

CHEMICAL ENGINEERING DECEMBER 2009 IN AUSTRALIA

NEWS

Produced by Engineers Media, Engineers Australia's publishing company, for the IChemE in Australia and the Chemical College of Engineers Australia. The statements made or opinions expressed in this newsletter do not necessarily reflect the views of Engineers Australia or the Institution of Chemical Engineers in Australia.

EDITOR: Dietrich Georg – dgeorg@engineersmedia.com.au

Chemical engineer takes highest engineering honour

Engineers Australia has presented its most prestigious individual award for 2009, the Peter Nicol Russell Memorial Medal, to chemical engineer Professor Mike Dureau. The announcement was made last month at Engineers Australia's Annual General Meeting in Canberra.

"Mike Dureau has contributed enormously to Australia's wellbeing as an industry leader, and generously through his contributions to the engineering profession, education and the community," said the citation. He retired from ABB Alstom Power in Australasia from the position of president and he is now the chair and executive director of the Warren Centre for Advanced Engineering in Sydney. He also chairs disaster relief agency RedR Australia.

In September Dureau already received



Mike Dureau

the 2009 Chemeca Medal, Australasia's highest individual chemical engineering award.

Sir Peter Nicol Russell ran a foundry and engineering business in Sydney in the late 19th century, and donated money to support the School of Engineering at the University of Sydney and the Engineering Association of NSW, a precursor of Engineers Australia. In his memory, Engineers Australia established the annual award for notable contributions to engineering.

Previous winners of the medal last century include the first president of the Institution of Engineers Australia William Henry Warren, noted engineer and soldier Sir John Monash and the designer of the Sydney Harbour Bridge and railway network Dr John Bradfield.

To view a video of Dureau's acceptance speech, go to tinyurl.com/pnrmedal

Nicklin Medal awarded for the first time

A prize in memory of one of Australia's most respected chemical engineering academics, the late Professor Don Nicklin, was awarded for the first time last month at the 2009 IChemE awards in York in the UK.

UK recycling company Rocktron was the inaugural winner of the IChemE Nicklin Medal, sponsored by BP. The medal was the top prize in the 2009 awards program, presented to the best entry from all categories.

Rocktron received the prize for its eco-mineral processing plant, designed to produce economically viable products from powerstation fly ash or pulverised fuel ash with no waste or effluent. The plant can store fresh and stockpiled fly ash, and the process uses pneumatic flotation cells, specially designed for fine particle separation.

Nicklin, who died in 2007, was a past chair of IChemE in Australia, head of chemical engineering at the University of Queensland and a successful consultant with positions on several industrial institutes and research bodies.

He was chairman at Austa Energy Corporation and the Centre for Mining Technology and Equipment. He held positions on the board of the Sugar Research Institute, the Industry Research and Development Board and the Prime Minister's Science, Engineering and Innovation Council.

The medal was unveiled during ChemEng 08 in Birmingham, UK, by Russell Scott, the chair of IChemE in Australia at the time. "Don was a legendary figure

in Australia, a man who was widely recognised for his outstanding achievement and innovation in chemical engineering and technology," he said.

While on the Board of the Queensland Museum, Nicklin was instrumental in setting up the Queensland Science Centre and chaired its management committee. He received the Chemeca Medal in 1987.

Nicklin's sons Ben and Jack presented the medal to Rocktron's Phillip Michael.

OFFICE CLOSURE

The IChemE in Australia office will be closed from Thursday 24 December to Monday 4 January. We wish all our members a very enjoyable festive season and look forward to doing it all again in 2010. Best Wishes – Jan, Tanya, Sally, Trish & Victoria.

For a message from Engineers Australia's Chemical College see page 5.

CONTENTS

News	1
Chemeca 2010	4
Chemical College	5
IChemE	7
New products	9

CHEMICAL ENGINEERING DECEMBER 2009 IN AUSTRALIA

NEWS

2



A picture of a similar thickener tank constructed at BHP Billiton's Mt Arthur coal mine in the Hunter Valley in NSW.

Thickeners for PNG gold mine

The Australian arm of FLSmidth Minerals has been awarded a contract to supply two elevated thickeners for the expansion of the Lihir Island gold mine in Papua New Guinea.

