



A LINER LIKE NO OTHER

After three years of development, Abergeldie has succeeded in introducing the Skotchkote 2400 spray lining technology into the Australian market. The technology is a breakthrough solution in extending the life of water mains.



Up until Skotchkote 2400 was introduced into Australia, there was no solution available on the Australasian market that could extend the life of a water main while keeping the existing main in service. All alternative methods resulted in either a new pipe being inserted into the old one – such as with pipe bursting – or a new main being constructed alongside the old main.

A NEW SPRAY-IN-PLACE SOLUTION

The Skotchkote Liner 2400, developed by 3M and introduced to the Australian market by Abergeldie and 3M, offers multiple benefits for utility owners and operators. The rapid-setting polyurea liner is free from bisphenol-A and VOC, making it a more environmentally friendly choice for pipe rehabilitation.

When used in the right conditions, Skotchkote 2400 creates a corrosion-resistant lining that can provide structural enhancement to the host pipe and extend the serviceable life of a main by up to 50 years.

As the liner is rapid-setting, it allows pipes to be quickly returned to service, reducing downtime and minimising disruption for utility users. This aspect of the technology is one of the key reasons the introduction of Skotchkote 2400 is so important.

Abergeldie Watertech Business Development Manager Chris Frangos said “We saw an opportunity for asset owners to use the residual life of the existing main and keep it in service for up to another 50 years. The benefits to the community, through quicker turnaround times and less disruption, are significant. In most cases the cost savings are also significant.”

The finished lining is glossy and hard, free from tack or greasiness. This smooth surface helps to maximise flow capacity, minimise tuberculation and prevent corrosion caused by deposits, resulting in an overall improvement in water quality.

Once in place, Skotchkote 2400 is able to span corrosion holes up to 6 mm and bridge gaps up to 5 mm in pipe 100-900 mm in diameter. This greatly reduces water loss caused by holes, cracks and failed joints.

A: Setting up the Skotchkote 2400 liner in Brunswick street as part of the Yarra Valley Water trial.

B: The spray lining technology is ideal for use on busy streets where cars, trams or trains prohibit the open cut method.

C: Abergeldie Watertech Project Manager Joe Sollis takes the final readings after the spray lining has completed.



“WE SAW AN OPPORTUNITY FOR ASSET OWNERS TO USE THE RESIDUAL LIFE OF THE EXISTING MAIN AND KEEP IT IN SERVICE FOR UP TO ANOTHER 50 YEARS.”

CHRIS FRANGOS

Proving its versatility, Skotchkote Liner 2400 is suitable for application on most pipe materials, including:

- Ductile iron
- Cast iron
- Cement mortar lined ductile and cast iron
- PVC
- Asbestos cement.

Skotchkote 2400 is applied using a centrifugal spin-cast application process. This process involves:

- Isolation of existing water main
- Excavation of the launch and retrieval shafts
- De-watering
- Cleaning
- Pre-CCTV
- Spray lining
- Post-CCTV
- Acceptance testing
- Reinstatement of the main
- Backfill and reinstatement of excavations.

Mr Frangos states that when compared to other techniques that already exist in the Australian market, Skotchkote 2400 offers »

ASTT’S NEW TECHNOLOGY OF 2015

Trenchless Australasia speaks with Mr Frangos on the award win.

How did you feel when you heard Abergeldie had won the 2015 ASTT Technology of the Year Award?

Excited! And happy that the hard work that went into introducing this product into Australia had been recognised. As with any award, it takes the hard work of many people to achieve. In this case the award would not have been possible without the support of Yarra Valley Water, 3M and many Abergeldie personnel at all levels.

What does this award mean for you personally?

The award is important to me personally as I have spent the last three years working towards the introduction of Skotchkote 2400 by talking to water authorities about changing the way they go about identifying and renewing water mains.



Left: The Abergeldie Watertech team receiving the ASTT New Technology of the Year Award.

greater flexibility, a quicker turnaround time, less on-site excavation, and cost savings of 20-50 per cent.

THE FUTURE OF SKOTCHKOTE 2400

Since its introduction into the market, Abergeldie has seen strong interest in Skotchkote 2400. However, due to caution from utility engineers concerning materials that will be in contact with drinking water, uptake is expected to be a lengthy process.

“The majority of the work is still ahead of us. We will continue to work closely with all water authorities across the county to implement, refine and develop this process to the point where it is accepted as a mainstream option, not just an alternative method,” said Mr Frangos. **T**

THE YARRA VALLEY WATER TRIAL

While Abergeldie Watertech officially introduced Skotchkote Liner 2400 into the Australian market in February this year, the company has been working to prove the benefits of the liner for at least three years, including liaising with a number of water utilities.

Abergeldie’s focus was to change the way utility operators identify faults and renew mains by providing a viable spray-lining alternative. The company is working on a trial with Yarra Valley Water to determine whether the product capabilities fit with their asset management and customer service approach, and to verify whether the expected costs will result in a cost benefit for the utility.

The trial with the water utility has involved testing the technology in a variety of refurbishment projects. The utility trialled a selection of asbestos cement and cast iron pipes of both 100 and 150 mm in diameter that had failed at least three times in a 12 month period. Yarra Valley Water also gave preference to pipes located under road pavement, where existing renewal techniques would be expensive.

Yarra Valley Water Project Manager James Goode said “Yarra Valley Water’s main motivation behind trialling spray lining was to find a new pipeline renewal technology that could be used cost-effectively for pipes under roads, for asbestos cement pipes and also might be able to provide emergency renewals.

“We reviewed the technology for any problems that arose in the field, water quality performance and also structural performance. This technology will hopefully provide us with a greater control over the costs of renewal and the ability to fast-track renewals and subsequently reduce customer interruptions.”



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