



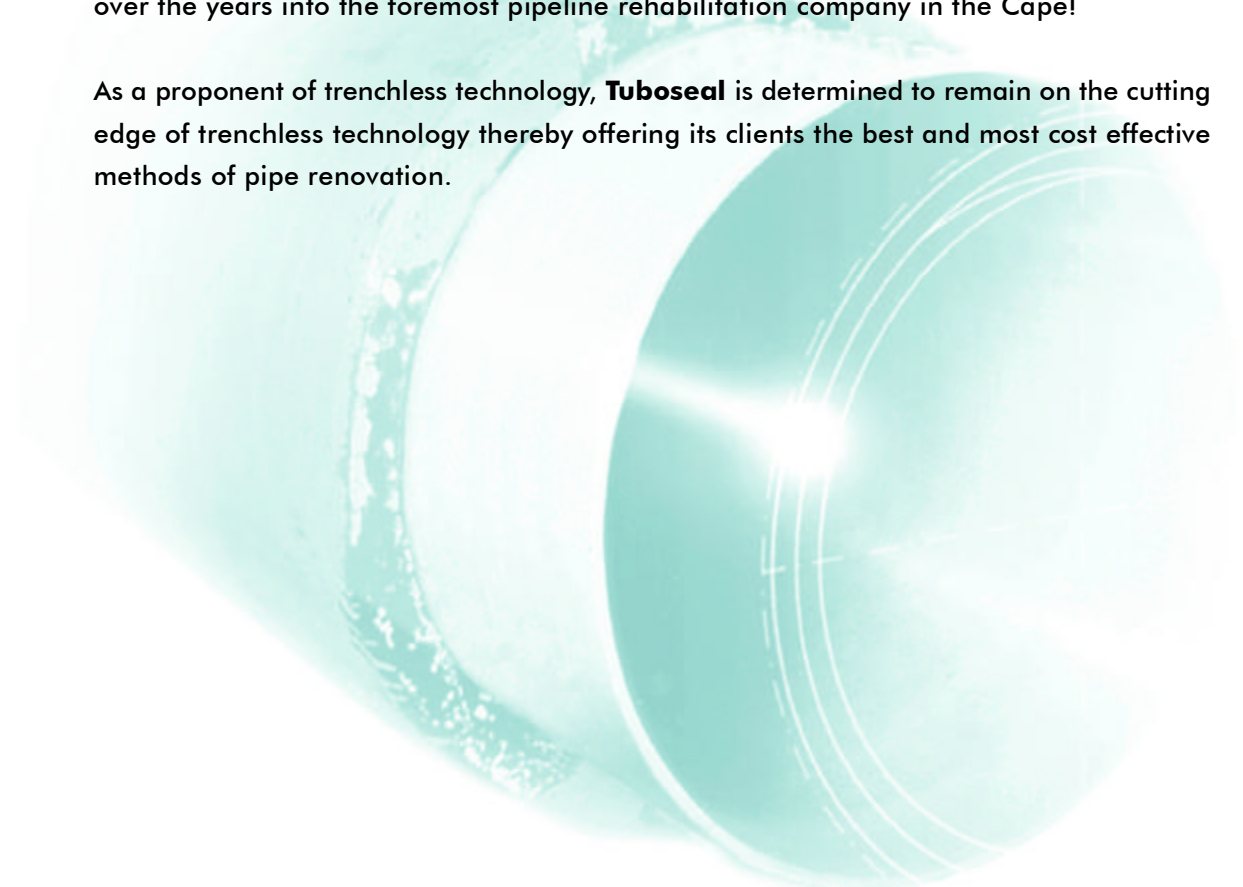
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C.C.T.V. INSPECTION, CLEANING AND REHABILITATION OF PIPELINES

Established in 1987, Tuboseal, under the leadership of Jean-Louis Frey, has developed over the years into the foremost pipeline rehabilitation company in the Cape!

As a proponent of trenchless technology, **Tuboseal** is determined to remain on the cutting edge of trenchless technology thereby offering its clients the best and most cost effective methods of pipe renovation.