The two thickeners, each measuring 48m in diameter and equipped with a hydraulic bridge drive, will be designed and fabricated in Australia. The company has operations in Gosford north of Sydney, and Melbourne. The fabricated pieces will be delivered by barge and assembled on site.

As part of the design process, FLSmidth and Lihir Gold staff investigated underflow capacities of the range of ore blends the thickeners could be processing. These test results suggested the overflow clarity and underflow densities that can be achieved.

The tanks will be elevated to maximise underflow capacity and reduce the chances of blockage.

They are also designed to improve the safety of operational and maintenance personnel, who would enjoy unrestricted

access to pumps and associated equipment.

The overall design of the thickeners and associated operational equipment has taken into account the high seismic activity in the area. Supported by steel network structures, the thickeners are designed to tolerate seismic events.

Final design is close to completion and construction fabrication is under way. Shipping is expected to start in April and final commissioning is scheduled for late 2010.



Board

Max Lu (chair)	Paul Taranto (Victoria)
Noel Williams (deputy chair)	Peter Ashman (South Australia)
Russel Scott (immediate past chair)	Ming Ang (Western Australia)
Lindsay Mallen (chair Nominations Committee)	Hendrik Tait (Queensland)
Ainslie Just (honorary treasurer)	Merv Jones (NSW)
	Matt Hardin (Roadmap Project)

Executive Director

Jan Althorp

Suite 11– 2/488 Bourke St, Melbourne, 3000

phone 03 9642 4494 fax 03 9642 4495

jalthorp@icheme.org



ENGINEERS AUSTRALIA

College of Chemical Engineers Board

Elizabeth Harangozo (chair and Council nominee)	Zvonko Pregelj (Queensland)
Georgina Wright (deputy chair, Victoria)	Debashis Raha (Sydney)
Michelle Thompson (Women in Engineering representative)	Daniel Edge (Newcastle)
Roger Kelson (Western Australia and NCO & G chair)	Patrick McMullan (Council nominee and NCF & E chair)
Tanja Stefanovic (South Australia)	Brian O'Neill (Council nominee)
	Andre Jemison (Young Engineers)
	Brandon Wai Meng Lee (corresponding)

College contact

Bill Chaffey

11 National Circuit, Barton ACT 2600

phone 02 6270 6558 email chemicalcollege@engineersaustralia.org.au

CHEMICAL ENGINEERING DECEMBER 2009 IN AUSTRALIA

NEWS

3

Management contract for Gorgon gas plant

Engineering company Monadelphous has signed a \$60 million facilities management contract for the construction of the Gorgon gas plant on Barrow Island in Western Australia. The plant will process gas from the Greater Gorgon gas fields off the coast of WA.

The company's maintenance and industrial services division is contracted to manage, operate and maintain construction facilities and utilities. The scope includes operating and maintaining the water and wastewater treatment plants, power generation and distribution systems. It also involves managing and maintaining accommodation facilities, buildings, vehicles, plant and equipment.

Chevron is the operator of the Gorgon Project. ExxonMobil, Shell, Osaka Gas and Tokyo Gas are the other partners in the joint venture.

New chair in gas processing

Eric May has been appointed as the Winthrop Professor and Chevron Chair in Gas Process Engineering at the University of WA.

He is based at the university's Centre for Petroleum, Fuels and Energy, part of the Faculty of Engineering, Computing and Mathematics.

Chevron has set aside \$2.3 million to finance the position, as well as postdoctoral researchers and scholarships to attract students to gas process engineering.

May specialises in density, viscosity and thermal conductivity of natural gas and condensates, microwave measurements of high pressure fluids, phase equilibria and behaviour in complex fluids, and pressure, temperature and flow metrology.

He holds bachelor and PhD degrees from the University of WA.

Doctor of engineering awarded

Monash University has awarded a doctor of engineering degree to chemical engineer Professor Frank Lawson.

The doctor of engineering is the university's highest award, superior to the normal PhD. According to the university, "the degree gives formal recognition to scholars who have made a substantial, original and distinguished contribution to knowledge". The degree is awarded based on a peer assessment of the recipient's published scholarly work.

