

其它

集中供热远程网络监控系统优化设计

唐玉峰,田茂诚,张冠敏,姜波

山东大学能源与动力工程学院, 山东 济南 250061

摘要:

针对集中供热系统中换热站数量多,功能结构相似的特点,对集中供热远程网络监控系统的程序及变量结构进行了优化设计.通过对换热站监控系统的结构分析,将其划分为不同的功能单元,采用结构化设计的思想,以过程涉及的变量为参数,设计该类型监控系统中4种典型操控过程的通用函数模块,同时为简化变量的定义和引用,结合系统功能结构的特点分离得到7种基础变量模型,并以结构体变量的形式进行优化.实际的工程应用表明,运用过程函数模块和结构体变量可提高程序的可移植性,降低开发工作量,便于多子站监控系统的扩容

关键词: 集中供热;远程监控系统;结构优化

Optimization of the remote network monitoring system of central heating

TANG Yu-Feng, TIAN Mao-Cheng, ZHANG Guan-Min, JIANG Bei

School of Energy Source and Power Engineering, Shandong University, Jinan 250061, China

Abstract:

In view of the situation that central heating systems have multiple heat stations which are similar in functional structure, optimization design was carried out on the program and variable structure of remote network monitoring system in central heating. Based on the structural analysis, the heat station monitoring system was divided into several different functional units. By using the structural design philosophy, the variables involved in the process were taken as the function parameters, and four typical control process of the monitoring system were designed as common function modules. In order to simplify the definition and reference of the variables, seven basic variable models were sorted out according to the system's functional structure characteristics, and optimized in form of structure body. A practical engineering application showed that the use of process function module and structure body can improve the program transportability, lower the development workload, and make the multi substation monitoring system grow easily.

Keywords: central heating; remote monitoring system; structural optimization

收稿日期 2009-01-10 修回日期 网络版发布日期 2009-10-16

DOI:

基金项目:

山东省科技攻关计划资助项目(2007GG30007001)

通讯作者:

作者简介:唐玉峰(1982-),男,山东德州人,硕士研究生,主要从事强化传热及节能技术研究.E-mail:tyf-sdu@163.com

作者Email:

PDF Preview

扩展功能

本文信息

- ▶ Supporting info
- ▶ PDF(559KB)
- ▶ 参考文献[PDF]
- ▶ 参考文献

服务与反馈

- ▶ 把本文推荐给朋友
- ▶ 加入我的书架
- ▶ 加入引用管理器
- ▶ 引用本文
- ▶ Email Alert
- ▶ 文章反馈
- ▶ 浏览反馈信息

本文关键词相关文章

- ▶ 集中供热;远程监控系统;结构优化

本文作者相关文章

- ▶ 唐玉峰
- ▶ 田茂诚
- ▶ 张冠敏
- ▶ 姜波

PubMed

- ▶ Article by Tang, Y. F.
- ▶ Article by Tian, M. C.
- ▶ Article by Zhang, G. M.
- ▶ Article by Jiang, B.

参考文献:

本刊中的类似文章

