



1ST INTERNATIONAL SYMPOSIUM ON INNOVATION AND TECHNOLOGY IN PHOSPHATE INDUSTRY

MAY 9-13, 2011
MARRAKECH - MOROCCO

Technical Program

Monday, may 9th 2011

15:00 - 19:00 Registration – Hall hotel PGP

Tuesday, may 10th 2011

07:00 - 18:00 Visit to the OCP facilities (JorfLasfar & Khouribga)

15:00 - 19:00 Registration – Hall Hotel PGP

20:00 - 21:00 Welcoming cocktail reception (PGP Hotel)

Wednesday, may 11th, 2011

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| 08:00 - 09:00 | Registration – Hall Diafa, PGP | | | | |
| 09:00 - 10:00 | Opening Ceremony –Room Atlas | | | | |
| 10:00 - 11:00 | Plenary lecture 1: L'Innovation technologique dans l'Aventure Humaine, le cas de la chimie. François GUINOT - Président Honoraire, Académie Française des Technologies – France Chairman : Fouad LAROUÏ, Amsterdam University, Netherlands | | | | |
| 11:00 - 11:30 | Coffee break | | | | |
| 11:30 - 12:00 | Exhibition inauguration | | | | |
| 12:00 - 13:30 | Lunch | | | | |
| | Room Atlas PLENARY SESSION 2: TOPIC 1: Mining Chairman : Mohamed SMANI, R&D Maroc, Morocco Co-chairman : Laurindo Leal Filho, University of Sao Paulo, Brazil | | | | |
| 13:30 - 14:15 | Plenary lecture 2: Surface Mining Technology: Progress and Prospects Raja RAMANI, Emeritus Professor of Mining Engineering, USA | | | Room Palmeraie | |
| 14:15 - 14:40 | Key note1: « Can we forecast the production pic for a mineral resources? » Pierre-Noel GIRAUD, Professeur d'économie, Mines Paris Tech, France | | | Novelty Show Session 1: MERSEN New technologies and new materials by MERSEN for phosphate industry | |
| 14:40 - 15:05 | Key note2: Recent Technology Breakthroughs in Phosphate Processing Patrick ZHANG, Florida Industrial and Phosphate Research Institute, USA | | | | |
| 15:05 - 15:30 | Key note3 : Les méthodes géophysiques de subsurface : un outil incontournable pour l'ingénieur. Maria Teresa TEIXIDO ULLOD –Institut Andalous de Géophysique, Université de Granada - Spain | | | | |
| 15:30 - 16:00 | Coffee break + Exhibitions | | | | |
| | Room Atlas Oral Session 1 Topic 1: Mining Chairman : Raja RAMANI, Emeritus professor of mining engineering, Pennsylvania state University, USA CoChairman: James Hendrix, University of Nebraska-Lincoln, USA | Room Palmeraie Oral Session 2 Topic 4: Phosacid (process) Chairman : Christopher EARL, KEMWORKS Technology Inc, USA CoChairman: Tayeb MRABET, IMPHOS, Morocco | Room Roseraie Workshop 1 16:00 – 18:30 | Room Olivraie Workshop 2 16:00 – 18:30 | |
| 16h-16h20 | MN-O-01 : Conception et réalisation des talus de mines à ciel ouvert : approche géologique et géomécanique Jean-Alain FLEURISSON, MINES ParisTech - Centre de Géosciences, France | PH-O-01: A Review of the Improved Hard Process Marten WALTERS, KEMWorks Technology, Inc., USA | Posters & exhibitions | Best management practices of Byproducts in the phosphate industry- Sludge and Phosphogypsum | |
| 16h20-16h40 | MN-O-02:Gridded Seam vs 3D Block Models in Mine Planning of Phosphate Deposits Daniel M GAGNON, Met-Chem Canada Inc, Canada | PH-O-02 :YARA hemihydrate (HH) and hemidihydrate (HDH) processes for phosphoric acid production JOHN GOBBITT, YARA BELGIUM S.A., BELGIUM | | | New developments in phosphate flotation techniques : technologies and flotation reagents |
| 16h40-17h00 | MN-O-03: Assessment of Reliability, Availability and Repairability of Field Equipment in Mines Jayanta BHATTACHARYA, Indian Institute of Technology, India | PH-O-03: New developments in Dihydrate-Hemihydrate processes Tibaut THEYS, Prayon Technologies, Belgium | | | |
| 17h00-17h20 | MN-O-04: Nouvelles méthodes pour l'extraction de phosphates Andreas MARQUARDT, Wirtgen GmbH, Germany | PH-O-04: A steady state model for describing the phosphate lattice loss Bilal MESSNAOUI, ENSA de Safi, Maroc | | | |