Lawson joined Monash as a chemical engineering lecturer in 1962 after working as chief chemist at Mt Isa Mines and a lecturer at the School of Metallurgy at the University of NSW. He now occupies an honorary position at the university.

He is also chair of Mutiny Gold, a listed company that develops gold tenements in Western Australia and Victoria.

Lawson graduated from the University of NSW and completed his PhD at Monash in 1970.

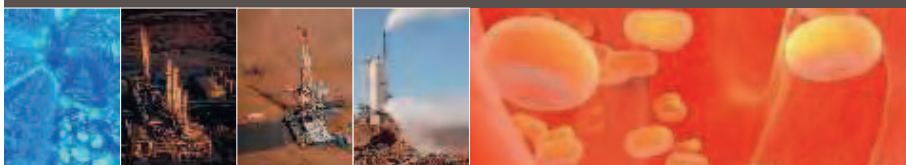


An artist's impression of the Gorgon plant on Barrow Island in Western Australia.

ESD Simulation Training
Dynamic Simulation Training Specialists
TRAINING COURSES

- Practical Aspects of Compressor Control using the CCC systems**
Perth - 8th-9th March
- LNG a technical overview**
Perth - 10th -12th March
- Control Operation and Design of Reciprocating Gas Compressors**
Perth - 15th - 16th March Brisbane - 10th - 11th May
- Design and Operation of FPSO's**
Perth - 15th - 17th March
- Control and Operation of Centrifugal Gas Compressors**
Perth - 17th - 19th March
Melbourne - 10th - 12th March
Brisbane - 12th - 14th May
- Subsea Systems**
Perth - 18th - 19th March
- Well Management and Artificial Lift**
Perth - 22nd - 23rd March
- Control and Operation of Gas Turbines**
Perth - 15th - 16th April Brisbane - 12th -13th April
- Coal Seam Methane**
Brisbane - 8th - 9th April
- Production Process and Emergency Systems**
Brisbane - 17th - 19th May

For more information contact:
Daren Reid, ESD Simulation Training Pty Ltd
Tel: (08) 9355 5599 Email:daren.reid@esd-simulation.com



26 - 29 September 2010 | Hilton Adelaide | www.chemeca2010.com

We are delighted to invite you to Chemeca 2010, the annual Conference hosted by the Institution of Chemical Engineers in Australia (IChemE), Engineers Australia (EA), the Royal Australian Chemical Institute (RACI) and the Society of Chemical Engineers New Zealand (SCENZ). These bodies represent over 100,000 engineers and chemists working across the world.

Chemeca 2010 will interest all those who contribute to the advancement of technology and the process industries, including scientists, engineers, manufacturers, suppliers and service professionals.

Chemeca 2010 will not only be a showcase for new knowledge but also a forum to discuss current issues. It is an excellent opportunity to listen to and share our vision with leaders of the profession from industry and academia. Chemeca 2010 also provides the opportunity for the technology and service providers to promote their products and services to the sector.

Sub-themes:

- Engineering Sciences & Fundamentals
- Process Design, Control and Safety
- Particle and Minerals Technology
- Material & Mineral Sciences
- Energy & Fuels
- Food, Pharmaceutical & Bioengineering
- Industrial Best Practice & Innovation
- Environment, Water and Sustainability
- Micro and Nanotechnology
- Education

Plenary Speakers:

- John England - BHP-Billiton
- Andrew Hopkins - Australian National University
- Hans Müller-Steinhagen - University of Stuttgart & German Aerospace Center
- Ziggy Switkowski - Australian Nuclear Science and Technology Organisation

Keynote Speakers:

- Rose Amal - University of New South Wales
- Dr Tom Beer - CSIRO Marine & Atmospheric Research
- Professor Suresh Bhargava - RMIT University
- Xiao Dong Chen - Monash University
- Paul Cleary - CSIRO Mathematical & Information Sciences
- Dr Geoff Dumsday - CSIRO Molecular and Health Technologies
- Barry Goldstein - Department of Primary Industries and Resources South Australia
- Professor Jinghai Li - Institute of Process Engineering, Chinese Academy of Sciences
- Mehmet Sarikaya - University of Washington
- Jerome Werkmeister - CSIRO Molecular & Health Technologies
- A/Professor Brent Young - The University of Auckland

