



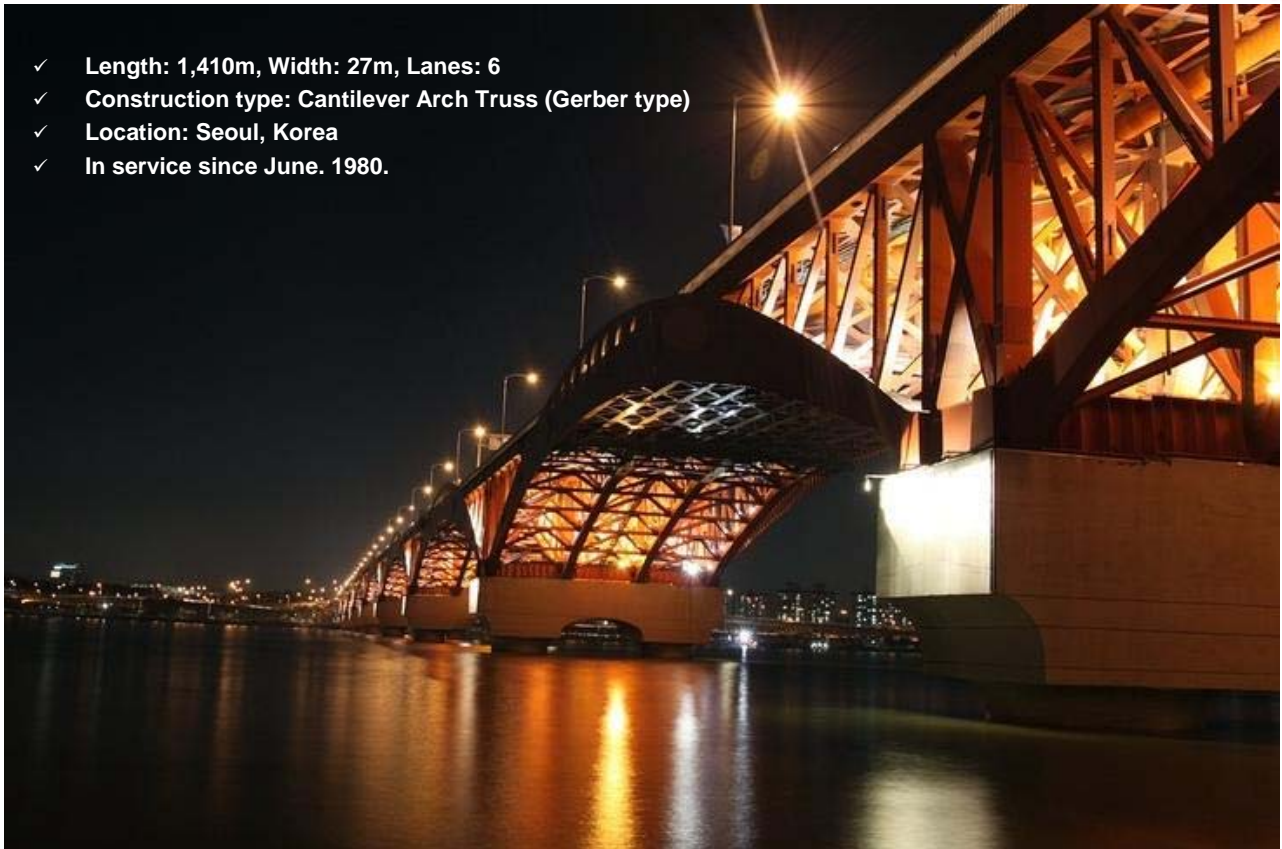
SungSan Bridge

Seoul, Korea, 2009



SungSan Bridge- General Characteristics

- ✓ Length: 1,410m, Width: 27m, Lanes: 6
- ✓ Construction type: Cantilever Arch Truss (Gerber type)
- ✓ Location: Seoul, Korea
- ✓ In service since June. 1980.

