

## 铲运机工作机构设计方法研究

### Study on the Design Method for the Working Mechanism of Scraper

投稿时间: 1998-2-9

稿件编号: 19980427

中文关键词: 矿用铲运机, 工作机构, 优化设计, 有限元法

英文关键词: mining scraper, working mechanism, optimized design, finite element method (FEM)

基金项目: 国家“八五”重点科技攻关课题

作者	单位
王玉兴	山东工程学院
高秀华	吉林工业大学
孙冬野	吉林工业大学
孔德文	吉林工业大学

摘要点击次数: 6

全文下载次数: 15

中文摘要:

根据矿用铲运机工作机构处于插入工况、运输工况、举升工况和卸载工况的特点,建立了其六连杆工作机构的优化设计数学模型,编制了优化程序,以WJD 1.5 m<sup>3</sup>矿用铲运机工作机构为例进行优化设计计算,并对设计前后工作机构的应力场进行了有限元建模和分析。研究表明,充分利用现代设计方法可以有效解决机构干涉和铲运机各技术指标的满足问题,并缩短产品的设计和开发周期。

英文摘要:

According to the characteristics of the working mechanism of mining scraper in the working conditions of reclaiming, carrying, raising and dumping, the optimal model of the mechanism was established by using the modern design theory. An optimal software used for designing the mechanism was programmed. As an example, the working mechanism of WJD 1.5 m<sup>3</sup> scraper was calculated and designed. The stress field of the traditional mechanism and the designed mechanism were modeled and analyzed with the finite element method. It is well known that making full use of the modern design method can solve the problems such as interference of the mechanism and the satisfaction of the technological conditions. The period of design and development of the scraper can be shortened.

[查看全文](#)

[关闭](#)

[下载PDF阅读器](#)

您是第607235位访问者

主办单位: 中国农业工程学会 单位地址: 北京朝阳区麦子店街41号

服务热线: 010-65929451 传真: 010-65929451 邮编: 100026 Email: [tcsae@tcsae.org](mailto:tcsae@tcsae.org)

本系统由北京勤云科技发展有限公司设计