this study, six metals (Fe, Al, Cu, Zn, Cr, and Pb) concentrated in bottom ash mostly, while Cd existed primarily in fly ash. Those findings may be useful for integrating municipal solid waste management and the metal recovery industry in Shanghai and other similar cities.**

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