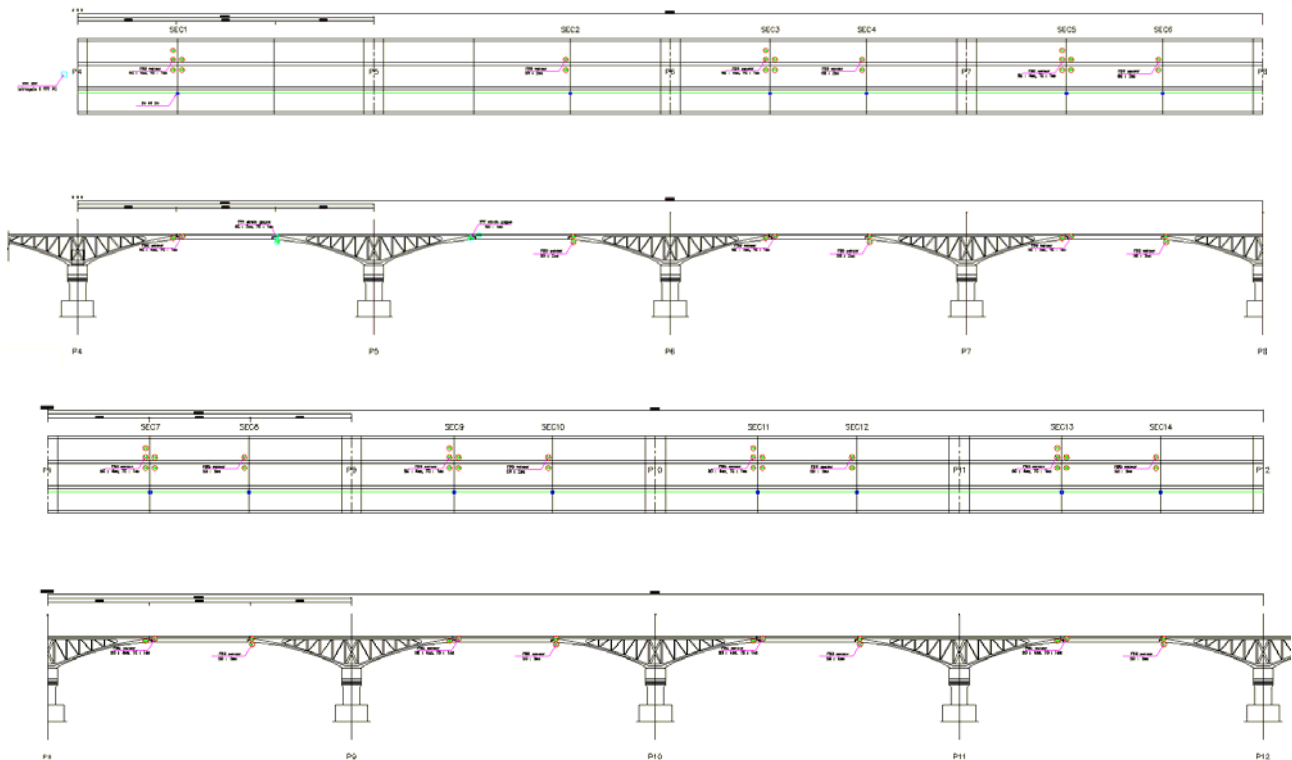




Aim	To monitor the damage & fatigue stress at the gerber sections
Location	Seoul, Korea
System integrator	GMG (Geotechnical Monitoring Group) http://www.gmgnow.com
System supply & technical support	KAISEN (Korea Advanced & Innovative Sensing Technology), Inc. http://www.kaisen.co.kr
Customer	Seoul City
Date	2009
Instrumentation	(1) Micron Optics sm130
Sensors	(36) Micron Optics os3100 Spot-Weld Strain Gage (13) Micron Optics os4100 Temperature Comp. Sensors
Project Scope	<ul style="list-style-type: none"> • Long-term monitoring of strain at 14 different locations. • On-site and remote data retrieval.



SungSan Bridge: Longitudinal Section



- Sensors were installed at 13 different gerber sections.
- A total of 49 sensors (36 strain and 13 temperature comp. sensors) were installed.



SungSan Bridge: Cross-Section and Sensor Locations



Strain Sensors, os3100



Temperature Sensors, os4100



SungSan Bridge – Installation

6



Cable preparation : fiber optic cable with protective tube





Sensor installation : spot welding



Productive box installation



Splicing



- Results
 - Customer is currently monitoring the bridge. More information will become available in the future.
 - The installation process was simplified and future upgrades will be easy, due to the simple, bus-type signal cable architecture of the monitoring system and it's clear wavelength allocation.
- Acknowledgements
 - End customer : Seoul City.
 - System Integrator : GMG (Geotechnical Monitoring Group)
 - System supplier & technical support : KAISEN, Inc.
(Name : Kyuwan Lee, e-mail : ceo@kaisen.co.kr, www.kaisen.co.kr)
 - Micron Optics, Inc, USA
(Tel : 404-325-0005, www.micronoptics.com)

