



DECEMBER 2006

Produced by Engineers Media, a company wholly owned by Engineers Australia, for the IChemE in Australia and the Chemical College of Engineers Australia. The statements made or opinions expressed in this magazine do not necessarily reflect the views of Engineers Australia or the Institution of Chemical Engineers in Australia.

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

NEWS



The Bayu-Undan gas recycle surface facilities in the Timor Sea's joint petroleum development area consist of three primary components: the central production and processing complex, the wellhead platform and the floating storage and offloading vessel.

Offshore gas plant wins highest award

A huge offshore gas processing plant has won the 2006 Sir William Hudson Award, Engineers Australia's highest engineering excellence award for the year. This award, together with several other excellence awards, was presented during a function at Parliament House in Canberra on 22 November.

The winning companies of the top award were WorleyParsons, ConocoPhillips and Fluor for the \$2.5 billion Bayu-Undan Phase 1 Project in the Timor Sea.

The project is operated by ConocoPhillips and was designed and engineered by WorleyParsons and Fluor.

The facilities are located in the Timor Sea's Joint Petroleum Development Area 500km northwest of Darwin. These facilities include one of the most complex offshore liquids stripping plants in the world and were predominantly developed and engineered in Perth.

The project was highly complex due to

its remote location, challenging processing requirements and sheer scale.

WorleyParsons performed the project screening and definition study and then teamed with Fluor Australia to form the Total Integrated Group Approach (TIGA) joint venture, responsible for the front-end engineering design, detailed design and procurement scope. The engineering team of over 550 personnel consisted almost entirely of local Perth engineers and designers.

WorleyParsons and Fluor used advanced management and engineering techniques and comprehensive risk analysis to manage the process complexities and other project challenges. All the facilities and associated structures were extensively modelled utilising advanced 3D design technology.

The Bayu-Undan Phase 1 project involved the separation of condensate and natural gas liquids, and storage in a multi-

product floating storage off-take vessel before being sold via tanker. The later Phase 2 project resulted in some of this gas being exported (by sub-sea pipeline) to a new LNG plant near Darwin.

The offshore facilities consist of a Drilling Production and Processing platform (DPP) and a Compression, Utilities and Quarters platform (CUQ) together with a Well Head Platform (WP1), a Floating Stor- ▶

CONTENTS

News	1
New IChemE Chair	6
IChemE roadmap	7
Calendar	8
New products	9



NEWS

◀ age and Offloading vessel (FSO) and interlinking sub-sea pipelines.

Installation of the large DPP and CUQ topsides were based on the "float over" technique, which allowed the topsides to be fully constructed and the facility to be substantially commissioned in the fabrication yard. This significantly

reduced installation risk and other project uncertainties.

The FSO was also the world's first multi-use separate propane, butane and condensate Floating Storage and Offloading vessel. The permanently positioned vessel is equipped with refrigeration, liquefaction and gasification fa-

cilities and can store 130,000m³ of condensate and 95,000m³ combined of propane and butane.

Regulatory approval for the project was given in February 2000 and first gas was processed in February 2004. The first gas and condensate production was achieved on schedule and the facilities exceeded production targets by 22% in their first year of operation.

This article first appeared in the December 2006 issue of *Engineers Australia* magazine.

New gas centre

Industrial gases and engineering company BOC officially opened its \$10 million Operations Centre in Wagga Wagga, NSW, on 2 November.

The facility packages ammonia and sulfur dioxide for markets in Australia, New Zealand and the South Pacific.

Sulfur dioxide is used in winemaking, fruit drying and water treatment. Ammonia is used in large scale refrigeration, soil fertilising, mining and refining.

The plant has safety features such as gas detection, gas extraction and scrubbing systems, automatic shutdown when storage tanks reach their safe filling level, spill containment and fire protection systems.

BOC is a member of the Linde Group, with more than 53,000 employees in 70 countries.

IChemE launches photo competition

To the public at large chemical engineering conjures up images of pumps, pipes and engineers wearing hard hats. To break these stereotypes and celebrate modern chemical engineering, the Institution of Chemical Engineers has launched "Process Perspective" - a photography competition to find the best contemporary images that symbolise 21st century chemical engineering.

IChemE members and companies operating in the process industries can enter the competition. Entries are invited with images portraying people, products or processes related to chemical engineering.

The overall winner will receive a Nikon D50 SLR camera while winners of each category will take home £25 of Amazon gift vouchers. Results will be announced

at IChemE's Jubilee Assembly on 16-17 May 2007. The event will exhibit the winning entries to celebrate the 50th anniversary of the Institution's Royal Charter. Winning entries could potentially feature on the cover of IChemE's magazine *tce*.