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| 17h20-17h40 | MN-O-05: Developments in DC and AC Technology for Surface Mining Equipment. <u>Mark JOHNSTON</u> , Bucyrus International Inc, USA | PH-O-05: Etude de la cinétique de décomposition de la roche phosphatée par l'acide nitrique <u>Allal KHOUDIR</u> , SERVITHEN, France | | |
| 17h40-18h00 | MN-O-06: Optimization of Draglines In mining Industry. <u>Vince OSBORNE</u> , SRK Consulting Limited, U.K | PH-O-06: A Smart Solution for the Phosphate Industry Hazardous by-product Fluosilicic Acid (FSA) –A Pre-Cursor for High Value Green Energy Product Dr. Jameel Ibrahim, VIRASA Technologies Inc., USA | | |
| 18h00-18h20 | MN-O-07 : la stratigraphie séquentielle :outil de prédiction des cortèges phosphates et de planification de l'exploitation minière. <u>M. MOUFLIH</u> , FSB - Casablanca, Maroc | PH-O-07 : Tailor Made screening technology of different screening Tasks in the Phosphate Processing Industry. <u>Olivier PIKHARD</u> , RHEWUM, Germany | | |
| 18h20-18h40 | | PH-O-08 : Comparison of Phosphoric Acid Production Processes. <u>Donal S. TUNKS</u> , JESA, Morocco/USA | | |

Thursday, may 12th 2011

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| Room Atlas | | PLENARY SESSION 3: TOPIC 5 :Environment& sustainable development Chairman : Taha BALAFREJ, OCP, Morocco Co Chairman : Ismail AKALAY, MANAGEM, Morocco | | | |
| 08:00 - 08:40 | Plenary lecture 3:An Industrial Ecology Approach to the use of Phosphorus Clift ROLAND, University of Surrey Guildford , United Kingdom | Room Palmeraie Novelty Show Session 2: TEKFEN TEKFEN Construction's Company Presentation | | | |
| 08:40 - 09:00 | Key note4: An efficient and Effective Process for Disposal of Phosphatic Clay Slurries. Bhupendra Kumar PAREKH, University of Kentucky- Center for Applied Energy Research, USA | | | | |
| 09:00 - 09:20 | Key note5: Phosphates in Sustainable Human Development. Michael ZAMMIT CUTAJAR, Former Ambassador on Climate Change, Malta | | | | |
| 09:20 -09:40 | Key note6: CO2 and Water management for industrial sustainability: examples from the oil industry. Philippe TANGUY, TOTAL S.A, France | | | | |
| 9:40- 10:00 | Discussions | | | | |
| 10:00 - 10:30 | Coffee break + Exhibitions | | | | |
| | Room Atlas Oral Session3 Topic 5: Environment & sustainable development Chairman : Roland CLIFT, University of Surrey, UK CoChairman : Michael ZAMMIT CUTAJAR, Former Ambassador on Climate Change, Malta | Room Toubkal Oral Session 4 Topic 3: Sulfuric acid, energy & water Chairman : Katy HAYWARD, Sulfuric Acid Today, USA CoChairman : Jamal CHAOUKI, Ecole Polytechnique de Montréal, Canada | Room Palmeraie Oral Session 5 Topic 7: Materials & new products Chairman : Abdelhak MOUSTAQSSA, OCP, Morocco CoChairman : Rachid BOULIF, OCP, Morocco | | Room Roseraie Workshop 3 10:30 – 12:10 |
| 10:30 - 10:50 | EN-O-01 : Phosphogypsum Disposal---Pros and Cons of Wet Vs. Dry Stacking. <u>Dr. Nadim F. FULEIHAN</u> , Sc.D., P.E, Ardaman& Associates, Inc., USA | SW-O-01 : Catalyst solutions for lower SO2 emissions and reduced pressure drop build-up. <u>Marie VOGNSEN</u> , HALDOR TOPSOE A/S, Danmark. | | Posters & exhibitions | Enhancing Fertilizer Product Quality |
| 10:50 - 11:10 | EN-O-02 : Phosphorus - a limited resource that could be made limitless <u>Jan-Olof DRANGERT</u> , IREA, Sweden | SW-O-02 : Enhanced heat recovery with HEROS® and HIPROS® in sulfuric acid plants™ <u>Michael KEMMERICH</u> , Outotec, Germany | AP-O-02: Les techniques innovantes en Essais non destructifs et applications industrielles sur les équipements sous pression <u>Mohammed CHERFAOUI</u> , CETIM, France | | |

