
Relationship between crack width and rebar corrosion volume in the electro galvanic corrosion experiment and in the actual structure

George Vulpe MINESAWA, Takuo MUROYAMA, Isamu SANDANBATA

Technologies for deterioration assessment of RC structures corrosion degradation are being developed, but the difficulty of sampling corrosion data and the variability associated with RC degradation had hampered the progress. In the study, results of crack and corrosion surveys of the RC slab samples extracted from the deck of a marine pier and the results of electro galvanic corrosion experiments on RC members were reported. At first the specimen surfaces cracking condition is visually evaluated and then the degree of internal corrosion of the reinforcement was quantitatively assessed. The crack width and the amount of reinforcing bar corrosion obtained by the galvanic corrosion test and from the actual structure was compared with data reported in previous studies. The actual structure upper face rebars samples were showing a similar tendency between corrosion and cracking, with slightly lower corrosion in comparison to previous studies.