IChemE external relations director Andrew Furlong said: "Here at Rugby we've got filing cabinets full of photographs, which quite frankly are a real turn-off and do little to convey the excitement of working as a chemical engineer. I'm looking forward to receiving a flood of images that show our profession as seen through the eyes - or should that be lens - of our worldwide membership."

Entrants should submit their images before 28 February 2007. For further details and application forms, visit www.icheme.org/processperspectives.

IChemE
IN AUSTRALIA

Board

Denis Dare (chair)

Don Nicklin (deputy chair)

Tam Sridhar (immediate past chair)

Lindsay Mallen (chair
Nominations Committee)

Ainslie Just (honorary treasurer)

Euan McMinn (Victoria)

Peter Ashman (South Australia)

Ming Ang (Western Australia)

Matt Hardin (Queensland)

Vik Kortian (New South Wales)

Executive Director

Jan Althorp

Suite 11- 2/488 Bourke St, Melbourne, 3000
phone 03 9642 4494 fax 03 9642 4495

jan.althorp@icheme.org.au



ENGINEERS AUSTRALIA

College of Chemical Engineers Board

John Waanders (chair)

Zvonko Pregelj (deputy chair)

Brian O'Neill (immediate past chair)

Patrick McMullan (Council nominee)

Maree Lang (Council nominee)
Elizabeth Harangozo (Council nominee)

Ian Ackland (Sydney)

Lindsay Wheeler (Victoria)

Roger Kelson (Western Australia)

Andre Jemison (Young Engineers)

Georgina Brooke Cooper

(Women in Engineering)

Iven Mareels (Corresponding)

College contact

Julie Armstrong

11 National Circuit,

Barton ACT 2600

phone 02 6270 6539

jarmstrong@engineersaustralia.org.au



NEWS

Processing with Australian expertise

Two processing companies were recognised at the Australian Industry Capability Network (AICN) Victorian Awards in Melbourne on 15 November. The awards are for achievements in sourcing work locally, increasing exports and replacing imports.

The two processing companies were Iluka Resources which won the Regional Company Award for its Douglas Mineral Sands Project, and Shedden Uhde which won the 2006 Large Company Award for its work on the Caltex Australia Clean Fuels Project.

Iluka is establishing a number of sites and a processing plant in the Murray Basin to mine and process mineral sands with an initial investment of \$284 million. The operation is expected to produce 70,000 tonnes of rutile and 130,000 tonnes of zircon – potentially developing into a new \$1.5 billion export industry.

Notable local achievements by Shedden Uhde include supply and manufacture of American Petroleum Institute (API) standard pumps, heat exchangers and structural steel work and piping – significant wins against foreign competitors.

There were three other category winners.

Yella Terra, a supplier of engine parts, won the Small and Medium Enterprise award.

The Victorian Industry Participation Policy (VIPPP) Award was won by Leighton Contractors for its work on the Southern Cross Station Redevelopment.

A special award, the Industry Commitment Award, was made to Tenix Defence Marine Division. This inaugural award recognised Tenix's exceptional dedication to local industry.

Funding for clean energy projects

CSIRO's energy technology research program received funding – announced by the prime minister on 1 November – for two projects which are part of the Asia Pacific Partnership on Clean Development and Climate strategy.

The projects are the Solar-enhanced Fuels for Electricity and Transport, and the CO₂ Enhanced Coal Bed Methane (ECBM).

Both are part of the Energy Transformed Flagship – a CSIRO-led national research program.

The Flagship's director, Dr John Wright, said: "The ECBM project aims to test and improve the use of CO₂ injection into coal seams to realise the economic and energy-security benefits of enhanced methane recovery and the greenhouse benefits of permanent CO₂ storage."


The chief of CSIRO's Division of Energy Technology, Dr David Brockway, said the ECBM technology has the potential to provide a low-emissions energy source and support both carbon capture and storage. The Division provides key capabilities to both projects.

The advantage of using solar energy in this way is that the Solargas can be used for many energy-intensive applications – converted to liquid fuels for transport, combusted for electricity generation, or used to produce hydrogen for future clean energy uses.

This project will involve collaboration with China and Japan, as well as Australian companies.

Convention in Manila

The Philippine Institute of Chemical Engineers (PICHE) has invited Australian chemical engineers to participate in its Annual National Convention to be held from 31 January to 3 February 2007 at the Manila Pavilion Hotel. The theme of the convention is "Academe and industry: Synergising for global cooperation and competitiveness". The convention website is at www.piche.org.ph.



