Case Study

TECHNOLOG
AMETEK

Advanced Pressure Management



City of Cape Town, South Africa

- ✓ Leakage and burst reduction
- ✓ Rapid return in product investment
- ✓ Improved network efficiency
- ✓ Reduction in operating costs
- ✓ Easy to implement



Project Overview

Khayelitsha is one of the largest townships in South Africa with a population of 450 000. It is located approximately 20km from Cape Town Central Business District on the Cape Flats, a large flat sandy area at or near sea level. An investigation into leakage levels established that the water lost could almost fill an Olympic sized swimming pool every hour. The main source was identified as household leakage and in particular poor quality plumbing fittings which have been badly damaged through constant exposure to high pressure. Such leakage resulted in very high water use in most properties and high levels of non-payment since the customers could not afford to pay for new taps and toilet fittings, let alone their high water bills.

The Khayelitsha Pressure Management Project was commissioned to improve the level of service to the Khayelitsha community. One of Technolog's advanced PRV controllers was installed to reduce the excessive water pressure and pressure fluctuations in the reticulation system, particularly during the off-peak periods of low demand. Resultant water savings were immediate, sustainable and exceeded the most optimistic projections, amounting to almost 40% of the original supply.



Key Elements

- Measurement of night flows to estimate leakage levels
- Extensive community consultation and participation at all stages of the project created favourable conditions for project implementation
- Labour-based construction using locally available labour was an important part of the project and a prerequisite for community support
- Advanced pressure management techniques were employed to reduce the excessive water pressure and pressure fluctuations in the reticulation system
- Financing of $700 000 was provided by the municipality



Key Outcomes

- **Major savings on water purchases from the bulk water supplier: four month payback**
- **Reduced wastage of water through leakage repairs especially on internal reticulation networks**
- **Water savings of approximately 9,000,000m3/yr achieved representing $5m per annum of bulk water purchases**
- **Awareness and education efforts have helped to create consumer support for water use efficiency in the area**

Technolog Limited,
Ravenstor Road, Wirksworth,
DE4 4FY, United Kingdom

+44(0)1629 823611
technolog@technolog.com
www.technolog.com

Copyright Technolog 2016
All rights reserved. Specifications subject to change without prior notice.
CS91003 & DMR 7001