



**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 2 INTERPRETATION OF CCTV VIDEOS and PREPARATION OF ASSESSMENT REPORTS**  
**base on WRc SEWERAGE REAHABILITATION MANUAL 4<sup>th</sup> Edition**

**For:**

Supervisor, Engineer & Owner who have attained competency in Part 1 of the Course

**Objectives:**

To provide Supervisor, Engineer & Owner in interpreting CCTV video on the pipe internal surface and Coding the Defects base on WRc SRM and the use of WinCan in preparing a Report on the pipe conditions.

**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:**

20

**Trainer**

Er. Lau Yew Hoong  
Mr. Martin Hien

**Cost**

<b>SgSTT</b>	<b>Part 2</b>
Members	\$600.00
Non-members	\$900.00

*The Society is currently not registered with GST*

**Funding**

WDA funding is being applied

**SEWER PIPELINE ASSESSMENT CERTIFICATION PROGRAMME**  
**PART 2 - INTERPRETATION of CCTV VIDEOS and PREPARATION**  
**OF ASSESSMENT REPORTS base on WRc SEWERAGE**  
**REHABILITATION MANUAL 4<sup>th</sup> Edition**

*For Supervisor/Engineer/Owner who has attained certification in “CCTV INSPECTION OF SEWER” by SgSTT*

Course Work 14 hr  
 Assessment 1 hr

Module		Time	Trainer
	<b>DAY 1</b>		
1	Refresher Course on CCTV Training – Operator Course	08:30	<i>Yew Hoong</i>
2	CCTV Inspection Form		<i>Yew Hoong</i>
2A	Header Sheet	09:00	
	<i>Tea Break</i>	10:00	
2B	Detail Sheet - Reporting Requirements Principles	10:15	
3	Observation and Defect Coding		<i>Yew Hoong</i>
3A	Structural Defects	11:15	
	<i>Lunch</i>	12:30	
3B	Operation and Maintenance Defects	13:30	
3C	Intruding Construction Features	14:45	
	<i>Tea Break</i>	16:00	
3D	Features not included in other groupings	16:15	
4	Manhole codes	16:45	<i>Yew Hoong</i>
	Debrief	17:15	
	<b>END OF DAY 1</b>	17:30	
	<i>DAY 2 Trainees to bring own Dangle and Computer</i>		
5	<b>Introduction: Concept of WinCan8</b> <ul style="list-style-type: none"> <li>• Presentation of all the WinCan modules</li> </ul> <b>License</b> <ul style="list-style-type: none"> <li>• Plugging in the hard lock (dongle)</li> <li>• Copying the VTC file to the local hard disk (e.g. D:\hardlock)</li> <li>• Reading the path of the VTC file (after the first launch or while upgrading the license)</li> </ul>	08:30	<i>Martin Hien</i>
	<b>WinCan projects</b> <ul style="list-style-type: none"> <li>• Creating a new project</li> <li>• Selecting Templates (WTP-Dateien) and catalogues (MDB-Dateien)</li> <li>• Using standard templates (pacp.wtp, wr3.wtp, wsa.wtp)</li> <li>• Opening an existing project</li> </ul> <b>Data entry (WinCan8 main window)</b> <ul style="list-style-type: none"> <li>• Entering/Deleting section and inspection data</li> <li>• Changing/Saving properties of data fields</li> <li>• Entering/Deleting observations; working with damage catalogues</li> </ul>		

