



CASE STUDY

“We installed the density meter in a very **abrasive slurry stream** as a trial and it has **performed very reliably** for us for four years.”

CASE STUDY - SOUTH32

Introduction

South32 Paste Plant, located in Cannington, has been using the Slurry Density Meter (SDM) for almost five years now. South32 needs to control the density of the slurry going to the storage tank. The company is also using a nuclear density gauge to control the density of the thickener underflow. They have a 1,2-kilometer pipeline in between these two density meters.

Customer

South32 is a mining and metals company which is headquartered in Perth, Western Australia. The company is global and operates in Australia, South Africa, and South America. South32 produces bauxite, alumina, aluminium, metallurgical coal, manganese, nickel, silver, lead and zinc.



Challenges

- To know how much slurry is going to the storage tank
- To measure and control the density for improving and optimizing this stage of the process

Measuring task

Density reading of metal-ore-slurry.

Pipe diameter:	254 mm (10")
Pipe material:	Steel
Solids:	60wt%
Density:	000 – 1700 kg/m ³

Our solution

The SDM is a great choice to determine the density of slurry going to the storage tank. Additionally, together with the output of a magnetic flowmeter, the mass flow can be calculated.

Instrument used

Ultrasonic Slurry Density Meter (SDM) of Rhosonics. The SDM is assembled with a 10" UHPE wafer.

Application



The SDM in 2017



The SDM after four years of operating

Results

After four years of using the Slurry Density Meter in a very abrasive slurry stream, it is operating well and the sensor is still in a good condition.

The staff at South32 experienced several advantages of using the SDM. They did not have to register a nucleonic device to do the same duty and it is a simple and cost-effective solution.

- No special licenses
- Good accuracy
- No radiation
- No end-of-life disposal costs
- No sampling
- Real-time and reliable measurements
- No restricted area

"We installed the density meter in a very abrasive slurry stream as a trial and it has performed very reliably for us for four years. We are using it in an application where it really picks up the difference between water and a slurry with 60% solids, and it shows good accuracy. We are interested in trialling elsewhere in the plant as potential replacements of nucleonic density meters to see if we can remove the risks."

Kevin Pery, South32



ADRES
Hoge Eng West 30
3882 TR Putten

CONTACT
+31 341 37 00 73
info@rhosonics.com