

# Concrete In Mongolia — Big Changes

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In 2002, I was invited to go to Mongolia to help start the first Mongolian Concrete Conference and to inaugurate an American Concrete Institute (ACI) chapter in Mongolia. If you are like me, I only had a vague idea of where Mongolia is, so I had to get a world map out to locate it. I found Mongolia is north of China and south of the Siberian part of Russia. It is completely landlocked and has an extremely large desert, the Gobi.

After reviewing all the information and deciding to make the “trip of a lifetime,” we felt that in a small way we could make a difference in concrete technology in a developing country. When we arrived in Mongolia, my wife Billie and I saw several abandoned construction sites, and no ready-mix plants or trucks.

Our host took us to some precast plants that made concrete pavers, hollow core slabs, and some small precast units. We also visited some construction sites and saw that most of the concrete was being site batched. The mixture designs that were being used were basic (about 3000 psi) and no admixtures were available. Thus, this concrete had no air entrainment to withstand the bitter cold winters.



Mongolia is located south of Russia and north and west of China.

I began to think this trip would be unsuccessful. The start of a Mongolian Concrete Conference and an ACI chapter appeared to be premature and the people unable to make basic advancements in the concrete industry due to the remoteness of the country.

I soon found out this assessment was completely off base. The engineers, contractors and people working in the concrete industry had been keeping up with the latest developments in concrete and wanted to implement them in Mongolia. At the first Mongolian

Concrete Conference about 100 people attended. Even with a language barrier, the questions were detailed and thoughtful. They wanted to learn how to improve their industry.

The meeting of the Mongolian ACI Chapter had 15 members. Their first order of business was to commit to doing the Mongolian Concrete Conference each year. I was overwhelmed by their enthusiasm for improving concrete.



One of 15 concrete trucks bearing the logo of Premium Concrete.

Over the next few years, I was able to go back to Mongolia on funded projects. Mongolia was still suffering from changes in government and economic policies. The price of copper had dropped and the country was in a recession. Roads were not being repaired, construction sites were still abandoned, engineering graduates were having trouble finding jobs, and the concrete industry appeared to be at the same stage as 2002.

At the ACI meeting in Dallas in spring 2012, a manager of a batch plant in Mongolia approached me and asked if I would be able to come to Mongolia and help train his people on concrete.

The economy in Mongolia is now booming. The price of copper has risen and new copper mines are being developed in the Gobi Desert, and construction in Ulaanbaatar is strong. His company, Premium Concrete, had just installed a central batch plant, purchased a quarry, was washing their aggregates, had 15 ready-mix concrete trucks and were now using admixtures in their concrete.

They are trying to establish themselves as the quality and service leaders in Mongolia. Thus, they wanted the training program to help them to provide “premium” concrete and service. They are planning to seek the National Ready-Mixed Concrete Certification for their plants. A cursory inspection of the plant indicates that this is a logical next step in their quality control process.

After working with them for over a week, visiting several concrete projects, and attending this year’s Concrete Conference, I am optimistic about the concrete industry in Mongolia. They are making great strides and everyone is working together to make quality concrete.

Several people have worked to help in the development of Concrete Education in Mongolia including M.R. Hansen, professor from South Dakota School of Mines and Technology, the late Dick Stehly (American Engineering Testing and ACI president), Frank Kozeliski (formally president of Gallop Sand and Gravel, now consultant), Robert Ripley (marketing manager for Proceq) and John Clark (production manager for Country Materials).



*Technicians perform a slump test at the Premium Concrete batch plant.*



*The Premium Concrete batch plant located in Ulaanbaatar plans to seek the National Ready Mixed Concrete Certification.*

We also want to thank Zircon, Kestrel, Fluke, Proceq, American Concrete Institute, several ACI Chapters and ACI members across North America and Hanley Wood for donating equipment, educational materials and money to make the Mongolian Concrete Industry a success.

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### **Mongolia Quick Facts:**

- The Capital of Mongolia is Ulaanbaatar. Population: 1 million
- Ulaanbaatar is often called the world’s coldest capital city. Average temperature: 27.7°F
- Approximately 33% of Mongolians live in the capital
- Major producer of copper, gold, silver, coal and uranium.
- Formerly communist.
- Sometimes referred to as “Outer Mongolia”. “Inner Mongolia” is an autonomous region in China.
- The country is about the size of Alaska.
- Major trading partners are China, Russia and Korea.
- There are airports, hotels, restaurants, beer, and vodka named after Genghis Khan, a national hero.



*The computer system used at the Premium Concrete batch plant.*