

CHAPTER 2

Precious Metal Recovery from Electronic Waste (E-waste) - A Review

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Abstract

Environmental problem because of electronic waste (e-waste) is a global issue today. Electronic devices, such as laptops, computers, TV, Mobiles, etc have become an essential part of our everyday life. With increasing the consumption of electronic devices the production of e-waste is also increasing exponentially. These e-wastes contains different precious metals, such as gold, silver, copper, tin, platinum, etc. Along with this e-waste also contains toxic metals, such as mercury (Hg), lead (Pb), cadmium (Cd), chromium (Cr), arsenic (As), etc. Because of this there is a harmful effect of these e-wastes in the environment. When these e-wastes are exposed to heat, toxic chemicals are released from it and creating air pollution. Sometimes, excessive use of electronic waste in land-filling causes contamination of toxic compounds in soil and water. Till now different approaches has been taken to utilize e-waste in proper applications. Recovery of valuable metals, such as gold, copper, platinum, etc from these e-wastes is a good approach in this direction. In this review we are focusing on different dimension of e-waste such as present status, problem because of e-waste, disposal of e-waste, recovery of e-waste and recovery of valuable materials for e-waste. Problem associated with e-waste management has also been discussed. Different methods of metal recovery from e-waste have also been discussed.

Keywords: E-waste, Disposal, Mechanical Separation, Recycling, Recovery of Metals