



AUGUST 2003

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## NEWS

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

### Giving IChemE a “larger footprint”

Dr Gordon Weiss, 47, is the new chairman of the Institution of Chemical Engineers in Australia. He took over the position from John Taylor on 1 July for the next 12 months.

One of his main objectives during his year at the helm is to “make a larger footprint”, meaning for the Institution to broaden its membership “to reflect the range of opportunities to apply chemical engineering knowledge and skills.

“IChemE must be better equipped to offer relevant products and services to support its members, to promote effectively chemical engineering to key audiences and to stimulate the continuing healthy development of the profession,” he said.

“The Board of IChemE in Australia is committed to this strategy.

“I will drive the internationalisation of IChemE, and the adaptation of many IChemE products so they better suit the local environment. I will also continue the work of John Taylor to establish IChemE as a leading voice of the chemical engineering profession in this region.”

Weiss graduated from Sydney University in 1978 and completed a PhD there in 1982.

He first worked for the CSR Sugar Division in a wide range of operations and technical support positions – from shift supervision and the development of a financial model of a sugar mill to sugar quality studies and the development of novel instruments. He also had a stint as production superintendent at one of the CSR sugar mills.

In 1989 Weiss joined ICI (now Orica) Engineering in Melbourne as a control



*Dr Gordon Weiss ... I will drive the internationalisation of IChemE, and the adaptation of many IChemE products so they better suit the local environment*

specialist in the Advanced Control Group. This provided him with opportunities to explore the use of advanced control in industrial applications. Some projects included internal model control of reactors, process optimisation using neural networks and adaptive model based control of reactors.

“We also developed and applied strategic reviews, which investigated the alignment between a plant’s operating and improvement strategies and the manufacturing plans for the plant or the business. It uses simple benchmarks to estimate the value of the performance gaps,

and then uses the benefits to drive a 12-month improvement plan. For some of my time at ICI Australia, I acted as the process control champion and worked with similar champions from other parts of the ICI Group,” he said.

After 10 years with that company, Weiss moved to Energetics, where he was the principal technical consultant. He worked in energy management, process improvement and greenhouse management.

He then moved across to EnVINTA which develops software products based on the intellectual property of Energetics. Currently he manages several of EnVINTA’s software products including Enterprize.EM, which is a web-based energy and environmental information system.

From 1997 to 1999 Weiss chaired the steering committee of the Warren Centre’s Industrial Engineering Project. The centre is attached to the Faculty of Engineering at Sydney University.

Weiss was also a member of the organising committees of several conferences including the IFAC World Congress in 1993 and Chemeca 96.

He is married with four children aged between 13 and 4.

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**...stimulating the continuing healthy development of the profession.**



## NEWS

### Cogeneration with biomass

A cogeneration plant with up to 100MW capacity will be investigated by Genesis Power and Norske Skog for the Kawerau mill in New Zealand. The plant is to use biomass or furnace gas. It will have an open-cycle gas-turbine coupled to a steam turbine, and a multifuel boiler that will supply steam and electricity to the site.

Engineering consultant Sinclair Knight Merz will carry out the feasibility study, which is expected to take up to four months to complete. The study will concentrate on the mill complex at Kawerau which comprises Norske Skog's thermal mechanical pulp mill and paper machines, Carter Holt Harvey Kawerau's chemical pulp plant,

Carter Consumer Brands tissue plant and Fletcher Forests' sawmill and timber drying plant.

Biomass will be drawn from the surrounding forest harvesting and processing operations

### Award for sugar mill research

A UNSW PhD student has won his second national award in two years, this time taking the Australian Society of Sugar Cane Technologists' Award for his work on the causes of fouling in sugar mills.

Hong Yu won the award for his paper based on an ARC-SPIRT research program, a collaboration between UNSW and the Queensland-based Sugar Research Institute. The project looked at the complex physico-chemical phenomenon of composite fouling that takes place in sugar milleevaporators.



*Hong Yu ... Research on causes of fouling in sugar mills.*

Yu is a doctoral candidate in the Faculty of Engineering's School of Chemical Engineering and Industrial Chemistry, under the supervision of Dr Roya Sheikholeslami.

Fouling refers to the accumulation of solid material or scale on the surface of process equipment in a way that hampers its operation at the required level. In the case of a sugar mill evaporator, the build-up of non-sugar scales causes serious processing and environmental problems.

Last year, Yu also won an award for related work from the Society.

### Register for Chemeca

The conference registration booklet for the 31st Australasian Chemical Engineering Conference (Chemeca 2003) is now available online at the conference website [www.chemeca2003.adelaide.edu.au](http://www.chemeca2003.adelaide.edu.au).

