

*Hydro*FLOW®

WATER TREATMENT
FOR THE MINING INDUSTRY



HYDROPATH Technology | The home of *Hydro*FLOW®

PROTECTION AGAINST MINERAL SCALING FOR THE MINING INDUSTRY



While many industries suffer from the problems of mineral scaling on pipelines, heat exchangers and other equipment, the mining industry is particularly vulnerable to the formation of scale due to the challenging nature of the industry and the high levels of minerals present in the water or slurry.

Many types of scaling can occur in the pipelines transporting the product, blocking pipes and valves, increasing the pressure and reducing the flow. It is also a common problem in pumps driving the fluid, in cooling towers and heat exchangers, and in process lines transporting limewater or other additives.

HydroFLOW® units offer a simple non-chemical treatment for the problem of hard mineral deposits. Without the need to cut into pipelines or stop production, HydroFLOW® units fit around an existing pipe and transmit a unique electrical signal into the water. The signal prevents minerals from forming as a hard encrustation on surfaces and instead form as powder-like crystals that are washed out by the flow of the fluid.



CASE STUDY

NORILSK NICKEL MINE, RUSSIA

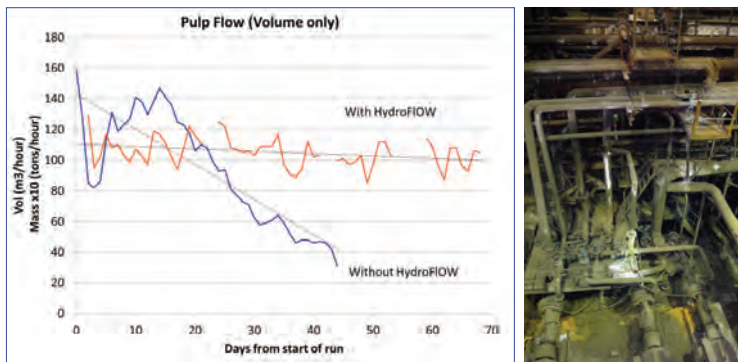
PROBLEM

In this mining/ smelting works, Gypsum (calcium sulphate, CaSO_4) is transported through pipelines of 219-245 mm OD for 1 km. The pipelines would scale up with gypsum deposits, reducing the flow to the extent that production stopped for cleaning, as often as every 1.5 months. The scaling could be so extreme the pipes would completely block.

RESULTS

On the untreated pipes there was a dramatic decrease in the flow rate, from 160 cubic meters/ hour to around 40 in 45 days. With HYDROPATH, the flow rate remained almost constant.

The untreated pipe was stopped when it reached its critical value, while the treated pipe did not drop to the critical value within the trial period, and remained near-constant for the entire period, while the slurry density (and hence mass flow) almost doubled over the same period.



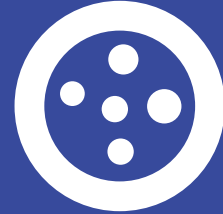
HYDROFLOW AROUND THE WORLD

HydroFLOW[®] has been installed throughout the globe for a range of different applications in the mining industry

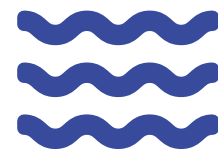
The images to the left show HydroFLOW[®] installations in (from left to right)

- Copper Mine, Chile, Pipelines and Pumps
- Gypsum Mine, Italy, Submersible Pump
- Nickel Mine, Russia, Slurry Pipeline

RESULTS






HARD SCALING PREVENTED



FLOW RATE MAINTAINED OVER 90%

DESIGNED FOR

-  **CALCIUM CARBONATE SCALING**
-  **CALCIUM SULPHATE SCALE**
-  **OTHER MINERAL SCALING**

FEATURES

- Suitable for all pipe materials
- Available for pipes up to 200mm as standard
- No plumbing or cutting of pipes required
- Easy retrofit – no downtime

APPROXIMATE DIMENSIONS

- 300 x 200 x 100 mm
- 3 meter cable

TYPICAL APPLICATIONS

- Pipelines
- Pumps
- Heat exchangers
- Cooling towers

FURTHER INFORMATION

For more detailed guidance on specification, installation or other information, please contact sales@hydropath.com or your local representative.



FROM COMBI BOILERS TO COOLING TOWERS

HydroFLOW® units are working all over the world on multiple applications, treating carbonate and non-carbonate scaling and filtration issues in a wide variety of industries. Check out our website for more information.

- **From homes to heavy industry**
- **From spas to steel mills**
- **Suitable for any pipe material**
- **From 15mm to 1500+mm OD pipe diameter**



LIMESCALE



BIOFOULING



FLOCCULATION

HYDROPATH.COM