

装载机发动机与液力变矩器功率匹配优化 Optimization of Power Matching on Torque-converter with Diesel Engine for Wheel Loader

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关键词: 装载机 液力传动 功率匹配 优化 满意度函数

摘要: 分析了现有装载机发动机与液力变矩器功率匹配的特性。根据装载机液压泵的工作情况,把装载机分为3种典型工况,建立了装载机发动机与液力变矩器匹配多目标优化模型。建立了基于满意度原理的满意度函数,给出了解题步骤和方法。算例分析表明:基于满意度原理的装载机发动机与液力变矩器功率匹配方法优化可行。 The no-rationality of the optimization of power matching on torque-converter with diesel engine for wheel loader was analyzed. Based on the hydraulic pump in accordance with the work of loaders, the loader was divided into three typical operating conditions. The satisfactory degree function in the optimization of power matching on torque-converter with diesel engine based on the generalized satisfactory degree theory was explored. Multi-objective optimization design of power matching on torque-converter with diesel engine was introduced, and the problem-solving steps and methods were given. The analysis shows that this method can improve the quality of the power matching.

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