Accepted Manuscript

Effects of spray parameters on the adhesion between plasmasprayed cast iron splat and aluminium substrate

Ya-Zhe Xing, Zhang Liu, Gui Wang, Xing-Hang Li, Ya-Long Xing, Chao-Ping Jiang, Yong-Nan Chen, Xu-Ding Song, Matthew Dargusch

PII: S0257-8972(17)30162-7

DOI: doi: 10.1016/j.surfcoat.2017.02.019

Reference: SCT 22115

To appear in: Surface & Coatings Technology

Received date: 2 July 2016

Revised date: 21 December 2016 Accepted date: 7 February 2017

Please cite this article as: Ya-Zhe Xing, Zhang Liu, Gui Wang, Xing-Hang Li, Ya-Long Xing, Chao-Ping Jiang, Yong-Nan Chen, Xu-Ding Song, Matthew Dargusch, Effects of spray parameters on the adhesion between plasma-sprayed cast iron splat and aluminium substrate. The address for the corresponding author was captured as affiliation for all authors. Please check if appropriate. Sct(2017), doi: 10.1016/j.surfcoat.2017.02.019

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.



Effects of spray parameters on the adhesion between plasma-sprayed cast iron

splat and aluminium substrate

Ya-Zhe Xing^{a,b,*}, Zhang Liu^a, Gui Wang^b, Xing-Hang Li^a, Ya-Long Xing^c, Chao-Ping Jiang^a,

Yong-Nan Chen^a, Xu-Ding Song^d, Matthew Dargusch^b

^a School of Materials Science and Engineering, Chang'an University, Xi'an 710061, China

^bCentre for Advanced Materials Processing and Manufacture, School of Mechanical and Mining

Engineering, The University of Queensland, St Lucia, Queensland 4072, Australia

^c Faculty of Humanities and Social Sciences, City University of Macau, Macau, China

^d School of Construction Machinery, Chang'an University, Xi'an, Shaanxi 710064, China

*Corresponding author:

E-mail: xingyazhe@126.com

Tel: ++86-29-82334590

Abstract

For a thermally sprayed coating, a strong adhesion between the coating and the substrate is

critical for its service performance. Furthermore, the adhesion between the coating and the

substrate is mainly controlled by the splat-substrate adhesion. Therefore, enhancing the

splat-substrate adhesion is important for the preparation and application of thermally sprayed

coating. In the present work, individual cast iron splats were deposited on polished aluminium

surfaces by atmospheric plasma spraying technique (APS) with varying plasma arc powers and

1

Download English Version:

https://daneshyari.com/en/article/5464651

Download Persian Version:

https://daneshyari.com/article/5464651

<u>Daneshyari.com</u>