

Sulfuric Acid

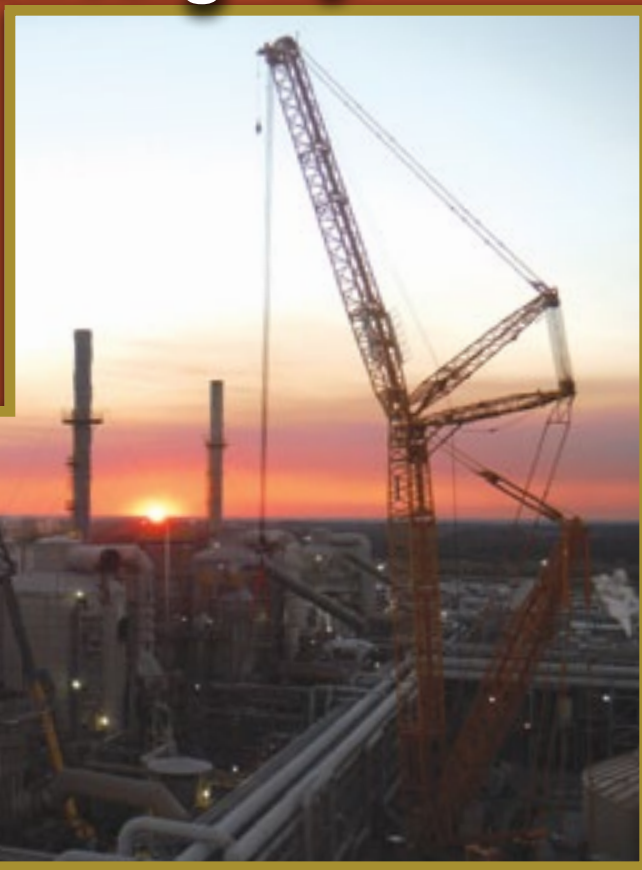
T O D A Y

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Spring/Summer 2015



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bringing a world-class legacy
into the 21st century** **Page 7**



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Industry converges in Chile for tenth sulfuric acid roundtable

The Hotel Dreams in Punta Arenas, Chile, provided a beautiful backdrop for the 2014 X Mesa Redonda de Plantas de Acido Sulfurico—the Chilean Sulfuric Acid Roundtable. Organized by Holtec Ltd., the conference, now in its tenth year, was held November 16-20. More than 125 attendees gathered at Chile's southern tip to discuss maintenance and operations technology.

Representatives from facilities around the globe attended, taking advantage of this opportunity to share information, knowledge and best practices with others in their field. Plant attendees included: Acidos Y Minerales De Venezuela; AngloAmerican; AR ZINC S.A.; Cemin Dos Amigos Pada; Codelco Orgullo de Todos Chuquicamata, Ministro Hales, Salvador, El Teniente, and Ventanas; Eco Services; ENAP Refinerias Aconcagua; Galvani; Glencore; Haldeman Mining Company S.A.; Industrias Basicas De Caldas S.A.; ISUSA; Monomeros; Noracid; Paranapanema; Pequiven; Procel; and Southern Copper.

Event sponsors included: Acid Piping Technology, Afla Delta LTDA, AWS, Babcock & Wilcox, Bayer Technology Services, BASF, Begg, Cousland Envirotec, Chemetics, Clark Koch, Drake Specialties, DuPont MECS, GEA, Gore, Haldor Topsøe, Ingal, Invenio, Koch Knight LLC, Marco, MB Consultores Ltda., MetalCop, Nicolaides, NORAM, Outotec, Repin LTDA, SMA, Steuler KCH, *Sulfuric Acid Today*, SNC-LAVALIN, Sulphurnet, Tetramet, TPI, Twin Filter, Triangle Fluid Controls Ltd., Verne, Vorwerk y Cia. S.A., Worley Parsons and Weir Minerals Lewis Pumps.

