

Executive Summary

Introduction

Nowadays, trenchless technology has been commonly adopted in the urban area for the installation of underground utilities to minimize nuisance to the community. This R&D study will review the available trenchless methods for pipe/sewer rehabilitation with consideration on the practicality for implementation in Hong Kong.

Objectives

The objectives of this study are as follows:-

- (i) to carry out literature review on the latest technologies for trenchless rehabilitation works in the industry; and
- (ii) to recommend appropriate trenchless methods for applications of Drainage Services Department (DSD).

Review of Latest Technologies

Various district divisions of DSD have provided technical information including method of construction, criteria for choosing rehabilitation method, difficulties encountered during operation and the submerged condition of works locations. Current trenchless methods adopted by DSD are mainly Cured-in-Place-Pipe (CIPP), Sewage Pipe Renewal (SPR), Rib-loc and Channeline.

Recommendations

It is considered that DSD have already adopted the advanced technologies available in the industry. Yet, it is essential to keep track of any new technology and review its suitability in the environment of Hong Kong. Recently, the consultancy CE 56/2011 (DS) titled “Enhanced Management of Underground Sewer and Drain Networks – Feasibility Study” was awarded in October 2012, in which the consultant would carry out a R&D study to explore available advanced and appropriate technologies for rehabilitation works in Hong Kong. With the resources of the consultant, more detailed research could be conducted with a view to recommending applicable methods of rehabilitation for extensive use in the community.

Furthermore, in order to promote introduction of latest technology once available, appropriate tender arrangement or contract provisions could be allowed in DSD projects such that the contractors are encouraged to come up with new practical solutions.