



Structural Monitoring Systems

Investor Newsletter
March 2005



**STRUCTURAL
MONITORING
SYSTEMS**

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CEO's Welcome



Mark Vellacott M.Sc, MBA, FRAeS, C.Eng
Chief Executive Officer

I am pleased to launch what will be a regular quarterly newsletter to investors.

Since our debut on the ASX, a number of significant developments have taken place.

We have expanded our qualification programs for the inclusion of CVM™ technology onto both existing and new large commercial aircraft and are in the process of increasing sales of CVM™ systems for military aircraft.

The level of interest in the broad application of CVM™ technology has also developed as evidenced by the increasing number of requests for proposals for non-aerospace applications.

I was first introduced to the CVM™ systems by Australia's Defence Science and Technology Organisation in 1998 when I was with British Aerospace. At the time I thought the technology had a bright future and was pleased to be able to assist its development by funding its first commercial trial with Airbus in the UK.

As the CEO of SMS I now have a clearer view of the business potential of CVM™ and am delighted to have the opportunity to lead the company through what will be an exciting commercial development phase.

I would like to thank Robin Dean on behalf of SMS for his visionary leadership and development of the company over the last five years. As a major shareholder and now a non-executive director of SMS his experience, advice and guidance will continue to be of great value to the company.

I hope that you find this newsletter of value and would welcome any comments that you may have.

The Investor's Newsletter

The purpose of the newsletter is to keep shareholders advised of current developments and to look behind and follow up on recent ASX announcements made by the Company.

Airbus Developments



A Joint Development Agreement is being finalised with Airbus.

CVM™ used in the development of the new A380 airliner.

Airbus and SMS are finalising a Joint Development Agreement (JDA) to have a CVM™ system available for in-flight structural health monitoring by the end of 2007.

The initial goal is to monitor Airbus aircraft structures with the aim of reducing maintenance costs and increasing aircraft availability. The longer term goal would be to enable structural weight savings.

CVM™ has already been used in the certification of a lightweight, aluminium epoxy laminate known as GLARE®, which forms approximately one-third of the fuselage surface area of the new giant A380 aircraft, recently rolled-out in Toulouse, France.

The integral sensors also successfully detected cracks on a large GLARE® test panel in real-time. Airbus regards this as a first in aviation history. Surface sensors have been used for a variety of crack detection and crack propagation tests.

The JDA covers integral and surface sensors plus associated hardware and software.

The JDA requires SMS to productionise the CVM™ technology for in-flight use while Airbus will validate the technology for incorporation into Airbus aircraft.

Military Markets

Black Hawk



Because military aircraft are governed by self-administered regulations it can be quicker to get clearance to use a new technology on military aircraft than on the multi-national, highly regulated civilian market.

SMS has completed validation installations on an A-4SU Sky Hawk and S-211 trainer of the Republic of Singapore Air Force. Last November a contract was signed with the Australian Defence Force (ADF) for a trial installation on the Black Hawk helicopter that will take place in April 2005.

Since 2002 CVM™ sensors have flown successfully on a US CH-53 helicopter and have detected a crack on three separate occasions.

In the UK significant progress has been made on increasing the awareness of CVM™ technology in the RAF and RN, and preparations are well advanced on trial fits to three in-service aircraft and a structural fatigue test program. A draft contract has been received. Successful completion of these trials could lead to programs with other military operators and acceptance by UK military operators of CVM™ systems for use in time consuming inspection locations.

In association with Aerostructures Technologies Pty Ltd, SMS expects to commence studies for the Pakistan Air Force in the near future for the life-extension of one aircraft type and structural integrity planning and monitoring using CVM™ for two other types.

Non Aerospace Opportunities

To date SMS has chosen to focus its activities in the aerospace market. Although the aerospace sector is the largest and most lucrative application area for CVM™ technology, it is also one of the most highly regulated sectors in the world.

Other sectors suffer equally from fatigue and damage in various materials and structures. It is these markets that SMS is now targeting to increase the scope of the business.

A significant number of applications are possible. For example, bridges and tunnel structures can suffer critical cracking as can industrial plant, ships and trains.

SMS is engaged in discussions about the structural monitoring of rail rolling stock, and work is underway in the UK with TWI (formerly known as The Welding Institute) on an initial test program to detect cracking on highly stressed metal pipes.

