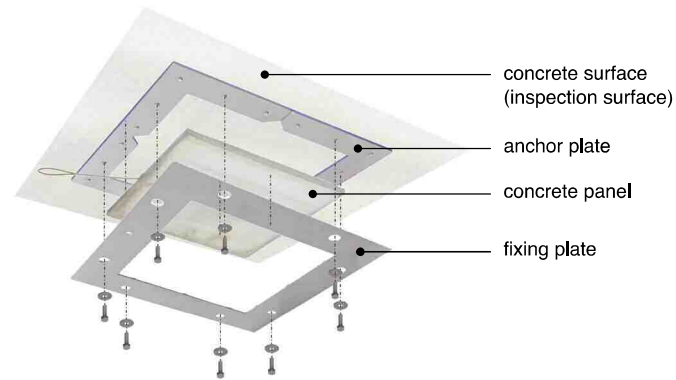
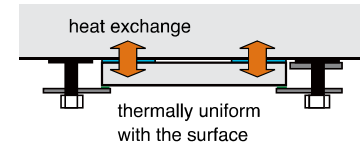


## next generation infrared imagery evaluation support system **J-SYSTEM**

### J-SYSTEM Specimen

**attachable thermal environment measuring system**

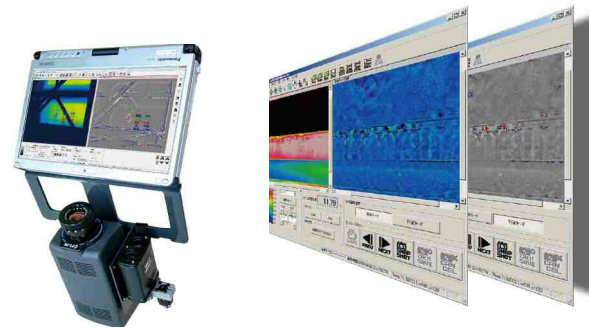


### J-SYSTEM Monitor

**inspection assistance monitor**

operating environment

- OS: Windows XP
- hardware: Intel Core2 Duo CPU U9300@1.20GHz
- memory: 2GB

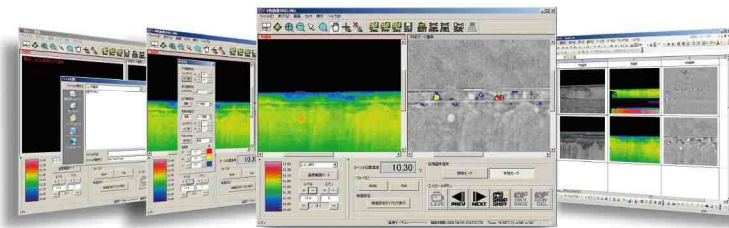


### J-SYSTEM Software

**damage evaluation assistance software**

operating environment

- OS: Windows XP
- hardware: Intel Core2 Duo CPU U9300@1.20GHz
- memory: 2GB



#### ● Orders Received

Order from	Quantity (m <sup>2</sup> )	Order from	Quantity (m <sup>2</sup> )
NEXCO-West (Shikoku)	1,228,000m <sup>2</sup>	NEXCO-Central (Hokuriku Expressway)	1,000m <sup>2</sup>
NEXCO-West (Chugoku Expressway)	5,000m <sup>2</sup>	NEXCO-East (Daisan Keihin Expressway)	2,000m <sup>2</sup>
NEXCO-West (Sanyo Expressway)	3,000m <sup>2</sup>	NEXCO-East (Tohoku Expressway)	1,000m <sup>2</sup>
NEXCO-West (Hiroshima Expressway)	1,000m <sup>2</sup>	Honshu-Shikoku Bridge Expressway Co.,Ltd. (Seto-Chuo Expressway)	19,000m <sup>2</sup>
NEXCO-West (Nishimeihan Expressway)	2,000m <sup>2</sup>	Honshu-Shikoku Bridge Expressway Co.,Ltd. (Nishi-Seto Expressway)	3,000m <sup>2</sup>
NEXCO-West (Hanwa Expressway)	6,000m <sup>2</sup>	Kumamoto Prefecture / Nagasaki Prefecture (National highway)	4,000m <sup>2</sup>
NEXCO-Central (Chuo Expressway)	25,000m <sup>2</sup>	Kochi Prefecture (Prefectural road)	1,000m <sup>2</sup>
NEXCO-Central (Tomei Expressway)	12,000m <sup>2</sup>	State of Florida, USA	2,000m <sup>2</sup>
NEXCO-Central (Seisho Bypass)	5,000m <sup>2</sup>		

Distribution, Contact

**West Nippon Expressway Engineering Shikoku Company Limited**

〒760-0072 3-1-1 Hanazono-cho, Takamatsu-city  
tel.087-834-2386 fax.087-834-0150

For more information, [NEXCO Shikoku](#) [click!](#)

Sales agency

2015.10

for safe, accurate, and efficient bridge inspection

# J-SYSTEM

Computer Aided Judgement of Infrared Thermography

next generation infrared imagery evaluation system to ensure accuracy, reliability, and efficiency of infrared inspection