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| 11:10-11:30 | EN-O-03: Dust Suppression of Phosphate Rock: Storage, Conveyance and Shipping <u>Jeffrey COOKE</u> , IPAC Chemicals, Canada | SW-O-03: Sulfuric Acid Catalysts – Chances And Limits <u>Thomas LAUTENSACK</u> , Dr. Michael Krämer, Dr. Frank Rosowski, , Dr. Jürgen Zühlke, BASF SE, Germany | AP-O-03: Echangeurs métalliques en alliage Hastelloy® G-35® pour les unités de concentration d'acide phosphorique : Utilisation, Intérêt <u>Patrice HOULLE</u> , Moumen CHAGRAOUI, Haynes International, France | | |
| 11:30- 11:50 | EN-O-04: Phosphogypsum use as a ca amendment for reclamation of saline-sodic soils: radioactive impact and management approaches, <u>ELMRABET Rachid</u> , OCPGROUP, Maroc | SW-O-04: SteaMax HRTM MECS Inc. <u>Guarret PALMQUIST</u> , MECSGLOBAL, Belgium | AP-O-04: Les échangeurs de chaleur métalliques sont aujourd'hui une solution éprouvée dans la production d'acide phosphorique <u>Daniel HERON & Jonas Höwing</u> , Sandvik Materials Technology, Sweden | | |
| 11:50- 12:10 | EN-O-05: Utilisation of Phosphogypsum for the production of Building Materials <u>Yongbo ZHOU</u> , Wengfu (Group) Co., Ltd., China | SW-O-05: Computational Model of Large Capacity Molten Sulfur Combustion Spray Efficacy and Process Efficiency <u>Kathleen Brown, Kyle Bade, and Rudolf J. SCHICK</u> , Spraying System Company, USA | AP-O-05: Brick Lined vs. Alloy Towers in Sulfuric Acid Plants, <u>Jack HARRIS</u> , VIP International, USA. | | |
| 12:10 - 13:30 | Lunch | | | | |
| | Room Atlas PLENARY SESSION 4: Topic 8: Materials & new products Chairman : Guy CHRISTOPHE, Ecole Polytechnique de Montréal, Canada Co-chairman : Driss DHIBA, OCP, Morocco | | | | |
| 13:30- 14:15 | Plenary lecture 4: Nanostructure Processing of Advanced Phosphate-Based Materials <u>Jackie YING</u> , Institute of Bioengineering and Nanotechnology, Singapore | | | | Room Palmeraie Novelty Show Session 3: ABB New technologies and new projects by ABB for phosphate industry |
| 14:15-14:40 | Key note7: Les phosphates, le lithium et le stockage de l'énergie <u>Michel GAUTHIER</u> , Phostech Lithium et Université de Montréal, Canada | | | | |
| 14:40- 15:05 | Key note8: Rheological properties of concentrated suspensions of colloidal and non colloidal particles <u>Pierre J. CARREAU</u> , CREPEC, Dept. of Chemical Eng., Ecole Polytechnique, Montreal, CANADA | | | | |
| 15:05 - 15:30 | Key note9: High value phosphate material development, a scientist viewpoint <u>Gilles Le FLEM</u> , ICMCB, France | | | | |
| 15:30- 16:00 | Coffee break + Exhibitions | | | | |
| | Room Atlas Oral Session 6 Topic 7: Materials & new products Chairman : Jackie YING, Institute of Bioengineering and Nanotechnology, Singapore Cochairman : Gilles Le FLEM, ICMCB, France | Room Palmeraie Oral Session 7 Topic 2: Phosphate beneficiation Chairman : Patrick ZHANG, Florida Industrial and Phosphate Research Institute, USA Cochairman : Ahmed ZNIBAR, OCP, Morocco | | Room Roseaie Workshop 4 16:00 – 18:30 | Room Olivraie Workshop 5 16:00 – 18:30 |
| 16:00 - 16:20 | AP-O-06: Fluorine Recovery Technology (Introduction of the Production of Anhydrous Hydrogen Fluoride (AHF) from Fluorosilicic Acid) <u>Songlin Liu, Wengfu (Group) Co.</u> , China | BN-O-01: Beneficiation of Indian Low Grade Rock Phosphates – A Few Case Studies <u>Arun Kumar MAJUMDER</u> , Jayanta BHATTACHARYA, Kaushik DEY, Indian Institute of Technology, India | Posters & exhibitions | Surface Miners: Current Applications and Research in Equipment Selection | Deposits and fouling issues in Phosphoric Acid and Fertilizer Plants: comprehensi |
| 16:20 - 16:40 | AP-O-07: Cathode Materials for High-Performance Li-Ion Batteries - A New Opportunity for the phosphate Industry <u>Fabrice RENARD</u> , PRAYON SA, Belgium | BN-O-02 : Pilot scale direct flotation of a phosphate ore with silicate-carbonate gangue <u>Antonio E. C. PERES</u> , UFMG, Brazil | | | |
| 16:40 - 17:00 | AP-O-08: New process to convert phosphate rock into animal feed phosphate | | | | |

