



Structural Monitoring given thumbs up by Boeing

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Osborne Park-based Structural Monitoring Systems plc has achieved a significant breakthrough after aircraft manufacturer Boeing accepted the use of its in-flight crack detection technology as a valid way of performing inspections on the company's aircraft.

The approval represents the culmination of a comprehensive two year validation program by the U.S. Federal Aviation Administration's Airworthiness Assurance NDI Validation Center at the Sandia National Laboratory, The Boeing Company, and a number of US airlines. The program also involved departments of the University of Arizona and the University of Iowa.

The full text of a company announcement is pasted below

The Company is pleased to announce that The Boeing Company has agreed to include the Company's Comparative Vacuum Monitoring (CVM™) structural health monitoring technology into the Boeing Common Methods - NDT (non-destructive testing) manual.

The recognition of CVM™ in-situ crack detection sensor monitoring technology as a standard NDT method is an aviation industry world first, and represents a major breakthrough for the Company's unique technology.

As a result of this agreement the Company's CVM™ technology is available to be used as a validated means for performing some types of in-situ structural integrity inspections on Boeing aircraft, to address crack detection inspections in future Service Bulletins and as an Alternative Means of Compliance for existing inspections.

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This is a significant development for the Company, which can now move towards revenue generation opportunities through marketing its CVM™ technology as an approved system to the operators of Boeing commercial aircraft worldwide.

SMS and STRUCTURAL HEALTH MONITORING

The agreement by Boeing to include the Company's Comparative Vacuum Monitoring (CVM™) in the Boeing Common NDT Methods (CMN) Manual represents a major breakthrough in the commercialisation of an outstanding Australian technology.

It also represents a significant cost saving opportunity for operators of Boeing aircraft.

As an aircraft ages its inspection requirements increase. On an older aircraft mandatory inspections can represent a large and increasing portion of the operating cost. In simple terms, the value of the asset declines and the cost of ownership increases.

Traditional airframe maintenance is driven by mandatory periodic manual inspections using visual and manual electronic tool aids to check for damage to structures. The goal is to automate these inspections, to increase damage detection reliability and reduce the costs of scheduled and unscheduled maintenance inspections and aircraft downtime.

The CVMTM technology offers:

- - Reduced labour cost of mandatory inspections
- - Efficient and electronic reporting on airframe structural integrity
- - Improved inspection reliability
- - Removal of secondary inspection damage caused by current invasive inspections and replacement material costs
- - Reduced down time and ground support costs
- - Optimised scheduling of all other maintenance
- - Increase revenue from increased operational flight availability

In August 2006 Structural Monitoring Systems entered into a commercial license agreement with The Boeing Company.

The agreement established the commercial terms and Boeing proprietary information access rights to enable the company's CVM systems to be manufactured, certified, sold and distributed by the Company to the operators of Boeing commercial aircraft.

The agreement also established the terms under which Boeing will provide technical services and assistance to **SMS**.

The significance of the program and the license agreement is that the CVM technology can be used to address certain structural inspection requirements in difficult, time consuming and costly access locations in Boeing commercial aircraft.

It enables access to the full range of Boeing intellectual property and support necessary to develop sensor applications, and provides the commercial framework for the sale of CVMTM sensors and systems to Boeing aircraft operators.

Structural Monitoring Systems has also entered into a Joint Development Agreement with the leading European commercial aircraft manufacturer, Airbus.

The JDA specifies that license agreements shall be entered into within the term of the agreement.

The JDA is planned to conclude by the end of 2007 but may be accelerated at the request of Airbus to enable the CVM systems to be available for inclusion into existing and new Airbus aircraft.

The objective of the JDA is, "...development of Comparative Vacuum Monitoring for an in-flight Structural Health Monitoring system."

At the conclusion of the joint development program SMS's patented CVM technology will

be ready for the in-flight structural monitoring of Airbus aircraft.

The Company's CVM technology is one of the world's leading SHM technologies and offers the potential for significant cost savings in aircraft manufacture and maintenance.

SHM provides the potential to achieve the highest degree of design optimisation of airframes. The potential benefits of SHM are the minimisation of airframe maintenance costs and reducing human factor influences, together with increased aircraft availability and structural weight saving.

The JDA will see CVM systems developed to meet Airbus requirements for on-aircraft applications on both new and existing aircraft. Airbus has been using the Company's CVM technology for five years in materials and structural testing programs and is currently using CVM on the full-scale structural testing program for the new A380 aircraft.

SMS achieved a breakthrough in the commercial aviation industry in 2006 during material testing associated with the Airbus A380.

The Company's CVM technology was successfully used by Airbus during qualification tests and provided vital information on the performance characteristics of GLARE, which is a lightweight aluminium epoxy laminate. A substantial proportion of the A380 is constructed in the GLARE material.

The accuracy of information which was provided by the CVM technology in real time had never been achieved before. This was regarded by Airbus as an historic first in the aviation industry that will lead to improved accuracy and efficiency of materials testing.

SMS and Airbus have been working in close cooperation on this challenging project to develop and use the unique CVM technology since 2001. The Company's involvement in the A380 program is continuing with CVM being used in the ongoing full-scale testing of the A380.

Entering into the JDA was a key milestone in the development of the technical and commercial relationship between Airbus and **SMS**.

It is a clear demonstration that the Company's patented CVM technology is at the forefront of Structural Health Monitoring for the aviation industry.