J-SYSTEM Specimen

J-SYSTEM Monitor

J-SYSTEM Software

Patent Applied For

To use as a non-destructive evaluation method

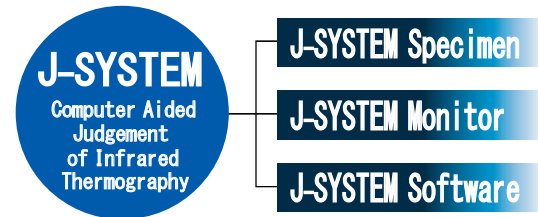
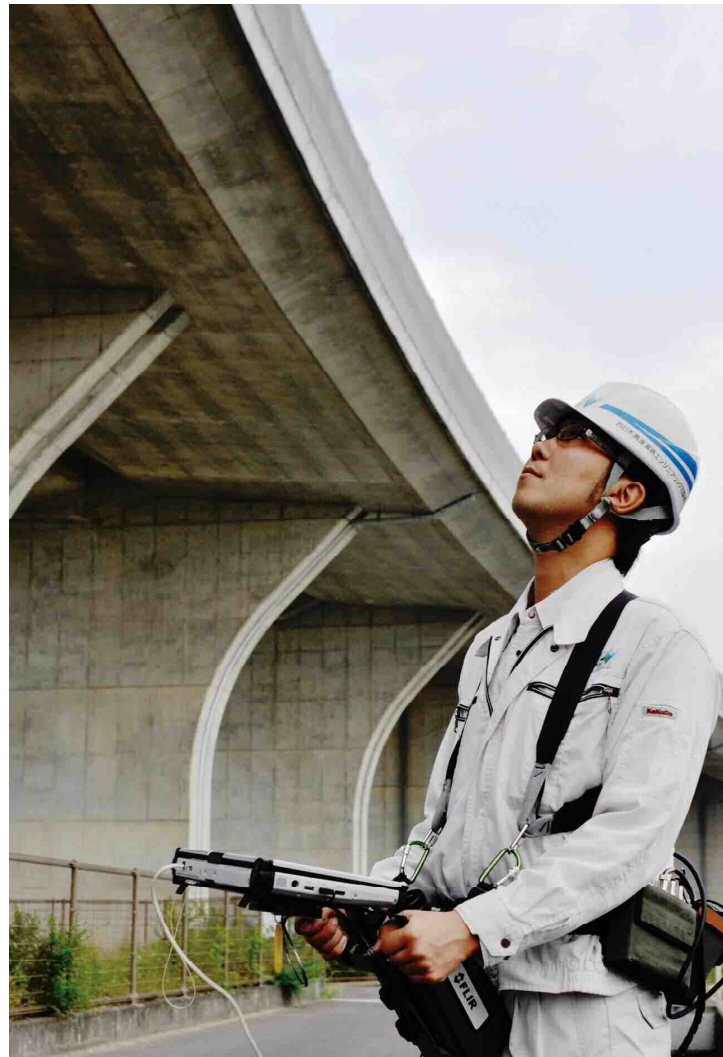
without close-up inspection

To save cost and time by replacing most of the sounding test

To reduce the risk of concrete spalling



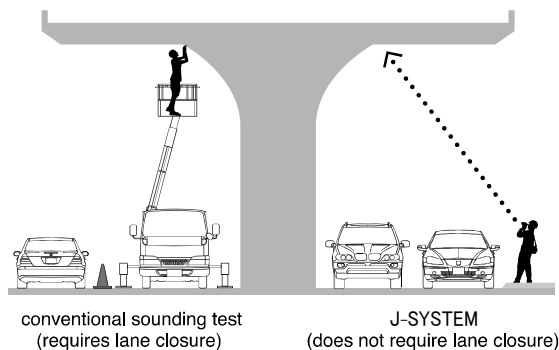
# Pinpoint potential delamination area in bridges by 3 steps (pre-inspection, inspection, post-inspection)



