

SEWER
ROBOTICS

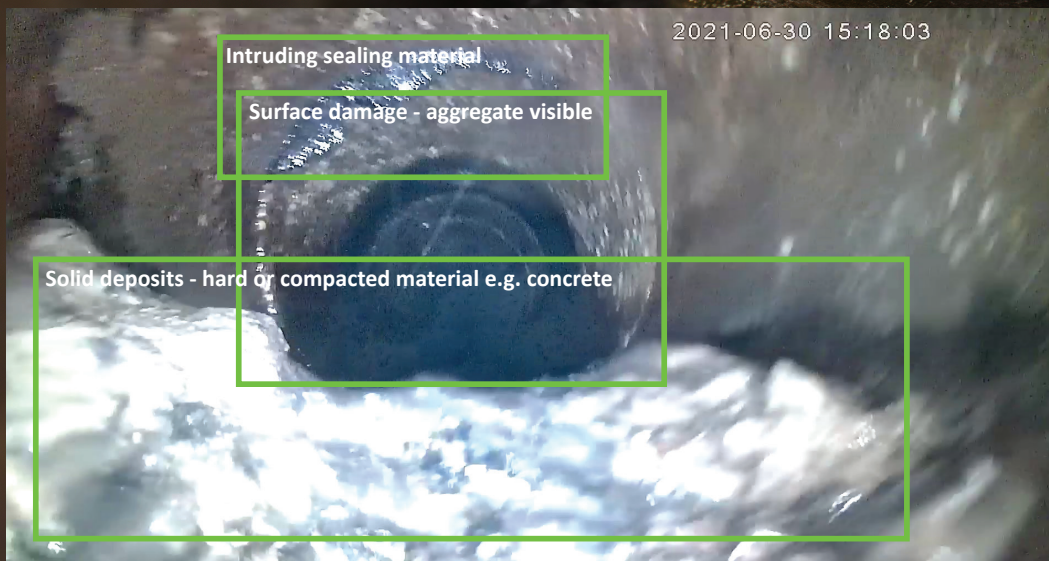
“SEEING IS BELIEVING”

C70 CAMERA NOZZLE



C70

CAMERA NOZZLE



AI AUTOMATIC DETECTED DEFECTS



***“COLLECT **VALUABLE INTELLIGENCE**
AT LOW COSTS & MINIMUM EFFORT
WHILE CLEANING”***



SUPERIOR VIDEO

The auto-upright, High-Definition camera is protected by stacked Sapphire lenses and records always from a perfect horizontal position.

PERFECTLY HORIZONTAL VIDEO

Mechanical self-leveling keeps the camera at a perfect horizontal position without eliminating pixels.



EXTREMELY DURABLE

The Stainless housing and stacked, Sapphire, lenses withstand impacts from rocks, concrete deposits and a good swing into the pipe.

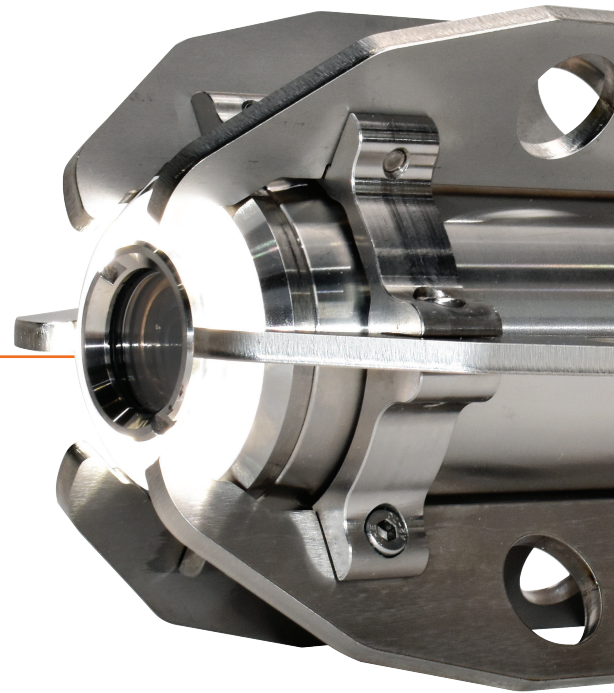
10 HOURS RUNTIME

The Lithium-Ion battery pack is rapidly charged and lasts as long as a good 10 hour working day.