INSPECTING AND REPORTING

The natural ageing process of pipeline reticulation, preventative maintenance, maintenance and specific instances, all call for investigation and resolution at one time or another.

Tuboseal has all the necessary know-how and equipment to do this.

The obvious and most effective way to inspect underground piping is by remote inspection.

Tuboseal uses specialised, imported CCTV camera inspection systems.

These effectively reveal whatever maintenance or repair may be required. The sophisticated equipment allows trouble spots to be clearly identified and located. The system is also employed for quality control in new pipelines and is becoming increasingly required of contractors.

CLEANING

Cleaning pipes usually entails mechanical cleaning or high pressure water jetting.

Root cleaning is also a specialised part of the service offered by Tuboseal because our methods ensure complete removal of the roots.

Gully cleaning is yet another of our range of services.

REHABILITATION AND REPAIR

Shoring up of access and retrieval pits is an important aspect of trenchless technology and one in which **Tuboseal** and its well-trained and experienced staff excel.

Rehabilitation and Repair falls into four main categories:

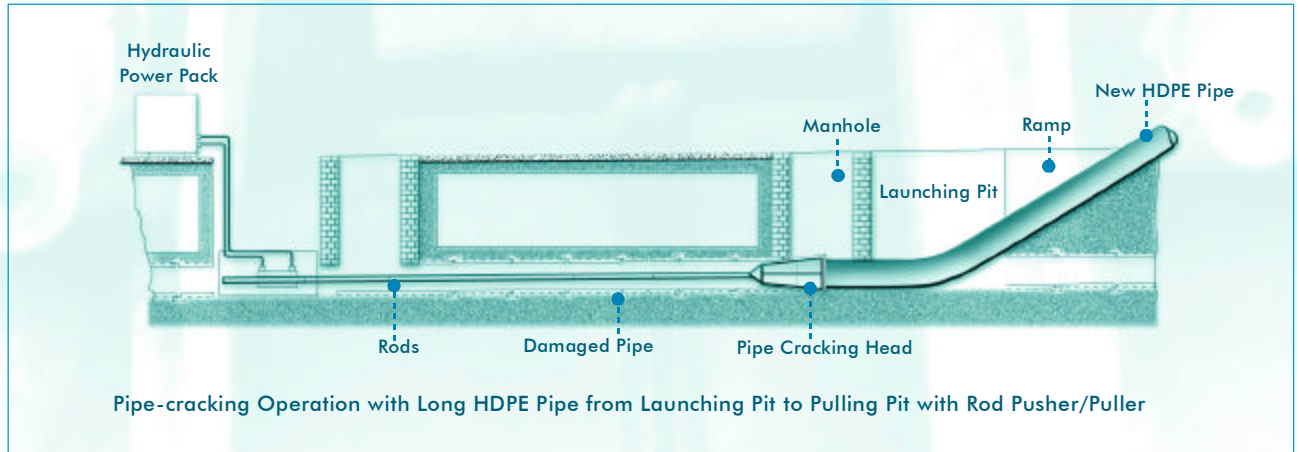
Slip-lining

Slip-lining consists of inserting a new pipe within an existing line.

While slightly reducing the inner diameter in a section, the main advantage of slip lining is the ease, speed and economy of the installation, while at the same time virtually guaranteeing the total sealing of the section.

Pipe-cracking/Upsizing

Pipe-cracking is the process by which one inserts a new pipe in an existing line. The process includes breaking up and dispersing of the existing pipe while replacing it with a new section. The pipe can be replaced with one of equal size or it can be up sized to a larger diameter. Once again a continuous line ensures total sealing of the pipe. Chemical resistant and robust HDPE pipes with a 50-year life expectancy are used.

