

基于QFD/SPA的武器装备需求分析方法

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Requirements analysis of weapons and equipment based on QFD and SPA methods

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摘要 针对武器装备需求论证中性能指标重要度问题,提出了一种基于QFD与SPA相结合的方法,并给出了方法的基本思路和应用过程。该方法以质量屋作为计算框架建立装备作战需求与性能指标间的相互关系,通过多元联系数对国内外同类型武器装备的需求满意度进行竞争者评估。应用结果表明,该方法可以将模糊、定性的专家意见进行集中,量化得出装备性能指标的重要度,增强武器装备需求论证中性能指标分析结果的说服力。

关键词: 质量功能展开 质量屋 集对分析 多元联系数 需求论证

Abstract: Aiming at the problem how to get the importance of measures of performance (MOP) in requirements demonstration of weapons and equipment, an approach based on quality function deployment (QFD) and set pair analysis (SPA) methods was proposed and applied in this paper. As a computation framework, house of quality (HOQ) was used to set interrelationship between operation requirements and MOP. Requirements satisfaction of the same type of equipments was evaluated by multivariate connection number. Application result shows that by the provided approach different opinions of experts are centralized and the importance of MOP are quantified. In addition, the persuasion of MOP analysis result is also enhanced in the process of requirements demonstration of weapons and equipment.

Key words: quality function deployment house of quality set pair analysis multivariate connection number requirements demonstration

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