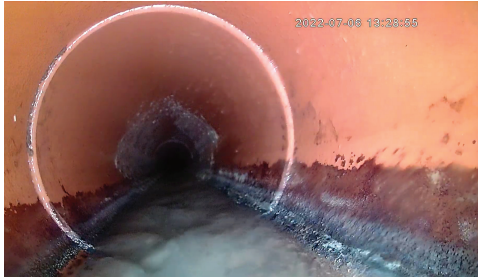
AUTOMATIC RECORDING

A built-in high pressure switch activates 8 super bright LED's and automatically starts the recording without interrupting the cleaner's workflow.



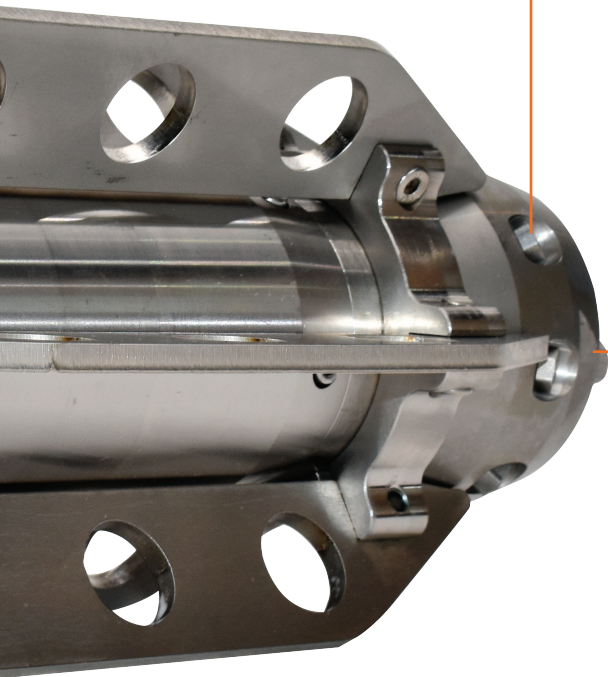
WIDE APPLICATION RANGE

Various easy exchangeable skids are available to keep the video nozzle at the right position inside 150 – 1000mm (6 – 40") pipelines.



GREAT CLEANING CAPACITY

Great cleaning and debris transportation with 8x 55° & 4x 20° exchangeable ceramic jets. (Other nozzle configurations available)

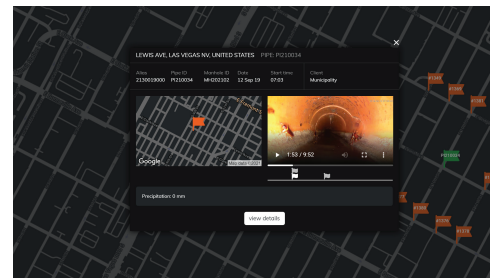


FOR ANY TRUCK

The stand-alone C70 camera nozzle threads onto any jetting hose.

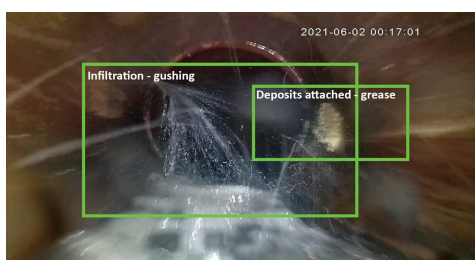
NO BUTTONS NOR FLASH DRIVES

WIFI communication between nozzle and tablet for wireless operation and video downloading from the nozzle and uploading to the cloud.



SEWER ANALYTICS WEB CLOUD

Login to SewerAnalytics.com to review videos, add header information and observations, prioritize next actions and share cleaning reports with customers.



AI AUTOMATIC DEFECT CODING

Reliable artificial intelligence software that automatically codes and classifies defects according international CCTV inspection standards.

