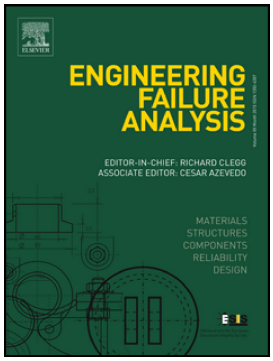

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Improving Aircraft Safety and Reliability by Aircraft Maintenance Technician Training

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Abstract

Aircraft maintenance is one of the primary causes or contributing factors in aircraft accidents. It is clear that proper training of Aircraft Maintenance Technicians (AMTs) will avoid failures, reduce maintenance related accidents, improve safety and reliability in aviation and provide recovery of the increasing demand to qualified AMTs for sustainability of the market growth. In this study, European Safety Agency (EASA) based AMT licencing system in EU states (and non-EU states implementing EASA rules) has been analysed and a training model developed in accordance with EASA Part-66 requirements and delivered by e-learning methods has been introduced. The analysis of the licencing process based on EASA regulations showed that this process was based on the candidate's demonstration of knowledge and acquisition of experience. The required experience depends on the training background of the candidate. Field exercise showed that developed e-learning training model, which overcomes the disadvantages of traditional face to face training models, succeeded to improve the attendees' theoretical knowledge level and when combined with the practical trainings given to AMT candidates in maintenance organisations during their experience periods, will be very successful in improving safety and reliability in aviation maintenance operations.

Keywords

Aircraft Maintenance, Safety, Reliability, Training

Introduction

The growing complexity of equipment and systems, as well as the rapidly increasing cost incurred by loss of operation as a consequence of failures, has brought to the forefront the aspects of reliability, maintainability, availability, and safety. The expectation today is that complex equipment and systems are not only free from defects and systematic failures at time t =0 (when they are put into operation), but also perform the required function failure free for