北京航空航天大学学报 » 2011, Vol. 37 » Issue (8) :1039-1043 DOI:

装备修复性维修工作项目确定方法

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Determination of corrective maintenance task item for materiel

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摘要 针对研制阶段保障性分析完整性的需求,基于语义相似度计算技术、FMECA(Failure Mode, Effects and Criticality Analysis)信息特点和对单元级、系统级相似性的度量要素研究,提出了装备修复性维修工作项目确定方法.该方法解决了故障模式层次不准确时单元相似度计算结果失真的问题,通过对单元相似度到系统相似度的定量拟合,完成对系统相似性的度量,并依据其结果辅助确定修复性维修工作项目;该方法支持计算机辅助,在提高效率的同时,一定程度上消除了由分析人员带来的结果差异性,规范了修复性维修工作项目确定流程.最后通过实例说明方法的可操作性.

关键词: 后勤 维修 相似系统 相似度

Abstract: In order to achieve the integrality of the supportability analysis during the development phase of materiel, the determination method of corrective maintenance task items was presented based on the characteristics of failure mode, effects and criticality analysis(FMECA), the calculation of semantic similarity and the research of similarity for the units and systems. This method accounts for the bias of similarity calculation of units which is due to the unsurely level of unit-s failure mode, and according to the similarity of units to complete the quantitative similarity calculation of system to assist the determination of corrective maintenance task items which depends on the similarity of different materiel. In addition, because of using the computer-aid, this method not only improves the effect and efficiency for the calculation process, but also somewhat avoids the differences between different supportability analyzers because of their own experiences and diversity. This method regulates the process of determination of corrective maintenance task items. The final example proves the method is effective.

Keywords: logistics maintenance similar system similarity

Received 2010-04-16;

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引用本文:

毛一岚, 康锐, 马麟, 徐哲涵.装备修复性维修工作项目确定方法[J] 北京航空航天大学学报, 2011,V37(8): 1039-1043

Mao Yilan, Kang Rui, Ma Lin, Xu Zhehan.Determination of corrective maintenance task item for materiel[J] JOURNAL OF BEIJING UNIVERSITY OF AERONAUTICS AND A, 2011,V37(8): 1039-1043

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