



## Interdiffusion in beta-Ti–Zr binary alloys

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The aim of this study is the determination of the interdiffusion characteristics in the  $\beta$ -solid solution of Ti–Zr alloys (from 830 to 1730 °C). The interdiffusion coefficients in this binary system are calculated by the den Broeder method. The interdiffusion coefficients are weakly dependent on the composition: their values lie between approximately  $10^{-9}$  and  $10^{-7}$  cm<sup>2</sup>/s. The Hall method is used to determine the diffusion coefficients at the Ti-rich and Zr-rich sides. These coefficients are compared with the impurity diffusion coefficients in the pure metals from the literature, and with coefficients calculated by the Vignes and Birchenhall relation. Whereas the impurity diffusion coefficients in Ti and Zr show the anomalous diffusion already observed in many body-centered-cubic metals and alloys, this behaviour is not observed for the interdiffusion in the Ti–Zr alloys. These results are compared with the results obtained in the binary systems Ti–Hf and Zr–Hf.