Host Organisations



**Abstract
Submission
Now Open**

Silver Sponsor



Bronze Sponsors



Session Sponsor



Dinner & Speaker Sponsor



Satchel Sponsors



Speaker Sponsors



Wireless Internet Sponsor



Welcome Reception Sponsor



CHEMICAL ENGINEERING DECEMBER 2009 IN AUSTRALIA

CHEMICAL COLLEGE COLLEGE

5



College chair Elizabeth Harangozo (l) presented certificates of appreciation to (l-r) Georgina Wright, Assoc Prof Brian O'Neill and John Waanders.

Renewal of Chemical College board

by Elizabeth Harangozo

The board of Engineers Australia's College of Chemical Engineers is entering a period of renewal with new members taking up positions in September 2009 and March 2010.

The board welcomes Dr Debashis Raha representing Sydney Division, Tanja Stefanovic representing South Australia Division, Michelle Thompson representing Women in Engineering (WIE) and Daniel Edge representing Newcastle Division.

Tanja Stefanovic was recently appointed as the principal chemical engineer with Tonkin Consulting in Adelaide. She recently stepped down as the vice president and committee chair of the Australian Water Association (South Australian Branch). Currently, she is working with SA Water on a number of water related projects. A concept design for the introduction of trade waste to the McLaren Vale Community Waste Management Scheme is also under way. Her association with the AWA is welcomed by the board because one of our priority objectives for the coming year is to strength our relationships with other professional

bodies employing chemical engineers. We anticipate using Tanja's experience to bring about mutually offered professional development programs for members working in the water industry.

Georgina Wright, the retiring WIE representative, will remain on the board as the Victoria Division representative, replacing Lindsay Wheeler who has had to resign his position due to work commitments. Ian Ackland from Sydney Division has also left the board.

Associate Professor Brian O'Neill, having been replaced as the SA Division representative, will remain on the board as an appointed member and our sole academic representative.

The board would like to especially thank John Waanders, who is retiring from the board after serving since 1998. He will be sorely missed.

After 11 years in industry, John joined the Department of Chemical Engineering at the University of Newcastle in 1976 and remained in the department until his retirement as laboratory manager in 2008. His responsibilities included su-

pervision of 13 technical staff and over 25 postgraduate students, organisation of undergraduate laboratories, preparation of manuals for undergraduate students, organisation of staff, responsibility for all laboratory operations and liaison with other departments.

He was also the Faculty of Engineering's apprentice manager.

John was a solid contributor to the board, serving as chair from 2005 to 2007. I extend my thanks to him for his support of my chairmanship as immediate past chair 2007 – 2009.

The remaining board members are Roger Kelson (WA), Zvonko Pregelj (Qld), Patrick McMullan (Council nominee and NCFE chair), Andre Jemison (Young Engineers) and Brandon Wai Meng Lee (corresponding).

I am looking forward to the year ahead. Our board offers a great mix of experience and new vision. For the festive season I wish you and your families peace and joy.

Elizabeth Harangozo has been reelected as College chair for another two years.

CHEMICAL ENGINEERING

DECEMBER 2009

IN AUSTRALIA

CHEMICAL COLLEGE COLLEGE

6



Engineers Australia's National Committee on Fuels and Energy currently has 14 members. Shown here are (l-r): Luigi Bonadio, deputy chair Dr John Sligar, Prof Mike Dureau, Adrian Chegwiddden, Elizabeth Harangozo, Dr Neil MacDonald, chair Patrick McMullen, Dr Ken Sullivan, Dr Jim Le Cornu and Young Engineers representative Michael Willacy. Absent are Dr Eric Lindner and Martin Thomas, and corresponding members David Hatton and Dr Terry Wall.

Focus on energy supply mix

by Elizabeth Harangozo

In line with the College's overall efforts to update our governance procedures, an ongoing process to review and update the terms of reference for the National Committee on Fuels and Energy (NCF&E) has been completed. A new committee with a three-year tenure will be formed in 2010 focusing on the transition in the energy supply mix, particularly on emerging technologies generating and delivering power into the existing coal based electricity distribution network.