Events like the roundtable are a perfect place to share information and discoveries within the industry. Attendees enjoyed panel discussions and presentations covering a wide range of topics, including: —“Control and inspection equipment enforcement emission standard” by Viviana Rojas and Maria Jose Osuna of Holtec.



The roundtable included an informative panel on safety. Panelists, from left, were George Wang of Eco Services, Carlos Lama of Southern Peru Copper, Claudio Diaz of Codelco Div. Ventanas and Elio Barraza of Noracid.



More than 125 attendees gathered for the X Mesa Redonda de Plantas de Acido Sulfurico in Punta Arenas, Chile.



Dirk van der Werff of Holtec welcomes participants to the X Mesa Redonda de Plantas de Acido Sulfurico, held Nov. 16-20, in Punta Arenas, Chile.

- “Convertor maintenance of SO₂ gases” by Gabriel Araya of Codelco Chuquicamata.
- “Saving time and money with form-in-place gasket materials” by Douglas Strait of Gore.
- “The suitability of double absorption and scrubbing technologies to meet new emission standards” by Guy Cooper of NORAM.
- “Commercialization of MECS SolvR™ regenerative SO₂ technology” by Steve Puricelli of DuPont MECS.
- “Leakage behavior of gaskets in flanged connections” by Chett Norton of Triangle



Sarah Richardson of DuPont MECS informed participants on how to effectively manage and reduce emissions in sulfuric acid plants using MECS catalyst.

- Fluid Control.
- “Bayqik & sulfuric acid technology” by Lucia Fernandez of Bayer Technology Services.
- “Increasing acid plant campaigns” by Claudio Diaz of Codelco Ventanas.
- “Hydrogen formation in sulfuric acid plants” by George Wang of Eco-Services.
- “Reform of truck load and dispatch in sulfuric acid” by Lucas Barcado of AR Zinc.
- “Wet ESP developments” by Sam Kumar & Bob Snyder of Babcock.
- “Solid construction PTFE step face

gaskets for improved sealing performance in Mondri™ piping” by Mike Shorts of Triangle Fluid Control

—“Operational reliability when designing for maintenance” by Grant Harding of Chemetics.

—“Improving efficiency and safety in metallurgical acid plants” by Sebastian Brechtel of Outotec.

—“Waste heat recovery in sulfuric acid plants” by Claudia Araya of Holtec.

—“Air quality standards in sulfuric acid plants” by Kleber Jurado of Southern Copper.

—“Presentation of a new sulfuric acid production plant in Uruguay” by David Mardero of ISUSA.

—“How to effectively manage and reduce emissions in sulfuric acid plants using state-of-the-art MECS catalyst” by Sarah Richardson of DuPont MECS.

—“Tailor-made catalyst solutions to meet the demands for lower SO₂ emissions” by Osman Chaudhry of Haldor Topsøe.

—“A scoring system and sound management of silica-rich stainless steels” by Axel Alfaro of TPI.

—“Cooler tubes and housing for sulfuric acid” by Ester Droguett of Outotec.

—“Sulfuric acid recirculation tank repair” by Gustavo Barreto of ISUSA.

—“Engineering and construction of an absorption tower” by Diego Rojas of Ingal.

—“Mist elimination techniques” by Alesandro Gullá of AWS.

—“Comprehensive improvement project gas capture and processing Potrerillos Smelter” by Manuel Roco of Codelco Salvador.

—“The art of troubleshooting mist eliminators” by Graeme Cousland of Begg Cousland Envirotec.

—“Improved control system for new sulfuric acid plant” by Hugo Ramirez of ISUSA.

—“Master control gas management - Ilo Smelter” by Carlos Lama of Southern Copper.

—“Leaks and consequences in sulfuric acid plant” by Elio Barraza of Noracid.

