

Mechanical and Materials Engineering Services and Software

机械与材料工程服务及软件

SwRI[®] Mechanical and Materials Engineering Division applies a broad range of capabilities in materials, structural and fluid mechanics to solve problems for all major industries worldwide.

美国西南研究院机械与材料工程分院应用其在材料、结构和流体力学等方面广泛的技术能力,为全世界所有工业企业解决技术难题。

The mission of the Mechanical and Materials Engineering Division is to improve the safety, reliability, efficiency, and life of new or existing mechanical components, structures, and systems for the economic benefit of our clients. Dr. Robert L. Bass

机械与材料工程分院的使命在于改进现有及新型机械零部件、机械结构、机械系统的安全性、可靠性、高效性及其寿命,为用户提供经济利益。

—Danny M. Deffenbaugh, Vice President

SwRI staff members accomplish this mission by performing applied research and development and providing engineering problem-solving services and software products. These services and products are described in this document along with appropriate staff contact information. More information on the broader programs and capabilities of SwRI (www.swri.org) and the Mechanical and Materials Engineering Division (www.mechmat.swri.org) is available on the referenced websites. We welcome your inquiries and the opportunity to be of service to your company.

美国西南研究院工程技术人员通过执行应用研究及开发,提供解决工程技术问题的服务和软件产品,完成我们的使命。在这份文件中,列举了这些技术服务和软件产品的相关联系人及其联系方式。美国西南研究院更为广泛的课题及能力见网站www.swri.org, 机械与材料工程分院见网站www.mechmat.swri.org。在有机会为贵公司提供服务之前,我们欢迎您对我们的咨询。



Oil and Gas/Energy Industries

石油天然气及能源工业



Compressor/Piping Design: API or Client Specifications, New and Retrofit Designs

压缩机/管道设计: 按照 API 或用户规范, 新建和改造设计

Website: www.pulsations.swri.org

Contact: Ed Bowles

Phone: 210-522-2086

E-mail: ebowles@swri.org



Plant Engineering Services: Rapid Response, Troubleshooting, Operational Improvements

站场工程服务: 快速响应、故障分析及解决、运行改进

Website: www.machineryvibration.swri.org

Contact: Robert Mckee

Phone: 210-522-3000

E-mail: rmckee@swri.org



Gas Flow Measurement: Meter Calibration, Station Design

天然气流量测量: 流量计校核、站场设计

Website: www.mrf.swri.org

Contact: Ed Bowles

Phone: 210-522-2086

E-mail: ebowles@swri.org



Oil and Gas Exploration and Production: Drilling Hydraulics, Downhole Equipment, Flow Assurance

石油天然气勘探和开发: 钻井水力学、井下设备、流量保证

Website: www.fluids.swri.org

Contact: Chris Buckingham

Phone: 210-522-3307

E-mail: cbuckingham@swri.org



Safety Valve Testing (production, pipeline, and refinery): To API/ISO and Client Specifications

安全阀测试（开发、管道及炼油行业）：API/ISO标准或用户规范

Website: www.fluids.swri.org

Contact: David Walter

Phone: 210-522-6046

E-mail: dwalter@swri.org



Subsea Wellhead System Testing: Ocean Pressures & Temperatures, API and Client Specifications

海底井口系统测试：海底压力和温度条件下，API或用户规范

Website: www.pressuresimulation.swri.org

Contact: Jesse Ramon

Phone: 210-522-2441

E-mail: jramon@swri.org

Materials Testing: Tubulars, Risers, Materials Property, Fatigue and Corrosion Testing

材料测试：管柱、提升器、材料特性、疲劳及腐蚀测试

Website: www.mechanicaltesting.swri.org

Contact: Pete McKeighan

Phone: 210-522-3617

E-mail: pmckeighan@swri.org



Website: www.corrosiontechnology.swri.org

Contact: Darrell S. Dunn

Phone: 210-522-6090

E-mail: ddunn@swri.org



Turbomachinery Design & Testing: Rotordynamics, Performance, Blade Life

透平机器设计和测试：旋转动力学、性能、叶片寿命

Website: www.gasturbines.swri.org

Contact: Klaus Brun

Phone: 210-522-5449

E-mail: kbrun@swri.org

All Industries

工业界



Product Development/Testing: Structural/Fluid Flow Analysis, Mechanical Design, Environmental Testing