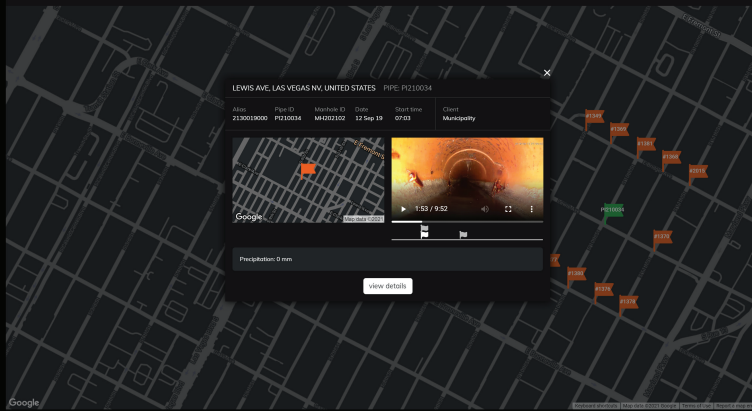
- DASHBOARD
- CLIENTS
- VIDEO NOZZLES
- CLEANINGS
- INTERACTIVE MAP
- USERS
- MY ACCOUNT

SEWER
ANALYTICS

Interactive map

Click on icons to see cleanings

Search by country, place or client



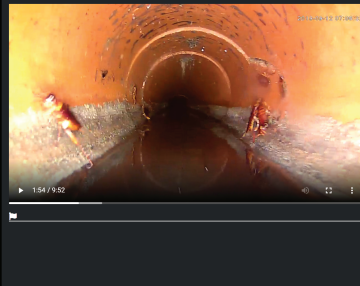
INTERACTIVE MAP

- DASHBOARD
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SEWER
ANALYTICS

Lewis Ave, Las Vegas NV, United States
#2037 Pipe reference: P210034
Date: September 12, 2019
Client organization: Municipality
Cleaning organization: Cleaning company

Video



Take snapshot

current frame



Position observation



Code: BMS - Structural - Failure
C - Fracture
Choose
Description:
Save Save & add another

ADD OBSERVATIONS

- DASHBOARD
- CLIENTS
- VIDEO NOZZLES
- CLEANINGS
- INTERACTIVE MAP
- MY ACCOUNT

SEWER
ANALYTICS

Pipe details

Pipe Height / Diameter 300	Pipe Width Not required where both dimensions are the same - e.g. Circular	Pipe Material Clay	Other material
Pipe Shape Circular	Other shapes		
Start Manhole ID M1020102	Pipe ID P210034	Pipe length (m) 50.42	End Manhole ID M1020102
Manhole start coordinates 36.1632528794711, -115.1371812360053	Location type A - In a road	Other location type	Manhole end coordinates 36.16305994732399, -115.13667295739221
Direction Upstream	Sewer usage C - Combined drain or sewer	Other usage	Address (optional) Lewis Ave, Las Vegas NV, United States
Hoster sewer system	Sensor type A - Gravity drain or sewer	Neighbourhood	City Las Vegas

Cleaning details

Type of debris A - Fat	Debris level A - 0% + vegetation <= 10%	Manhole water level A - 0-10% of pipe height
Purpose A - Routine cleaning	Other purposes	Priority No priority

ADD HEADER INFO & PRIORITIZE

#397

“LOGIN TO **SEWER ANALYTICS** TO ACCESS CLEANINGS”

- + REVIEW VIDEOS
- + ADD HEADER INFO
- + ADD MANUAL OBSERVATIONS
- + AI AUTOMATIC INSPECTION
- + PRIORITIZE CLEANINGS
- + SHARE CLEANING INFO WITH CUSTOMERS

