



Erdenet Settling Tanks Mongolia



2019

ABOUT THIS PROJECT:

Market Segment:

Mining

Owner:

Erdenet Mining Corporation

Products Used:

Xypex Megamix II
Xypex Patch'n Plug
Xypex Concentrate
Xypex Modified

Location:

Northwest, Mongolia

General Contractor:

Altaibaidrag Construction LLC

THE CHALLENGE

Erdenet Mining Corporation SOE, situated in the northwestern region of Mongolia, is Asia's premier copper ore mining and processing facility and ranks as the world's seventh largest. This extensive complex processes more than 26 million tonnes of ore, yielding approximately 530,000 tonnes of copper concentrate and around 4,500 tonnes of molybdenum concentrate annually.

This liquid slurry has a high alkalinity, with a pH ranging from 11.5 to 12.0 and temperatures exceeding 40 degrees Celsius. The tanks' concrete had degraded to the point of being unusable even though it had already undergone several repairs in the past.

THE XYPEX SOLUTION

To repair, restore, and permanently waterproof the tanks, a system of Xypex products was used, including Megamix II, Patch'n Plug, Xypex Concentrate, and Xypex Modified.



The final preparation step included an aggressive water-jet blasting of the entire surface.



A scrub coat of Megamix II was carefully hand-applied over the entire area.

The mine has several concrete tanks, each approximately 50 metres in diameter, into which the concentrated ores are pumped in liquid slurry form.

The process started with removing more than 200 tonnes of previously applied repair material that failed. Cracks and other defects were repaired using Xypex Patch'n Plug and Xypex Concentrate. The tanks were repaired with Xypex Megamix II. This structural repair mortar contains Xypex crystalline waterproofing technology, chosen for its durability when exposed to aggressive environments like the high-temperature, high-pH solutions in the Erdenet settlement tanks.



An optimum mix quantity of both Megamix II (6 bags) and water was quickly settled upon and maintained.

Xypex Megamix II and Xypex Concentrate provide a permanent and durable waterproofing solution for the facility, ensuring environmental protection.



As soon as the Megamix II application had hardened enough to allow for foot traffic, a sprayed application of Xypex Concentrate was applied over the top.