锤式破碎机的设计

摘要

锤式破碎机是一种破碎矿山物料的机械,普遍应用于水泥厂、电厂、矿山、化工等部门,所以,它的设计制造有着广泛的应用前景和丰富的可借鉴的经验。设计锤式破碎机的过程是:首先根据选定的相关初始数据,初步完成锤式破碎机总体的结构设计,并对其主要参数进行选择计算;其次完成各个零部件的设计、选型等问题,对重要部件即主轴进行强度校核与计算,并完成对锤头的优化设计,提高它的耐磨性。校核主轴的强度时,要参照相关原理,确定危险截面,计算所受力矩是否满足设计要求,并用软件完成其结构分析。在其余零部件的设计中,完成材料的选择、尺寸大小的确定以及与其他零件的配合定位等。最后进行锤式破碎机的整体装配和各部件的检查,确保设计无误,以保证破碎机最终设计的经济性和可靠性,达到预期目标。

关键词: 锤式破碎机, 锤头, 强度校核, 传动方式

Design of Hammer Crusher Abstract

Hammer crusher is a kind of crushing mine material machinery, widely used in cement plant, power plant, mine, chemical industry and other departments, so its design and manufacture has a wide range of application prospects and rich experience can be used for reference. The design process of the hammer crusher is as follows: firstly, according to the selected relevant initial data, the overall structural design of the hammer crusher is preliminarily completed, and its main parameters are selected and calculated; Secondly, the design and selection of various parts are completed. The strength check and calculation of the important parts, namely the main shaft, are carried out, and the optimized design of the hammer head is completed to improve its wear resistance. When checking the strength of the spindle, it shall refer to relevant principles to determine the dangerous section, calculate whether the torque received meets the design requirements, and complete its structural analysis with software. In the design of other parts, the selection of materials, the determination of size and positioning with other parts are completed. Finally, the overall assembly of hammer crusher and the inspection of all parts are carried out to ensure the design is correct, so as to ensure the economy and reliability of the final design of crusher and achieve the expected goal.

Key words: hammer crusher, hammer head, strength check, kind of drive

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