

Accepted Manuscript

Title: Dependence of the infrared emissivity on SiC content and microstructure of microarc oxidation ceramic coatings formed in Na_2SiO_3 electrolyte

Authors: Yuan-Hong Wang, Zhan-Guo Liu, Jia-Hu Ouyang, Ya-Ming Wang, Yu-Jin Wang



PII: S0169-4332(17)31821-4
DOI: <http://dx.doi.org/doi:10.1016/j.apsusc.2017.06.166>
Reference: APSUSC 36366

To appear in: *APSUSC*

Received date: 6-1-2017
Revised date: 15-5-2017
Accepted date: 15-6-2017

Please cite this article as: Yuan-Hong Wang, Zhan-Guo Liu, Jia-Hu Ouyang, Ya-Ming Wang, Yu-Jin Wang, Dependence of the infrared emissivity on SiC content and microstructure of microarc oxidation ceramic coatings formed in Na_2SiO_3 electrolyte, *Applied Surface Science* <http://dx.doi.org/10.1016/j.apsusc.2017.06.166>

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.

Dependence of the infrared emissivity on SiC content and microstructure of microarc oxidation ceramic coatings formed in Na₂SiO₃ electrolyte

Yuan-Hong Wang, Zhan-Guo Liu*, Jia-Hu Ouyang*, Ya-Ming Wang, Yu-Jin Wang

Institute for Advanced Ceramics, School of Materials Science and Engineering, Harbin

Institute of Technology, 92 West Da-Zhi Street, Harbin 150001, China

Highlights

- MAO coatings are composed of R-TiO₂, A-TiO₂, Al₂SiO₅ and SiC phase as well as amorphous phase.
- The introduction of SiC into the Na₂SiO₃ electrolyte leads to a significant change of coating microstructure.
- MAO coatings improve the infrared radiation properties of Ti₂AlNb alloy at high temperature.
- The SiC particles distributed in the oxide matrix enhance the infrared emissivity of the S-10C coating.

Abstract

* Corresponding author. Tel.: +86 451 86414291; fax: +86 451 86414291.

E-mail address: zgliu@hit.edu.cn (Z.-G. Liu), ouyangjh@hit.edu.cn (J.-H. Ouyang).

Download English Version:

<https://daneshyari.com/en/article/7836550>

Download Persian Version:

<https://daneshyari.com/article/7836550>

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