THE STUDY OF THE STRUCTURES OF THE GREY CAST IRONS OBTAINED AFTER SUPERFICIAL HARDENING AND ITS INFLUENCE ON MECHANICAL PROPERTIES

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Keywords: structure, hardness, the wear, resistance to breakage

Dynamic special industry machinery worldwide requires finding technical solutions to enable the achievement of the highest durability for the machine, while reducing manufacturing time and cost price.

Based on a literature research and own research work we present structural study of synthetic grey cast irons tried superficial induction and its influence on mechanical properties.

The objectives were achieved: increased hardness superficial layer, a structure getting martensitic a depth of 2 mm; doubling module wear a superficial layer; crashes avoided in case of overload, avoiding strains in the case of a secondary heat treatment and respect for economic factor adapting technology hardening at existing facilities.

In order tro determine the depth layer we tried the method used to measure hardness (most accurately). Figures 1 and 2 show the variations in hardness layer quality.

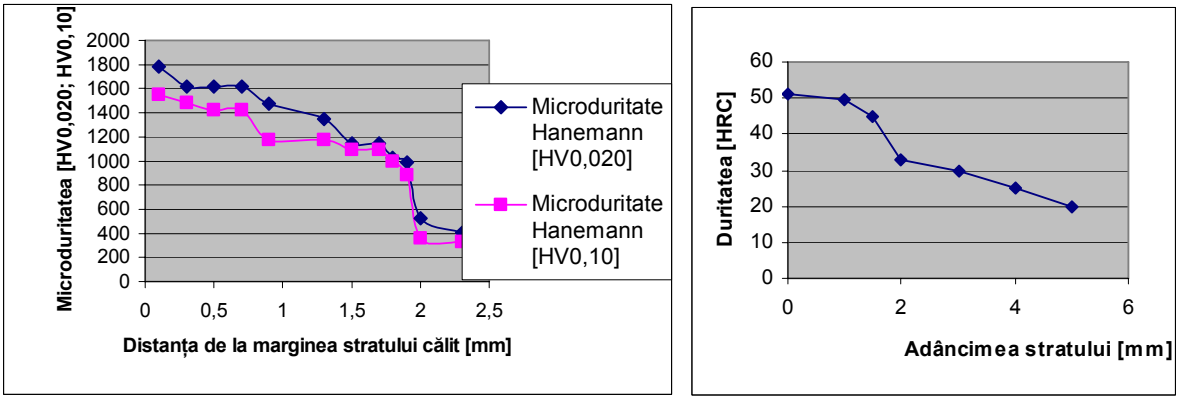

Fig. 4. Changes in the hardness of the toughen layer

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