

SVS CANADA - SYSTEM INTEGRATORS FOR ACOUSTIC AND VIBRATION TECHNOLOGY

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Résumé

Sound and Vibration Solutions Canada Inc. compte plus de 35 ans d'expérience dans les domaines de la mesure acoustique et vibratoire ainsi que dans l'instrumentation d'analyse. Nous sommes un représentant des fabricants canadiens offrant une assistance pour la prise de mesure ainsi que de la formation sur les technologies de pointe. SVS possède une vaste expérience dans le domaine de l'intégration personnalisée pour des solutions clés en main à la recherche d'un fournisseur singulier.

Mots-clés: instrumentation acoustique, vibration instrumentation, analyseurs, systèmes de mesure

Abstract

Sound and Vibration Solutions Canada Inc. has had over 35 years' experience in the fields of acoustic and vibration measurement and analysis instrumentation. We are a Canadian manufacturers' representative providing measurement assistance and training of advanced technology. SVS has extensive experience in the area of customized integration for turn-key solutions searching for one supplier source.

Keywords: Acoustic instrumentation, vibration instrumentation, analyzers, measurement systems

1 Introduction

SVS Canada Inc., a wholly owned and operated Canadian company, seeks noise and vibration product solutions from world leaders for the Canadian marketplace. The advancement of Canadian research and development relies on quick turn-key systems with out of the box solutions. We offer free consultation and direction for these solutions empowering our clients in a competitive marketplace and challenging new research. Andy Metelka, president and owner spent the first 15 years of his career with Nicolet Instrument Canada while working with both Nicolet Scientific and Nicolet Test Instruments. Nicolet Scientific (formerly Federal Scientific) was responsible for developing the first Portable FFT analyzer, while the Nicolet Test Instrument Division developed the first Digital Storage Oscilloscope. After Nicolet closed its operations world-wide Andy remained focused on the acoustics and vibration industries with a broader market and product selection by founding Novel Dynamics Test Inc. The company now has changed its name to better reflect the nature of its focus; Sound and Vibration Solutions Canada Inc.

SVS Canada specializes in Noise and Vibration Applications. Sound & Vibration Solutions Canada Inc. provides all these services to the Canadian Marketplace as a true solution-based Canadian Distributor. Andy has a background in instrumentation design with several research firms and a degree in Electronics Engineering Technology. He is long standing member of the CAA, CMVA, ASA, INCE, and IEEE. SVS Canada now provides consultation in measurement applications to find appropriate solutions.

2 Product Line

SVS offers the following products:

- Sound Level meters
- FFT analyzers/recorders
- Laser Vibrometers
- Sound sources
- Measurement microphones, free field, Pressure, Random incidence, Outdoor, Array, Sound Intensity. KEMAR Head, Ear & mouth simulators.
- Studio Microphones
- Modal analysis acquisition and software
- Vibration Sensors & Vibration analyzers
- Acoustic imaging systems, Beam Forming Acoustic Holography
- Wind Turbine noise, vibration and infrasound measurement systems. Fig# 1, 2, and 3.
- Seismic measurement, monitoring PPV
- Building Vibration monitoring
- 3D- Acoustic imaging using particle velocity and sound intensity. Noise mapping 2D & 3D Noise mapping
- In-situ acoustic absorption.

Our clients include Universities, consultants, the automotive and aerospace industries, the military and more. An example of one such turn-key system solution is described below.

New technology will provide the means to understanding complex sources and propagation of low frequency pressure.

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Currently low frequency pressure is not considered audible noise and future research requires new technology for simultaneous measurements of multi-dimensional complex transmission paths. Analysers with advanced recording capability custom programmed for these measurements have led to the discovery of complex blade-to-tower pressures indicating far field propagation and much more. Measurements, however, are complex functions of pressure amplitudes, frequency, time and space. Combining air flow, atmospheric conditions, temperature, humidity, wind gusts, wind direction and so on becomes an impossible task for a Sound Level Meter. SVS Canada Inc. has developed a turn-key flexible solution to synchronously correlate these and other parameters for the successful measurement of Wind Turbine noise, infrasound, vibration and weather parameters. Instrumentation and sensors used are traceable to the highest world recognized standards.

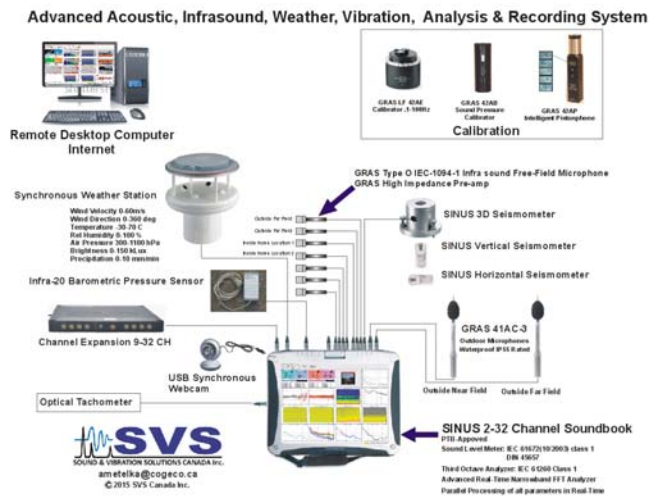


Fig.3 Layout diagram of advanced options and system expansion.

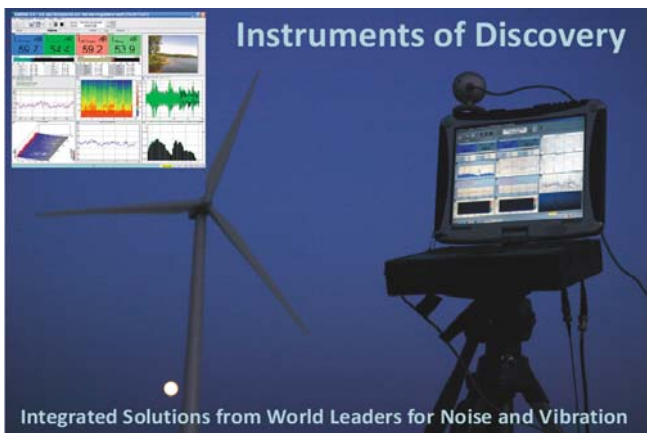


Fig.1 Rugged field portable advanced noise, infrasound and vibration System.

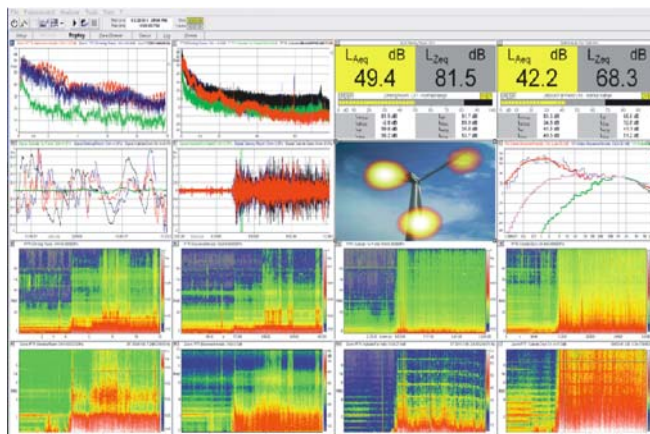


Fig.2 Real-time Display Example



Fig.4 Advanced noise and vibration analyser with PTB approval.

References

[1] Dooley and Metelka, *Session 3aNS, ASA 155th Meeting of the Acoustical Society of America, San Francisco, 2013.* Acoustic interaction as a primary cause of infrasonic spinning mode generation and propagation from wind turbines.