

## CVG Bauxilum Improves Process Control and Reduces Maintenance Costs with Rosemount High Signal Universal Transmitter Technology

### RESULTS

- Reduced installation and maintenance costs
- Improved measurement accuracy and stability
- Improved process control



### APPLICATION

Raw Bauxite in Caustic Soda Solution Slurry, approximately 50-60% content of sand and quartz

### CUSTOMER

CVG Bauxilum is a major alumina production company located in Venezuela with an established capacity of two million metric tons per year.

### CHALLENGE

CVG Bauxilum extracts bauxite mineral from Los Pijiguaos mines and processes it to produce high grade alumina. The raw bauxite in caustic soda solution from Los Pijiguaos has a 50-60% content of sand and quartz. The bauxite solution enters the plant at three locations and is measured using magnetic flowmeters. The bauxite flow combined with high sand and quartz content results in a noisy flow signal. The magnetic flowmeters that were installed at the plant entrance showed numerous spikes in the flow signal. This resulted in an unstable and inaccurate measurement that made it difficult to control the pumps at the entrance to the plant. In order to maintain an efficient control loop, CVG Bauxilum did not want to add damping to the flow signal.

CVG Bauxilum was also looking to reduce the maintenance and installation costs associated with their magnetic flowmeters. Due to the abrasive nature of the process, the magnetic flowmeters that were originally installed required changing of the liner and electrodes on a yearly basis. In addition, repeated failure of an electronics board has required significant maintenance intervention. Finally, the other manufacturer's transmitter was more difficult to set up and required special cable, increasing installation costs.

***“The Rosemount meter was installed in March of 2006 and has been working properly for two years without intervention.”***

**Rodolfo Navarro**

*Instrumentation Superintendent*



*CVG Bauxilum plant entrance with Rosemount High Signal Flowmeter system installed.*

**ROSEMOUNT**<sup>®</sup>

For more information:  
[www.rosemount.com](http://www.rosemount.com)

  
**EMERSON**<sup>™</sup>  
Process Management

### SOLUTION

CVG Bauxilum chose to replace one of the three measurement points with a Rosemount High Signal Magnetic Flowmeter (8712H) and monitor its performance against the other two. CVG Bauxilum selected the Rosemount High Signal Magnetic Flowmeter because it generates a magnetic field strength 10 times that of a standard DC magnetic flowmeter. The Rosemount Magnetic Flowmeter has outperformed the existing meters by providing a more stable and accurate flow signal without additional damping. The more stable signal provided increased process efficiency through improved control of the pumps at the plant entrance.

In addition to providing improved process control, the Rosemount Magnetic Flowmeter proved more reliable in abrasive applications. The meter was installed in March of 2006 and has been working properly for two years without intervention. As a result of the improved reliability and performance, CVG Bauxilum has replaced the remaining two flowmeters at the plant entrance with Rosemount High Signal Magnetic Flowmeters.

After the installation of the Rosemount High Signal magnetic flowmeters, the value of the Rosemount 8712 Transmitter was clear. The Rosemount 8712 Transmitter took less time to configure than their existing installation and did not require any special cable to operate, which reduced installation costs. Also, Rosemount Magnetic Sensor Transmitters are Universal transmitters, which can be used with other manufacturer's sensors. By using Rosemount Universal technology, CVG Bauxilum has been able to replace the troublesome transmitters plagued with electronics board failures while leaving the existing sensors in place, thus reducing maintenance costs.

### RESOURCES

#### Emerson Process Management Metals and Mining Industry

<http://www2.emersonprocess.com/en-US/industries/metals-mining/nonferrous/Pages/index.aspx>

#### Rosemount High-Signal Magnetic Flowmeter System

<http://www2.emersonprocess.com/en-US/brands/rosemount/Flow/Magnetic-Flowmeters/High-Signal-System/Pages/index.aspx>

The contents of this publication are presented for information purposes only, and while effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, expressed or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which can be found at [www.rosemount.com/terms\\_of\\_sale](http://www.rosemount.com/terms_of_sale). We reserve the right to modify or improve the designs or specifications of our products at any time without notice.

The Emerson logo is a trade mark and service mark of Emerson Electric Co. Rosemount and the Rosemount logotype are registered trademarks of Rosemount Inc. PlantWeb is a registered trademark of one of the Emerson Process Management group of companies. All other marks are the property of their respective owners.

**Emerson Process Management  
Rosemount Inc.**  
8200 Market Boulevard  
Chanhausen, MN 55317 USA  
[www.rosemount.com](http://www.rosemount.com)  
Tel (USA) +1 800 522 6277  
Tel (International) +1 (303) 527 5200  
Fax +1 (303) 530 8459

**Emerson Process Management**  
Blegistrasse 23  
P.O. Box 1046  
CH 6341 Baar  
Switzerland  
Tel +41 (0) 41 768 6111  
Fax +41 (0) 41 768 6300

**Emerson FZE**  
P.O. Box 17033  
Jebel Ali Free Zone  
Dubai UAE  
Tel +971 4 811 8100  
Fax +971 4 886 5465

**Emerson Process Management Asia  
Pacific Private Limited**  
1 Pandan Crescent  
Singapore 128461  
T (65) 6777 8211  
F (65) 6777 0947  
[Enquiries@AP.EmersonProcess.com](mailto:Enquiries@AP.EmersonProcess.com)

**Emerson Process Management Latin America  
Multipark Office Center**  
Multipark Office Center  
Turrubares Building, 3rd & 4th floor  
Guachipelin de Escazu, Costa Rica  
T+(506) 2505-6962  
[international.mmcam@emersonprocess.com](mailto:international.mmcam@emersonprocess.com)

**ROSEMOUNT®**

For more information:  
[www.rosemount.com](http://www.rosemount.com)

**CVG Bauxilum  
reduced maintenance  
costs by replacing  
their failure prone  
transmitters with  
Rosemount Universal  
transmitters, while  
leaving their existing  
sensors in place.**



The Rosemount 8712 Transmitter with an easy-to-use LOI.



**EMERSON™**  
Process Management