The conference will be held in Adelaide from 28 September to 1 October under the theme "Products and Processes for the 21st Century".

Interested members can register either online (secure site) or by downloading a registration form from the site.

Early Bird registration closes on 22 August. The last day for standard registration is 5 September. Registration on site is available from 6 September.

*Assoc Prof Brian O'Neill  
Organising Chair*



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## NEWS

### Competing about safety

To highlight the importance of learning lessons from accidents, the Institution of Chemical Engineers (IChemE) has launched a competition offering young chemical engineers the opportunity to win a free trip from the UK to next year's Loss Prevention Symposium in Prague.

The symposium, to be held from 31 May to 3 June, will focus on contemporary issues like assessing the risks of terrorism attacks on plants as well as more traditional ones such as human factors and optimising safety measures.

As organiser of the competition, IChemE's Safety and Loss Prevention Subject Group is looking for the best article or case study submitted by a young chemical engineer. The article will be pub-

lished in the Loss Prevention Bulletin, a bimonthly publication from IChemE, featuring articles and case studies from around the globe on lessons learnt from past incidents. The prize includes free attendance at the symposium, three nights bed & breakfast accommodation and a return budget flight from the UK to Prague.

"Learning from our mistakes is an important life lesson and one we are keen to promote among our young chemical engineers," said Tracey Donaldson, editor of the Loss Prevention Bulletin.

For more information visit the online press office at [www.icheme.org](http://www.icheme.org) or contact Ebenezer Adeyeri, External Relations, IChemE, phone +44 1788 534414, email

[eadeyeri@icheme.org.uk](mailto:eadeyeri@icheme.org.uk)

The deadline for the submission of articles is 31 December 2003. The articles can relate to any aspect of safety and loss prevention. Case studies are particularly welcome, but any practically based article with learning points will be considered. Articles should be 1000 - 3000 words long. Where a case study is reported, the author must be able to demonstrate the agreement from the organisation where the incident took place or the investigating authority.

Applicants must be aged 30 years or under on 31 December and be corporate or associate members of IChemE.

To enter, send your article, marked Prague Competition, to Tracey Donaldson, IChemE, 165-189 Railway Terrace, Rugby, CV21 3HQ, UK or email [tdonaldson@icheme.org.uk](mailto:tdonaldson@icheme.org.uk)

### Biotechnology in WA

The Western Australian government has released a biotechnology directory. It profiles 140 companies undertaking core biotechnology activities and servicing the industry, with a market capitalisation of more than \$780 million from the 15 listed WA companies alone.

"The WA biotechnology industry is one of our quiet achievers and this directory will help change the perception of its size and capability, both nationally and internationally," said Clive Brown, minister for state development.

WA has the third largest biotechnology industry in the country. NSW has 24 and Victoria has 32 listed companies.

The state is home to Pharmacia/Pfizer, the only global pharmaceutical company to have a manufacturing presence in Australia.

Among the companies listed in the directory are Chemeq, a pharmaceutical firm developing, manufacturing and marketing antimicrobials that kill or inhibit germs; pSivida which develops nanostructured porous silicon for human and animal healthcare; and Eastland Medical Systems which provides devices designed to protect workers from needlestick injuries.

Hard or electronic copies of the directory and CD-Roms are available from the Department of Industry and Resources, phone 08 9222 5578 or email [richelle.gornik@doir.wa.gov.au](mailto:richelle.gornik@doir.wa.gov.au)

**ESD**  
**ESD Simulation Training**  
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**TECHNICAL TRAINING COURSES CALENDAR**

*Control, Operation & Design of Reciprocating Gas Compressors*  
24-25 November 2003.....Melbourne.

*Control & Operation of Centrifugal Gas Compressors*  
26-28 November 2003..... Melbourne

*Practical Aspects of Process Control & Instrumentation*  
17-19 September 2003.....Brisbane

For more information contact:  
**Belinda Gault, ESD Simulation Training Pty Ltd**  
Tel: (08) 9367 1844  
Email: [Belinda@esd-simulation.com](mailto:Belinda@esd-simulation.com)

[www.esd-simulation.com](http://www.esd-simulation.com)



## NEWS

### Institute of Bioengineering and Nanotechnology

The inaugural director of the new \$50 million Australian Institute of Bioengineering and Nanotechnology (AIBN) at Queensland University has taken up his position.

Professor Peter Gray comes from the University of New South Wales where he was director of the Bioengineering Centre and professor of biotechnology, as well as a senior principal research fellow with the Garvan Institute of Medical Research.

Among the AIBN's areas of research will be the development of materials that are less likely to be rejected when used in tissue or organ replacement.