Another focus area will be energy efficiency and load management. Expressions of interest to join the new committee will be invited soon. On behalf of the College, thanks to Patrick McMullen for his excellent chairmanship of this group for the past few years.

Fuel cell expert at Chemeca 2010

One of the world's leaders in translating fuel cell technology into practice will be opening Chemeca 2010, on 26 September at the Hilton in Adelaide, while on the other side of the globe an Airbus A320 will be flying and taxiing with a multifunctional fuel cell system developed by his institute. Professor Hans Müller-Steinhagen, director of the Institute of Technical Thermodynamics, German Aerospace Centre, University of Stuttgart, Germany, will present his work on "Fuel cells with wings".

In addition to outlining his Institute's work with Airbus, he will elaborate on the world's first fully fuel-cell driven aircraft, Antares DLR-H2, developed by his institute in partnership with Lange Aviation, BASF Fuel Cells and Serenergy.

For further information on Chemeca 2010 see page 4.



Training courses in Australia 2010

Fundamentals of process safety

15-19 February, Brisbane, QLD

IChemE international forms of contract

12-13 April, Melbourne, VIC

15-16 April, Perth, WA

Chemical engineering for non-chemical engineers

31 May - 1 June, Perth, WA

Contact: Victoria Reznikov

Email: austcourses@icheme.org

Tel: +61 (0)3 9642 4494

Fax: +61 (0)3 9642 4495

IChemE
heart of the process



Celebrating ACTS accreditation with BP in Australia



During September and October, IChemE in Australia celebrated with BP's refineries at Kwinana & Bulwer Island on achieving Accredited Company Training Scheme status, also known as ACTS.

ACTS accreditation has been developed following extensive consultation with industry. It is designed to offer several benefits to all parties (the trainee, the employer and IChemE).

The graduate training scheme accreditation process not only provides the company with a unique opportunity to benchmark its graduate training against world class standards but also allows graduate trainees on the scheme to achieve chartered status in their professional careers as effectively and quickly as possible.

The process of accreditation involves a company tailoring or developing a training scheme to address IChemE's standard and to detail the training and experiences provided for a graduate on the scheme to develop the competencies and skills required as an accomplished chemical and process engineer.

The structure of schemes are different from company to company due to the different industries involved. Accreditation of a company's training scheme is on a company-by-company basis.

In March and April this year, BP Refinery Kwinana submitted their application to become an accredited company with IChemE. A team of assessors visited the BP Refinery Kwinana site to talk to the graduates, the senior team, and to look at the detail of the training scheme. The BP Refinery Kwinana's graduate training scheme has now been formally recognised by IChemE as an Accredited Company Training Scheme. As Australia's largest refinery, this is a huge achievement for BP Refinery Kwinana, they are the first BP refinery globally, and the first company within Australia, to achieve this status under IChemE's revised accreditation scheme.

During Chemeca 2009, BP Refinery Kwinana and IChemE hosted a cocktail party to celebrate this fabulous achievement. Ian Shott, President of IChemE presented the ACTS certificate to Thys Henys, the Managing Director of BP Refinery Kwinana.

Following BP Refinery Kwinana's lead, in May this year BP Refinery Bulwer Island also submitted their application to have their graduate training scheme accredited by IChemE. A team of assessors visited the BP Refinery Bulwer Island site in July for the assessment and they have also been successful in achieving ACTS status for the refinery in Brisbane.

During the Presidential address dinner in Brisbane in October, Ian Shott again presented the ACTS certificate to Ian Mulvilhill, the Technical Manager of BP Refinery Bulwer Island.

We hope this is the first of many Australia companies who will take BP's lead in ensuring their graduates get the best opportunities and develop their careers through the ACTS program.

ACTS is for both large and small companies, and can certainly run with other graduate programs. So if you have a process team working with you and you want to know more, then contact the IChemE team in Melbourne for more information.

CHEMICAL ENGINEERING DECEMBER 2009 IN AUSTRALIA

8

ICHEM E

Dow chief to be guest speaker

The Board of IChemE in Australia invites members and their guests to attend a special dinner event on Wednesday 17 February 2010 in Melbourne, with guest speaker Andrew Liveris, president, chief executive officer and chairman of the Dow Chemical Company, a \$54 billion global chemicals, plastics and agrosocieties company based in Midland, Michigan.

