# Pipe Condition Survey 正確步驟你要知 管道狀況評價易



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香港管綫管理研究中心
Hong Kong Institute of Utility SpecialistsHong Kong Utility Research Centre

## Why Pipe Condition Survey is needed?

Most of the pipes buried in the older urban areas in Hong Kong were installed in early years. They have already depreciated in a certain extent and maintenance works are inevitable. However, replacement and rehabilitation of the whole area involves very high cost. In fact the need for rehabilitation or replacement varies from pipe to pipe. In order to identify which main shall receive rehabilitation and the extent of the rehabilitation work, pipe condition survey can be carried out beforehand.

### 為甚麼要進行管道狀況評價?

香港的地下管道多於早年建成,現在很多已有不同程度的損耗,無可避免要進行維修,但更 換及全面修復整個地下管道系統的成本高昂,且每條喉管對維修的急切性皆不同,進行管道 狀況評價能檢驗各喉管的損耗狀況,並制定相應的修復或更換計劃,



## **What is Pipe Condition Survey?**

Pipe condition survey is a method to assess the condition of the pipes buried underground. Different techniques are employed in the survey. The surveys and techniques used shall be determined according to the situation. Common surveys used include Visual Inspection, Wall thickness measurement, Conduit Condition Evaluation (CCTV and ME Survey), Coating Defects Survey, Water Leakage Detection, Soil Sampling and Testing, Utility Survey, Stray Current Measurement. The surveys provide information on different aspects of the pipe, and thus the extent of deterioration of the pipes and their probability of failure can then be estimated.

### 甚麼是管道狀況評價?

管道狀況評價是透過不同的檢測來評估管道的結構性狀況‧所使用的檢測及技術皆按情況而 定,常用的檢測包括目測,管壁厚度測量,管道狀況評估(排水),防護層缺陷檢測,漏水 監測,泥土抽樣檢測,管綫測量,漏失電流腐蝕測量等‧這些測試能提供關於管道不同方面 的資料,以推斷管道的損耗程度及其倒塌的可能性‧



## Steps and points to note

Before commencement of works, take all reasonable steps including:

- 1. Desktop evaluation shall be carried out before surveys.
- 2. Details of the pipes will be collected from existing information provided in the contract document and if possible, during preliminary site visits.
- 3. Investigations shall be performed by trained and competent persons.
- 4. Both employers and employees MUST ensure a safe working environment by all means.

## 步驟及注意事項

進行工程前,須採取一切合理步驟,包括:

- 1. 在施工前作實地勘查:
- 2. 在合約文件中獲取管綫的詳細資料,或在初步勘查中獲得
- 3. 調查必須由已受訓及合資格人士進行
- 4. 僱員及僱主必須用一切辦法確保工作環境和個人的安全



# When commencing the inspection, the following shall be noted:

- 1. Standards of the surveys stated in the Contract shall be followed.
- 2. To obtain an accurate measurement, all reasonable steps shall be carried out in a proper manner.
- 3. As some techniques may be sophisticated, experts' supervision and advice shall be employed.

# 施工時,應注意以下事項:

- 1. 必須跟從合約上訂明的檢測標準和規格
- 2. 為獲得更準確的結果,必須妥善執行一切合理步驟
- 3. 由於某些技術可能比較複雜,應請有關方面的專家監察工作及提供建議:

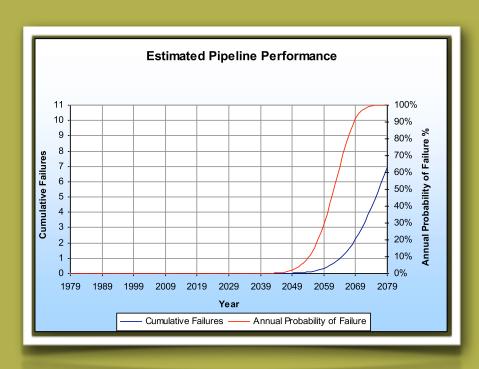


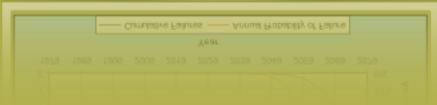
# After inspection, take the following actions:

- 1. Prepare inspection report, which shall cover the following items:
- 2. Assessment and analysis of the survey and testing results;
- 3. Assessment and analysis of pipeline condition;
- 4. Reasons of defects, bursting, leakage and any other failures;
- 5. Assessment of the probability of failure of the pipes;
- 6. Provision of analyses to facilitate development of rehabilitation and replacement plan for the pipeline.

#### 進行探測後,應採取以下行動:

- 1. 撰寫調查報告,報告應涵蓋以下項目:
- 2. 評估並分析檢測及測試的結果
- 3. 評估並分析管道的狀況
- 4. 解釋管道缺陷,爆裂或滲漏的原因
- 5. 評估管道倒塌的可能性
- 6. 為管道的修復和更換計劃提供建議





## **Further Information**

Documents are available for further details of the survey. The Hong Kong Institute of Utility Specialists(HKIUS) has prepared Guide to Pipe Condition Survey. This document provides more detailed information on the process and standards for pipe condition survey. It can be accessed via <a href="http://hkius.org.hk">http://hkius.org.hk</a>.

## 更多資訊

由香港管綫專業學院編制出版的《管道狀況評價指南》為檢測的步驟和標準提供詳盡資料。 該指南可透過香港管綫專業學會網頁http://hkius.org.hk查閱。



### Enquiry 查詢

#### Address:

Unit 209, 2/F, Favor Industrial Centre, 2-6 Kin Hong Street, Kwai Chung, N.T., H.K.

Tel: (852) 2690 3899 Fax: (852) 2618 4500

地址:

香港新界葵涌健康街2至6號飛亞工業中心二樓209室

電話: (852) 2690 3899 傳真: (852) 2618 4500



網頁 Website: <a href="http://www.uti.hk">http://www.uti.hk</a> 電郵 Email: <a href="mailto:info@hkius.org.hk">info@hkius.org.hk</a>



Hong Kong Institute of Utility Specialists

網頁 Website: <a href="http://hkius.org.hk">http://hkius.org.hk</a>
電郵 Email: <a href="mailto:info@hkius.org.hk">info@hkius.org.hk</a>



網頁 Website: <a href="http://www.cpdc.hk">http://www.cpdc.hk</a>電郵 Email: <a href="mailto:info@cpdc.hk">info@cpdc.hk</a>



香港管綫管理研究中心 Hong Kong Utility Research Centre

網頁 Website: <a href="http://www.hkurc.org.hk">http://www.hkurc.org.hk</a>/

電郵 Email: info@hkurc.org.hk

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