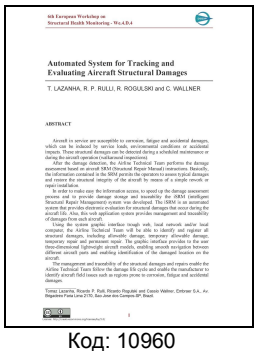

Код: 10960

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# Automated System for Tracking and Evaluating Aircraft Structural Damages

Дрезден, Германия, 2012 год

7 стр; формат: 23,5 x 16 см; библиографический список: 4 единицы

Aircraft in service are susceptible to corrosion, fatigue and accidental damages, which can be induced by service loads, environmental conditions or accidental impacts. These structural damages can be detected during a scheduled maintenance or during the aircraft operation (walkaround inspections).

After the damage detection, the Airline Technical Team performs the damage assessment based on aircraft SRM (Structural Repair Manual) instructions. Basically, the information contained in the SRM permits the operators to assess typical damages and restore the structural integrity of the aircraft by means of a simple rework or repair installation.

In order to make easy the information access, to speed up the damage assessment process and to provide damage storage and traceability the iSRM (intelligent Structural Repair Management) system was developed. The iSRM is an automated system that provides electronic evaluation for structural damages that occur during the aircraft life. Also, this web application system provides management and traceability of damages from each aircraft.

Using the system graphic interface trough web, local network and/or local computer, the Airline Technical Team will be able to identify and register all structural damages, including allowable damage, temporary allowable damage, temporary repair and permanent repair. The graphic interface provides to the user three-dimensional lightweight aircraft models, enabling smooth navigation between different aircraft parts and enabling identification of the damaged location on the aircraft.

The management and traceability of the structural damages and repairs enable the Airline Technical Team follow the damage life cycle and enable the manufacturer to identify aircraft field issues such as regions prone to corrosion, fatigue and accidental damages.

Доклад. 6-я Европейская конференция по мониторингу технического состояния сооружений, 2012. Редакция Кристиана Боллера.

**Ключевые слова:**

## Содержание