钢筋切断机结构设计

摘　要

钢筋切断机其工作性质就是将钢筋进行定向切断，其应用范围非常广泛主要是在建筑施工方面上。其主要分类为全自动式和半自动式，目前应用比较广泛的是液压式钢筋切断机，还有卧式钢筋切断机，属于机械传动，其结构简单，使用更加方便，立式钢筋切断机则为固定使用方式，主要用于工厂的钢筋加工生产线上[1]。

有三种方案进行选择，并对其进行简单的分析，选择采取合适的方案进行确定。方案最终确定选择三级减速，其优点为可以缓冲，运行平稳，噪声小。因为其需要直线运动，选择曲柄连杆机构，对钢筋切断机进行了总体结构和工作性能等方面的优化设计。

关键词：钢筋切断机；曲轴连杆机构；进给机构；

Abstract

The working property of the steel bar cutter is to cut the steel bars in a directional way, which is widely used in construction. There are many kinds of steel bar cutting achines on the market, which are mainly classified into fully automatic and semi-automatic types. At present, hydraulic steel cutting machine is widely used. Among them, there is a horizontal steel bar cutting machine, which belongs to mechanical transmission, with simple structure, more convenient use, smaller size and convenient carrying. The vertical steel bar cutter is a kind of fixed and unrestrained machine, which is mainly used in the steel bar processing production line of the component prefabrication plant.

In this design, first of all, the three schemes of the steel bar cutter are selected, and the simple analysis is carried out to select the appropriate scheme for the next discussion. Finally, the scheme chooses three-stage deceleration, which has the advantages of buffering, stable operation and low noise. On the motor side, because it needs to be converted, the crank slider mechanism is selected, and other aspects are selected. The overall structure and working performance of the steel cutting machine are optimized.

Keywords:Steel bar cutting machine;Crankshaft connecting rod mechanism;Two gear reduction;

目录