

基于二次函数环量分配的液力变矩器叶片设计方法

刘伟辉 刘春宝 汪清波 马文星 褚亚旭

杭州前进齿轮箱集团有限公司

关键词: 液力变矩器 叶片设计 环量分配 二次函数

摘要: 提出了基于二次函数环量分配的液力变矩器叶片设计方法, 并给出了应用实例。计算液力变矩器流道过流断面面积及建立三维实体模型后, 与传统的等环量分配叶片设计法相比, 在同等叶片加厚条件下, 新方法设计出的叶形更合理, 流道过流面积变化更为平缓。应用CFD软件计算了用2种方法设计叶片的液力变矩器的三维流场, 基于三维流场数值解计算出液力变矩器的特性, 并与传统设计方法设计的变矩器特性进行了对比分析。 The design method of torque converter blade based on quadratic function distribution of momentum was put forward. The torque converters have been designed by using both new and traditional methods. The 3-D model of torque converter was established and the flow section area was calculated. Compared with the traditional method, not only the blade profile of new method was more reasonable under equal blade thickening, but also the change of flow section area was more gently. The flow field of torque converters has been numerical simulated by CFD software. Based on the flow numerical solution, the performances of torque converters designed by new and traditional methods have been predicted. The comparison and analysis of the results have been carried out.

[查看全文 \(请使用Adobe Acrobat 6.0版本浏览\)](#) [返回首页](#) [引用本文](#)