ICUS

NAGAI LAB.

[Infrastructure Technology and Management]

International Center for Urban Safety Engineering

Infrastructure Management for Developed Society

Civil Engineering Department

Anchorage Performance of RC

As Japanese seismic design code is becoming more strict, lager amount of reinforcement must be placed in Reinforced Concrete (RC) structures at the joint part.

http://www.nagai.iis.u-tokyo.ac.jp/

Mechanics of Fiber Reinforced Concrete under Principal Stress Rotation



Problems Increase the fabrication time Poor concrete

compaction may occur.

Stress condition in complex reinforcement arrangement Numerical simulation can clarify We aim to propose the rational design code



Robust material against the principal stress rotation is developed by focusing the shear performance.



Infrastructure Management for Municipalities in Japan

Japan faces a problem of aging of infrastructure. Especially in municipalities, lack of human 2 10000resources, technology and budget are pointed out. Rational maintenance system is required.

Analysis of bridge inspection data Age of bridge (years) 30 40 50 60 70 80 Length: $0m \sim 5m(N=878)$ n~15m(N=1532) **C1** C2:

C3₆

Indexation analysis of

maintenance system 市域が狭く橋梁が分散していない 平野が多く迂回路のない橋少なし 200m級の橋を抱えている 登山用の山奥の橋を多数管理 橋梁維持管理は他業務と兼務 橋長の長い橋が多い 関川村

Calculation of roundabout route



International Expansion of Infrastructure Management

PLAN od for transferrin

ACTION

regional situatio

nformatior

information

Modification of the

provement of AM

vision of standard

CHECK

Verification of mismatch transfer and utilization o

Verification of mismatch i regional situations viving condition of AM

Asset management cycle

Construction

Asset Management (DO)

[PDCA for asset management]

CHECK

Reason of the mismate

[PDCA for maintenance]





Seminar and demonstration of inspection (Thailand, Vietnam, Cambodia etc.)