ESD Simulation Training
Dynamic Simulation Training Specialists
2007 TRAINING COURSES


Practical Aspects of Process Control & Instrumentation
7-9 March – Perth

The Oil & Gas Industry – A Non Technical Overview
13 March – Perth

Control, Operation & Design of Reciprocating Gas Compressors
19-20 March – Perth

Control & Operation of Centrifugal Gas Compressors
21-23 March – Perth

For more information contact:
Julie Scholey, ESD Simulation Training Pty Ltd
Tel: (08) 9367 1844
Email: julie.scholey@esd-simulation.com



www.esd-simulation.com



NEWS

Butanol as fuel

Biobutanol, to be introduced by late 2007, will be the first product developed by a partnership between DuPont and BP.

According to the partnership, "the strategy is to deliver advanced biofuels that will provide improved options for expanding energy supplies and accelerate the move to renewable transportation fuels, which lower overall greenhouse gas emissions."

The partnership will capitalise on DuPont's biotechnology and biomanufacturing capabilities and BP's fuel technology expertise and access to major fuel markets.

Biobutanol is an alcohol produced from agricultural feedstocks rather than petroleum, with properties that make it a high performance fuel. Butanol has not been widely used because it is costly to produce. The partnership is developing technologies to lower the costs of producing butanol.

The partnership said one of the advantages of butanol is that it can be used in higher blends of petrol without requiring any changes in automobile or engine design.

It said biobutanol has several performance characteristics that make it a better fuel biocomponent. It can also enhance ethanol-petrol blends.

Biobutanol can be easily added to conventional petrol, due to its low vapour pressure. It has an energy content closer to that of petrol than ethanol, so consumers would face less of a compromise with fuel economy.

The first DuPont-BP biobutanol plant in the UK will use sugar beet as the feedstock. Future plants could use any locally grown crops, including corn, wheat, and sugar cane.

In the future, biomass/cellulosic feedstocks from fast growing crops such as grasses, or agricultural byproducts such as straw and corn stalks could be used.

The partnership believes that in the US corn will remain the main feedstock for the production of biofuels, including biobutanol.



Three new Dorr-Oliver Eimco thickeners recently arrived at Gove.

Alliance for processing systems

Solid/liquid separation specialist Dorr-Oliver Eimco (DOE) and Alcan Engineering Pty Ltd have formed a product development and engineering alliance.

With thickener design and operation as the primary focus, the alliance is able to offer complete processing solutions including upstream and downstream engineering, waste disposal design and management and overall project management.

The new alliance is already carrying out pilot plant trials for coal tailings management in the Hunter Valley.

The alliance complements a licensing agreement between the two companies, signed in the early 1990s, which gave DOE exclusive rights to sell Alcan's paste thickener technology to nonalumina customers.

Alcan initially developed its paste thickener technology to improve the management of the high-volume red mud tailings from alumina production. DOE improved the design of the thickener vessel resulting in its deep cone thickener, of which the company recently signed its 100th order.

Simulation software for China

FlowTran software for simulating gas or liquid flow in major pipeline networks will be supplied to city gas companies in China as a result of an agreement signed between William J Turner Pty Ltd and DFSoft.

DFSoft is a Chinese company which supplies management information systems for some city gas companies.

William J Turner said FlowTran is currently used by most operators and designers of gas pipelines in Australia including Alinta, Epic, Agility, NT Gas, OSD and GHD. The software is also used in China, Bangladesh and South Korea.

The software began life as NAIAD – a program developed by the Australian Atomic Energy Commission for simulating

loss of coolant accidents in nuclear power reactors. It then became SIROGAS in CSIRO with assistance from the Pipeline Authority for simulating the Moomba to Sydney gas pipeline. In 1993, ownership of the software passed to a company set up by the original developer William J Turner which developed FlowTran, the Windows version.

The software allows users to interactively create a model of any pipeline network including all network components such as valves and compressors.

Users can calculate the variation in time and space of all gas properties including composition, pressure, flow, and temperature.



NEWS

IChemE welcomes British Stern Report

The IChemE has welcomed the Stern Review on the Economics of Climate Change released last month in Britain. Several leading IChemE representatives commented on the report.