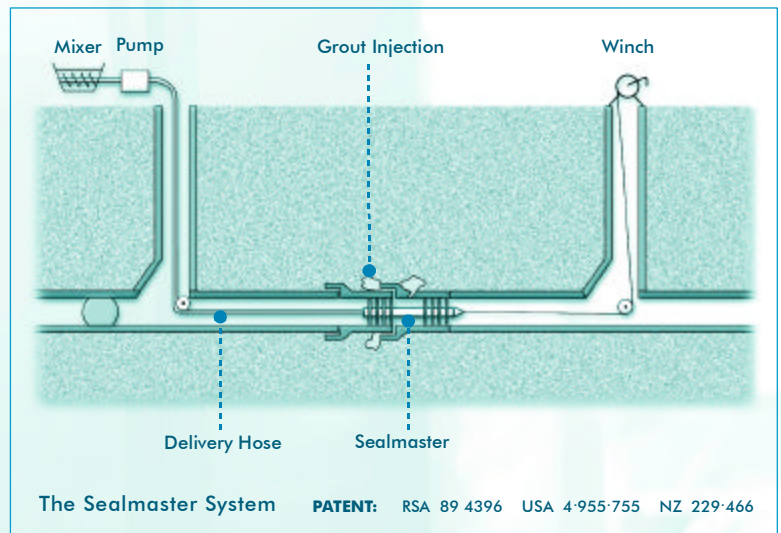


Grouting (Sealing joints)

Grouting is a process of sealing no-pressure or low-pressure pipelines against infiltration of ground water.

This operation takes place between manholes by injecting cement-based grout using patented **Tuboseal** technology.

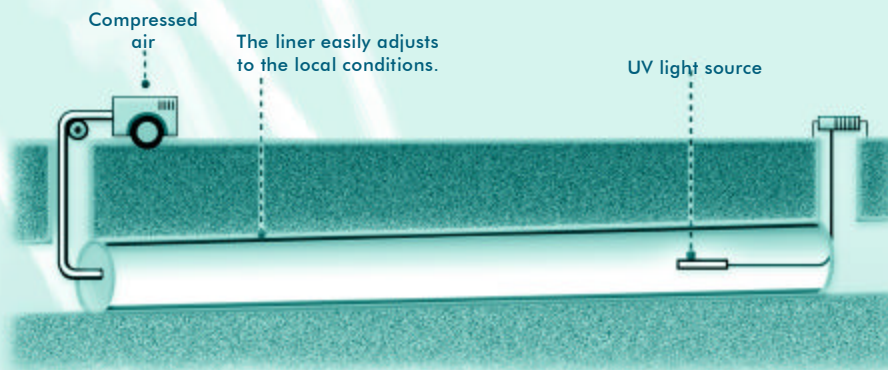
Culverts and man entry pipes are sealed using a mould to inject grout. This method is especially effective in preventing water and sand infiltration, sinkholes and settlement of the existing lines.



C.I.P.P. (Cured in Place Pipe)

CIPP Lining is the most technologically advanced lining system in use today and epitomises the use of totally trenchless technology.

After inspection and cleaning, a resin impregnated, soft-liner is inserted in the section to be rehabilitated. It's then cured by heat or ultra-violet light. This results in hardly any loss of section. The liner is highly chemical resistant and at the same time it structurally reinforces the existing pipe. Quick installation ensures a minimum of disruption. A remote-controlled robot is employed to re-open lateral connections once the lining has been installed.



In flexible tube relining, a tube is drawn into the existing manholes and fitted so that a pipe within a pipe results. The infrastructure in the area surrounding the rehabilitation site is hardly affected and only for a short time. Large installation plant is not required and earthworks are dispensed with.

TUBOSEAL REHABILITATION SPECIALISTS

For over 15 years Tuboseal has been pioneering trenchless technology as the preferred solution to pipeline renovation.

Tuboseal make it a priority to minimise disruption to traffic and householders.

Among Tuboseal's many clients you'll find the municipalities of Cape Town, Tygerberg, Oostenberg, Blouberg, South Peninsula, Helderberg, Stellenbosch and Paarl, to name but a few.

Corporate Clients include Rand Water, SANS, SFW, SAB and KWV.

Consultants using **Tuboseal's** services are VKE, Liebenberg and Stander, Ninham Shand and Dynacon.