



INTERNATIONAL PUMP USER CONFERENCE

MTN Expo Centre, Johannesburg

13-15 September 2011

ADAPTING PUMPING SYSTEMS FOR AN ERA OF LIMITED AND EXPENSIVE POWER

Main Topics

In the past pumping systems were designed around abundant and cheap electricity - now the power supply is limited, unreliable and increasingly expensive.

IPUC 2011 brings together leading local and international experts to present the latest developments from around the world and show how to modify existing systems without incurring a crippling financial burden.

Technical papers and case studies to be presented include the following topics:

- The various funding mechanisms available in South Africa.
- Latest developments in water and slurry pump design.
- Sustained pumping system efficiency in wastewater pumping.
- In situ motor efficiency testing.
- Pumping issues around acid mine drainage.
- Energy and maintenance reduction strategies in parallel pumping systems.
- Energy efficiency opportunities in coal washing plants.
- Optimising a bulk water supply pump station.
- Savings opportunities in agriculture.
- Improving pump reliability in the process industry.

CPD Accredited



Keynote Speakers

Gunnar Hovstadius Phd

UNIDO Pump System Optimisation Project in SA

Gunnar has more than 30 years of experience in Engineering and Technology management, mostly within ITT Fluid Technology Corporation as Director of Technology. He has served on the steering committee of the U.S. Motor Challenge/Best Practices Program and is deeply involved with governments, NGOs and trade organizations and has been selected by U.S. DOE as a leading international expert.



Andrew Etzinger MD Eskom IDM

South Africa's energy supply shortage, what is being done about it?

Andrew is a Senior General Manager, currently responsible for Eskom's integrated demand management programme which involves collaboration with business and society to reduce the demand for electricity through energy efficiency, whilst growing South Africa's economy



Larry Bachus "The Pump Guy"

The Pump Operator's Contribution to Energy Conservation

Larry has more than 30 years of experience in the industrial pump arena. He teaches pump improvements courses at major plants and industries all over the world and has written a book Everything You Need To Know About Pumps.



Steve Schofield Technical director BPMA

The European position on Product, Extended Product, and System approach

Steve is responsible for a device to members on 19 existing directives emanating from Europe and responsible for all BPMA's technical, training, IT, standards, legislative and energy related activities. Steve has also been the main driver for introducing a nationally accredited on-line qualification in Pumping Technology.

Post Conference Workshop Pumping System Assessments

15 September 2011

In this full-day workshop a panel of experts will examine in detail various aspects of an assessment and expand on their presentations from the Conference in an interactive forum.

Gunnar Hovstadius will look at the new assessment standard

Steve Schofield discusses the European approach

Harry Rosen summarises the techniques required

Carl Malcomess looks deeper into financing options

Case studies from the USA, Europe and South Africa will be examined

Delegates will leave this workshop with a working knowledge of how to conduct an assessment of their own systems, the main things to look out for, possible remedies to the most frequent problems and the options for financing improvement projects.

CPD Accredited

Delegat e Fees

IPUC Conference

2 day conference	R6 500
SAIMechE members	R5 850
Foreign delegates	€ 725

WISA Conference

Half day conference	R1 800
WISA members	R1 300

Pump Assessment Workshop

R3 500

Sponsorship opportunities

Platinum Sponsorship	R50 000
Gold Sponsorship	R35 000
Silver Sponsorship	R25 000
Bronze Sponsorship	R15 000

WISA Conference

15 September 2011

Mining, Industrial & Municipal Water Reclamation/Re-use

This half-day conference addresses what is undoubtedly a current 'hot button' in the Water Industry. Government speakers will discuss the latest strategies and perspectives will be given from the mining and industrial sectors. A municipal case study will show what can be achieved and consulting engineers experienced in this field will look at local and international developments

For more details of the WISA program [click here](#)



13-15 September 2011

The co-located **AFRIWATER 2011** exhibition will provide an important platform for companies involved in the water and waste industry, with a view to offering solutions, products and services to all those endeavoring to preserve this precious resource.

Since the inception of **AFRIWATER** in 1994, this exhibition has played an important role in the water, waste and environmental forum.

SPECIALISED EXHIBITIONS, in partnership with **WISA**, aim to bring you an affordable and meaningful exhibition as a platform to promote discussion, a showcase for your products and services and ultimately the facility to build relationships with important players in the market, with a view to implementing sales.



For Afriwater information please contact:

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IPUC 2011 PROGRAMME OF SPEAKERS

Tuesday 13 September 2011

Wednesday 14 September 2011

7:30 - 8:30 TEA and REGISTRATION

- 8:30 **Welcome**
Official opening address by invited dignitaries
- 8:40 **Andrew Etzinger** Eskom
SA's energy supply shortage and what is being done about it
The South African electricity supply situation, which will remain under pressure for several years, offers a great opportunity for energy efficiency programme implementation. The presentation will provide an overview of the current electricity supply situation and the measures in place to deal with it over the short to medium term. Eskom's demand-side management programme will be covered in a fair degree of detail
- 9:20 **Gerswynn Mckuur** UNIDO
Industrial Energy Efficiency Improvement Project in South Africa
This project aims at capacity building in South Africa regarding energy management as well as optimization of pumps, compressed air, fans and process heating systems. It includes awareness seminars and training of end-users, vendors as well as experts. The presentation will also focus on the pump system component of the project
- 10:00 **Gunnar Hovstadius** International Pump Expert (USA)
Pumping system assessments in USA and how to apply them in SA
The UNIDO project in South Africa aims to train a group of experts on how to assess and optimize pumping systems. The assessments will be conducted according to the ASME EA-2-2009 assessment standard which will support the new ISO 50001 standard for Energy Management Systems. The assessment standard will be reviewed in detail