The Institution's Energy Conversion Subject Group chairman, and emeritus professor at the University of Leeds, James Harrison, said: "Coal and gas will play a major role for several decades so we need to promote clean technologies such as carbon sequestration. The UK has the technical know-how and suitable sites to make this happen now. A successful carbon capture and storage (CCS) project in the UK would enable our industry to play a part in the use of CCS elsewhere, including China. However, CCS should not hinder the development and deployment of alternative sources of energy."

With the UK contributing only 2% of global CO₂ emissions, Harrison warned against the risk of shifting the problem elsewhere. "Unless international action is taken, there is a danger that developed countries will simply reduce their emissions by shifting manufacturing activities to developing countries."

IChemE's Gasification Conference chairman John Griffiths also supported the use of carbon capture technology to reduce emissions. "The review lists a range of options - the only option that should be ruled out is doing nothing. However, it is

clear that renewables will not suffice as a sole response given their current early stage of development – even with the addition of nuclear power. Global construction resources would quickly be exhausted without a substantial inroad on emissions. We must choose another way to buy time.

"Three-quarters of the world's energy is supplied by coal. An effective response to the Stern Report would be to make better use of this resource by switching to CCS technology - either by installing retrofits or new plant – so that energy supplies can continue to come from coal in the medium term," he said.

The omission of the word "nuclear" from the Stern Report's Executive Summary prompted IChemE's energy spokesman David White to highlight the continuing role of nuclear in the power generating mix. He also called for a realistic assessment of renewable energy.

"The report recognises the high cost of carbon abatement that results from the use of wind power and solar. While the use of alternative fuels is to be encouraged, it is important that the whole system of renewable sources is analysed to assess the realistic level of carbon saved and cost," he said.

Climate change, energy policy and sustainability featured strongly at the recent Chemeca conference in Auckland. The views of IChemE members in Aus-

tralia and New Zealand were summed up by Professor David Wood of Melbourne University who commented: "We continue to support research and development into those technologies seeking the minimisation of greenhouse gases. The best available ideas need to be taken and there is a need to ensure that there are incentives for companies to take risks in developing these technologies. A step change in thinking is required if the ambition set out in the Stern Report is to become reality."

IChemE's Sustainability Subject Group chairman Miles Seaman expressed a more radical response to the report. "An urgent and major program on developing carbon sequestration for implementation up to 2025 is required, but in parallel we need economic and regulatory incentives to stimulate the development of low or no carbon technologies, both now and in the future. Sustainable energy is within our grasp – the science and engineering challenge is to realise it. Let the political establishment throw down the gauntlet to scientists and engineers, and we will herald a new age of technological inventiveness."

To obtain a full copy of the Stern Report on Climate Change, visit http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm.

Chemeca 2007

Melbourne 23-26 September

- **Abstracts:** Abstracts of no more than 250 words should be submitted online at www.chemeca2007.com.au. Deadline Thursday 1 February 2007.
- **Organising committee:** Russell Scott (chair), Lindsay Wheeler (deputy chair), Art Looi (treasurer), Martin Rhodes (technical program),

Alan Easton (sponsorship and exhibition), Graeme Cox (promotions), John Taylor (industry participation), Georgie Cooper and Clare Anderson (young engineers liaison).

- **Conference office:** phone 03 9682 0244, fax 03 9682 0288, email chemeca2007@icms.com.au



ICHEME

New chairman of IChemE in Australia

Professor Don Nicklin is the incoming chair of the Institution of Chemical Engineers in Australia. He will take up the position from Denis Dare on 1 January 2007, for the next 12 months.

Nicklin graduated from the University of Queensland in 1957 in applied science with first class honours and a university medal. He was awarded a Shell Scholarship to Cambridge University, completed his PhD in chemical engineering in 1961 and was awarded the Junior Moulton Medal for a paper published by the Institution of Chemical Engineers.

He then joined du Pont of Canada and led a small group responsible for the development of new processes in nylon production. In 1963 he transferred to E I du Pont in the US to work on the development of Lycra, a new elastomeric fibre.

In 1965 he joined the University of Queensland and in 1969, at age 34, was appointed professor and head of the Department of Chemical Engineering. He later served as dean of the Faculty of Engineering (three years) and pro-vice-chancellor (10 years) before retiring from the University in 1994.

Nicklin has had extensive consulting experience. He served



Professor Don Nicklin

on the National Energy Advisory Committee (the main advisory body to the federal government during the energy crisis). He chaired the Queensland Science and Technology Council from 1988 to 1990. From 1989 to 1995 he served on the Australian Science and Technology Council which was at that time the key advisory body to the prime minister on science and technology issues.