Companies are welcome to book a table to this event. For more information contact Tanya Graham in the IChemE in Australia office, phone +61 (0)3 9642 4494.

Liveris' 32-year Dow career has spanned manufacturing, engineering, sales, marketing, and business and general management. He has spent the bulk of his career in Asia, where he was general manager for the company's operations in Thailand, and later head of all Asia-Pacific operations. He began his Dow career in 1976 in Australia.

Liveris was born in Darwin and later lived in Brisbane, where he attended the University of Queensland, graduating with a degree (first-class honors) in chemical engineering. He was awarded an honorary doctorate in science by his alma mater as well as being named *Alumnus of the Year* for 2005. He is a chartered engineer and a Fellow of the Institution of Chemical Engineers.



Andrew Liveris

Liveris serves on the board of directors of Citigroup, the world's leading financial services company. He is chairman of the board of the US-China Business Council; a vice-chair of the US Business Council; a member of the United States Climate Action Partnership; and a past chairman of the American Chemistry Council and the International Council of Chemical Associations.

He is also a member of the following organisations: the American Australian Association, the Business Roundtable, the Detroit Economic Club, the National Petroleum Council, and the Société de Chimie Industrielle. Liveris is also a trustee of Tufts University.

First chair of new safety centre

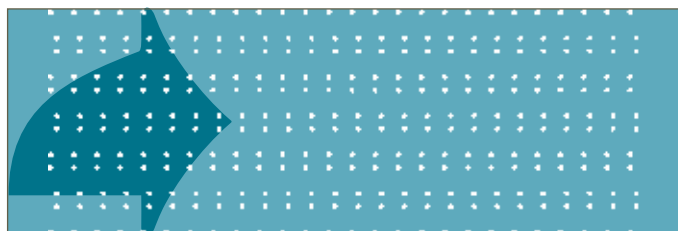
Judith Hackitt, chair of the UK's Health and Safety Executive, has been appointed chair of the new IChemE Safety Centre.

A member of IChemE's Council and a chartered chemical engineer, Hackitt assumed the post at the Institution's Hazards XXI conference in Manchester recently where the centre was officially launched. She will lead a team of safety experts and provide technical guidance and support across all aspects of the Institution's safety services and portfolio.

The Safety Centre brings together IChemE's existing publications, training services and specialist subject groups and also sets safety strategy in line with the Institution's overall plan.

IChemE marketing director Justin Blades said: "I am thrilled that someone of Judith's calibre has agreed to take on the role and ensure that IChemE process safety activities go from strength to strength."

IChemE CEO Dr David Brown said Hackitt is well placed to lead the new group: "Our Safety Centre incorporates a wide range of services and professional groups. It's vital that its steering group is led by somebody with a multisector, multifaceted understanding of safety. Judith's chemical engineering background and safety expertise makes her the ideal candidate."



Want to Get Chartered?

Attend one of our seminars to find out about the requirements, application and your individual route.

To book your place for an online or in-person session visit: www.getchartered.org/workshops.htm



IChemE
heart of the process

CHEMICAL ENGINEERING DECEMBER 2009 IN AUSTRALIA

NEW PRODUCTS

9

Removing water

A new water removal technology is being introduced to Australia by EWT-AJM is designed to reduce operating expenses associated with sludge produced in industrial, municipal and agricultural wastewater treatment.

The Cinetik line of products can extract water to produce 50% dry solids.

The process relies on the combined action of a controlled mechanical pressure and electro-osmosis, where an electrical field generated inside the sludge liberates and carries away the water bonded to hydrophilic particles.

The application of an electrical current also has a direct impact on sludge quality. Both the structural properties and the odour of the sludge are improved.

The combination of electricity, heat and pressure also helps eliminate pathogens such as E. coli, salmonella, enteric



The Cinetik electro-osmotic system for removing water from sludge.

viruses and parasites. Treated biosolids typically reach Class A standard.

When excess water and pathogens are removed, sludge is turned into a valuable resource and can be directly reused as a fertilizer or as a renewable fuel source. High-quality biosolids are also a driver to

further treatment including pelletising, gasification or incineration.