Boeing Connections

Boeing is one of the world's two major commercial aircraft manufacturers. More than 8,000 of their aircraft fly in the commercial airline market.

SMS is working with Boeing, the Federal Aviation Administration (FAA), airline operators and research organisations in the US on a program to qualify CVM™ technology for inclusion in the Boeing Standard Practices Manual (SPM).

This is a necessary step before operators of Boeing aircraft can use CVM™ sensor products to monitor airframe structures. It is intended that CVM™ be qualified during the second-half of 2006 for use on Boeing commercial aircraft.

The programs that SMS were already working on with Boeing, FAA and major US airlines have been included into the Boeing SPM program. The results generated under the earlier programs are being included in the SPM program.

The importance of this program to SMS is that Boeing has the largest fleet of commercial aircraft in the world. A significant proportion of the Boeing in-service fleet can potentially benefit from using CVM™ technology to reduce the cost of airframe inspection related maintenance and increase aircraft availability.

SMS is also in discussions with Boeing regarding the relationship between the two companies for the supply and retrofit of CVM™ sensor and instrumentation products to a number of Boeing aircraft types upon completion of this program.

Lap Joint Sensors



CVM™'s Competitive Advantages

The simplicity of CVM™ technology provides a unique set of competitive advantages and great flexibility in the design and application of structural monitoring systems. CVM™ systems:

- are simple to install, lightweight and inert with long term durability;
- can be implemented in a range of sensor types, materials and configurations to address structural fatigue and structural integrity health monitoring requirements;
- installed in hard-to-access areas can be used periodically inspected via a remote access point in a matter of minutes, enabling a major reduction in maintenance inspection costs and improvements in aircraft operational availability;
- sensors are made from radar transparent materials that do not generate electromagnetic or acoustic emissions;
- can detect and monitor cracks by direct measurement of pressure changes avoiding the processing of complex sensor outputs currently used in existing inspection techniques;
- enable real-time monitoring of cracking on surfaces and within joint assemblies in both metallic and composite airframe structures, and can be used to predict the rate of onset of structural failure; and
- information can be used in a structural health monitoring system to provide a continuous assessment of structural integrity.

Meet the Chief Technical Officer



Mike Southern B.E.

Chief Technical Officer Mike Southern is an engineer and member of IEEE with extensive experience in the automotive and related industries.

He worked with the high technology engine developer Orbital Engine Corporation (OEC) for nearly 20 years in senior technical and managerial roles.

He was also the motorcycle systems Technical Director of a joint venture between Siemens and OEC and the Chief Operating Officer of a world leading computer vision company. He brings to SMS a wealth of knowledge in customer relations, technology, licensing, product specification, development and implementation.

Mike is enthusiastic about the future of the Company's CVM™ technology.

"I think our technology and its applications represent a terrific opportunity, not only in the aviation sector but in a wide range of industries.

"Everyone here, and we have a great team of dedicated people, is tremendously motivated by the challenge of taking the technology to full commercialisation," he said.

"We're focused on resolving the certification issues and ensuring we deliver a quality product that meets the promise of this technology."

Away from the office, Mike is married to Ruth with two teenage children and enjoys sailing and scuba diving. He is also a supporter of the Fremantle Dockers, one of the two Perth teams in the Australian Football League.



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Visit us on the WorldWideWeb:

www.smsystems.com.au

Offices

Structural Monitoring Systems Ltd

ABN 94 067 556 245

Unit 5

15 Walters Drive

Osborne Park WA 6017

Australia

Telephone

+61 8 9204 4844

Facsimile

+61 8 9204 4866

Structural Monitoring Systems plc

ARBN 106 307 322

4 Elwick Road

Ashford

Kent TN 23 1PF

United Kingdom

Telephone

+44 1233 666795

Facsimile

+44 1233 646840



Developments In CVM™ Technology

Together with the company's business development activities, SMS has been developing CVM™ sensors and instrumentation systems to meet evolving customer needs.

Recent technology development highlights include:

- the development and use with Airbus in component and full-scale tests of an integral sensor to detect and monitor cracks around rivet holes within assembled joints; and.
- the development of a load bearing sensor as a washer replacement which can be used to detect and monitor cracking under bolt heads or nuts.

