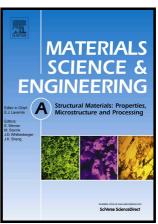
Author's Accepted Manuscript

The effect of thickness on the creep properties of a single-crystal nickel-based superalloy

Yebing Hu, Li Zhang, Tieshan Cao, Congqian Cheng, Pengtao Zhao, Guangping Guo, Jie Zhao



www.elsevier.com/locate/msea

PII: S0921-5093(18)30636-1

DOI: https://doi.org/10.1016/j.msea.2018.04.114

Reference: MSA36434

To appear in: Materials Science & Engineering A

Received date: 29 December 2017 Revised date: 26 April 2018 Accepted date: 27 April 2018

Cite this article as: Yebing Hu, Li Zhang, Tieshan Cao, Congqian Cheng, Pengtao Zhao, Guangping Guo and Jie Zhao, The effect of thickness on the creep properties of a single-crystal nickel-based superalloy, *Materials Science & Engineering A*, https://doi.org/10.1016/j.msea.2018.04.114

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

The effect of thickness on the creep properties of a single-crystal nickel-based superalloy

Yebing HU^a, Li ZHANG^b, Tieshan CAO^a, Congqian CHENG^a, Pengtao ZHAO^b, Guangping GUO^b, Jie ZHAO^{a, *}

^aSchool of Materials Science and Engineering, Dalian University of Technology, Dalian 116024, P.R.C.

^bBeijing Institute of Aeronautical Materials, Beijing 100095, P.R.C.

cceotteo

*Corresponding author. Jie ZHAO, School of Materials Science and Engineering, Dalian University of Technology, No. 2 Linggong Road, Ganjingzi District, Dalian 116024, P.R.C. TEL: +86-411-8470-9076; E-mail: jiezhao@dlut.edu.cn

Abstract

Creep rupture tests were conducted at 980 °C/250 MPa on specimens with different wall thickness values obtained from a single-crystal nickel-based superalloy. Experimental results showed that the thin specimens had an inferior creep life compared with the thick ones. All specimens were oxidised during the creep tests. Electron probe microanalysis and scanning electron microscopy combined with

Download English Version:

https://daneshyari.com/en/article/7972021

Download Persian Version:

https://daneshyari.com/article/7972021

<u>Daneshyari.com</u>