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| | Marc SONVEAUX, EcoPhos S.A., Belgium | | | | on approaches and suggested solutions |
| 17:00 - 17:20 | AP-O-09: Fabrication de phosphates alimentaires DCP et MCP au Maroc Phosphore SAFI M. ZEMMARI, OCP, Maroc | BN-O-04: Collector Developments for Complex Phosphate Ores Johan SIIRAK, AkzoNobel Surface Chemistry, Sweden | | | |
| 17:20 - 17:40 | AP-O-10: L'obtention de matériaux polymères phosphonés et leurs applications. Claire NEGRELL-GUIRAO, Institut Charles Gerhardt de Montpellier, France | BN-O-05: Surface Tension Measurement for Optimization of Flotation Control Axel KRAMER, ABB Switzerland – Corporate Research. | | | |
| 17:40 - 18:00 | AP-O-11: Iodine Recovery Technology (Introduction of the Recovery of Iodine from Phosphate) Xuelin LEI, Wengfu (Group) Co., Ltd., China | BN-O-06: Développement des modes d'enrichissement des phosphates à OCP pour la satisfaction des clients, cas de Khouribga, MM. ALOUANI et MOUNTASSIR, GROUPE OCP. | | | |
| 18:00 - 18:20 | AP-O-12: Manufacture of High-Bulk Density aluminium fluoride from fluosilicic acid, Alain DREVEYON, AD Process Strategies Sarl, Switzerland | BN-O-07: Tailing Re-beneficiation Technology Yuxiang TUO, Wengfu (Group) Co., Ltd., China (presented by Aigbe Sylvester) | | | |
| 18:20 - 18:40 | AP-O-13: Production of Granular Ammonium Sulfate from Phosphogypsum Bangjie ZHAO, Wengfu (Group) Co., Ltd., China | | | | |

Friday, may 13th 2011

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| Atlas Room | | | | | |
| PLENARY SESSION 5: Topic 4: Phosacid and Fertilizer | | | | | |
| Chairperson : Mack BARBER, Consultant to the Fertilizer Industry, USA Co-Chairperson : Vaughn ASTLEY, Dr Phosphate Inc., USA | | | | | |
| 08:00 - 08:45 | Plenary Lecture 5: Phosphoric acid Technologies History, Evolution and future perspectives, Christopher EARL , KEMWorks Technology, Inc. , USA & M. BELGHITI ALAOUI OCP, Morocco | | | | Room Palmeraie |
| 08:45 - 09:10 | Key note10: Scale-Up challenges in Chemical Engineering: the role of the Chemical Engineers in the 21st Century. Jocelyn DOUCET, KENGTEK, Canada | | | | Novelty Show Session 4: MPC |
| 09:10 - 09:35 | Key note11: le développement des procédés au service de la création de richesses et du développement durable. Ismail. AKALAY, Directeur Général MANGEM – Groupe SNI - Maroc | | | | ENDRESS HAUSER Flowmeters calibration |
| 09:35 - 10:00 | Key note12: Development in Fertilizer technology David M. IVELL, JESA, Morocco | | | | |
| 10:00 - 10:30 | Exhibitions & Coffee break | | | | |
| | Atlas Room Oral Session 8 Topic 4: Phosacid and Fertilizer Chairperson : Paul WATERS, JESA, Morocco CoChairperson : Brahim MOUFID, OCP, Morocco | Toubkal Room Oral Session 9 Topic 4: Phosacid and Fertilizer (Technology) Chairperson : Marten WALTERS, KEMWORKS Technology Inc, USA CoChairperson : Vaughn ASTLEY, Dr Phosphate Inc., USA | Palmeraie Room Oral Session 10 Topic 6: Industrial Management Chairperson :Jocelyn DOUCET, KENGTEK, France CoChairperson : EL BARAKA El Motaouikil, OCP, Morocco | | Room Roseraie Workshop 6 10:30 – 12:30 |
| 10:30 - 10:50 | PH-O-09: The utilization of the raffinates from the phosphoric acids in the production of “economically viable commercial fertilizers.” John SINDEN, JSA LTDA, Brazil | PH-O-14: Recent Improvement of granulator pipe reactor for the production of granular ammonium phosphate. Donal S. TUNKS, JESA, Maroc/USA | IM-O-01: Reducing Costs Through Better Asset Management. Robert HALL, UBC, Canada | Posters & exhibitions | Safety management in mining and chemicals |
| 10:50 - 11:10 | PH-O-10: Cooling fertilizers and phosphates: By rotary drum or Fluid bed? Daniel PLACED, COMSPAIN, Spain | PH-O-15: How to increase the overall output of phosphoric acid evaporation loops while reducing their total cost of ownership Loic BERNARD, SGL | IM-O-02: Avoiding pitfalls in feasibility studies Frank S. HICKS, Jacobs Engineering S.A., Morocco | | |

