

Y. NAKANO LAB.

[Safer Buildings against Earthquakes and Tsunamis]



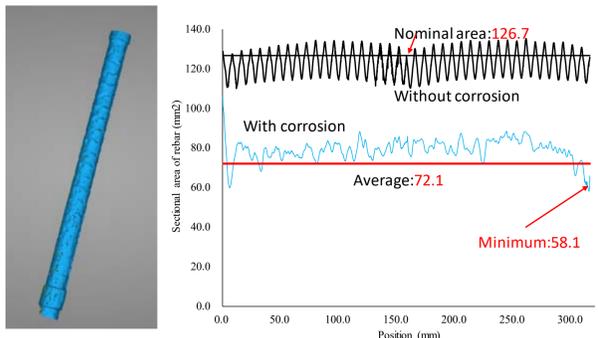
Department of Fundamental Engineering
Earthquake Engineering & Structural Dynamics

Department of Architecture

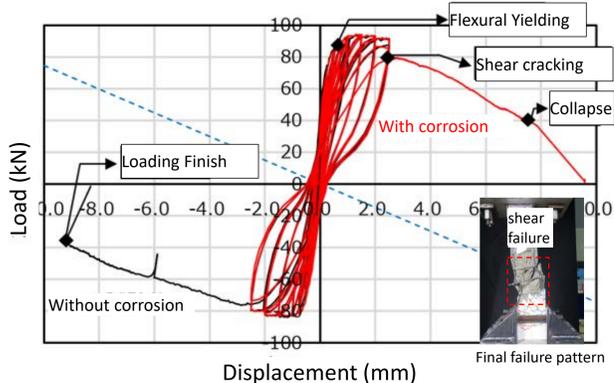
<http://sismo.iis.u-tokyo.ac.jp/>

Seismic Performance Evaluation of Reinforced Concrete Building Structures

- MEMBERS: Evaluation of Drift Capacity of RC Columns with Corrosion on Rebar
- SUB-ASSEMBLAGE: Simulation of In-plane Behavior of Masonry Wall Infilled RC Frames
- OVERALL STRUCTURE: Response Evaluation Method of Buildings due to Waterborne Debris Impact Load
- INTERNATIONAL COOPERATION: Project for Technical Development to Upgrade Structural Integrity of Buildings in Densely Populated Urban Areas and its Strategic Implementation towards Resilient Cities

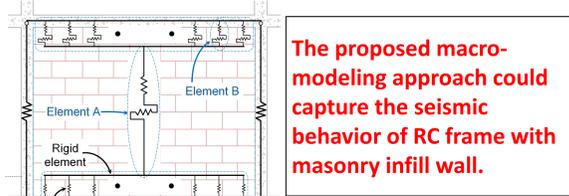
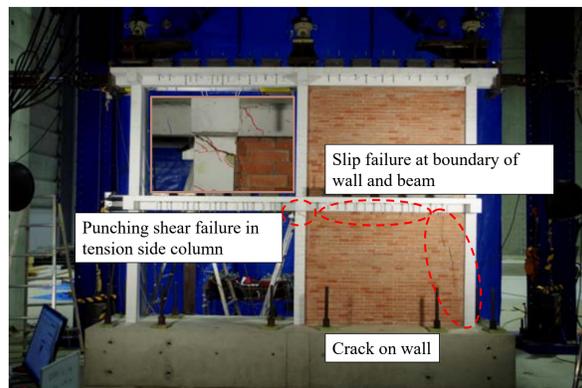


3D Data of a Corroded Rebar and Distribution of Sectional Area

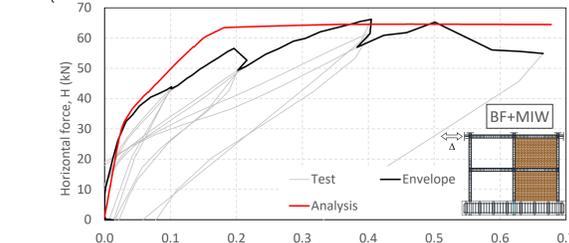


Drift capacity of column specimen was decreased by corrosion on their rebar

Drift Capacity Evaluation by Static Cyclic Test



The proposed macro-modeling approach could capture the seismic behavior of RC frame with masonry infill wall.



Concept of the Modeling and Results of Simulation



Ship's drifting behavior at Hachinohe bay in 2011

Drifting ships may cause severe damage of reinforced concrete buildings due to their collision



Collision Test and Collapse of Reinforced Concrete Frame

Science and Technology Research Partnership for Sustainable Development (SATREPS)

Project for Technical Development to Upgrade Structural Integrity of Buildings in Densely Populated Urban Areas and its Strategic Implementation towards Resilient Cities

Joint Research Group

Japan

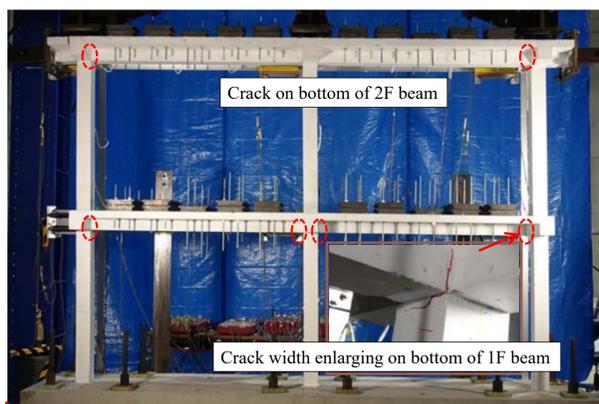
- IIS, The Univ. of Tokyo
- Tohoku Univ.
- Osaka Univ. etc.



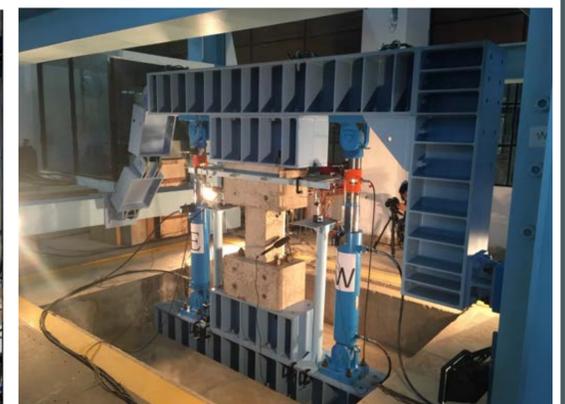
Bangladeshi Representative

- Housing and Building Research Institute
- Public Works Depart.
- Univ. of Asia Pacific etc.

Testing on vulnerable RC frame made by low strength concrete @UTokyo



Testing on RC column@BUET



Technologies for enhancing structural resilience of buildings in Dhaka and their effective implementation schemes are proposed.