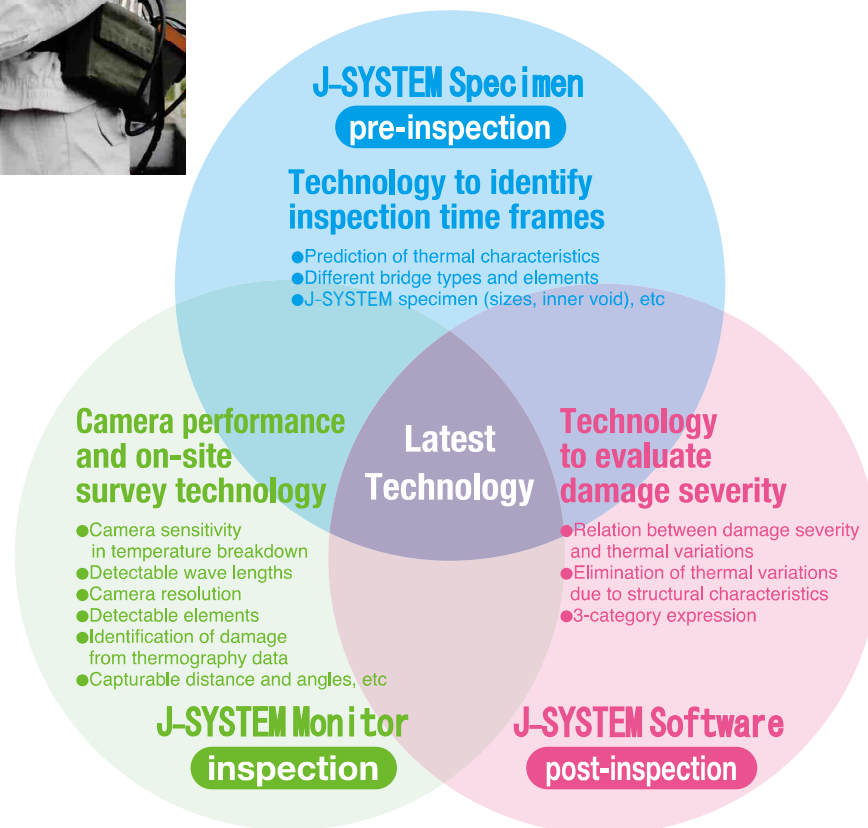
J-SYSTEM covers all phases of inspection (pre-inspection, inspection, and post-inspection) to identify potential concrete delamination efficiently and accurately.

J-SYSTEM can:

- (1) collect thermal environment information for concrete structures and identify appropriate time period to perform inspection with J-SYSTEM Specimen.
  - (2) show damage severity on the monitor (J-SYSTEM Monitor).
  - (3) evaluate and indicate damage severity in three categories based on collected thermography data (J-SYSTEM Software).
- With our J-SYSTEM, bridge inspectors can identify potential delamination accurately and implement post-inspection examination and recommend more economical and efficient repair plans



# J-SYSTEM



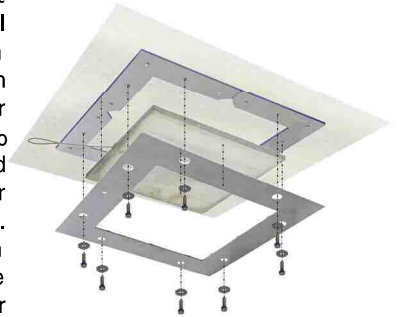
## step1 Capturing thermal variations of the structure for accurate inspection

pre-inspection

### J-SYSTEM Specimen

attachable thermal environment measuring system

Our J-SYSTEM Specimen is the most suitable equipment for infrared inspection to understand the thermal environment of structures. Attach J-SYSTEM Specimen on concrete surface and the system exchanges heat with the surface to measure temperature variation. Our J-SYSTEM Specimen enables on-site bridge inspectors to understand the optimal time period to perform infrared inspection based on thermal variations from solar radiation, even on a steel bridge with a thin floor slab. Our J-SYSTEM Specimen is designed to provide smooth attachment to a concrete surface and become thermally uniform and integral with the surface. Our J-SYSTEM Specimen does not require anchorage for installation, thus avoiding damage to the structure.



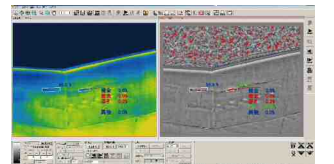
## step2 Endoscope to evaluate structure's soundness in real time

inspection

### J-SYSTEM Monitor

inspection assistance monitor

Infrared inspection dramatically changed concrete damage inspection. Our J-SYSTEM Monitor strongly supports more efficient on-site bridge inspection. J-SYSTEM Monitor can be installed on a compatible infrared camera to show real-time inspection results. Thermal imagery shows thermal variations that visually indicate damage and the search mode emphasizes thermal variations. The evaluation mode categorizes damage into three levels to locate areas with delaminated concrete.



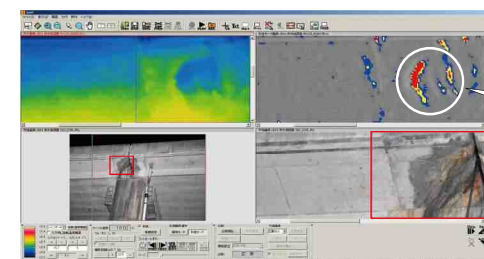
## step3 Automatic damage evaluation by analysing infrared image

post-inspection

### J-SYSTEM Software

damage evaluation assistance software

Infrared inspection is the next generation technology to inspect internal defects of concrete structures. Our J-SYSTEM Software ensures higher reliability to infrared inspection. J-SYSTEM Software automatically analyzes infrared imagery and indicates damage level in three categories. Our software offers objective analysis to prevent variations and oversights due to inspector's subjective judgment. Additionally, thermal and analysis imagery can be easily cut and pasted to common spreadsheet and word processor software to help produce reports and other documents.



3 levels indication of damage.

- Critical
- Caution
- Observation

