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铬铸铁表面激光熔敷Ni-Al-WC合金层及组织性能研究

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摘要 研究了铬铸铁表面激光熔敷Ni Al WC合金层及其组织性能 ,分析了熔敷层的化学成分、相的组成、显微结构、平均显微硬度、耐磨性及耐蚀性等。结果表明 :熔敷层与基体完全实现了冶金结合 ,其化学成分、显微组织发生了根本性转变 ,使表面硬度、耐磨性和耐蚀性得到了较大幅度的提高

关键词 铬铸铁 激光熔敷 Ni-Al-WC合金层 组织性能

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Study on Laser-cladding Ni-Al-WC Alloy Layer on the Surface of Chrome Cast Iron and Alloy Layer's Micro-structure and Properties

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Abstract Laser cladding Ni Al WC alloy layer on the surface of chrome cast iron and alloy layer's micro structure and properties are studied. The chemical composition, the phase structure, the average micro hardness, the wear resistance and the corrosion resistance are analyzed for the Ni Al WC and the matrix, respectively. The results show that the metallurgical combination is achieved between the spray alloy layer and the surface of chrome cast iron, the chemical composition and micro structure in the surface layer of the specimen are changed basically, and the micro hardness, the wear resistance, the corrosion resistance in the surface layer are increased with a large range.

Key words chrome cast iron laser cladding Ni Al WC alloy layer micro structure

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