

## C A S E S T U D Y

### Gumi City, South Korea



#### OVERVIEW

Gumi is the second largest city in Gyeongsangbuk-do, South Korea. It is located on the Nakdong River, half way between Daegu and Gimcheon, also lies on the Gyeongbu Expressway and Gyeongbu Line railway which are the principal traffic routes of South Korea.

#### WATER SYSTEM CHALLENGES

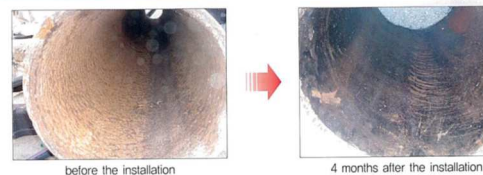
The city water maintenance department had to cope with many problems related to scale and corrosion which cause pipes to burst or leak (known as Physical Non-Revenue Water, or PNRW) lost is expressed as % of the volume per km of piping network per day.

#### SOLUTION

Reducing the PNRW is a complex process, and ScaleBuster® has been found to be one of the innovative solutions. As the **ScaleBuster®** reduces scale buildup and protects the piping system against corrosion, it contributes to longer life span of the municipal piping network. In October 2006 **ScaleBuster®** conditioners installed for testing in 2 locations to prove the effect of the technology in old (installed pre-1978) and newer (2002) pipes.



Pipe annuli-buried in 2002



Pipe annuli-buried in 1978



#### RESULTS

In February 2007, 4 months after installation of the **ScaleBuster®** water conditioners, city engineers confirmed that pre-existing scale and rust fell to a lower level observed in years, revealing the pipe floor. As a result, more **ScaleBuster®** conditioners were installed in various locations (2007-2009) to give scale and corrosion protection to the whole city water network. In the following years the water department had monitored the PNRW and found it to decrease dramatically.

#### ABOUT THE TECHNOLOGY

The patented **ScaleBuster®** technology completely replaces traditional chemical treatment; providing control of scale and corrosion in various water process systems to create an exceptionally clean system. This dramatically reduces energy and water consumption, while reducing or, in certain cases, eliminating toxic water discharge to the environment.