Contact: Dan Pomerening

产品开发/测试: 结构/流体分析、机械设计、环境测试

Phone: 210-522-2318

E-mail: dpomerening@swri.org

Website: www.nebs.swri.org

Contact: Jenny Blankinship

Phone: 210-522-2329

E-mail: jblankinship@swri.org



Failure Analysis: Root Cause Determination, Rapid Response

失效分析: 基本原因确定、快速响应

Website: www.failureprevention.swri.org

Contact: Paul Redmond

Phone: 210-522-3163

E-mail: predmond@swri.org



Ballistic Design and Testing: Blast-Resistant Structures, Vehicle Protective Armorment, Aircraft Bird Strike Testing

Website: www.engineeringdynamics.swri.org

Contact: Scott Mullin

Phone: 210-522-2340

E-mail: smullin@swri.org



Aircraft Structural Testing: FAA Certification, Life Extension, Fuel Sloshing

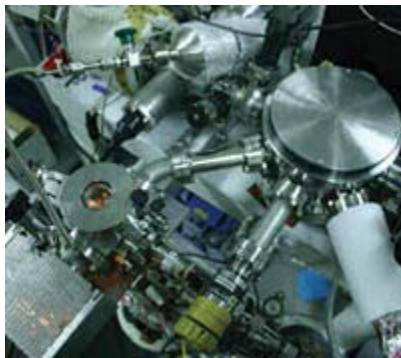
航空器结构测试: FAA认证（美国联邦航空局）、寿命延长、燃料晃动

Website: www.aerospacestructures.swri.org

Contact: Hal Burnside

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材料性能分析服务: 红外光谱技术（TFIR）、热力分析、热量测定、拉曼光谱分析

Website: www.materialscharacterization.swri.org

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Vacuum Coating Services: Surface Hardness, Friction, Wear, Corrosion and Oxidation Resistance

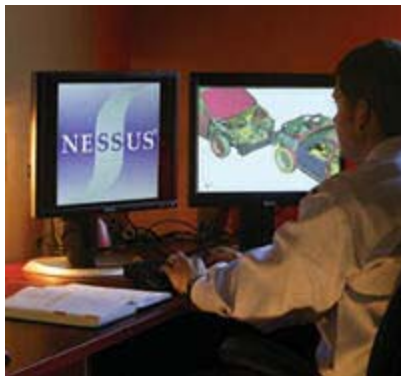
真空涂层服务: 表面硬度、摩擦、磨损、腐蚀和抗氧化

Website: www.surfaceengineering.swri.org

Contact: Kent Coulter

Phone: 210-522-3196

E-mail: kcoulter@swri.org



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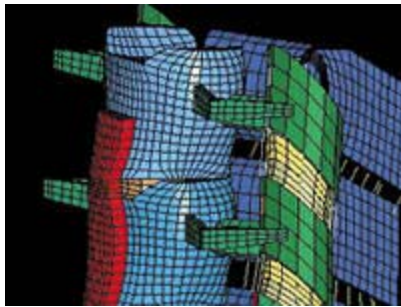
模型和仿真服务: 计算流体动力学、爆炸流体力学计算机仿真、危害及因果关系评价

Website: www.engineeringdynamics.swri.org

Contact: Christopher Freitas

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Software Products for Structural Integrity/Life

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Quantifications, Reliability

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Contact: Ben Thacker

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For additional information about Mechanical and Materials Engineering Services and Software, please visit www.mechmatserv.swri.org

更多的信息，请登录机械与材料工程分院网站：www.mechmatserv.swri.org

This brochure was published in April 2007. For more information about Mechanical and Materials Engineering Services and Software, contact [Danny Deffenbaugh](#), Vice President, [Mechanical and Materials Engineering Division](#), Phone (210) 522-2384, Fax (210) 681-9661, Southwest Research Institute, P.O. Drawer 28510, San Antonio, Texas 78228-0510.

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