A Research for Optimization of Reliability Growth Model on High-Tech Products During R&D Stage- An Example of Engine

林大源、王學銘

E-mail: 9415978@mail.dyu.edu.tw

ABSTRACT

Facing the trend of world trade liberalization and enterprise operation globalization, all kinds of the business towards fierce competition. For Taiwan's industry upgrading, the most urgently need is to strengthen capability in R&D ability. As to High-Tech products, during the R&D stage, it is important not only to concern save time and reduce cost, but even more to raise the performance of Quality which emphasize the key indicator of Reliability Value. The aim of this research is to apply reliability management skill to find out the most suitable reliability growth model, for the new product during R&D stage in order to ensure that the reliability target value can satisfy the design requirement. All test data are from real example(aircraft engine) than calculated by Non-Homogeneous Possion Process(NHPP) with Weibull intensity function and compare with Duane and AMSAA models. Finally, the reliability target value be verified and get rationable and better estimating method.

Keywords : AMSAA Model, Duane Model, Reliability Growth, R&D

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