

**CONSTRAINED GROOVE PRESSING OF TWIN-ROLL CAST ALUMINUM-BASED ALLOYS**

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**Abstract**

Two twin-roll cast strips prepared from EN AW 3003 aluminium alloys with and without an addition of zirconium were processed by constrained groove pressing.

The evolution of microstructure during annealing was studied and related to mechanical properties. In accordance with numerical calculations a distribution of microhardness, which reflects the distribution of imposed strain, is inhomogeneously scattered along the width of strips. Microhardness measurements were used for the mapping of mechanical properties. Light optical microscopy and electron back-scatter diffraction have proven that inhomogeneity in mechanical properties is always linked with inhomogeneities in the microstructure.

**Keywords:** Aluminium alloys, twin-roll casting, constrained groove pressing

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