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| | | Group, France | | |
| 11:10 - 11:30 | PH-O-11: Use of Baghouses in a DAP Plant <u>David M. IVELL</u> , JESA, Morocco | PH-O-16: Optimizing Agitator Design for Phosphoric Acid Reactor Duty <u>Todd HUTCHINSON</u> , Philadelphia Mixing Solutions, Ltd., USA | IM-O-03: Keys to success for fertilizer plant projects OCP Experience , <u>Mohamed BELGHITI ALAOUI</u> , OCP SA., Maroc | |
| 11:30 - 11:50 | PH-O-12: Integration of the pipe reactor technology in existing granulation plant to improve the capacity, the energy consumption, the quality of the product and the easiness to conduct the operation <u>Svet VALKOV</u> , SNC-Lavalin, Belgium | PH-O-17: Mersen mixers: An innovative design combining process optimisation and energy efficiency <u>Jean Noël FERNANDEZ</u> , Mersen, France | IM-O-04: Design Technologies And Engineering Construction , <u>Kébir RATNANI</u> , SNC-LAVALIN, Maroc. | |
| 11:50 - 12:10 | PH-O-13: Improving Phosphorus Use Efficiency with Polymer Technology <u>James PERKINS</u> , Specialty Fertilizer Products, USA | PH-O-18: Mersen heat exchangers: Innovations that guarantee reliability, lifespan and energy efficiency <u>Laurent TRABLY</u> , Mersen, France | IM-O-05 : Comment obtenir un échantillon représentatif ?...une brève introduction au monde de l'échantillonnage. <u>Philippe DAVIN</u> , ITECA SOCADEI, France | |
| 12:10 - 13:30 | Lunch | | | |
| | Atlas Room PLENARY SESSION 6: Topic 6: Agriculture & Fertilization Chairperson : <u>Amit ROY</u> , IFDC, USA Co-Chairperson : <u>Mohamed BADRAOUI</u> , INRA, Morocco | | | |
| 13:30 - 14:10 | Plenary Lecture 6: Phosphorus in agriculture and how things are likely to change over the next 40 years and so. <u>Donald Lawrence Smith</u> , McGill University, CANADA | | | Room Palmeraie Novelty Show Session 5 |
| 14:10 - 14:30 | Key note13: Sustainable agricultural practices impact on phosphate rock production <u>James L. HENDRIX</u> , University of Nebraska-Lincoln, USA | | | |
| 14:00 - 14:50 | Key note14: Beneficial microorganisms for the sustainable use of phosphates in agriculture <u>Hani ANTOUNE</u> , Université de Laval, Canada | | | |
| 14:50 - 15:10 | Key note15: Global food security and the role of fertilization in supporting it. <u>Mike STEWART</u> , Director for the southern and Central Plains region, IPNI - USA | | | |
| 15:10- 15:30 | Discussions | | | |
| 15:30 - 16:00 | Coffee break + Exhibitions | | | |
| | Toubkal Room Oral Session 11 Topic 4: Phosacid and Fertilizer Chairperson: <u>Paul SMITH</u> , Vale, Brazil CoChairperson: <u>ENNAICH El Mestafa</u> , OCP, Morocco | Palmeraie Room Oral Session 12 Topic 5: Environment & sustainable development Chairperson: <u>Abdelhak KABBABI</u> , Groupe OCP Morocco CoChairperson: <u>Serge VIGNERON</u> , LESNI A/S, France | Roseraie Room Workshop 7 16:00 – 18:30 | Olivraie Room Workshop 8 16:00 - 18:30 |
| 16:00 - 16:20 | PH-O-19: Purification of Wet Process Phosphoric Acid via Membrane Technology <u>Howard SKIDMORE</u> , JR Simplot Company, USA | EN-O-06 : Water - the other resource a mine needs to estimate. <u>Houcayne EL IDRYSY</u> , SRK Consulting Limited, UK | Sulfuric acid production: Energy enhancement environment management and new development | The performance culture within large industrial Groups: a necessity for achieving manufacturing excellence. |
| 16:20 - 16:40 | PH-O-20: Purified Phosphoric Acid (PPA) Technology and Elect-Grade Phosphoric Acid (EPA) Technology <u>Li HONGLIN</u> , Wengfu Group Co., Ltd., China (Presented by Aigbe Sylvester) | EN-O-07 : Solar energy for water desalinisation <u>Pascale COMPAIN</u> , Bertin Technologies, France | | |
| 16:40 - 17:00 | PH-O-21: The History, Operation and Maintenance of the J.R Simplot Company Phosphate Ore Slurry Pipeline Systems. <u>James A.SAMUELSON</u> , J.R.Simplot, USA | MN-O-08: Engrais OCP à base de RPR (Reactive Phosphate Rock) <u>Joël Joffre</u> , Agricultural Input Strategies, France | | |
| 17:00 - 17:20 | PH-O-22: Polymeric Filtration | EN-O-09 : Water Management in | | |

