



# Kuhankosken Vesivoimalaitos Hydropower Plant



ABOUT THIS PROJECT:		
<b>Market Segment:</b> Dams & Irrigation	<b>Contractor:</b> SRV	<b>Products Used:</b> Xypex Admix C-1000 NF
<b>Location:</b> Laukaa, Finland	<b>Engineer:</b> AFRY Finland	<b>Owner:</b> Koskienergia Oy

The Kuhankosken Vesivoimalaitos hydropower plant project in Laukaa, Finland, involved constructing a new plant adjacent to an existing one, including new underground tunnels. Besides the typical challenges of meeting stringent waterproofing requirements for the dam and other hydropower structures due to high hydrostatic pressures, the project team also faced the complexities of seamlessly integrating the new plant with the old one while adhering to a strict deadline.

To address all these challenges, the owner Koskienergia Oy supported by AFRY Finland Engineering and the contractor SRV, chose to use Xypex Crystalline Technology on all concrete structures in contact with water, using approximately 30,000 kg of Xypex Admix C-1000 NF. This decision was guided by the advantages of Xypex Admix C-Series, known for waterproofing efficacy and no installation time, as it is added directly to the concrete mix during batching.

This eliminates the need for applying waterproofing membranes or coatings post-concrete curing.

When exposed to moisture within the concrete, Xypex reacts to form a crystalline structure, effectively sealing capillaries and micro-cracks. This renders the concrete permanently waterproof, resistant to chemicals, and capable of self-healing cracks up to 0.5 mm.

The collaborative effort between Koskienergia Oy, SRV, and AFRY Finland led to the successful completion of the Kuhankosken Vesivoimalaitos project by the specified deadline. The comprehensive waterproofing using Xypex Admix C-1000 NF significantly contributed to speed up the construction process ensuring long-term reliability and sustainability for Laukaa and its surrounding areas in Finland.