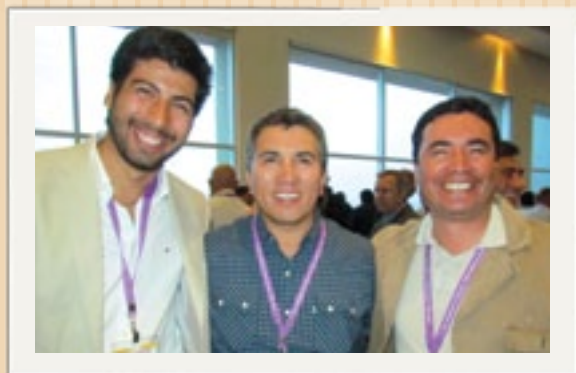
All work and no play makes for a dull conference, though. With that in mind, organizers of the Chilean Sulfuric Acid Roundtable arranged a variety of interesting events to complement the programming. Fun was had by all at the biannual soccer match between producers and sponsors, in addition to hospitality and networking opportunities and dinners each night. Attendees were also treated to a tour of the historic Punta Arenas cemetery, as well as a trip to a local farm for a Chilean BBQ dinner with dancers in native costumes.

The next Chilean Sulfuric Acid Roundtable will be held in 2016. □



Fun was had by all at the friendly soccer match between the producing plant attendees and the event's sponsors.

Faces & Places



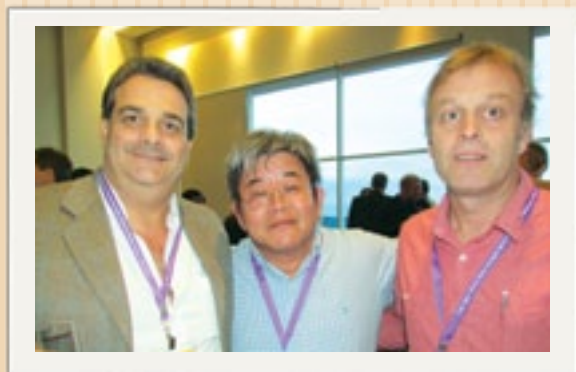
From left to right, Amadeo Valdés of SMA, Manuel Alvarado of Glencore and Hernab Luma of SPCC enjoyed catching up with one another at the welcome reception of the X Mesa Redonda de Plantas de Acido Sulfúrico, held Nov. 16-20, in Punta Arenas, Chile.



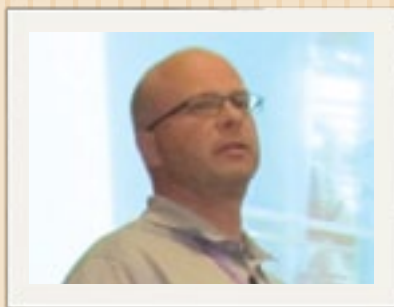
Graeme Cousland of Begg Cousland Envirotec, left, and Osvaldo Cabrera of Alfa Delta networked at the welcome reception of the X Mesa Redonda de Plantas de Acido Sulfúrico in Punta Arenas, Chile.



Mario Beer of MB Consultores, left, and Carlos Lama of SPCC enjoyed the festivities during the welcome reception of the X Mesa Redonda de Plantas de Acido Sulfúrico in Punta Arenas, Chile.



Nelson Clark of Clark Koch, right, visited with George Wang of Eco Services, center, and Dirk van der Werff of Holtec at the welcome reception during the X Mesa Redonda de Plantas de Acido Sulfúrico in Punta Arenas, Chile.



Grant Harding of Chemetics presented an informative paper on operational reliability when designing for maintenance during the X Mesa Redonda de Plantas de Acido Sulfurico in Punta Arenas, Chile.



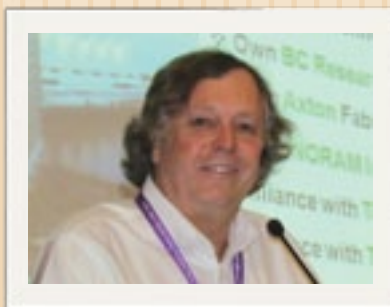
Kleber Jurado of SPCC presented an informative paper regarding the air quality standards in sulfuric acid plants during the X Mesa Redonda de Plantas de Acido Sulfúrico in Punta Arenas, Chile.