Based on a modular design, Cinetik equipment can be fitted into an existing solids handling process or incorporated into new designs.

www.glv.com

Acoustic pulses for level measurement

Hawk has introduced the Sultan 234 level measurement system, which can be powered using loop power (two-wire), three- or four-wire sources.

The instruments emit an acoustic wave pulse, which is then reflected from the

surface of the material being measured. The reflected signal is processed using specially developed software to enhance the correct signal and reject false or spurious echoes. The measured signal is also compensated for temperature to improve accuracy.

There is no direct contact with the media, which can be up to 80m away from the sensor.

The device is compatible with Hart, Goshawk, Modbus, Profibus, and Fieldbus, and there are many transducers to choose from.

The instrument is suitable for wastewater, mining, power generation, food, cement, plastic, chemical, paper and quarry applications.

www.hawk.com.au



The Sultan 234 level measurement system.

Antenna for bulk solids

Endress+Hauser has expanded its Micropilot M range with the launch of the FMR250 parabolic antenna.

This new antenna is designed primarily for monitoring levels of bulk solids like grain, sugar and cement in tanks, silos and hoppers. The device aims to overcome the tendency of bulk materials to heap up unevenly in the vessel and the build up of dust on the sensor.

Its narrow beam angle of 3.5°, allows the FMR250 to achieve optimum beam reflection even over distances of up to 70m. Its "ball joint" beam alignment device helps attain the right detection angle without making any changes to the process connection.

The antenna can be mounted in process connections as small as DN80 and its mechanical design has been adapted for heavy duty bulk material applications.

To overcome the problem of material build up on sensors, there is a built-in air purge.

www.au.endress.com

CHEMICAL ENGINEERING DECEMBER 2009

IN AUSTRALIA

NEW PRODUCTS

10



The MV Multi-Trap vacuum pump inlet trap.

Pump inlet trap

A line of vacuum pump inlet traps for processes that create large volumes of solid byproducts such as those used in manufacturing solar cells and LEDs is available from MV Products.

MV Multi-Trap features a knock-down stage with two stages of user-selectable filter elements, including stainless steel gauze, 2 micron, 5 micron, and 20 micron polypropylene and polyester. It is suited for MOCVD, HVPE, PECVD, or PVC processes used in manufacturing solar cells and LEDs, and help reduce vacuum pump failures.

The trap is available as a 406mm diameter model that uses two stages of eight filters and a 305mm model with two stages of six filters. They are constructed of 304 stainless steel and are available with NW40 up to ISO160 port sizes. For removing condensable byproducts, a cooling coil is optional, along with other filter elements.

www.massvac.com

Emergency door release

Fortress Interlocks has engineered the DM-I door interlock with an internal release mechanism that allows emergency exit from a dangerous area when the door is locked.

The DM unit is mounted on the outside of the guard allowing normal entry and exit

using a Fortress key. The unit is fitted to the doorpost and allows operators to enter through one access point and exit through another. Pressing the large red button releases the door, even though the DM unit is still locked. The action also breaks dual safety circuits wired to the safety system of the machine to ensure it stops.

Once the operator has exited, the machine cannot restart until the DM-I has been reset. When the DM-I latches back in place the machine is able to restart.

The DM-I unit can be mounted on panels of varying thickness. Locks are available as standard DM units, which can go up to 10 modules, or fully stainless steel DMS, which can hold up to five modules. Both are capable of

5° adjustment.

The DM-I is part of the mGard range modular trapped key products. Suitable for use in applications up to SIL3 (EN/IEN 62061), category 4 and PLe (EN/ISO 13849-1), mGard can withstand harsh environments.

www.fortressinterlocks.com

Measuring pipe flows

TechRentals is offering Panametrics PT878 ultrasonic flowmeter and the OKS transducers. Combined, the devices can non-invasively measure flow rates in pipes within the temperature range of -200°C-350°C.

The transducers are mounted on the exterior of the pipe, preventing pressure drops, leaks or contamination.

The system can calculate velocity, volumetric, energy and totalised flow and is suitable for flows 0.03m/s-12.2m/s.

It is compatible with many pipe materials, lined or unlined.

www.techrentals.com.au



Pressing the large red button releases the door.