

Accepted Manuscript

Effect of holding time and interlayer's thickness on the crack initiation and propagation and the dissolving behavior of the heat-treated facet WC grains

Guotao Yin, Yueyue Wang, Haichao Cui, Fenggui Lu, Peiquan Xu



PII: S0263-4368(17)30625-X

DOI: doi:[10.1016/j.ijrmhm.2017.11.006](https://doi.org/10.1016/j.ijrmhm.2017.11.006)

Reference: RMHM 4558

To appear in: *International Journal of Refractory Metals and Hard Materials*

Received date: 9 September 2017

Revised date: 3 November 2017

Accepted date: 4 November 2017

Please cite this article as: Guotao Yin, Yueyue Wang, Haichao Cui, Fenggui Lu, Peiquan Xu , Effect of holding time and interlayer's thickness on the crack initiation and propagation and the dissolving behavior of the heat-treated facet WC grains. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Rmhm(2017), doi:[10.1016/j.ijrmhm.2017.11.006](https://doi.org/10.1016/j.ijrmhm.2017.11.006)

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 proof before it is published in its final 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.

Effect of holding time and interlayer's thickness on the crack initiation and propagation and the dissolving behavior of the heat-treated facet WC grains.

Guotao Yin^a, Yueyue Wang^a, Haichao Cui^{b, c}, Fenggui Lu^{b, c}, Peiquan Xu^{a, c, *}

^a College of Materials Engineering, Shanghai University of Engineering Science, Shanghai 201620, China.

^b School of Materials Science and Engineering, Shanghai Jiao Tong University, Shanghai 200240, China.

^c Shanghai Key Laboratory of Materials Laser Processing and Modification, Shanghai Jiao Tong University, Shanghai, 200240, People's Republic of China.

*Corresponding author: Peiquan Xu (P. Xu) Email: pqxu@sues.edu.cn.

Abstract: Post welding heat treatment was performed on dissimilar weldments composed of WC-Co to 316L stainless steel with 1-mm-, 1.5-mm-, and 2-mm-thick Invar interlayers by heating the samples to 1250°C for 2 hours, 8 hours, and 16 hours respectively. Cracks initiation and propagation were observed in all samples because of the stress relieving after heat treatment. The increase of the interlayer's thickness tends to partially inhibit the initiation and propagation of cracks. When the holding time is 2 hours, the sample fractured in the heat affected zone (HAZ). With the increase of holding time (8 hours, 16 hours), the samples tended to fracture in the

Download English Version:

<https://daneshyari.com/en/article/7989800>

Download Persian Version:

<https://daneshyari.com/article/7989800>

[Daneshyari.com](https://daneshyari.com)