Gray said his new position is "an excit-

ing opportunity, given the very rapid development coming out of the fields of nanotechnology and biotechnology."

He said he was also looking forward to building on some already strong links to commercial activities through the AIBN.

He has had commercial experience in the USA working for Eli Lilly & Co and Cetus Corporation as well as holding academic positions at the University College of London and at the University of California, Berkeley.

While at UNSW, Gray has built up the research and development capabilities in mammalian cell culture to be the leading

group in Australia with an extensive collaborative network of international research groups and corporations.

He was one of the founders and a past president of the Australian Biotechnology Association (Ausbiotech) and is regularly called upon as an expert witness in biotechnology patent cases as well as extensive consultancy projects.

### Contract for WA oil

Woodside Energy Ltd has let the first major construction contract for its Enfield oil development off the North West Cape in Western Australia.

The contract for construction of the hull for a floating production, storage and offloading (FPSO) vessel has been signed with Samsung Heavy Industries Co Ltd of South Korea.

Woodside's Enfield area development general manager Duncan Clegg said design work on the hull would start in advance of environmental approvals and a final investment decision to ensure the project remained on schedule.

The 260m-long vessel will have a double-hull, deadweight of about 150,000t, and storage capacity of 900,000 barrels of oil. It will be self-propelled and able to leave its location in bad weather.

The Enfield Project is located about 40km northwest of the Northwest Cape.

Depending on environmental approval, Woodside expects to make a final investment decision in the second quarter of 2004. Production from the field is expected in the fourth quarter of 2006.

Total Enfield development capital costs are estimated at about A\$1.5 billion. The contract price for the FPSO hull is confidential.

### Student wins award for essay on sustainability

University of Newcastle student Josh Spurgeon is the winner of the 2003 Society of Chemical Industry (SCI) Undergraduate Student Essay Competition. He was presented with his award on 2 July.

The competition is an annual event for science and engineering students from universities throughout Australia.

The topic for this year was "Improving sustainability in the Australian chemical industry". Spurgeon is part of the university's Study Abroad Program, a study exchange program designed to offer students enrolled in universities overseas an opportunity to complete part of their degree in Newcastle.

Spurgeon is currently enrolled in the Faculty of Engineering and Built Environment. On completion of his study-abroad period, he will return to the University of South Carolina in the USA where he is studying for a bachelor of



Josh Spurgeon

chemical engineering.

His essay will be published by the London branch of the SCI and he has received a cash prize of A\$750 and a year's free membership to the society.



## NEWS



*A bank of fuel cell test stations at CFCL's pilot plant in Noble Park, Victoria.*

### Partner sought for fuel cell applications

Fuel cell technology developer Ceramic Fuel Cells Limited (CFCL), based in Melbourne, is looking for a partner to develop fuel cell applications over the next two to three years.

"After 10 years of intensive research and product development we are now looking toward commercialisation of fuel cell stacks for incorporation into a variety of energy-efficient products," said David Peck, the company's business development consultant.

The original technology comes from the CSIRO and the company has had support from energy suppliers including Metasource (Woodside Energy) and

Energex, as well as the federal and Victorian governments.

The product concept is to incorporate a series of 1kW to 2kW solid oxide fuel cell stacks with supporting systems into market-ready packages.

"We have developed prototypes of complete systems but our commercial focus is to concentrate on the cell stacks which we will ultimately sell to application development partners for incorporation into their final products," Peck said.

CFCL envisages that its fuel cell stacks could be embedded into a range of power generation equipment, such as methane capture from sewage, landfills and coal

seams, coal and biomass gasification, remote area power, distributed combined heat and power, and substitutes for UPS systems in telecommunications facilities. Peck said benefits of the fuel cell technology for stationary base-load power generation include high efficiency, high-quality scalable power, and low environmental impacts including low emissions, noise and vibration.

CFCL's current fuel cell design runs on natural gas or methane with very little pre-processing, or a variety of other hydrocarbon gases such as LPG and propane with a front-end reforming stage (already developed for some fuels).



## NEWS

### Pipeline expansion

The Goldfields gas transmission pipeline is to be expanded, increasing its capacity by 10% to 108TJ/d. A new compressor station will be built 30km from Paraburdoo. Construction will begin this month and be completed early next year.

The pipeline - at 1380km the state's second longest - transports gas from the Northwest Shelf to Kalgoorlie and Kambalda, supplying gas to mineral processing projects throughout the Pilbara and the Goldfields.

The increased capacity will help feed a new \$45 million powerstation at Esperance. Work on a 340km pipeline from Kambalda to Esperance is under way.

Goldfields Gas Transmission general manager David King said the Paraburdoo expansion is the second expansion of the pipeline in the past three years, following a similar one in 2001 at Wiluna.

