

# Manhole Internal Condition Survey

正確步驟你要知  
沙井狀況檢測易



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## Why manhole internal condition survey is needed?

Manholes are windows to the underground utility system. The decay of manholes may affect the flow of drain or even causes damages to the underground utilities. Manhole Internal Condition Survey provides information on the features and defects of the manholes. With such information, remedial actions can be taken in time and in turn prevent potential landslips. Besides, the survey facilitates the design and planning of drainage works by identifying the location and structure of the manholes.

### 為甚麼要評估沙井內部狀況？

沙井是地下設施的出入口，損毀的沙井可能會影響地下的水流甚至對地下設施造成破壞。沙井內部狀況評估紀錄沙井的特徵和缺陷，以便及時進行維修及補救行動，預防山泥傾瀉的潛在危險。另外，得知沙井的位置和結構有助於排水系統的設計和規劃。



## What is manhole internal condition survey?

The survey investigates the location, structure, function and condition of all types of nodes. Works include marking the exact location and measuring the dimensions of all compartment of the manhole. Evaluation of the condition (defects, high water level) mainly relies on visual observation.

### 甚麼是沙井內部狀況評估？

測量的內容包括沙井的位置、結構、功能及狀況。主要工作有標記沙井的準確位置、量度沙井各部分的尺碼，而沙井的狀況(如缺陷、水位高)則主要靠操作員的觀察。



## Steps and Points to Note

Before commencement of works, take all reasonable steps including:

1. Reconnaissance survey covering the full survey extent to see if there is any update of asset within the survey extent.
2. Get permission from the asset owner if entrance to the survey extent is forbidden.
3. Inspection shall be performed by **Competent Person**.
4. Confined space is extremely hazardous. Both employers and employees must **ensure a safe working environment** by all means and minimize disturbance to the public caused by the works.

## 步驟及注意事項

進行工程前，須採取一切合理步驟，包括：

1. 在整個檢測範圍作事前勘察，檢查圖則有否需要更新的地方。
2. 若進入檢測範圍受阻，應先取得業主的批准。
3. 評估必須由合資格人士進行。
4. 密閉空間乃極度危險的地方，僱員及僱主必須用一切辦法確保工作環境和個人的安全，並將對公眾的滋擾減至最低。



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

1. Pay attention to manual handling when opening the manhole.
2. Try NOT to go into the manhole
3. Manhole reference number shall be formed according to the referencing system.
4. All measurements shall be accurate within the tolerance listed in the following table.
5. Fill in the manhole record card on site.

**施工時，應注意以下事項：**

1. 打開井蓋時，注意體力操作。
2. 盡量避免進入沙井。
3. 沙井參考編號必須按參考系統編製。
4. 所有量度必須準確至下表所列的誤差。
5. 現場填寫沙井紀錄卡。

Grid Reference	±1m
Location Measurement	± 300mm
Levels	± 25mm
Relative levels of pipe inverts within the chamber	± 20mm
Pipe size	±20mm
Box-culverts	±20mm
All other dimensions	± 50mm



## After inspection, take the following actions:

1. Prepare inspection report with manhole record card and photographs.
2. Use computer software to check data consistency, plot graph and store the data collected.
3. Remedial actions shall be taken immediately if the manhole condition is poor. However, the follow-up actions shall be decided by the Engineer/client.

### 進行探測後，應採取以下行動：

1. 撰寫調查報告，報告中應附有沙井紀錄卡及相關相片。
2. 使用電腦程式檢查資料的協調性、繪圖及儲存資料。
3. 若沙井的狀況惡劣，應立即採取補救和修復行動。但所有跟進行動應由工程師或客戶決定。

