

Outokumpu

Award: Sustainability

Category: Emissions/Material efficiency/Investment in new processes and products

Maximising Water Recycling in Cold Rolling Plant, Mexico

Challenge

In Mexico, San Luis Potosí, Outokumpu's cold rolling mill is located in a dry arid area, where groundwater is a valuable asset for people. The less our production consumes it, the more can be used for drinking, farming and vegetation.

Action

The progress in water recycling is based on long term work. Already in 2001 the imposed environmental conditions to discharge gave the opportunity to recycle water back to cold rolling process in a larger scale.

During the years our cold rolling plant has developed and improved the water treatment and recycling. One of the last investments was new Crystallizer equipment in 2013. It saves energy, money and environment compared to old system and also decreased CO2 emissions from this water treatment process part by 95%. This is the last phase on the wastewater treatment plant process and makes water recycling efficient; the solution with high concentration of salts coming from the evaporation phase is heated in order to evaporate the water and to obtain rest material in crystal shape.

Outcome

Today 99% of the waste water is treated, recycled and reused in cold rolling plant. This level is unique in the stainless steel industry. To follow up on the progress, the plant set up a yearly internal targets for water use in the mill. The savings in fresh water usage is equivalent to the quantity consumed by 1,100 households yearly. In 2015 the fresh water consumption of the cold rolling was extremely low (1.22 m3/t) and well below target (1.50 m3/t).

The plant has also achieved its own target in water use per rolled ton of steel. "For us to continue recycling water is important because it allows us to contribute to environmental care as an organization. We fulfill the environmental regulations and give an example of social responsibility", says Jorge Vieyra, head of production and environmental management at Mexinox.

Outokumpu

Award: Sustainability
Category: Emissions/Material efficiency/Investment in new processes and products

Maximising Water Recycling in Cold Rolling Plant, Mexico

Wastewater Treatment Plant
 Flow Diagram

