

Highlighted Project:

Leduc Recreation Centre



WHITEMUD^{MK} MAKING ALL CONCRETE HIGH PERFORMANCE

In 2007, the City of Leduc decided to upgrade their recreation facility and awarded PCL the contract as General Contractor for the project. The construction design required a variety of concrete for slab on grade, suspended slabs, bleachers, beams and columns. Strength specifications for the performance concretes ranged from 25 MPa to 35 MPa.

Inland Concrete approached PCL with the idea of incorporating Whitemud^{MK} (MK) in the concrete supplied to the project. Inland had months of experience using Whitemud^{MK} their concrete mixes, displaying enhanced strength performance, setting time and finishing characteristics.

Peter Bukkems, Inland's Regional Plant Manager, had experience with the MK concrete and assured PCL this would be an excellent fit for the Leduc Enhanced Recreation facility.

THE PROJECT

The first MK concrete was poured for a slab on grade in December 2008. The concrete finisher, P-Ban of Edmonton, was impressed with the creamy texture and faster set of the concrete under cool and wet conditions. Confident with the first pour, PCL gave Inland the okay to use MK in the higher strength mixes for the rest of the project. The subsequent pours went very smooth, displaying excellent flowability, shorter set times and a solid appearance to the hardened concrete. The concrete demonstrated a preciseness after removal of the forms and very few voids or bug-holes, evidences of a high density and consolidated concrete.

PCL's Project Manager, Keith Lakusta, had these comments regarding the concrete containing Whitemud^{MK}.

"My experience with the metakaolin product used on the Leduc Enhanced Recreation Facility has been successful. On-site PCL used a 25 MPa strength mix design and achieved strengths well beyond 25 MPa in a short duration of time.

The concrete finishers on-site liked the mix's workability with the hand trowels and its ability to close up quickly with the magnesium float.

The Metakaolin mix design was used for slab on grade and the 2nd floor structural bleachers. The finish on top was a good, sealed, and polished finish that was consistent throughout and the underside soffits looked fantastic also. All of our pours were in an enclosed building with temperature controlled conditions.

Given the good experience from this project, I would use the metakaolin design on future projects."



AT A GLANCE

Project Owner: City of Leduc

Architect: Arndt Tkalcic Bengert

Construction Manager: PCL Construction

Ready Mix Supplier: Inland Concrete Limited

Location: Leduc, Alberta, Canada



FOR MORE INFORMATION

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