

## Road Bridge Structural Health Monitoring

<b>Project</b>	To monitor strain and temperature at various locations in a newly built road bridge to provide a long-term structural health monitoring capability
<b>Client</b>	Mageba SA
<b>Date</b>	2005
<b>Location</b>	Near Frankfurt, Germany
<b>Sensors</b>	SmartPatch, SmartTemp
<b>Attachment</b>	Surface mount to metallic structure
<b>Interrogator</b>	W3
<b>Images</b>	<ol style="list-style-type: none"> <li>1. Bridge crossing Steinbach Valley</li> <li>2. Box section construction</li> <li>3. Portable gantry used for installation</li> <li>4. Sensor installation on cross member</li> <li>5. Installed strain sensor on expansion joint</li> <li>6. Installed temperature sensor on expansion joint</li> <li>7. Instrument rack with W3 interrogator (black)</li> <li>8. Sample of live bridge data on customer webpage</li> </ol>
<b>Results</b>	Strain and temperature sensors were attached to the bridge at selected location (main box section, McAlloy cross members and expansion joints). Data from the sensors is being acquired from a permanently installed W3 interrogator located within an instrument room. Data from electrical strain and temperature sensors are also being recorded for reference information. The data is being sent real-time to a URL via an on-site modem where the customer is able to display and download. At the time of writing, the data is customer confidential.
<b>Further information</b>	This document will be updated with results when available for public dissemination. For more information please contact Smart Fibres