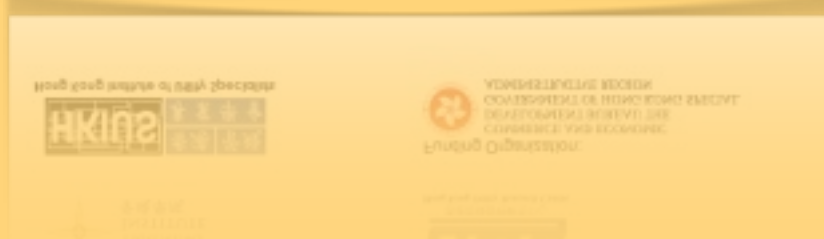
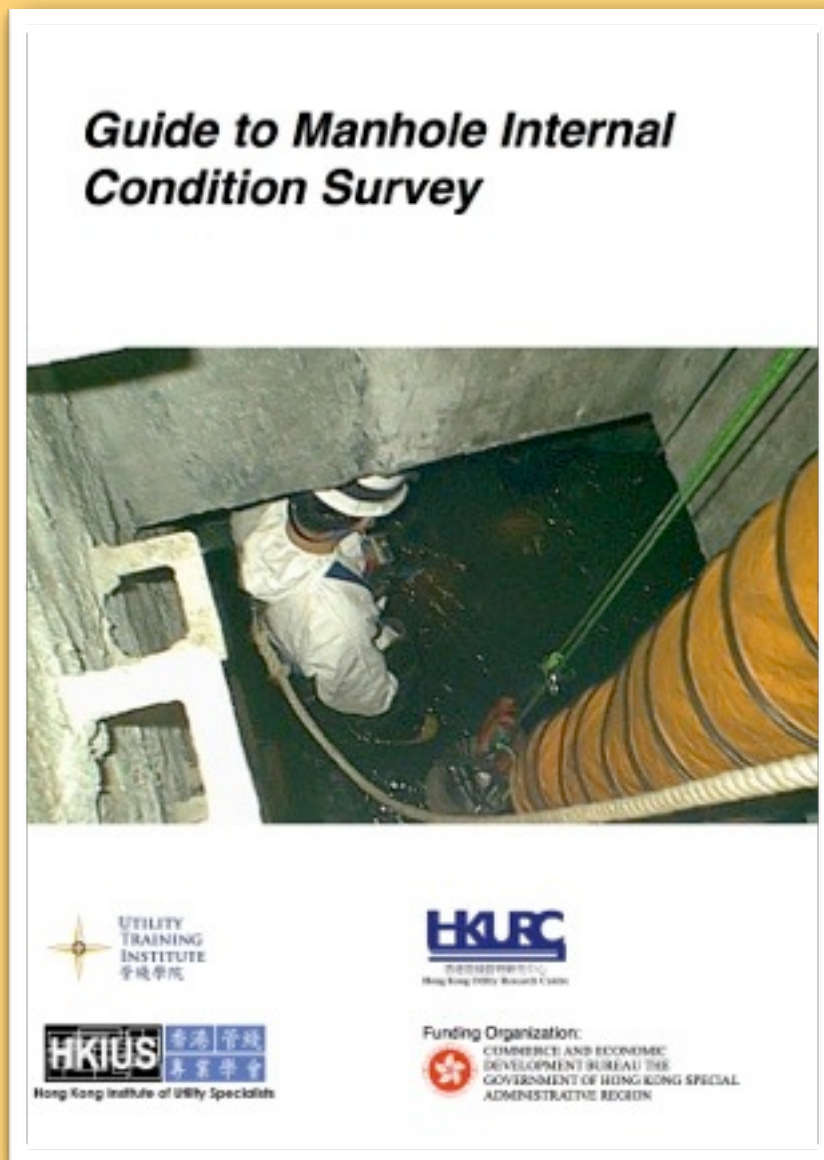


## Further Information

Documents are available for further details of the survey. The Hong Kong Institute of Utility Specialists (HKIUS) has prepared *Guide to Manhole Internal Condition Survey*. This document provides more detailed information on the process and standards for manhole internal condition surveys. Another document 'Specification for Manhole Internal Condition Survey (MHICS)' has been proposed by the Hong Kong Institute of Utility Specialists (HKIUS) and gives the requirements for survey work. Both the guide and specification can be accessed via <http://hkius.org.hk>.

## 更多資訊

由香港管綫專業學會編製出版的《沙井內部狀況評估指南》為檢測的步驟和標準提供詳盡資料。另外，同樣由香港管綫專業學會編製的〈管道狀況評估規格 (閉路電視檢測)〉，則詳述了檢測的各個部分的要求。該指南及規格均可透過香港管綫專業學會網頁<http://hkius.org.hk>查閱。



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