



Sorek Desalination Plant

15 km South of Tel Aviv, Israel



Completion Date
NOVEMBER 2012

Engineers
IDE TECHNOLOGIES / HUTCHISON WATER

Products
ADMIX C-500 NF

Project Type
WATER TREATMENT

The Sorek delamination plant in Israel was at the time the largest desalination plant in Israel.

This plant takes water from the Mediterranean Sea, removes the salt to create fresh, potable water and ejects the high salt brine back to the sea. The water feed lines (2 separate pipes) and the brine ejection line (one single pipe) combine for a total combined pipe length of approximately 9.7 km. The pipe sections are thick walled pre-cast pieces that

were “pipe-jacked” from a launch site on land through an excavated tunnel under the sea bed.

There was concern that with the stresses induced in the pipe during both transport from the precast yard to the site and then especially during the pipe-jacking cracking in the

pipe would occur. It was expected that this cracking combined with the high brine environments in the pipes would cause rapid chloride degradation of this critical piece of infrastructure.





After thorough investigation, the project design team chose to include 1.5% of Xypex C-500 NF Admixture in the concrete mix to both heal cracks as well as improve the overall chloride durability of the pipe.

As the pipe was jacked into place visible leaking was seen in the pipe sections. All visible leakage was seen to heal and the project became so impressed with Xypex's crack healing ability that the use of the Xypex Admix was extended in the project to include most of the water processing and holding structures as well as the pipe.

The project used over 300 tonnes of Xypex C-500 NF Admixture as well as Xypex Concentrate and Xypex Patch'n Plug for joints and other works. Xypex is proud to have been a part of this highly successful project.



November 2011 – Weeping Cracks



March 2012 – Cracks Healed