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Author: Mr. wei yi wei
China Academy of Launch Vehicle Technology (CALT), China, liudifei218@126.com

THE METHODOLOGICAL INVESTIGATION AND PRACTICAL EXPLORATION OF THE
TECHNOLOGY SYSTEM IN AEROSPACE INDUSTRY

Abstract

Technology system in aerospace is an important part of scientific technology system. Taking a further investigation and exploration is very necessary and beneficial, not only for a comprehensive, complete and effective recognition in aerospace science, but also for an administration in aerospace technology research as well as an application in development rule. Technology advance is prominent for aerospace enterprise's development, our company tries to manipulate technology system construction in order to support enterprise's sustainable development, increase company's core competitive power and obtain the strategic goal finally. The unique method is taken into account in this paper. According to the aerospace product's plan, we sort out the technologies which the products are required, then arrange them from top to bottom layer by layer. After the arrangement, the analysis and optimization has been used in technical path for every product fields. Furthermore, we will merge the common technologies and optimize the technology tree. In term of these preparations, the technology classification and the technology readiness level assessment can be applied. We can do many things afterwards, such as formulating the core technology development plan, constructing the technology platform and providing the basis for the capacity building plan. Based on the investigation, the following results can be reached: Firstly, we took the lead in proposing the theory and methodology of aerospace's technology system in this area. The qualitative and quantitative combined core technology evaluation criterion has been formulated. At the same time, we also elaborate the relations between technology system and innovative business. Secondly, we are the first to construct the complete technology system concerning to aerospace future development. According to the eight sub-systems and five layer framework, we work out the systematic technology, the sub-systematic technology, the specialty technology and the technology direction. Finally, we improve the great progress about the collaborative innovation system comprehensively. Due to the pioneering work, the technology system has been combined perfectly with the production-study-research, the major construction, the intellectual management and the standards system. The accomplishments obtained in this paper can provide some theoretical and practical instructions for the construction and application of technology system in aerospace relevant industry.