

S195型柴油机气缸体的改进设计

Modificative Design of Cylinder Block of Diesel Engine

投稿时间: 1997-8-25

稿件编号: 19980123

中文关键词: 柴油机, 设计, 气缸体

英文关键词: diesel engine, design, cylinder block

基金项目:

作者	单位
苏德风	机械工业部基金会
苏清祖	江苏理工大学

摘要点击次数: 9

全文下载次数: 12

中文摘要:

针对S195型柴油机存在主轴瓦和连杆大头轴瓦寿命不够长, 飞轮一侧的主轴承座渗油和气缸垫烧蚀等问题, 对气缸体进行了模态分析和受压响应分析。应用结构动力修改软件, 将原有的模态参数在计算机上进行了修改设计与优化选择。新试制的气缸体经重新模态分析和受迫响应分析, 刚度比原来有明显提高。投入使用后, 原机存在的问题得到解决。

英文摘要:

S195 diesel engine are widely used in many fields in china. Generally its quality is better, but there are also some drawbacks in it, such as the operation life of main bush and connecting rod bush, the oil leakage of bearing cap and the working life of cylinder cushion still should be improved. In order to solve these problems, the modal analysis of the cylinder block of S195 diesel engine was made and its deformation excited by force was calculated. The results showed that the difference of deformation at the interface of cylinder head is rather large and so is the deformation at the end face of main bearing hole in the side of flywheel. In order to reduce these deformations, the method of rigidity improvement was employed. Based on the original modal parameters, calculated and analyzed by the software of structural dynamic modification, and considered to the block structure and our experience several optimal methods were obtained. The results of before modification and after modification were listed in Tab.1 and 2, showing that after modification the deformation at the interface of cylinder head and the deformation at the end face of main bearing hole were reduced remarkably. The new cylinder block was re-analyzed. The rigidity was improved apparently. The real use of the modified diesel engine showed that the drawbacks mentioned above were eliminated.

[查看全文](#)

[关闭](#)

[下载PDF阅读器](#)

您是第606958位访问者

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

本系统由北京勤云科技发展有限公司设计