

ENHANCEMENT OF THE MECHANICAL PROPERTIES OF GRAYCAST IRON BY FERRITIC NITROCARBURIZING PROCESS

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Abstract : In this paper, we studies the mechanical properties of green cast iron ferritic nitrocarburizing after treatment in salt bath at 580°C at different holding time. The nitrocarburizing process has contributed changes in surface properties. After characterization and analysis the microstructure by scanning electronic microscopy and X-ray diffraction, the obtained results show that the structure led to marked improvement in mechanicals properties particularly hardness and abrasive wear.

Keywords : Gray cast irons, Salt bath nitrocarburizing, mechanical properties, Surface properties, abrasive wear.