

**LMS responds to market demand for torsional vibration testing
New LMS Test.Lab solution provides precision rotational speed measurements
without compromise**

With eco-engineering comes a new array of issues to solve. New powertrain designs like start-stop systems or downsized engines often induce new torsional vibration phenomena, which negatively impact NVH performance and ultimately engine and driveline efficiency. Engineers need insight into those phenomena to quantify and eliminate the root cause of torsional vibration problems.

For more than a decade, LMS has provided solutions for torsional vibration testing and engineering. Integrating years of experience as well as extensive customer feedback, LMS is pleased to launch its next-generation torsional vibration testing solution, based on the acquisition and processing power of the LMS SCADAS and LMS Test.Lab platforms respectively.

Completely integrated in the measurement-to-analysis process, the solution processes torsional vibration signals simultaneously with acoustic, vibration or strain data. Data is acquired in a single measurement run using the LMS SCADAS hardware. The new SCM-RV4 module directly conditions the widest range of tachometer signals, derived from incremental encoders, TTL or RS422/485 optical sensors, or unconditioned magnetic analog-output sensors.

LMS Test.Lab integrates all torsional vibration testing, analysis and reporting steps in a seamless workflow, optimizing ease-of-use and productivity. Engineers benefit from a vast range of processing capabilities, such as order analysis, angle domain analysis, transmission error rectification and butt-joint correction.

The new solution also answers the call for early-on design optimization. Using LMS' unique methodology to correlate LMS Imagine.Lab torsional vibration simulation models with test-based data, engineers can assess concept trade-offs and make the right design choices early in the process.

"LMS Test.Lab uniquely combines a dedicated torsional vibration testing solution with a complete suite of data acquisition and analysis tools for noise and vibration engineering. Engineers can explore the complex relation between torsional vibrations and other noise and vibration phenomena. The resulting insight lets them efficiently evaluate design alternatives to solve torsional vibration problems," concluded Bruno Massa, Vice-President, Test Division, LMS International.

For more information about our torsional vibration solutions:

www.lmsintl.com/testing/rotating-machinery/torsional-vibration-testing

About LMS

LMS, the leading partner in Test and Mechatronic Simulation in the automotive, aerospace and other advanced manufacturing industries, helps customers get better products to market faster. With a unique combination of mechatronic simulation software, testing systems and engineering services, LMS tunes into mission critical engineering attributes, ranging from system dynamics, structural integrity and sound quality to durability, safety and power consumption. With multi-domain and mechatronic simulation solutions, LMS addresses complex engineering challenges associated with intelligent system design and model-based systems engineering. More than 1150 LMS professionals serve over 5000 manufacturing companies worldwide.