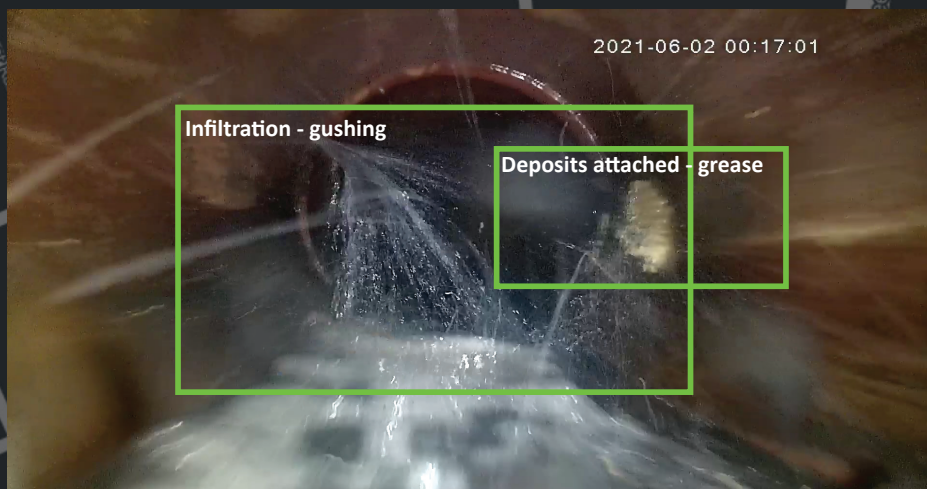
"THE FUTURE STARTS TODAY"

With reliable artificial intelligence software that automatically analyses your cleaning videos by coding and classifying defects according international CCTV inspection standards.

Your analysed cleanings are conveniently organized and prioritized in SEWER ANALYTICS. Ready for decisions making.



AI AUTOMATIC DETECTED DEFECTS



AI AUTOMATIC DETECTED DEFECTS

#397



**SCAN FOR DEMO
ACCOUNT**

DASHBOARD

CLIENTS

VIDEO NOZZLES

CLEANINGS 2779

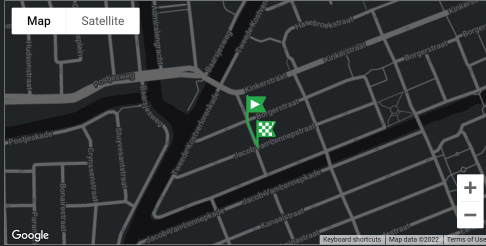
INTERACTIVE MAP

ORDERS

MY ACCOUNT

MY ORDERS

Location



Click the marker above and click the location of the end point to add it. Click again, at the location of the starting point to change it.

Reset

Video



AI Inspected

Add observation

Observations (9)

Time	Code	Classification	Description	Images
00:01:16	BBFD	5	Infiltration, gushing (D) entering under pressure.,	
00:01:16	BBBB	3	Attached deposits, grease (B),	
00:01:19	BBFD	5	Infiltration, gushing (D) entering under pressure.,	
00:01:19	BBBB	3*	Attached deposits, grease (B),	

SEWER ANALYTICS WEB CLOUD

C70 CLEANING WORKFLOW



The SEWER ROBOTICS C70 video nozzle is compatible with any jetting truck and easily threaded on the jetting hose.

The pipe segment is cleaned with the C70 camera nozzle

Based on the cleaning (what cleaning operator, sees, feels, smells and hears)

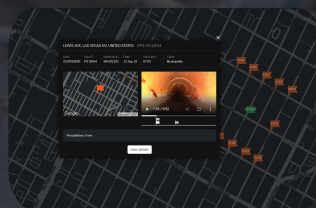
No anomaly suspected

Anomaly suspected

The video is watched to determine next actions



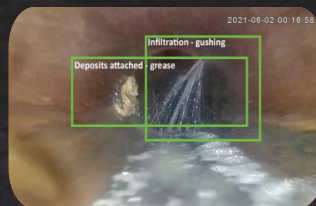
The cleaning video is downloaded and watched for an immediate pipe status report and to determine the next actions (e.g. the pipe needs more cleaning, or a different solution is required).



Back at the depot, the cleaning videos are automatically uploaded to SEWER ANALYTICS with date, time and GPS coordinates while the C70 and tablet are charging.