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| | Aid: "Two Decades of Lab and Plant Observations – the Rest of the World" Louis Paul IRWIN, ArrMaz Custom Chemicals, USA | Phosphoric Acid Plants Paul S. WATERS, JESA Maroc. | | |
| 17:20 - 17:40 | PH-O-23: Thermochemical modelling of aluminium behaviour in the context of wet-process phosphoric acid production (25 < T < 100°C) Mohamed AZAROUAL, BRGM, France | EN-O-10: Mine Water and Energy issues Olivier RIETJENS, VEOLIA Environnement et Dalkia International, Maroc | | |
| 17:40 - 18:00 | PH-O-24 : Élimination du magnésium de l'acide phosphorique par précipitation : optimisation par les plans d'expériences Hamid MAZOUZ, OCP SA. | EN-O-11: Innovations dans l'élimination des vésicules et panaches de fumées. Serge VIGNERON, LESNI A/S, Danemark | | |
| 18:00 - 18:20 | PH-O-25: FA1 filtration unit scrubbing liquor change from sea water to process water and economic analysis Mustafa YALIN, TOROS, Turkey | EN-O-12: Industrial wastewater control: Experience in Europe and Spain Felix RIPOLLES, IPROMA, Spain | | |
| 18:20 - 18:40 | PH-O-26: Operating Experience of Nitro Phos Plant ILTIFAT HUSSAIN, Arif UR REHMAN, Fatima Fertilizer Company Limited & Pakarab Fertilizers Ltd, Pakistan | EN-O-13: Les défis de l'innovation en matière de gestion et de valorisation des rejets fins des laveries de phosphate en zones arides et semi-arides Abdellah CHIK et Khalid ZAHOUILY, Photon&Polymers, France | | |
| 18:40 - 19:00 | Closing Ceremony | | | |

LES PRESENTATIONS AUX WORKSHOPS

Wednesday, may 11th, 2011

| Room Roseaie Workshop 1 16:00 – 18:30 | Room Olivraie Workshop 2 16:00 – 18:30 |
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| <p style="text-align: center;">Best management practices of Byproducts in the phosphate industry- Sludge and Phosphogypsum</p> <p>Chairpersons: A.KOSSIR, OCP, Morocco & B.K PAREKH, University of Kentucky- Center for Applied Energy Research, USA Secretary: OUANNANE – KABBABI, OCP, Morocco</p> | <p style="text-align: center;">New developments in phosphate flotation techniques : technologies and flotation reagents</p> <p>Chairperson: J.POUGET, Directeur technique de PST Industries Secretary : MOUNTASSIR , OCP, Morocco</p> |
| WS1-1 : A Novel Approach for Disposal of Phosphate slimes , B.K PAREKH, University of Kentucky- Center for Applied Energy Research, USA | WS2-1 : Nouvelle conception des unités de flottation des phosphates , ZNIBAR Ahmed, OCP. |
| WS1-2 : Expérience de l'OCP et axes de développement de la manutention et de la valorisation des boues de lavage , ALOUANI & MOUNTASSIR, OCP | WS2-2 : PST Industries Enrobants & Additifs , Jacques POUGET, Directeur technique de PST Industries |
| WS1-3 : Application of the FLSmith DEEP CONE thickening technology to the phosphate and fertilizer industry , Lee CONDREY, FLSMIDTH Salt Lake City | WS2-3 : DÉVELOPPEMENT DES TECHNIQUES DE FLOTTATION DES PHOSPHATES , ALOUANI & MOUNTASSIR, OCP |
| WS1-4 : Phosphogypsum Management/Utilisation , Yongbo ZHOU, Wengfu, China | WS2-4 : Advances in life cycle costs of Flotation machines , Kari FOHR, OUTOTEC |

