

## Case Study

# PODEROSA GOLD PROCESSING PLANT

Compañía Minera Poderosa S.A.

**PODEROSA**

## MEASURING TASK

Determination of slurry density in the thickener underflow

Pipe diameter:	80 mm (3 inch)
Pipe material:	Carbon steel alloy (ASTM A53)
Solids:	60 wt%
Density:	1.500 – 1.700 g/l
Temperature:	19°C – 24°C (66°F – 75°F)

## INSTRUMENT USED

SDM – slurry density meter. Installed in the discharge pipe of a tailings thickener by an UHPE ultrasonic wafer cell.

## CHALLENGE

Minera Poderosa wants to measure and control the density in the discharge pipe line of a tailings thickener in order to improve the next stage of the process which is tailings filtering.

## SOLUTION

The Rhosonics SDM Slurry Density Meter is a good solution for this measuring task, because of its reliable, stable and real-time density measurement results.

The density measurement signal (4-20 mA) is sent to a PID loop controller and is used to control the speed reference of the pumps and the closing and opening of automatic valves for recirculation of the slurry when the density is below the desired value. The SDM contributes to more efficient tailings filtering and saves time spent on manual measurements. Additionally, thanks to the ultrasonic technology instead of nuclear, the customer will save time and costs spent on governmental licenses and hiring specialized personnel for maintenance and calibration. These benefits can result in a payback time of approximately 2 years.

## RESULTS

- Automated process control in the filtering plant
- An increased efficiency of the tailings filtering
- No licences, permits or specialized personnel necessary for the density meter thanks to the ultrasonic technology instead of nuclear source
- Payback time of approximately 2 years



## FOR FURTHER INFORMATION

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