



Sarcheshmeh Copper Mine, Iran



PROJECT SUMMARY

Name: Sarcheshmeh Tailings Storage Dam, Iran

Year: 2011 - 2013

Client: National Iranian Copper Industries Co.

Instrumentation: LARZEH SAKHT SAVALAN

Consultant: ATC Co. & MEWE Co



OVERVIEW

This Project is located in 30Km from Sarcheshmeh Kerman Province. It is phase II of the copper mine.

Because of electrical towers that were on top of the slope and the construction of structures, monitoring of the slope was essential.

Sarcheshmeh Tailings dam was constructed to reserve 1,000,000,000 tons of tailing materials resulted copper mine concentration process. It is an earth fill dam with a clay core, 1500 m length and 75 m high, and reservoir volume is 123,000,000 m³.

MONITORING

Monitoring is required as part of Asset Protection as well as design validation and construction safety.

Instrumentation installed includes In Place Inclinerometers (IPI) to monitor deformation, In Place Tilt meters to monitor tilt of electric towers and excavation surface and a data logger for remote monitoring.

Automatic monitoring of seepage was required to ensure the long-term integrity of the dam and to allow water quality measurements to be made. Changes in seepage volumes and water quality could be quickly identified and checked with changes in reservoir level and filling activities.

PRODUCTS USED

In-place Inclinerometers

In-Place Tilt Meters

Portable MEMS Inclinerometer System

For measuring lateral displacement.

QJ Inclinerometer Casing

G8 PLUS Data Logger

CR1000 Data logger

V-notch weir

Provides a method of measuring volumetric. Since the geometry of the top of the weir is known and all water flows over the weir, the depth of water behind the weir can be converted to a rate of flow.

VW Weir Monitor

Automatically measures the height of water behind the V-notch weir.