

注水播种机挂接仿形机构的计算机模拟(英文)

Computer Simulation on Hitch Parallel-Link Mechanisms of Combine Drill With Walking Tractor

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作者	单位
张文焕	山西农业大学农业工程系, 太谷030801
郑德聪	山西农业大学农业工程系, 太谷030801

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中文摘要:

为解决注水播种机与手扶拖拉机(6~8马力)的挂接牵引问题,对平行四杆挂接仿形机构进行受力分析,结合拉格朗日方程,建立了该类机构设计的数学模型,并编制程序进行计算机模拟和结构参数的优化,结果用于2BSY-2型注水播种机。在山西省西部山区的生产试验表明,机构牵引性能良好,播种深度稳定,满足使用要求。

英文摘要:

BSY-2 combine drill was designed to be hitched to two wheel walking tractor (6~8 hp) and to apply water, grain and fertilizer in one pass. One of the key points was the design of the land gauging parallel-link hitch mechanisms. Based on the force balance and the Lagrange's Equation analyses, a numerical modeling of the mechanism was established and the structural parameters were optimized by computer programs. The manufactured drills were tested in mountainous areas of west Shanxi Province, the drafting performance of the mechanism was satisfactory and the sowing depth was stable.

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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

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