AT THE END OF THE DAY

All videos are synchronized and uploaded to the Sewer Analytics cloud

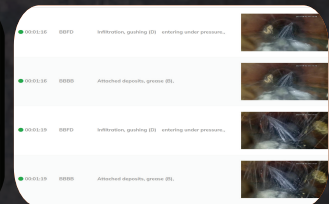
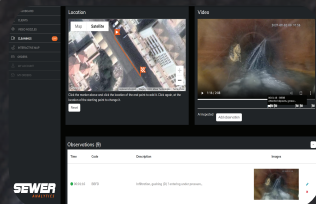


The cleaning videos are automatically inspected by AI and defects are coded and prioritized according international CCTV standards.

The videos are watched or automatically inspected by AI

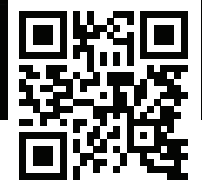
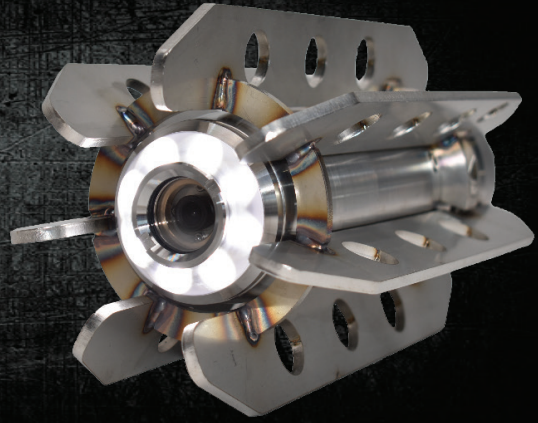
THE NEXT MORNING

Coded and prioritized cleaning data is ready for making decisions



C70

CAMERA NOZZLE



SCAN FOR VIDEO

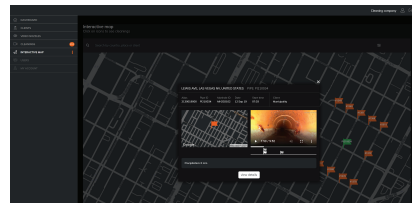
C70 150 - 1000MM (6-40")

The durable C70 camera nozzle easily threads onto any jetting hose to help cleaning crews and asset managers record High Definition, auto-upright, video at low-cost during pipe cleaning operations.

Once the pipe is cleaned, the video is downloaded with a single touch of a button and automatically uploaded to the SEWER ANALYTICS Web Cloud, together with the date, time and GPS location of the cleanings.



C70 SKIDS



SEWER ANALYTICS WEB CLOUD

SPECIFICATIONS

Scope of use	: 150 – 1000mm (6-40")
Pressure	: 125 – 275bar (1800-4000psi) : Up to 3000bar (43,500psi) ¹
Flow	: 80 – 650 LPM (21-170GPM)
Hose connection	: ¾, 1 and 1¼" BSP & NPT
Video	: Self leveling, High-Definition, MP4
Camera	: CMOS, 1980x1080 or 1280x720
Internal storage	: 32 Gb
Cleaning	: 8x 55° & 4x 20° jets with Ceramic orifices : Other nozzles (optional)
Housing	: Durable, Stainless-steel
Protection lenses	: 2 Sapphire lenses, stacked
Lighting	: 7 intensity adjustable superbright LED's
Battery	: Lithium-Ion battery pack : 10+ hours battery runtime : 3 hours charge time
Weight	: 6,2kg (13,7 Lbs) ²
Dimensions	: D90x295mm (D3.5x11.6") ²
Tablet	: 8", Rugged, IP67 : Windows® operated : GPS receiver

FEATURES

- Pressure activated lighting
- Pressure activated recording
- Wireless operation & video downloading
- Great cleaning, thrust and debris removal

SEWER ANALYTICS

- Password-protected access from any device
- Automatic cloud synchronization ³
- Automatic registration of date, time and location
- Interactive map, observation coding, prioritizing and sharing functions
- FREE 500 GB SEWER ANALYTICS Cloud Storage

ACCESSORIES

- Jet inserts
- Hose adapters and swivels
- Nozzles for different cleaning applications
- Large diameter skid with auxiliary lighting
- Charging dock for C70 and tablet
- Inclination measurement
- Customized software integrations