



“Gheorghe Asachi” Technical University of Iasi, Romania



A NEW TECHNOLOGY TO OBTAIN ECOLOGICAL STEELS

Olimpia Ghermec*, Cristian Ghermec, Traian Popescu

*University of Craiova, Faculty of Engineering and Management of Technological Systems, Drobeta Turnu – Severin,
1 Calugareni, 220037, Drobeta Turnu Severin, Romania*

Abstract

A friendly technology with the environment which consists of the elaboration of carbon steels through specific proceedings to powder metallurgy has in view the contribution of methane gas in iron powders at the same time with sintering. This technology is advantageous from various points of view: the final product is a part which does not need afterward processing with solid waste result and therefore the specific energy consume is lower, the wear and corrosion behavior is similar to that of classic steels and better than that of sintered steels obtained through mixing iron and graphite; the obtained steels is also a recycling material. In the paper there are presented the most important aspects that prove the fact that carbon steel obtained through this new technology is an ecomaterial.

Key words: carburizing, LCA, sintering, steel

* Author to whom all correspondence should be addressed: e-mail: olimpia_ghermec@yahoo.com