

Title (en)  
SUPERALLOY FORGING PROCESS AND RELATED COMPOSITION

Title (de)  
Schmiedeverfahren für Superlegierungen und verwandte Zusammensetzung

Title (fr)  
PROCEDE DE FORGEAGE DE SUPERALLIAGES ET COMPOSITION CONNEXE

Publication  
**EP 0533914 B1 19970312 (EN)**

Application  
**EP 92911977 A 19920415**

Priority

- US 9203082 W 19920415
- US 68558191 A 19910415

Abstract (en)  
[origin: WO9218659A1] A process for producing a fine grain forged superalloy article having a high yield strength at intermediate temperatures. A preferred starting composition comprises, by weight, 15 % Cr, 13.6 % Co, 4.1 % Mo, 4.6 % Ti, 2.2 % Al, 0.01 % C, 0.007 % B, 0.07 % Zr, balance Ni. This material is forged at a temperature above the gamma prime solvus and at a true strain of at least 0.5. Alternately, the material may be forged below the gamma prime solvus temperature with intermediate super solvus anneals. The overaged material is then worked at a temperature below the gamma prime solvus. The resultant fine grain material is then heat treated or can be further isothermally forged prior to heat treatment to produce complex shapes.

IPC 1-7  
**C22F 1/10**; **C22C 19/05**

IPC 8 full level  
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