10:40 - 11:00 MORNING TEA

- 11:00 **Awie Bosman** ABB
Achieving sustainable energy savings in industry
The paper proposes a structured and holistic approach to energy management. It illustrates how changes made to a pumping system can affect the rest of the process, as well as how energy savings initiatives in the rest of the process can create more savings opportunities in the pumping system.
- 11:40 **Greg Adcock** TAS Online
Case Study - Slurry pumps in the mining industry
A practical look at energy efficiency savings opportunities and the outcome of pump performance assessments at coal washing plants.
- 12:20 **Graeme Harding** Magnet Engineering
Case Study - Water pumps in the pulp and paper industry.
Optimizing energy savings and load shifting capabilities at a water treatment and bulk water pumping station

13:00 - 14:30 LUNCH & EXHIBITION

- 14:30 **Willem van der Westhuizen** Corporate Pump Consultant
So what did we learn about pumps in the past 20 years? An Eskom pump story experience
Highlighting the most important pump related challenges and experiences facing the critical pumps at Eskom power stations over the past 20 years
- 15:10 **Keith Gass** Verder Pumps SA
Acid Mine Drainage - Can we fix the problem?
Peristaltic dosing pumps used as part of the process to rectify the pH balance of acid mine water. Case study on a waste water treatment plant focusing on cost of ownership, plant performance and availability, reliability and dosing accuracy
- 15:50 **Andrew Robbins** AngloGold Ashanti
In situ motor efficiency testing
Investigating a practical way to measure motor efficiencies on site by concentrating on measuring power at the coupling in situ

16:30 CLOSE OF DAY 1

8:00 - 8:30 TEA

- 8:30 **Welcome**
Dave Athey - Weir Minerals
- 8:40 **Steve Schofield** Deputy Director, British Pump Manufacturers Association (UK)
The European position on energy efficiency in pumps and pumping systems
The product, extended product and system approach for pumps and pumping systems have been accepted by the European Commission for implementation across Europe. An up to date review of the above and how they can offer significant energy savings.
- 9:20 **Stefan Abelin** ITT Water and Wastewater (Sweden)
Sustained pump efficiency in wastewater pumping
This paper describes the research and field testing of pump efficiencies and defines and explains the concept of "Sustained Pump Efficiency", a critical parameter for energy efficient pumping in solids handling application such as wastewater pumping
- 10:00 **John Tonkin** JTA
Energy and maintenance reduction strategies in parallel pumping systems
The negative effect of operating standby pumps on a continuous basis, including the effects of re-circulation cavitation will be examined. The role of management in fostering an atmosphere of good communication and relationships between operations, maintenance and planning will also be covered.

10:40 - 11:20 MORNING TEA & EXHIBITION

- 11:20 **Murray Jooste** Weir Minerals
Energy efficient slurry pumping applications
Current best practice regarding the energy efficient transportation of slurries and water using centrifugal pumps in mining and industrial applications.
- 12:00 **Trinath Sahoo** M/S Indian Oil Corporation Ltd (India)
Strategies to improve reliability of centrifugal pumps in process industries
Focus on the major factors affecting centrifugal pump performance in process plants including the efficiency of the pump and system components, overall system design, efficient pump control, appropriate maintenance cycles and process conditions
- 12:40 **Chris Rose** SPP Energy (UK)
Selected case studies from industry
Demonstrating how companies can make reductions in energy consumption and system running costs of more than 20% and sustaining these improvements through the ongoing thermodynamic or ultrasonic monitoring of pump systems.

13:20 - 14:00 LUNCH

- 14:00 **Larry Bachus** 'The Pump Guy' (USA)
The pump operator's contribution to energy conservation
How the engineer and operator can work together to conserve energy with efficient pump operation. Interesting case studies from the archives of the "Pump Guy"
- 15:00 **Christo van der Merwe** Energy Cybernetics
Measurement and Verification of Pumping Systems.
This paper will describe the measurement and verification methodology that is used to accurately and independently assess and quantify the impacts obtained from energy efficiency activities on pumping systems in the industrial sector, with particular reference to the incentive schemes currently available. A case study is also provided to illustrate the methodology.
- 15:45 **Dr. Chris Carmody** AESSEALS (UK)
Energy saving considerations for pump seals and systems.
The selection of efficient ancillary equipment such as seals can provide large potential for overall energy savings and reductions in environmental damage. The paper also compares gas seals with equivalent wet seal technology and focuses on the environmental impact that pumping technology is having on legislation

16:30 CLOSE OF DAY 2

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Pumping System Assessments Workshop

Thursday 15 September 2011

Accredited for 1 CPD point

R3,500 + VAT



A panel of experts will examine in detail various aspects of an assessment and expand on their presentations from the Conference in an interactive forum. Delegates will leave this workshop with a working knowledge of how to conduct an assessment of their own systems, the main things to look out for, possible remedies to the most frequent problems and the options for financing improvement projects.