Nicklin is now an independent consultant, and is principal of Niche Consulting Services Pty Ltd. He is a Fellow of the Australian Academy of Technological Sciences and Engineering and was made an Officer of the Order of Australia in the June 1996 Honours List.

Nicklin said he is taking over the role of Australian chair at a time when opportunities for chemical engineers are excellent and the IChemE is in a very healthy state both in Australia and internationally.

He hopes to expand the role of the IChemE in increasing the awareness of the public to such issues as climate change, sustainability and Australia's role in the uranium cycle. "There is clearly much confusion in relation to these matters, and the public has a right to turn to the learned societies for clarification and presentation of the facts in a nonjudgmental way," he said.

"It is inevitable that sustainability issues will be of increasing importance for the next generation of chemical engineers, and an important role of the IChemE will be to work with the universities to ensure that graduates are appropriately qualified to contribute within this change in emphasis.

"I am delighted that the Institution is in the process of preparing a roadmap to define broadly its future role, and I understand the above issues will be highlighted in that roadmap," he said.

SUBSCRIPTION
RENEWAL NOTICE

2007

Your 2007 IChemE
membership Subscription
is due on the
1st January 2007

This year why not pay your fees conveniently and
securely online.

Pay online with a credit card: **My Details** is a secure
site and you can print a receipt once your payment
has been processed.

To view your account in **My Details** visit
www.icheme.org/mydetails

 My details



ICHEME

Progress on Roadmap project

“What does society need, what are the desirable outcomes and how can chemical engineers work in partnership with other stakeholders to make it happen?”

This lies at the heart of the Technical Roadmap project launched by IChemE's Council in 2005. The origins of this initiative can be traced back to the 6th World Congress of Chemical Engineering in 2001. Additional inspiration was drawn from the US National Science Foundation report, Beyond the Molecular Frontier in 2003 and subsequent activity within IChemE, including a series of cross-disciplinary interactions with the Royal Society of Chemistry, the deliberations of Shott's Technical Strategy Task Force and the key messages identified at the 7th World Congress of Chemical Engineering in Glasgow in 2005.

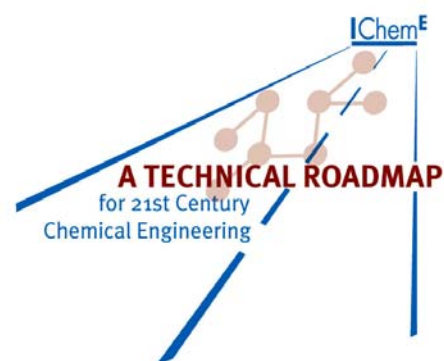
The IChemE Council supports the view that, if chemical engineering is to secure greater credibility and stronger positioning, then better clarity is needed on where the profession stands on many of the key issues currently preoccupying decision makers, opinion formers and the public at large.

The first round of member consultation on the six draft technical position papers

closed on Friday 29 September 2006. A total of 884 individuals have registered to participate from 49 nations. Early analysis indicates that over 500 members made one or more submissions to the process. The profile of the participants maps well against the Institution's membership and many prominent members from industry and academe feature in the list of participants.

Output from the Roadmap Workshop, chaired by Professor David Wood, that took place at the IChemE Members Forum prior to Chemeca in Auckland on 24 September 2006 is also being analysed and incorporated in the findings.

The analysis of the survey and presentation of the findings is being carried out by an external contractor, Dialogue by Design. The technical policy working groups reconvened in the UK in November to discuss the member input and began work on drafting the final technical position statements. Arrangements will be put in place to seek the views of key exter-



The logo for the Roadmap project.

nal stakeholders including industry partners and relevant kindred bodies at this stage.

Draft versions of the final statements will be put out for a second round of web-based stakeholder consultation on 15 January 2007.

The project timeline includes the technical position statements to be ready for publication and launch at the Jubilee Assembly in London on 16-17 May 2007.

For further information contact jan.althorp@icheme.org.au.

ICHEME in Australia has moved to:



Suite 11-2/488 Bourke Street
Melbourne VIC 3000

Ph: +61 (0)3 9642 4494
Fax: +61 (0)3 9642 4495





CONFERENCES SEMINARS EXHIBITIONS

For a comprehensive list of upcoming engineering events, visit Engineers Media's fully searchable, continuously updated events database.

