Maintenance technology for underground concrete structures

Maintenance costs are reduced by optimizing the inspection cycle

**Abstract**

Underground concrete structures, such as manholes, are subject to periodic inspections and maintenance due to the speed at which they deteriorate, depending on the installation environment and materials. The main causes of deterioration were identified, and the mechanism was clarified through investigation of existing facilities and laboratory experiments, and the inspection cycle was optimized.

**Features**

- Elucidation of degradation mechanism due to neutralization, sea sand damage and alkali-silica reaction
- Classified using the inspection information of accumulated water, construction year, and cracks

**Application Scenarios**

- The inspection cycle for NTT manholes was extended from 10 to 27, enabling a reduction in inspection costs
- Maintenance cost can be reduced by utilizing it in underground concrete structures of other companies

**Roadmaps**

- In the future, we will work to optimize overall maintenance, from inspection to repair and reinforcement, while also developing technologies for other companies’ facilities.

**Exhibitors**

NIPPON TELEGRAPH AND TELEPHONE CORPORATION

Contact: rdforum-nw-ml@hco.ntt.co.jp

NTT R&D FORUM – Road to IOWN 2021