



R.P. Rulli, P.A. da Silva

Overview of CVM Technology Tests Performed by Embraer

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This paper presents an overview of the Comparative Vacuum Monitoring (CVM) technology tests performed by Embraer in the scope of the company's effort on Structural Health Monitoring. Less time-consuming and less complex maintenance procedures, facilitated damage detection in areas with restricted access, early detection of structural damages and reduction of maintenance costs are potential benefits that can be achieved by using SHM. In order to reach and make good use of those benefits, SHM technologies are being investigated at Embraer. Among them, CVM is considered one of the promising technologies for monitoring metallic material parts. Some tests with CVM technology were performed, such as having sensors installed in a Full-Scale Fatigue Test monitoring the structure periodically or installing sensors in a flight tests aircraft for on-ground periodic inspections. Those tests are focused on the investigation of the many aspects of CVM technology. Results obtained have demonstrated the viability of CVM to be applied for monitoring aircraft parts; however, aspects regarding sensors and cables durability and system qualification and readiness level still have to be addressed, depending on the application scenario.

Ключевые слова:

Содержание.

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