Modeling and Assessing a New Warship Maintenance System(PDF)

Title:	Modeling and Assessing a New Warship Maintenance System

作者： 赵金超; 齐 欢; 张勇明

Author(s): Jin-chao Zhao1; Huan Qi2* ; Yong-ming Zhang1

1. Department of Management Engineering, Naval University of Engineering, Wuhan 430033, China 2. Department of Contronl Science & Engneering, Huazhong University of Science and Technology, Wuhan 430030, China

关键词： capability assessment; planning optimization; heuristic regulation; warship maintenance system

分类号： -

DOI: -

文献标识码： A

摘要： The authors developed a prototype of a warship maintenance system. The process started by defining the maintenance requirements of warship equipment. Next, a planning scheme was development for a maintenance network. An optimization target for the plan and indexes for assessment were established. Based on the above work, a simulation model was proposed with two layers: a base and a workshop. Dispatching rules were then formulated for the simulation. Experimental results proved the validity of the model and the dispatching algorithm. It was found that the model can solve the capacity evaluation problem for maintenance systems and provides a scientific basis for decision-maker to make decisions regarding equipment maintenance.

工具/TOOLS

引用本文的文章/References

下载 PDF/Download PDF(279KB)

立即打印本文/Print Now

推荐给朋友/Recommend

参考文献/REFERENCES

Cao Zhengcai , Qiao Fei, Wu Qidi (2006). Research development of modeling methods and dispatchment strategies for semiconductor product line. *Electronics Journal*, 34(12), 2518-2526.

Mila K, Andrei K, Julia R, Ahto T (2006). MDA approach for maintenance of business applications. *Lecture Notes in Computer Science*, Springer Berlin/Heidelberg, New York, 40-51.

Peng Wenli, Zhang Dinghua, Qin Zhongbao, Yao Cangfeng (2003). Research for modeling method of manufacture system based on fractal theory. *Computer Engineering and Application*, 39(20), 32-36.

Xie Junyi, Tang Wencheng, Ni Zhonghua (2005). Research for management system of manufacture resources dispatchment of workshops based on multiple agent. *Computer Integrated Manufacture System*, 11(6), 805-810.

Yao Yunan (2005). Research for emulational maintenance system and model of production organization and implement process for maintenance. Ph.D. thesis, Wuhan University of Technology, Wuhan, 25-26.

Yang BS, Jeong SK, Oh YM, Tan A (2004). Case-based reasoning system with Petri nets for induction motor fault diagnosis. *Expert Systems with Applications*, 27(2), 301-311.

Zhang Zhihui (2004). Modeling for function of furnishment maintenance support system based on IDEFO. *Journal of Ordnance Engineering College*, 16, 15-20.

Zhao Jinchao, Qi Huan, Wang Ping, Zhang Yongming (2007). Research for modeling technology of warship maintenance system based on multiple intelligent carriers. *Engineering of Ships and Ocean*, 36(1), 125-128.

Zou Wei, Zhang Tao, Guo Bo (2005). Modeling method of multiple viewgraphs for furnishment maintenance support system. *Automation of Weapons and Industry*, 24(2), 24-25.

备注/Memo: -