高端粉末冶金零部件智能生产车间建设探究

510430

摘　要： 随着我国科学技术的不断发展，在"中国制造2025"的背景下，社会也加强了传统制造业的硬性化生产模式向人工智能、数字制造、智能生产车间的柔性化生产模式的发展。基于此，本文对高端粉末冶金制造行业进行智能化生产车间建设进行探究，提出数字化管理、虚拟化模拟、智能化生产的柔性生产车间的布局及设计方案。并阐述了建设智能生产车间的先进性及实用贡献，能对高端粉末冶行业智能制造起到示范和带头作用。

关键词： 粉末冶金；智能生产车间；数字化；虚拟化

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Research on the Construction of Intelligent Production Workshop for High-end Powder Metallurgy Parts

Yongqiang Huang　Limei Kang　Bingchuan Xian

Guangzhou Rall Wall Polytechnic Guangdong Guangzhou 510430

Abstract: With the continuous development of science and technology in China, under the background of "made in China 2025", the society has also strengthened the development of the traditional manufacturing industry from the hard production mode to the flexible production mode of artificial intelligence, digital manufacturing and intelligent production workshop. Based on this, this paper explores the construction of intelligent production workshop in high-end powder metallurgy manufacturing industry, and puts forward the layout and design scheme of flexible production workshop with digital management, virtual simulation and intelligent production. The progressiveness and practical contribution of building intelligent production workshop are expounded, which can play a demonstration and leading role in intelligent manufacturing of high-end powder metallurgy industry.

Keywords: Powder metallurgy; Intelligent production workshop; Digitization; Virtualization

引言

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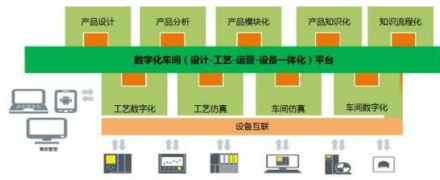
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1 建设智能车间的重点环节

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1.2

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1.3

MES

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SCADA

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2 建设智能车间的先进性

2.1

2.2

2.3

DMI

PCT

3 建设智能车间的实用贡献

3.1

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3

MES   ANN

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PSO

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4 结语

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PLM   MES

3.2

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