[CLICK HERE TO VISIT THE DATABASE](#)

Events organised or sponsored by Engineers Australia

Biomedical Engineering

Conference: Engineering & physical sciences in medicine & Australian biomedical engineering conference 2007 (5 days) Fremantle 14 Oct. *Inquiries:* email enquiries@keynotewa.com, web www.keynotewa.com/epsm-abec-2007

Environment

Conference: 2007 international conference on engineering sustainability (3 days) Perth 31 Oct. *Inquiries:* Society for Sustainability and Environmental Engineering 08 9382 3799, email enquiries@keynotewa.com, web www.keynotewa.com/ssee-07

OTHER LISTINGS

Chemical Engineering

Course: Heat recovery in the process industries & heat pinch analysis (1 day) Melbourne 5 Feb. *Inquiries:* Jill Crisfield, Department of Chemical Engineering, Monash University 03 9905 3555, email jill.crisfield@eng.monash.edu.au
Courses: The oil & gas industry: A nontechnical overview (1 day) Perth 13 Mar;

Practical aspects of process control & instrumentation (3 days) Perth 14 Mar; **Control, operation & design of reciprocating gas compressors** (2 days) Perth 19 Mar, Brisbane 21 May, Perth 24 Sep, Perth 26 Sep, Melbourne 26 Nov; **Control & operation of centrifugal gas compressors** (3 days) Perth 21 Mar, Brisbane 23 May, Melbourne 28 Nov; **Design & operation of floating production storage & offloading** (3 days) Perth 16 Jul; **Subsea systems** (2 days) Perth 19 Jul; **Floating LNG – production storage offloading & regasification** (2 days) Perth 23 Jul. *Inquiries:* Julie Scholey, ESD Simulations 08 9367 1844, fax 08 9367 3886, email julie.scholey@esd-simulation.com, web www.esd-simulation.com

Minerals processing

Conferences: Discrete element methods 2007 (3 days) Brisbane 27 Aug; **Precious metals 07** (2 days) Brisbane 30 Aug; **Automated mineralogy 07** (2 days) Brisbane 1 Sep. *Inquiries:* email amanda@min-eng.com, web www.min-eng.com

Miscellaneous

Conference: Smart 2007 (2 days) Sydney 20 Jun. *Inquiries:* Program Committee, Smart 2007 Conference 02 9223 9366, fax 02 9223 9388, email admin@smartconference.com.au, web www.smartconference.com.au
Conference: 2007 world conference on science & technology education (5 days) Perth 8 Jul.

Inquiries: Robin Groves, 08 9266 2174, fax 08 9201 0003, email grovesr@ozemail.com.au, web www.worldste2007.asn.au

Safety

Conference: 5th annual national security Australia 2007 (2 days) Sydney 26 Feb. *Inquiries:* 02 9080 4090, fax 02 9299 3109, email info@nationalsecurityaus.com, web www.nationalsecurityaus.com

OVERSEAS COURSES

Chemical Engineering

Conference and exhibition: AchemAsia (5 days) Beijing, China 14 May. *Inquiries:* Dechema e.V., +49 697564 230, email achemasia@dechema.de, web www.achemasia.de

Energy

Conference: Erneuerbare Energien (3 days) Böblingen, Germany 2 Mar. *Inquiries:* Thomas Brombach, Energie Server +49 7121 30160, fax +49 7121 3016100, email brombach@energie-server.de, web www.energie-server.de
Conference: Russia offshore 2007: The strategic development of Russia's offshore oil & gas resources (2 days) Moscow, Russia 7 Feb. *Inquiries:* The Energy Exchange Ltd +44 0207 0671800, fax +44 0207 2422673, email marketing@theenergyexchange.co.uk, web www.theenergyexchange.co.uk/energy213overview.html

Minerals processing

Conferences: Solid-liquid separation 07 (2 days) Cape Town, South Africa 14 Nov; **Processing of nickel ores & concentrates 07** (2 days) Cape Town, South Africa 12 Nov; **Processing & disposal of mineral industry wastes 07** (2 days) Falmouth, UK 14 Jun; **Processing of industrial minerals 07** (2 days) Falmouth, UK 12 Jun; **Pyrometallurgy 07** (2 days) Falmouth, UK 3 May; **Bio- & hydrometallurgy 07** (2 days) Falmouth, UK 1 May; **Flotation 2007** (5 days) Cape Town, South Africa 5 Nov. *Inquiries:* email amanda@min-eng.com, web www.min-eng.com

