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Record 1 of 1**Author(s):** Kindrachuk, V; Wanderka, N; Banhart, J; Mukherji, D; Del Genovesse, D; Rosler, J**Title:** Intragranular precipitation in Inconel 706: 3D atom-probe and HRTEM investigations**Source:** STEEL RESEARCH INTERNATIONAL, 75 (1): 74-78 JAN 2004**Language:** English**Document Type:** Article**Author Keywords:** 3D atom probe; HRTEM; interface; Ni-Fe based superalloy**KeyWords Plus:** MORPHOLOGY; ADDITIONS; GAMMA'

Abstract: The microstructure of Inconel 706 alloy was studied by three-dimensional atom probe (3DAP) and high resolution transmission electron microscopy (HRTEM) after two heat treatments: direct ageing (DA) and modified stabilization heat treatment (MST). Both heat treatments produced intermetallic gamma' and gamma'' phases in nanometer size. The microchemical information of the individual gamma' and gamma'' precipitates as well as of the gamma'/gamma'' and gamma''/gamma'/gamma'' co-precipitates was obtained by 3DAR Atom probe analysis on individual precipitates showed different partitioning behaviour compared to that of co-precipitates. Small clusters of Nb were found around individual gamma' precipitates.

Addresses: Hahn Meitner Inst Berlin GmbH, D-12109 Berlin, Germany; Tech Univ Carolo Wilhelmina Braunschweig, Inst Werkstoffe, D-3300 Braunschweig, Germany

Reprint Address: Wanderka, N, Hahn Meitner Inst Berlin GmbH, Glienicke Str 100, D-12109 Berlin, Germany.

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