

FIELD REPORT

HIGH-DENSITY POLYETHYLENE: THE PIPELINE TO GREENER PASTURES



ISCO Industries brings first-of-its-kind fusion equipment to New Zealand.

Summer is Coming

Dairy, New Zealand's top export, grosses more than \$13.5 billion per year. It's their bread and (literally) butter. However, dry winds and below-average rainfall totals are threatening the industry. For years, farmers have been trying to come up with a better way to irrigate acres upon acres of parched pasture.

Building the pipeline

High-density polyethylene (HDPE) is providing a pipeline to greener pastures. In 2012, a plan was developed for the Canterbury Plains on the South Island. It involved the creation of ponds and a piping system capable of delivering water under pressure.

Traditionally, the country used pure groundwater for irrigation. The new system would switch to surface water, protecting valuable groundwater for drinking. Surface water can be collected in the mountains and gravity fed through a pipeline to farms, saving on operating costs over open trenches. The warmer water is preferable for farmland. The upgrade also included new telemetry so the delivery of water can be monitored electronically.

The system was designed to maximize the use of water, minimize water loss through seepage and inaccurate deliveries, cut transport times, and eliminate evaporation.

"The Ashburton Lyndhurst Irrigation scheme (ALIS) combines cutting edge technology and first-of-its-kind equipment to create the longest irrigation pipeline in the country,"

explained Malcom Collins, ISCO Australia's sales director. HDPE was the ideal choice of material because of its ability to withstand pressure and corrosion resistance. Perhaps most importantly for an irrigation line, HDPE creates a leak-free system. When not a drop can be spared, HDPE joined by butt fusion assures a dependable,

long-lasting solution.

The ISCO Solution

The ALIS consists of 238 kilometers (more than 147 miles) of HDPE pipe capable of pushing 2,000 gallons of water per minute. The pipeline is made up of 18 meter (59 foot) lengths of pipe ranging from 100mm to 1200mm all fusion welded together.

PROJECT

Irrigation Scheme

LOCATION

New Zealand

THE NEED

Water loss, seepage, evaporation, and inaccurate delivery of water through traditional irrigation methods.

THE SOLUTION

High-density polyethylene and McElroy fusion equipment.





"The Ashburton Lyndhurst Irrigation scheme (ALIS) combines cutting edge technology and first-of-its-kind equipment to create the longest irrigation pipeline in the country,"

ISCO Australia provided fusion equipment that had never before been used in New Zealand, McElroy fusion machines as well as a QuickCamp™ and MegaMc® PolyHorse and Rollers to allow technicians to fuse exponentially more pipe in significantly less time. The butt fusion process



All-weather Fusion

The QuickCamp™ system is an insulated and climate-controlled enclosure that allows technicians to work through any weather at any time of day. The shelter ships as a 20' ISO cargo container that expands to 24 feet by 21 feet. The shelter houses an 824 or 1236 fusion carriage inside. It was crucial for completing the 13,500 individual welds along the length of the pipeline.

Sprinkler System

Farmers who buy into the irrigation pipeline will have an access point with an isolation valve and regulation valve connected to a programmable logic controller (PLC). The pastures are irrigated via a traditional center-pivot system.



100 Witherspoon Street
2West
Louisville, KY 40202
800-345-ISCO



The Bottom Line

This pipeline has the potential to save farmers millions of dollars in the midst of a life-sucking drought. A dependable irrigation line keeps cows grazing on greener pastures and helps protect New Zealand's economy and number one export for decades to come.