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Examination of the structure and the phase composition of the alloy Fe30Al5Zr

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Light optical microscope, X-ray diffraction as well as scanning electron microscope equipped with energy-dispersive X-ray analysis system were used for examination of the structure and the phase composition of the Fe3Al-based material alloyed with 5 at. % of zirconium in the state as cast and after heat treatment. The occurring phases were identified, their volume fraction in the alloy was determined and the effect of the heat treatment on the structure of the investigated material is described and discussed.

Keywords: Intermetallics, Iron aluminides, Fe-Al-Zr, Structure, Phase composition

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