	<ul style="list-style-type: none"> <li>• Entering/Deleting continuous damages</li> <li>• Entering/Changing damage grades</li> <li>• Changing colours of the damaged grades; saving the colour template</li> </ul>		
	<i>Tea Break</i>	10:00	
	<p><b>Live Video: video clip, photos</b></p> <ul style="list-style-type: none"> <li>• Video settings: encoding hardware, input channel, compressor ...</li> <li>• Video settings: reset initial configuration (XML files) for the VITEC board</li> <li>• Launching/stopping video recording; displaying recorded video clip</li> <li>• Using MPEG time code to jump from one clip position to the other</li> <li>• Photos taken directly from the live video stream or from an existing video clip</li> <li>• Putting an existing video clip in a project</li> <li>• Structure of ?WinCan8 project; important subfolders</li> </ul>	10:15	
	<p><b>Special Inspections:</b></p> <ul style="list-style-type: none"> <li>• <b>Abandoned inspections</b> <ul style="list-style-type: none"> <li>○ Section 1; Inspection with the flow to the spot where it is abandoned</li> <li>○ Copying Section 1 and doing a reversal inspection</li> <li>○ Combining 2 abandoned sections to Section 3</li> </ul> </li> <li>• <b>Multiple inspections (e.g. rehabilitation)</b> <ul style="list-style-type: none"> <li>○ Inspection of section before rehabilitation</li> <li>○ Inspection of the same section after rehabilitation</li> </ul> </li> <li>• <b>Lateral / satellite inspections</b> <ul style="list-style-type: none"> <li>○ Creating lateral sections (using the field <i>SO_SATFlag</i>)</li> <li>○ Entering observations in the lateral section</li> <li>○ Closing and opening lateral sections</li> </ul> </li> <li>• <b>Manhole inspections</b> <ul style="list-style-type: none"> <li>○ Entering manhole data: Inspections, observations, in- and outlets</li> <li>○ Defining mandatory fields: (N-DepthToInvert; NE_Pipe DiaWidth, NE_Drop; NE_Clock position) Automatic drawing of a manhole sketch using these mandatory parameters</li> </ul> </li> </ul>		
	<i>Lunch</i>	12:30	
	<p><b>Printing reports</b></p> <ul style="list-style-type: none"> <li>• Selecting and printing different report types</li> <li>• Printing all / filtered sections</li> <li>• Saving protocols as a PDF file</li> <li>• Changing the printing header layouts and saving the changes</li> </ul>	13:30	<i>Martin Hien</i>

- Assigning text to standard symbols to be printed on the inspection report
- Entering addresses (client, site manager, contractor) and get them printed correctly
- Assigning the right logo to the contractor's address
- Setting the default contractor for future projects

#### **WinCan Media Distribution**

- Launching the Media Distribution (menu command "Viewer-Export")
- Checking the parameters (gearwheel symbol) before the distribution process
- Writing data on the hard drive OR burn them directly on DVD

#### **WinCan Viewer**

- Launching the project directly from a Viewer DVD
- Difference between the *basic video player* AND the *WinCan video player*
- Getting/Activating the license for the *WinCan video player*

#### **Printing DVD box cover (after the media distribution)**

- Checking the fields needed (SI\_VCRNumber1; SI\_InspDate; S\_City)
- Entering the contractor's logo for the box cover in the page layout

#### **WinCan Draw**

- File formats supported by WinCan Draw (e.g. JPEG, GIF ...)
- Drawing a section sketch using a background file (satellite picture, plot...)
- Using a default symbol (e.g. section flow)
- Creating additional symbols/pictograms (e.g. manhole covers, arrows, etc.)
- Saving section drawing as well as symbols

#### **Filtering sections**

- Launching the panel with the extended filter functions (filter symbol)
- Entering filter criterions (AND; OR )
- Exporting filtered data into a new project
- Get filtered data directly distributed on DVD via *Viewer Export*
- Search and replace field entries using the button *mass Update*

#### **Replicator**

- Merging several projects into one new project
- Merging several projects into an existing project
- Important prerequisites for error free merging of WinCan projects :  
*the projects to merged must have been recorded with the same template as well as the same damage catalogue*

	<i>Tea Break</i>	16:00	
	<b>Practical Training with exercises and a final test</b> Creation of a real project with Video & Photos in the WRc – Singapore Format files in the current MAP project		
	<i>END</i>	17:30	