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# SPECIFICS OF SURFACE PHASE FORMATION DURING CARBURISATION OF FERROUS ALLOYS

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## Abstract

We used X-ray diffractometry to conduct a phase analysis of surface layers formed in a range of ferrous alloys after surface hardening. We studied ingot iron samples after subjecting them to vacuum carburisation for two, four and six hours. This treatment made it possible to alter the phase composition of surface layers, which, in turn, affected performance characteristics of the samples, such as wear resistance, hardness, etc. We conducted a qualitative phase analysis and determined a rational treatment duration

## Keywords

Surface hardening, carburisation, diffusion saturation of surfaces, X-ray diffractometry method, ferrous alloys, phase structure of surface layers, sample hardening, X-ray phase analysis, surface property improvement

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