(7) Research on renewal and new construction technology aiming at longer-life and efficiency of maintenance for public infrastructure

Research Summary

Research period: FY2016-2021 Program leader: Director of Materials and Resources Research Group



Japan's stocks of public infrastructure were intensively improved during the period of rapid economic growth and now the increasing aging infrastructures are concerned. It is important to renew or enlarge the service life for these existing infrastructures without interrupting their service. Under the severe fiscal situation, in order to ensure renewal or repair of infrastructure and, it is essential to conduct strategic maintenance work with consideration of priority and consequences of the infrastructures. For structures which have high priority, we need to achieve high durability to reduce their lifecycle costs. On the other hand, management level is not really high but for a huge number of simple structures, it will be advantageous to achieve structures that can clearly show you timing of renewal and locations needed for renewal using simple inspection methods.

In addition, decline of working-age population has affect the

construction sector. Even if workers engaged in the construction industry is declined, we need to realize an improvement of productivity in order to efficiently renew public infrastructure. For example, we will need engineering development to build high quality structures efficiently using the precast concrete products.

This research program aims to establish evaluation methods necessary for development of material and construction in order to commercialize the new technology that can adapt to society's needs. We will also propose such research results reflected in the standards of various design guidelines.