PROGRAMME

Assessment Standards - Gunnar Hovstadius (UNIDO International Expert)

ASME EA-2-2009 - Energy Assessment Standard for Pumping Systems

- Provides a common understanding of what should be included in a pump system assessment to replace the lack of a standardization for pump systems previously evaluated as part of an energy evaluation, audit, survey or energy study.
- Defines specific requirements that must be performed for different assessment levels.

ASME EA-2G-2010 - Guidance Document

- Provides a common understanding of what should be included in a pump system assessment to replace the lack of a standardization for pump systems previously evaluated as part of an energy evaluation, audit, survey or energy study.
- Defines specific requirements that must be performed for different assessment levels.

The European product based approach to pumps - Steve Schofield (Technical Director, BPMA)

- ECODESIGN Directive 2005/32/EC
- The European Commission study on water pumps
- Domestic circulator pumps
- Europump extended product approach

Carrying out a pump assessment - Harry Rosen (UNIDO Local Expert)

The Systems Approach

- Pump system reliability and maintenance
- Motor considerations
- Control Methods
- VSD Applications

Conducting the Assessment

- Pre-screening
- Data collection - what and how
- Instrumentation requirements
- Data logging

The Assessment Report

- Structuring the report
- Presenting findings
- Motivating change
- Finance considerations

Post Assessment action plan

UNIDO Industrial Energy Efficiency Programme - Gunnar Hovstadius, Harry Rosen

- Pump System Optimisation Project
- Local expert training programme
- How to qualify for a free plant assessment

Case studies from USA, Europe and SA

- These will be discussed in detail

Energy efficiency incentives for pumping systems - Lawrence Padachi (Eskom)

Eskom Independent Demand Management division has recently released a number of new and revised schemes which are appropriate to projects which arise from pumping systems assessments. Lawrence will discuss the characteristics of each scheme and recommend the best fit between schemes and varying project types

Measurement and Verification - Christo van der Merwe (Energy Cybernetics)

The measurement and verification (M & V) required by energy efficiency schemes on pumping systems will be discussed by the leading independent M & V practitioners in SA.

Financing pumping systems improvements

Pumping systems are not low-cost items, so a company embarking on an improvement project is facing a potential financial nightmare! The Board is only too aware of this - how does the Engineer or CFO present his case for an improvement project, particularly as it has to compete with a myriad of other more traditional Capex opportunities?

The good news is that the South African Government is keen to incent companies to save power through a series of schemes operated through Eskom and by 'carrot and stick' measures involving tax rebates and punitive tariffs. Overseas aid and local funding are also available in addition to banks and financial services companies' offerings

The Workshop format will provide time to examine the pros and cons of each solution in more depth than was possible in the paper delivered at IPUC.

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IPUC REGISTRATION FORM
International Pump User Conference & Workshops 13-15 September 2011
MTN Expo Centre, Nasrec, Johannesburg, South Africa

How to enroll:

- 1) Register on-line at www.ipuc.co.za or complete this registration form and fax it to Veriza Smith (see details above)
- 2) Acknowledgement will be faxed or emailed to you.
- 3) Final confirmation and details will be faxed or emailed to you approximately 7 days before the commencement of the conference.

4) **Registration is still open.**

Conditions of enrolment:

- 1) Cancellations are accepted **in writing** and without penalty, up to 7 working days prior to commencement of the conference.
- 2) Delegates cancelling **in writing** less than 7 working days prior to commencement of the conference will be liable to pay 20% cancellation fee.
- 3) If prior **written** notification of cancellation is not received, defaulter will be liable to pay 50% cancellation fee.
- 4) In case of insufficient registrations, IPUC reserves the right to cancel the conference. Applicants will be informed and all fees will be refunded immediately.

Delegate Information

Title: Surname:..... First Name:.....

Full Company Name:..... Job Title:.....

Postal address (to which invoice must be sent): VAT number:.....

.....

..... Code:.....

Tel: ()..... Fax: ().....

Cell:..... Email:.....

WISA Membership number:..... SAIMechE Membership number:.....

Contact / Accounts Information

Title: Surname:..... Name:.....

Tel: ()..... Fax: ().....

Cell:..... Email:.....

Conference Rates

2 Day Pump (13-14 Sept): R6500.00

Half Day WISA (15 Sept): R1800.00

WISA Members (15 Sept): R1300.00

Foreign

2 Day: \$1100.00

Half Day: \$300.00

Workshop (WS) Rates

1 Day Workshop (15 Sept): R3500.00

Foreign

1 Day: \$590.00

SAIMechE and WISA members 10% off IPUC conference and workshop

All prices exclude VAT @ 14%

please tick relevant

I have read and agreed to all the conditions of enrolment as stipulated in this brochure.

Signature

Date