Miscellaneous

Conference: International technology, education & development conference (INTED 2007) (3 days) Valencia, Spain 7 Mar. *Inquiries:* email inted2007@iated.org, web www.iated.org
Conference: 2nd international conference on engineering education & training (3 days) Shuwaikh Free Trade Zone, Kuwait 9 Apr. *Inquiries:* Secretariat, College of Engineering & Petroleum, Kuwait University +965 498 5182, fax +965 481 1772, email info@iceet.org, web www.iceet.org
Systems Engineering
Conference: NAFEMS world congress 2007 (4 days) Vancouver, Canada 22 May. *Inquiries:* web www.nafems.org/congress n

Engineering Education Australia

Courses: Contract management (2 days) Sydney 12 Feb, Melbourne 19 Feb, Brisbane 26 Feb, Adelaide 19 Mar; **Managing self & others** (2 days) Melbourne 6 Mar, Sydney 8 Mar; **Mentoring** (1 day) Melbourne 31 Jan, Sydney 6 Feb, Brisbane 15 Feb, Perth 20 Feb, Adelaide 27 Feb; **Project management** (2 days) Sydney 15 Feb, Melbourne 22 Feb, Brisbane 1 Mar, Perth 15 Mar, Adelaide 22 Mar; **Risk & liability**

management (2 days) Melbourne 28 Mar; **Writing winning technical documents** (2 days) Hobart 22 Feb, Melbourne 1 Mar, Sydney 6 Mar, Perth 20 Mar, Brisbane 29 Mar. *Inquiries:* Frank Martinelli, general manager, Engineering Education Australia 03 9326 9777, fax 03 9326 9888, email frankm@eeast.com.au, web www.eeast.com.au

Bretherick's Handbook of Reactive Chemical Hazards



Ed: Peter Urban

Bretherick's is widely regarded as the reference work in this field – an assembly of all reported risks such as explosion, fire, toxic or high-energy events that result from chemical reactions gone astray, with extensive referencing to the primary literature. It is designed to improve safety in laboratories that perform chemical synthesis and general research, as well as chemical manufacturing plants. Entries are ordered by empirical formula and indexed under both name(s) and Chemical Abstracts Registry Numbers. This two-volume compendium focuses on reactivity risks of chemicals, alone and in combination; toxicity hazards are only included for unexpected reactions giving volatile poisons.

2006 0123725631 2680 pages

Usual price: \$518.18 + GST = \$570.00

EA members' price till December 31: \$440.45 + GST = \$485

<http://www.engineersmedia.com.au/bookshop>



NEW PRODUCTS

Pump control

ITT Monitoring & Control has introduced Version 5.0 for the PumpSmart PS200.

Some of the features of V5.0 are Smartflow, advanced pump protection, positive displacement pump protection and Smartcontrol.

Smartflow is a sensorless flow measurement function with the ability to calculate the flow of a centrifugal pump within + or - 5% of the pump rated flow without the need for any external instrumentation. This function mathematically models the pump power curve with only four points of CDS pump performance curve data, BEP flow, BEP power, shutoff power and rated speed.

Advanced pump protection takes into account the hydraulic and mechanical losses associated with a centrifugal pump's speed changes.

Smartcontrol is an improved way to control pumps with flat head capacity curves where a small change in speed can lead to a large change in flow.

• More information? Qikreply 17

Plant control

Yokogawa Electric Corporation has announced its Centum CS 3000 R3 Release 3.08, a new version of its flagship integrated production control system.

The company said the latest version allows the integrated use of data from throughout a plant. An alarm and event integration function has been introduced that sends only optimal alarms to the right person at the right time.

The system offers a real-time alarm management function that works in harmony with a distributed control system and provides multiple approaches to alarm management.

• More information? Qikreply 16

Level measurement

Endress+Hauser is offering a comprehensive, 58-page information guide for level measurement, titled "Selection and engineering guide for level measurement".

• More information? Qikreply 20

Adjustable gate valve lockout

Brady Australia has released an adjustable gate valve lockout. The company said this device eliminates the need to buy three or more gate valve lockout devices, by adjusting to fit multiple size gates.

It said the design ensures that the gate valve is completely enclosed, for greater worker safety and tamper prevention.

The device is of non-conductive polypropylene construction to resist cracking and abrasion. It can withstand temperatures from -45°C to 182°C. It locks out valves from 25mm to 165mm.

• More information? Qikreply 19



This adjustable lockout can be used for valves from 25mm to 165mm.

Swing check valve

Air & Hydraulic Systems of Sydney is marketing the K4 swing check valve from Austrian valve manufacturer Praher Valves.



This swing check valve offers higher flow rates and lower pressure drops.

The valve comes in PVC, PP, PPGF (polypropylene glass filled) and PVDF, for applications involving water and most chemicals, up to 10 bar pressure.

