

## Class 2 : Structural Response of Bridge Structure

- 1. Design stress and actual stress : Stress reduction factors of 7 existing bridges
- 2. Proof loading test in Tomei
  - 1. Proof loading test on Sakabe bridge
  - 2. Comparison between Design and Actual stress
  - 3. Modeling of Bridge
  - 4. Contributions of Members on FEM Result
- 3. Proof loading test in Houkigawa bridge
- 4. Capacity evaluation : Monoi, Sakabe, Hirono br.

Milai























BRIDGE	IMPACT FRACTION	STRESS REDUCTION FACTOR	
Takamaten No 1	0.260	WITH IMPACT	WITHOUT IMPACT
katavama(steel)	0.207	0.64	• 0.81
Katayama(R.C.)	0.235	0.68	0.84
Sagamigawa(R.C.)	0.231	0.60	0.75
Uenohara(steel)	0.259	0.85	1.07
Komiya	0.200	0.75	0.90
<pre>Foyoda(steel)*</pre>	0.253	0.64	0.81
Muramatsu(steel)**	0.250	0.65	0.82
*Tomei expres 28.62 + 29.0 **Tomei expres 3 x 30m	ssway, 3 span cont 00 + 28.63m ssway 3 span cont	inuous girders inuous girders	s with three girde s with four girder
		Avera	age 0.69 w. impact
		0.85	w/o impact





































## 3. Proof Loading Test in Houkigawa Bridge

Objective

Verification of Load-Carrying Capacities of Existing Bridges, especially after the Change of Design Loads

Method

Loading Tests on Actual Bridges using Heavy Trucks with Already-Known Weights





