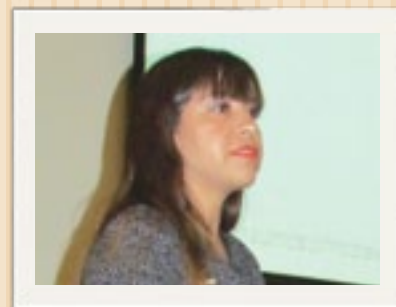
Enjoying the welcome reception of the X Mesa Redonda de Plantas de Acido Sulfúrico in Punta Arenas, Chile are, from left, Juan Herrera of Drake Specialties, Viviana Rojas of Holtec, Maria Jose Osuna of Holtec and Claudio Diaz of Codelco Ventanas.



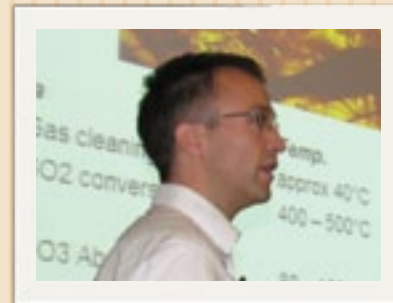
A few of the participants of the X Mesa Redonda de Plantas de Acido Sulfúrico enjoyed a day trip to the scenic Torres del Paine National Park in the southern Chilean Patagonia region. Pictured from left to right, are Alvaro Stegmann of Worley Parsons, Osvaldo Cabrera of Alfa Delta, Kathy Hayward of *Sulfuric Acid Today*, Graeme Cousland of Begg Cousland Envirotec, Jan Hermans of Sulphurnet, Anabel Thomas of SNC-Lavalin and Orlando Perez of OP & Associates – H₂SO₄ Consultants.



Guy Cooper of NORAM Engineering and Constructors Ltd. presented his company's paper on the suitability of double absorption and scrubbing technologies to meet new emission standards during the X Mesa Redonda de Plantas de Acido Sulfúrico in Punta Arenas, Chile.



Claudia Araya of Holtec Ltda. spoke about waste heat recovery in sulfuric acid plants during the X Mesa Redonda de Plantas de Acido Sulfúrico in Punta Arenas, Chile.



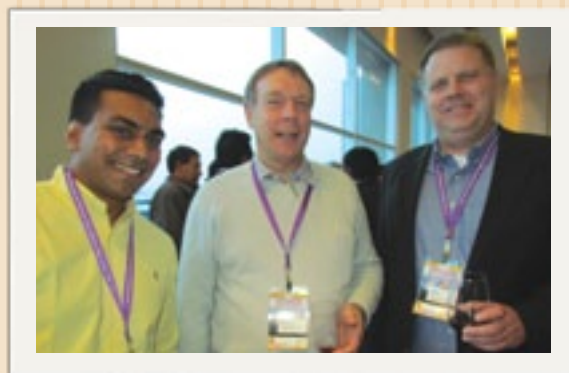
Sebastian Brechtel of Outotec shared his experiences with improving efficiency and safety in metallurgical acid plants during the X Mesa Redonda de Plantas de Acido Sulfúrico in Punta Arenas, Chile.



Diego Rojas of Ingal Ingenieria, left, and Nelson Clark of Clark Koch enjoyed networking during the welcome reception of the X Mesa Redonda de Plantas de Acido Sulfúrico in Punta Arenas, Chile.



Matthias Walschburger of Koch Knight LLC, right, visited with, from left Andres Videla of Vorwerk y Cia, Manuel Rodriguez of ENAP Refinerias and Eduardo Perez of ENAP Refinerias during the welcome reception during the X Mesa Redonda de Plantas de Acido Sulfurico in Punta Arenas, Chile.



Osman Chaudhry of Haldor Topsøe, left, visits with Jan Hermans of Sulphurnet, center, and Ken Black of Weir Minerals Lewis Pumps, right, at the welcome reception during the X Mesa Redonda de Plantas de Acido Sulfúrico in Punta Arenas, Chile.