Thursday, may 12th 2011

| Room Roseaie Workshop 3 10:30 – 12:10 Olivraie Room |
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| Enhancing Fertilizer Product Quality |
| Chairperson: , Donalds TUNKS – JACOBS Engineering, USA |
| Secretary : EL ABID AMRANI Badreddine, OCP, Morocco |

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| WS3-1 : Use of Process Chemicals and Additives for Enhanced Fertilizer Quality, and Performance , Joseph CHRISTENSON, ArrMaz Custom Chemicals |
| WS3-2 : Applications Engrais , James O'DONNELL, HORIBA |
| WS3-3 : Polymerising coatings , Andrews DUNCAN, Biofix intelligent agriculture. |

| Room Roseraie | Room Olivraie |
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| Workshop 4 16:00 – 18:30 | Workshop 5 16:00 – 18:30 |
| Surface Miners: Current Applications and Research in Equipment Selection Chairperson: Amine LAHRICHI , OCP, Morocco Secretary : M. ASRI , OCP, Morocco | Deposits and fouling issues in Phosphoric Acid and Fertilizer Plants: comprehension approaches and suggested solutions Chairperson: Mack BARBER, Consultant In fertilizer Industry USA Secretary : L. OMARI , OCP, Morocco |
| WS4-1 : Machine Salient Features , Andreas MARQUARDT, Wirtgen. | WS5-1 : Design to reduce Deposits and Fouling in Phosphoric Acid and Fertilizer Plants , Marten WALTERS, KEWWorks Technology, USA |
| WS4-2 : « Rock Properties and Estimation of Cutting Parameters »M. Jayanta Bhattacharya, Professor, IIT, India | WS5-2 : Lutte contre les incrustations dans un procédé d'acide phosphorique , Tomizio GUIDI, PRAYON SA, Belgique. |
| WS4-3 : “ Economics of Surface miner operation in India ” Dey KAUSHIK, Professor, Indian Institute of Technology, India. | WS5-3 : Modélisation thermo-cinétique des processus physico-chimiques à l'origine des problèmes de l'encrassement dans l'industrie des phosphates , MM. AZAROUAL & AMALHAY, BRGM, OCP |
| | WS5-4 : New bolt-on technologies for scale control and metals removal in Phosphoric acid production , RAVISHANKAR & TEOMAN, CYTEC, USA. |

Friday, may 13th 2011

| Room Roseraie |
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| Workshop 6 10:30 – 12:30 |
| Safety management in mining and chemicals Chairperson: A. ALOUANI , OCP, Morocco Secretary : M.SBAI, OCP, Morocco |
| WS6-1 : Comment développer une culture de sécurité pour atteindre l'excellence en sécurité , Nicolas BROCHERIEUX, Sté Dupont de Nemours, France. |
| WS6-2 : La maitrise des risques de grands complexes industriels : les facteurs clés de succès - l'exemple de l'OCP , CHEVALIER & MARZAL |
| WS6-3 : DEVELOPPEMENT DU SYSTÈME DE MANAGEMENT DE LA SECURITE A L'OCP ET SON DEPLOIEMENT SUR LE SITE DE KHOURIBGA , Mohamed SBAI |
| WS6-4 : Démarche de maitrise des risques professionnels et industriels au site de Safi : méthodes et outils , Ahmed SADIK, OCP Group, Morocco. |
| WS6-5 : Etude de Signalisation Sécurité Maroc Phosphore Safi , Omar BENAICHA, VERITAS MAROC. |
| WS6-6 : OCP Complexe Chimique de SAFI Retour d'expérience en matière d'analyse des risques industriels , CHEVALIER & MARZAL, APSYS |
| WS6-7 : Management intégré QSE , Khalid MISSAOUI , Directeur général, CNAPP. |

| Roseraie Room | Olivraie Room |
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| Workshop 7 16:00 – 18:30 | Workshop 8 16:00 - 18:30 |
| Sulfuric acid production: Energy enhancement, environment management and new development Chairperson: Kathy Hayward, Sulfuric Acid Today - Covington, (USA) Secretary : M.HANINE, OCP, Morocco | The performance culture within large industrial Groups: a necessity for achieving manufacturing excellence. Chairperson: Bernard LE BRAS, (Ex- Président de Région de Lafarge et Directeur des Performance Cimentières du Groupe Lafarge) Secretary : EL OUAZGUITI, OCP, Morocco |

