Yoshida Award (Research Accomplishment Section)

Study on evaluation and control for corrosion of reinforcing steel in concrete

Dr. Toyoaki Miyagawa
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Dr. Miyagawa has contributed greatly to Japanese civil engineering in the fields of design, construction, and maintenance for concrete structures. He has pursued research and study activities within the JSCE as a committee member, as well as played a leading role in the compilation of specifications and standards. In particular, he has focused on durability and maintenance and conducted pioneering research into chloride attacks and anti-corrosion measures for concrete structures, such as determining chloride limits in concrete to prevent corrosion, and developing a polarization resistance method for measuring the speed of corrosion of reinforcing bars in concrete.

Dr. Miyagawa also has greatly contributed to extending the service life of concrete structures. He has pursued research into repair methods, such as cross-section restoration. He has investigated desalination and electrical anti-corrosion methods for both RC and PC structures. Recently, he clarified that different environments generate different corrosion products, and he is promoting research into the influences of environmental factors on the deterioration of concrete structures.

Dr. Miyagawa's efforts and results have contributed greatly to the clarification of deterioration mechanisms and the extension of the service life of concrete structures. He has released these research results to the society while chairing the JSCE concrete committee and participating in many other JSCE's committees.

These achievements have been recognized as worthy of the Yoshida Award for Research Accomplishment.