



SINGAPORE SOCIETY FOR TRENCHLESS TECHNOLOGY
(Affiliated to the International Society for Trenchless Technology)
80 Toh Guan Road East
Waterhub
Singapore 608575

SEWER PIPELINE ASSESSMENT CERTIFICATION PROGRAMME

Part 1 CCTV INSPECTION of SEWER

For:

- 1) Operator & crew members,
- 2) Supervisor, Engineer & Owner

Objectives:

- 1) To provide Operators & crew members of CCTV team on the proper selection and operation of a CCTV camera for inspection of the internal conditions of a pipe. This includes basic maintenance of a camera. A basic understanding on the purpose of the video recording to be used for Report on Pipeline assessment is introduced.
- 2) To provide a basic understanding on the operation of CCTV recording, to prepare Supervisor, Engineer & Owner for them to proceed to Part 2 of the Course on the Coding of Defects and Preparation of Report.

Certification

A Certificate of Competency will be given to Trainee who passes the Assessment Test at the end of the course.

Course Duration

2 Full day course

Refreshment provided:

2 tea breaks

Class Size:

30 -35

Trainer

Mr. Aloysius Ang

Er. Lau Yew Hoong

Cost

SgSTT	Part 1
Members	\$400.00
Non-members	\$600.00

The Society is currently not registered with GST

Funding

WDA funding is being applied

SEWER PIPELINE ASSESSMENT CERTIFICATION PROGRAMME

PART 1 - CCTV INSPECTION OF SEWER

For CCTV Operator, Supervisor, Engineer, & Owner

Course Work	10.0 hrs
Practical	3.5 hrs
Assessment	1.5 hr

Module		Time	Trainer
	<i>DAY 1</i>		
1	Introduction and need for Condition Categorisation <ul style="list-style-type: none"> • <i>Trainees/Lecturer Introduction</i> • <i>Course Objective & Contents</i> • <i>Introduction to common CCTV used in Singapore</i> • <i>Video presentation of Sewer inspection</i> 	08:30	<i>Aloysius</i>
2	Operation of CCTV Camera (<i>Part 1</i>) <ul style="list-style-type: none"> • <i>Introduction of IBAK camera system</i> • <i>Introduction & Demonstration of connecting IBAK system</i> • <i>System Safety features</i> 	09:00	<i>Aloysius</i>
	<i>TEA BREAK</i>	10:00	
2	Operation of CCTV Camera (<i>Part 2</i>) <ul style="list-style-type: none"> • <i>Highlight on the common / required data entry for Electronic Overlay</i> 	10:15	
2.1	Proper handling of CCTV Camera	10:40	
2.2	Safety issues concerning usage of camera in sewer pipe	10:50	
2.3	Assessment of Requirement for sewer cleaning before starting of CCTV inspection	11:00	
2.4	Selection of correct accessories to add on to camera to ensure camera is at the centre of the sewer pipe, i.e. wheels size, electric lifters, etc.	11:10	
2.5	Operational speed of camera	11:20	
2.6	Selection of LED lights for camera based on sewer diameter to ensure better video quality	11:30	
2.7	Selection of weight in sewer conditions, i.e. high surcharge will need more weight to give more traction to tractor	11:40	
2.8	Understanding the characteristics of sewer surcharge based on time of the day in order to choose the best time for CCTV inspection with the lowest surcharge and the need to do over pumping as and when necessary	11:50	
2.9	Basic maintenance of CCTV camera before and after use	12:00	
2.10	Proper recording of videos in media storage and documentations to submit to office for report by Supervisors	12:20	
	<i>LUNCH</i>	12:30	
2.11	Practical Session (Part 1) <ul style="list-style-type: none"> • <i>Set up of IBAK system</i> • <i>Change of wheels</i> 	13:30	<i>Aloysius</i>

	<i>TEA BREAK</i>	16:00	
	Practical Session (Part 2) <ul style="list-style-type: none"> • <i>Electronic Overlay (Data Entry)</i> 	16:15	
	Debrief	17:15	
	<i>END of DAY 1</i>	17:30	
	<i>DAY 2</i>		
3	Appreciation of Sewer Defects and Classification		<i>Yew Hoong</i>
3A	Understanding basic defect classification <ul style="list-style-type: none"> • <i>Highlight the 3 main groups</i> • <i>Point Defects / Continuous Defects</i> • <i>Understanding of Clock reference Point</i> 	08:30	
3A i	Structural	09:00	
	<i>TEA BREAK</i>	10:00	
3A ii	Operations and Maintenance	10:15	
3A iii	Construction	10:45	
3A iv	Others	11:15	
3B	Proper televise (pan, tilt and zoom) of abnormality	11:45	
3C	Recording of abnormality on Internal Recording Form (for submission to Supervisor) showing distance and preliminary observations	12:15	
	<i>LUNCH</i>	12:30	
	Assessments <ul style="list-style-type: none"> • <i>MCQ</i> • <i>Group Discussion</i> 	13:30	
4	Introduction to WinCan Software (Version 8) Application <ul style="list-style-type: none"> • <i>Basic Working Mechanism of WinCan (Dongle & Software)</i> • <i>Basic System Requirements / Modules</i> • <i>Demonstration of Report Generation</i> • <i>Illustrated Reporting Template from PUB</i> 	15:00	<i>Aloysius</i>
	<i>TEA BREAK</i>	16:00	
	Debrief / Q&A Session	16:15	
	Certificate presentation& Closing Speech	17:00	
	<i>END</i>	17:30	