

# New method for fixing pipe cracks – a first for SA

Rescue Rod's client Jehovah Witness Watchtower, based in Krugersdorp, requested an on-site conditional assessment on the stormwater lines in and around its new media building.

By Cherry Ellis



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Rescue Rod

Rescue Rod cleaned the stormwater piping using a high-pressure water jet unit, removing debris collected during cleaning activities and then conducted a CCTV-inspected stormwater conveyance piping, ranging between 450mm and 600mm in diameter. The CCTV inspection was performed and defects were noted.

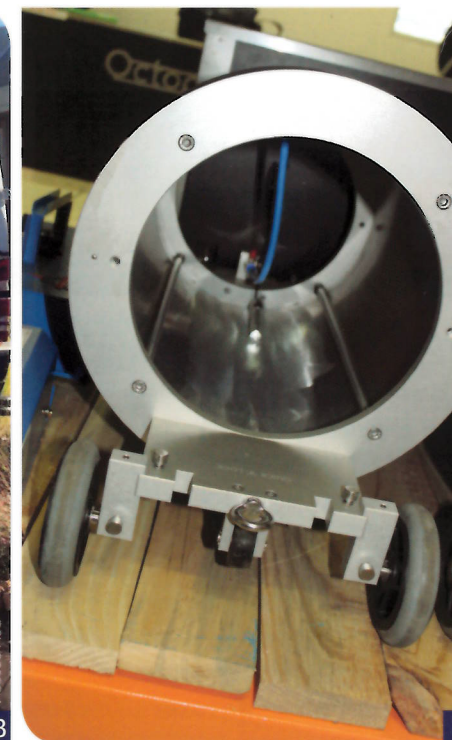
"On completion of the survey, we found that there were nine serious repairs required and these were not an option for excavation. Defects that result in scores of four or five include cracks, fractures, breaks, and holes in the piping. The majority of the piping was below a concrete floor located within and around the media facility," says Bobby Smit from Rescue Rod, who, together with colleague Stuart Hawkins, headed up the project. An engineer was on site to oversee the project as well.

"Open excavation to repair the piping would require a large effort and restoration of the subgrade and concrete floor would have been costly and would require multiple days to rehabilitate one defect. Upon reviewing and discussing the areas of a structural rating of four or five with the client, we recommended the Quicklock point repair system," says Smit.

Quicklock is a mechanical point repair system for the interior repair of pipes, and no resin is involved. This system consists of two components, a 316L stainless steel sleeve structural body, covered by a seamless EPDM compression seal. The sleeve is inserted through



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the manhole into the pipe and advanced using the CCTV crawler camera device until placed over the damaged section. Using an inflatable packer, the sleeve is then expanded and permanently locked into position.

For the first time in South Africa, Rescue Rod used the Quicklock system to solve these problems.

## METHODOLOGY

The Quicklock patch, comprising a stainless steel ring with a rubber gasket, is coiled around an inflatable packer on an installation trolley. Under CCTV monitoring for accuracy, the packer is winched to the repair location, where the packer is inflated, expanding the Quicklock patch until it is pressed tightly against the existing pipe.

The packer is then deflated and pulled back on the trolley. CCTV inspection confirms the repair is effective.

Quicklock is a German-engineered, compression-based trenchless repair system for rehabilitating existing sewer and stormwater pipelines. Suitable for circular

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non-pressure pipes suffering from deformations, cracks, water infiltration, and root intrusion, the Quicklock system restores leaking or cracked pipes to original condition using a localised mechanical pipe repair technique.

Rescue Rod carried out and successfully installed three 450mm point repair units and six 600mm point repair units within two days and at minimal disruption to the surface. **PA**

To watch a short video of the project by Rescue Rod, visit <https://www.youtube.com/watch?v=NETHum5G1Kc&feature=youtu.be>

Quicklock has been installed more than 50 000 times throughout Europe since its development in 1999. It recently entered the South African market. Rescue Rod has established AQTF training and sought industry appraisal to provide the local market with access to this premium trenchless product.

The completely mechanical Quicklock system ensures no chemicals, resins, or glues are required and is therefore suitable for use in all forms of pipes/surfaces, even drinking/potable water pipes. The Quicklock system is suitable for repairing most common forms of damage found in sewer networks.

1. A-B: On site in Krugersdorp: staff busy with the Quicklock system.
2. The Quicklock system can be used in pipes up to 600mm in diameter.
3. Bobby Smit from Rescue Rod.