It is a wafer style, with a body featuring universal mounting holes. This makes the valves suitable for use with BS, DIN, ANSI, ASTM and JIS flanges.

Seal options are EPDM and FPM.

The company said the wide opening angle of the flap - 83 degrees - ensures much higher flow rates and lower pressure drops than have been available from thermoplastic swing checks of the previous thin wafer design.

All wetted parts are made from corrosion resistant thermoplastic and open/closed optical position indicator is provided as standard.

The design incorporates a reinforced flap and support lugs on the inside of the body to minimise the risk of flap breakage as a result of shock or water hammer.

• More information? Qikreply 20



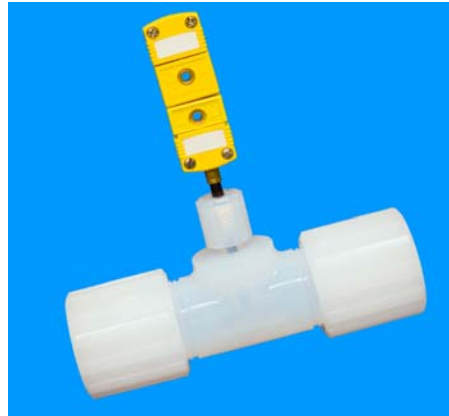
NEW PRODUCTS

Sensor for high-purity processing

A new design of thermocouple assembly from the Partek division of Parker Hannifin provides reliable temperature monitoring sensor for high-purity fluid systems which traditionally use fluoropolymer components.

The TS Series has been designed so the tip of the probe is sealed with fluoropolymer for protection and long life, and has minimal dead space and entrapment areas.

A TS Series sensor can be specified with either a K- or J-type thermocouple probe. Mounting for the sensor is provided in the form of a compact "T" shaped PFA fitting that can be installed into fluid lines to function as a straight union, or a 90°



elbow joint. The sensor element is installed into one leg of the T assembly, using a standard PFA compression ferrule set. The

◀ The TS Series thermocouple

thermocouple is available for five tubing diameter sizes from 1/4 inch to 1 inch, or in a "jump size converter" configuration.

The new probe design has been through an extensive program of tests to verify reliability and accuracy.

Partek's new TS Series thermocouple has applications wherever accurate, low-latency temperature monitoring is required in fluoropolymer-based fluid systems.

The wetted surfaces of all products are of chemically inert, corrosion-resistant PFA (perfluororalkoxy) or PTFE (polytetrafluoroethylene).

• *More information? Qikreply 24*

Stainless steel ball valve minifold

HNL has commenced manufacturing of the Series 910 stainless steel ball valve minifold, now available through AMS Instrumentation and Calibration.

Originally developed for instrument air supplies with control panels, minifolds are now available for the distribution of gaseous and liquid media in petrochemical, marine and general industrial applications.

Minifold blocks have tapped inlet connections at both ends, connect to one and plug the other, or connect to other minifolds in series.

The standard Series 910 Minifold comprises of 4 or 6 stainless steel ball

valves fitted to a stainless steel manifold with tapped connections at each end. The minifold provides a compact arrangement with fewer connections reducing the likelihood of leaking. The use of ball valves has a number of advantages including the rapid opening and closing of the valve. In addition ball valves can be supplied with automatic backventing or locking facilities.

Standard Series 910 minifolds are available with either 4 or 6 ball valves on a manifold block having tapped inlet connections at both ends. Typically one inlet is used for the supply and the other is plugged.

Both the minifold block, valve body and

ball are manufactured in 316 stainless steel making them suitable for use with a wide range of process media.

A wide range of accessories includes barrel-nipples, plugs, isolation and drain valves, back-venting valves and locking valves are available.

• *More information? Qikreply 23*

Air-driven fluid mixer

Teralba Industries, which manufactures the Mixquip range of fluid mixers and agitators, is offering a new air-driven mixer for pallet tanks.

The new range incorporates an innovative high axial flow Superflo impeller. The impeller folds to be inserted through the 51mm BSP bung hole in the centre cap of any standard pallet tank.

The Superflo directs a jet stream of liquid toward the centre of the container, lifting any sediment or heavier product from the base and evenly distributing it throughout the container.

The integrated air valve can be used to adjust air flow which regulates the RPM of the impeller.

• *More information? Qikreply 18*

For more information on any of these products, send an email to tmarsden@engineersmedia.com.au with the subject headline "CEA Qikreply". Your contact details and the Qikreply number of the product should be included in the body of the email.