

论文

激光熔覆铸造WC-Ni基合金中WC颗粒的烧损机理与评估

曾晓雁;吴新伟;陶曾毅;朱蓓蒂;崔崑

华中理工大学;武汉,430074;华中理工大学;武汉,430074;华中理工大学;武汉,430074;华中理工大学;武汉,430074;华中理工大学;武汉,430074

摘要: 本文研究了激光熔覆金属陶瓷层中铸造WC颗粒的烧损方式和机理,证明激光熔覆过程中铸造WC颗粒主要以溶解扩散式的烧损为主,提出了评定WC颗粒烧损率的半定量公式为:

关键词: WC-Ni基合金 激光熔覆 金属陶瓷 烧损

HEAT DAMAGE MECHANISMS AND EVALUATION METHOD OF WC PARTICLES IN LASER CLAD WC-Ni COMPOSITE COATING

ZENG Xiaoyan, WU Xinwei, TAO Zengyi, ZHU Beidi, CUI Kun (Department of Materials Science and Engineering, Huazhong University of Science and Technology, Wuhan 430074) (Manuscript received 1996-07-12, in revised form 1997-03-14)

Abstract: In this paper, the heat damage fashions and mechanisms of the cast WC particles in the laser clad ceramic-metal composite coating have been investigated systematically. It was demonstrated that the main heat damage fashion of the cast WC particles is the dissolution and diffusion scorification. A half quantitative formula was derived to evaluate the heat damage extent of the WC particles.

Keywords: WC-Ni composite coating laser cladding ceramic-metal heat damage

收稿日期 1997-08-18 修回日期 1997-08-18 网络版发布日期

DOI:

基金项目:

国家自然科学基金!59171050;;武汉市晨光科技基金;;华中理工大学国家模具重点实验室基金

通讯作者:

作者简介:

作者Email:

参考文献:

- 1 曾晓雁,朱蓓蒂,陶曾毅,崔崑.材料科学与工程,1995;13(4):8
- 2 Boas M, Bamderger M. Surf Coat Technol,1990; 42: 175
- 3 陶曾毅,陈新.中国激光,1989;16: 629
- 4 Zeng Xiaoyan, Tao Zengyi, Zhu Beidi, Cui Kun. Surf Coat Technol, 1996; 79: 209
- 5 Cerri W, Mortinella R, Mor G P, Bianchi P, Angelo D D. Surf Coat Technol,1991; 49: 40

扩展功能

本文信息

- ▶ Supporting info
- ▶ PDF(1926KB)
- ▶ [HTML全文]
- ▶ 参考文献[PDF]
- ▶ 参考文献

服务与反馈

- ▶ 把本文推荐给朋友
- ▶ 加入我的书架
- ▶ 加入引用管理器
- ▶ 引用本文
- ▶ Email Alert
- ▶ 文章反馈
- ▶ 浏览反馈信息

本文关键词相关文章

- ▶ WC-Ni基合金
- ▶ 激光熔覆
- ▶ 金属陶瓷
- ▶ 烧损

本文作者相关文章

- ▶ 曾晓雁
- ▶ 吴新伟
- ▶ 陶曾毅
- ▶ 朱蓓蒂
- ▶ 崔崑

PubMed

- ▶ Article by
- ▶ Article by
- ▶ Article by
- ▶ Article by
- ▶ Article by

6 Zeng Xiaoyan, Tao Zengyi, Zhu Beidi, Zhou Erhua, Cui Kun. Surf Coat Technol, 1996; 79: 162

7 Abbas G, West D R F, Steen W R. Key Eng Mater, 1990; 46-47: 47

8 Zhu Beidi, Zeng Xiaoyan, Tao Zengyi, Yang Shuguo, Cui Kun. Wear, 1993; 170: 161

9曾晓雁.华中理工大学博士学位论文,1993

10曾晓雁.华中理工大学学报,1995;23(12):76

11曾晓雁.金属学报,1997;33:885

本刊中的类似文章

---

Copyright by 金属学报