

DISPOSAL OF INDUSTRIAL WASTES COMING FROM ELECTROPLATING pH-ORP AUTOMATICALLY CONTROLLED SYSTEMS

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ABSTRACT

Small electroplating workshops operate all over the area of Athens and its operation has important influence on environment. The social and economical status of local communities in which these companies are located changes rapidly and now the electroplating companies have to coexist in an area full of houses and commercial stores. So the companies had to develop a policy for environmentally friendly management of the wastewater.

Waste materials coming from Electroplating Processes contain high levels of heavy metals such as iron, nickel, zinc, cadmium, copper, silver and gold. The wastes often contain cyanide or/and chromium that is extremely toxic, particularly in water systems.

The main purpose of the study was to investigate suitable wastewater purification methods and ways of recovering materials and chemicals in electroplating plants. Use of these methods would make it easier for electroplating plants to achieve current and future emission limits imposed by the European Union. In addition, the study sought to examine the technical and economical feasibility of using substitute methods and processes, less noxious chemicals, Best Available Techniques and the possibility of further processing the metal containing sludge produced during electroplating processes.

Many problems are involved in the treatment of these wastes. Therefore a proposal came is to totally manage the wastes in site with a low cost, but efficient system and develop a policy for the sludge handling.