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| WS7-1 : « 'Ultra Large Sulfuric Acid Plants' Garret Palmquist , MECS Global, St. Louis, Missouri USA | WS8-1 : La transformation opérationnelle de l'OCP, un grand pas vers l'excellence industrielle Amine LOUALI & DERRIJ Faris |
| WS7-2 : « Sulphur Technology and Operations » Les LANG, BRIMROCK Group Inc. Canada. | WS8-2 : Gestion intégrée des Opérations Industrielles chez DuPont Bernard CHARIOU, DuPont de Nemours |
| WS7-3 : « Improved Acid Plant Reliability through Modern Gas/Gas Heat Exchanger Designs» , Alfred Guenkel, NORAM Engineering and Constructors Ltd. Vancouver, BC Canada. | |
| WS7-4 : « Catalyst Handling/Screening» Jack HARRIS, VIP International, USA. | |
| WS7-5 : « Prolonging production cycles with dust protection catalyst» Marie Vognsen, Haldor Topsøe A/S, Denmark, mavo@topsøe.dk | |
| WS7-6 : « New developments in Sulphuric Acid Plants» Michael Kemmerich's, Outotec Gmbh Ludwing-Erhard-Strasse 21 61440 Oberursel, Germany | |
| WS7-7 : « O4-116 BASF's New High-Performance Catalyst For Last Bed Application » Thomas LAUTENSACK , BASF SE, Germany | |

LES POSTERS PRESENTATIONS

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| Poster1 : Production of micro-granular dcp/mcp , John SINDEN, JSA Ltda, Brésil | Poster3 : Traitement passif des effluents de la mine Kettara à l'aide des calcaires résiduels des exploitations minières des phosphates , OUKIBI Omar , FST Marrakech. | Poster5 : Adaptation des qualités d'acide phosphorique OCP au besoin du marché , Kamal SAMRANE, Groupe OCP, Maroc. |
| Poster15 : Rare-earth elements characterization in naturel apatite: microprobe analyses and coupled SEM/CL spectroscopy , Mohamed NASRAOUI, Institut Polytechnique LaSalle Beauvais & École Nationale Supérieure des Mines de Saint-Étienne | Poster6 : Micro granulation des phosphates downstream , Abdelaziz HAKAM, Groupe OCP, Maroc. | Poster7 : Fabrication des Superphosphates SSP&TSP à partir des Phosphates DOWN STREAM , Abdelaziz HAKAM, Groupe OCP, Maroc. |
| Poster8 : Traitement d'acide phosphorique : décadmiation par additif . Naoual MAKHOUKHI, Groupe OCP, Maroc. | Poster10 : La silification des phosphates marocains: typologie génétique et conséquences industrielles , Hamid EL HADDI, FSBM de l'Université Hassan II-Mohammedia, | Poster21 : Hyperbaric Filtration after Pipeline Transport of Various Ores , RAINER Raberger,Andritz, Australie. |
| Poster22 : L'opération de rénovation de la virole du tube sécheur en 9 jours , Driss OUSSI, Groupe OCP, Maroc | Poster23 : Conception des stations de chargements des trains de phosphate , Zakaria BOUAINI, Groupe OCP, Maroc | Poster24 : Elimination des poussières dans les pistes de roulage des camions de chantiers et dans les installations minières , Othmane FILALI, CM2D. |
| Poster20 : Reactive transport through unsaturated zone of soils and the fate of pollutants: numerical modeling of the main physical chemical and geobiochemical processes , Mohamed AZAROUAL, BRGM, France | Poster13 : Détection de dérangements par le géoradar GPR à basse fréquence dans le bassin phosphaté de Sidi Chennane (Khouribga, Maroc) , Nora EL ASSEL, FST Marrakech | |

LES PRESENTATIONS AUX NOVELTY SHOW - Room Palmeraie

Novelty Show

Session 1: MERSEN

New technologies and new materials by **MERSEN** for phosphate industry

-Welcome Note and program presentation , Ernest TOTINO

-Welded plate heat exchangers innovation

Jean-Noël FERNANDEZ

-MERSEN, a growing company with new technologies and sustainable markets

Laurent TRABLY

-Uranus mixer for corrosive environment

Erik LOISEAU.

Novelty Show
Session 2: TEKFEN

-**TEKFEN** Construction's Company Presentation
-DAP Fertilizer Plants 107 B&C.

Novelty Show
Session 3: ABB

New technologies and new projects by **ABB** for phosphate industry

-Welcome Note and program presentation, Decision manager (Youssef Achhoubi)
-"ABB Mineral Processing Added Value" Mr Abdellah Nahdi : ABB Switzerland
"ABB State of the Art Grinding Solutions" , Mr Abdellah Nahdi : ABB Switzerland
-Gas analysers solutions & Environnement impact, Mr Carlos Herraiez : ABB Spain

Novelty Show
Session 4: MPC

ENDRESS HAUSER Flowmeters calibration