



FOSTA[®]

Fibre Optic Sensing
Technology and Applications

新加坡富士达(结构健康监测)科技有限公司



新加坡富士达结构健康监测科技有限公司(简称新加坡富士达)是新加坡政府投资的专业从事利用光纤传感技术的土木与结构健康监测的高科技公司。新加坡富士达的优势是拥有自己的光纤传感技术专利和监测高楼与桥梁的施工经验。新加坡富士达提供三方面的产品和施工监测服务:

1. 利用光纤传感技术的结构健康监测服务

- 设计, 制造, 供应, 安装, 操作和报告一体化的结构健康监测服务
 - 光纤光栅系统

2. 分布式温度和应力传感系统

- 适用于长距离全线式温度和应力测试, 是隧道, 输电网火警探测的最新最佳手段

3. 土木工程的仪器应用和监测

- 实时和全球网络监测
- 大型数据管理, 预警和自动报告系统
- 18年在28个国家提供监测服务的经验
- 服务工业包括: 城市建设, 高楼, 交通, 能源和环境工业等

4. 碳纤维结构补强

- 供应和施工碳纤维, 补强混凝土, 钢结构和木结构等
- 具有配套产品系列: 玻璃纤维, 碳纤维, 布, 板, 陆地和海洋结构等
- 10年行销美国和亚洲

FOSTA® stands for Fibre Optic Sensing Technology and Applications. FOSTA Pte Ltd is a Singapore government (www.edb.gov.sg) invested hi-tech fibre optic sensing instrumentation company for building and construction industries. FOSTA's strength is her patented sensor technology and project implementation experience for buildings and bridges. FOSTA has four synergised activities:

1. Structural Health Monitoring (SHM) Using Fibre Optic Sensors (FOS)

- Design, fabricate, supply, install, operate and report SHM systems using:-
 - Fibre Bragg Grating (FBG) technology

Her earliest FOS SHM project was conducted in a concrete bridge in 1998. After 8 years, the sensors are now still in working conditions, in which none of other companies has such longest track record.

2. Distributed Temperature System (DTS) and Distributed Temperature & Strain Systems (DTSS)

- Raman and Brillouin linear fibre optic sensing technology for fire detection of tunnels, powerlines and dams, etc.

3. Civil and Geotechnical Instrumentation and Monitoring

- Real-time and global internet access
- Sophisticated data management, warning and automated reporting systems
- 15 years project experience in 28 countries
- Broad range of industrial experience: urban work, building, transport, energy, risk and environment

4. Structural Strengthening Using FRP Wrap

- Design, supply and install glass and carbon fibre reinforced polymer (FRP) wrap for structural repair, strengthening, and explosion/seismic protection
- 10 years experience in US and worldwide
- Comprehensive product range: carbon and glass fibres, laminate and plate, land and marine applications, and vertical and overhead surface applications, etc.

(FOSTA® is a registered trademark.)