

**O 107. RECOVERY OF SOME METAL FROM THE PHOSPHATE SLUDGE; ZINC AND NICKEL**

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**ABSTRACT:** Many products, have an important place in our lives, such as white goods, small household appliances and also cars are made of metals. Oxygen in the air and water causes oxidation of the metal and metals begin to corrosion. The surface treatment chemicals are applied to prevent corrosion of the metals and improve their durability. It is possible to increase the surface holding capacity of dye and the corrosion resistance of the product and the surface by the correct application of the surface process. Therefore, especially in the automotive industry and in many areas of our life, the surface treatment procedure can be said to be as important as the metal finishing process. Therefore, the surface treatment procedure can be said to be as important as the last metal coating process, especially in the automotive industry and equipment used in many areas of our lives. In the surface treatment, the surface to be coated is firstly degreased, activated and phosphated. Phosphating is the oldest and the best surface treatment method to provide protection against corrosion. Phosphating is the process of forming a film layer of zinc phosphate crystals on the surface to be painted as a result of the chemical reaction of metal phosphating. Phosphating is the process of forming a film layer consisting with zinc phosphate crystals on the surface to be painted as a result of the metal phosphating chemical reaction. In the baths where phosphating is performed, according to the General Principles of Waste Management, sludge classified as hazardous waste is produced. This waste is called a phosphate sludge in industry and includes zinc and nickel elements. As it is known these two metals are valuable elements. But the high amounts of them cause toxic effects. The aim of this study is providing the recovery of two valuable elements such as zinc and nickel from the phosphate sludge waste in the industry.

*Keywords: surface treatment technology, zinc, nickel, phosphate sludge, waste management*