

SensoTech Case Study

Codelco's Chuquicamata Smelter



Application:

Double Contact / Double Absorption Acid Plants

Units in use:

- 7x LiquiSonic® process units
- 1x LiquiSonic® Lab for laboratory

In 2019, Codelco's Chuquicamata Smelter, located in the north of Chile, in the Antofagasta Region, put into operation two new Double Contact / Double Absorption Acid Plants.

Currently, the company operates with seven LiquiSonic® process units and one LiquiSonic® Lab in a double contact sulfuric acid plant - double absorption.

These equipments came to solve the difficulties of the start-up with the concentration measurement using equipment based on flow and temperature range.



Codelco received a LiquiSonic® Lab test kit to measure concentrations which allowed to achieve the expected results. Subsequently, the device was selected as the appropriate solution to complete the commissioning of the new plants.



The picture shows the installed flange sensor in the process pipe.

Codelco's Chuquicamata Smelter plans to acquire new on-line analyzers to be installed both at the inlet and outlet of the acid plant to the storage tanks.

We selected the LiquiSonic® analyzers because of the reliability of the measurement of concentrations and the operation, especially the expected temperature range, delivering more than 0.01-0.05% accuracy levels."

Regarding the level of satisfaction, the executive states:

"The maintenance of the equipment is optimal, except for some adjustments of the concentration measurement that we have easily made. Due we do not need to intervene in the process, we achieve considerable economic savings. The sensor also It serves us as a contrast medium since it allows us an acid-base assessment with respect to the analytical equipment in the field".

Gabriel Araya,
Chief Plant Operations Engineer
Chuquicamata Foundry Acid.