

# KGHM Improves Plant Efficiency and Safety with Rosemount™ 3D Solids Scanner

## RESULTS

- Increased safety
- Improved plant efficiency
- Reduced maintenance



## APPLICATION

Underground copper ore mining

## CUSTOMER

KGHM, Canada

## CHALLENGE

KGHM is a large mining company involved in mining copper ore underground. During the mining process, five different types of ore are crushed and fed into one ore pass.

The raw ore is passed through a crusher and the crushed ore is stored in the ore pass/underground silo. KGHM was experiencing problems with the amount of wear and tear experienced by the ore pass during daily use, which resulted in excessive maintenance.

The damage to the ore pass is caused by the ore falling directly onto the trap door at the bottom of the pass, known as a press frame. This press frame is coated with a rubber liner to reduce the force of impact from the falling rocks but they were wearing away the liner very quickly and damaging the press frame. The cost to replace the line and frame exceeded \$100k, and would cause downtime for days at a time, resulting in loss of throughput. The falling rock could also escape the ore pass and damage nearby lighting, posing a risk to worker safety.

KGHM needed to source a level measurement that would measure down to the bottom of the ore pass which is 225 feet deep. Different level technologies had been tried in the hope of producing a buffer of stationary rock to act as a cushion, but those instruments were not able to measure the level due to dust and the area dimensions. In addition, the buffer of rock meant there was too much ore in the pass and different grades of ore would be unintentionally mixed causing inefficiencies during processing.

***“Using the Rosemount 5708 we achieved success where all others failed.”***

**Adam Savignac, Automation Team Leader  
Sudbury Operations, KGHM**



*Dusty underground conditions*

## SOLUTION

The customer installed a Rosemount 5708 3D Solids Scanner on the top of the 225-ft ore pass. The transmitter was not only able to penetrate the dust, but the sensor was able to measure right down to the bottom of the ore pass, avoiding the trap running empty and meeting the accuracy requirements.

The ability of the Rosemount 5708 to measure the lowest point ensured that neither the line nor the press frame were exposed to the falling rocks. This resulted in a substantial cost saving since both the required manpower and downtime related to the degrading door liner were drastically reduced.

The result was greatly reduced maintenance, mixing of different ores eliminated and risk to worker safety removed.

## RESOURCES

### Rosemount 5708 3D Solids Scanner

[www2.emersonprocess.com/en-us/brands/rosemount/level/solids-measurement/3d-solids-scanners/pages/index.aspx](http://www2.emersonprocess.com/en-us/brands/rosemount/level/solids-measurement/3d-solids-scanners/pages/index.aspx)

### Emerson Process Management Metals & Mining Industry

[www2.emersonprocess.com/en-US/industries/metals-mining/Pages/index.aspx](http://www2.emersonprocess.com/en-US/industries/metals-mining/Pages/index.aspx)

**“By installing the scanner we minimized the mixing of different ore grades and increased safety.”**

**Adam Savignac, Automation Team Leader  
Sudbury Operations, KGHM**



Rosemount 5708 3D Solids Scanner

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