

O 94. INDUSTRIAL BY-PRODUCTS AND REEVALUATION

Birkan Gökpınar¹, Semir Gökpınar²

¹Iskenderun Technical University, Engineering and Science Institute, Iskenderun, Turkey

E-mail: birkangkp@gmail.com

ABSTRACT: Demand of the energy and raw material is being increased with development of industrial, nowadays. The wastes generated as a result of these requirements increase the environmental problem. In order to reduce costs and increase high performance (concrete, cement, etc.) evaluation of the by-products in many sectors has become attractive and many organizations have started to do research about this topic. Iron-steel and energy sectors are those which the by-products are most produced. More than half of the material is used as input in production is transformed into gas and solid waste/by-product, so by-products such as fly ash, slag, oxide layer and EAF dust are evaluated in order to reduce the use of natural materials and to minimize the problems that may occur in the environment if the materials are storage for disposal. In this thesis, the process of re-evaluation of the mainly by-products and the process of re-conversion to raw materials were investigated. The effects of the used by-products on the products have been searched and especially in the construction sector, the resistance of materials is examined.

Keywords: fly ash, oxide layer, slag, EAF dust, Waelz Process, By-Products