### Tyre recycling a winner

Gold Coast company Molecra Technologies has won the 2003 Engineers Australia Eureka Prize for Engineering Innovation.

The prize is awarded for outstanding innovation in the conception, design, implementation or redevelopment phases of an engineering project.

Molecra Technologies, based in Ashmore City, has developed a new technology for extracting valuable materials from waste tyres. "The process reclaims all tyre components cleanly and efficiently without waste residue or emissions," the company said. "The recovered products include diesel oil, jet fuel and activated carbon."

Engineers Australia's national president Dr Peter Greenwood presented the prize to Molecra managing director John Dobozy on 12 August in Sydney, as part of the Australian Museum Eureka Prizes.

The \$10,000 Prize is sponsored by Engineers Australia.

## JOINT ICHEME/ENGINEERS AUSTRALIA BRANCHES

### Upcoming events

#### New South Wales

Contact: Gordon Weiss [gweiss@envinta.com](mailto:gweiss@envinta.com)  
or phone 02 9492 9523

#### Queensland

- **The new Comalco alumina refinery in Gladstone**

Date: 26 August  
Time: 6.00pm for 6.30pm  
Venue: Hawken Auditorium, Engineering House, Brisbane  
Contact: [www.engqld.org/jetspeed/](http://www.engqld.org/jetspeed/) or phone 07 3832 3749

- **Hydrogen opportunities for clean energy delivery**

Date: 28 August

Venue: Customs House, 399 Queen Street, Brisbane  
Contact: [www.nanomac.uq.edu.au/hydrogen.html](http://www.nanomac.uq.edu.au/hydrogen.html)

- **University of Queensland Chemical and Environmental Engineering Student Society**

Event: Dinner  
Date: 5 September  
Time: 6.30pm  
Venue: Royal on the Park  
Contact: Jo Kirby at [s363013@student.uq.edu.au](mailto:s363013@student.uq.edu.au)

Event: Mentors' Trivia Night  
Date: 11 September  
Time: 6.30pm  
Venue: Taringa Soccer Club  
Contact: Lacey White at [s363302@student.uq.edu.au](mailto:s363302@student.uq.edu.au)

- **Recruiting chemical engineers**

Date: 23 September  
Contact: [www.engqld.org/jetspeed/](http://www.engqld.org/jetspeed/) or phone 07 3832 3749

#### South Australia

Contact: Peter Ashman [pashman@chemeng.adelaide.edu.au](mailto:pashman@chemeng.adelaide.edu.au)

#### Western Australia

Contact: Kelvin Taylor [taylork@pbfoods.com.au](mailto:taylork@pbfoods.com.au)

*To have your events included in this list, contact the editor Dietrich Georg at [dgeorg@engaust.com.au](mailto:dgeorg@engaust.com.au) or phone 02 9438 1533.*

### Joint committee chairs

The chairs of the state joint committees are:

**SA:** Dzuy Nguyen [dnguyen@chemeng.adelaide.edu.au](mailto:dnguyen@chemeng.adelaide.edu.au)

**WA:** Ming Ang [M.Ang@exchange.curtin.edu.au](mailto:M.Ang@exchange.curtin.edu.au)

**Qld:** Jeff Moo [JLMoo@caltex.com.au](mailto:JLMoo@caltex.com.au)

**NSW:** Gordon Weiss [GWeiss@envinta.com](mailto:GWeiss@envinta.com)

**Vic:** Lindsay Wheeler [lindsay.wheeler@worley.com.au](mailto:lindsay.wheeler@worley.com.au)



## WORLD CHEMICAL ENGINEERING COUNCIL

### Making sustainability an integral part of university courses

by David Wood

At the 6th World Congress of Chemical Engineering which was held in Melbourne in September 2001, the World Chemical Engineering Council was launched. The Council membership includes senior executives from around the world. Australia is represented by Dr Roland Williams, Dr Robin Batterham and myself, giving this country strong representation.

The Council plans to issue statements from time to time on matters of international importance in the field of chemical engineering. The status of the membership is such that the statements will assume great importance in many nations.

The WCEC business is undertaken by an executive of representatives from a significant number of professional bodies and confederations including the AIChE, IChemE, DECHEMA and APCCHE. At present the secretariat is with DECHEMA and the presidency is with the AIChE. As chair of the last World Congress I have a position on the executive and the IChemE.

The first project undertaken by the WCEC has been on the education of chemical engineers, and the outcome of this project is under consideration at present. The second project will be on sustainability and its precise nature is currently under consideration. The executive met in Frankfurt at AICHEM in May and is due to meet again at the South African Institution of Chemical Engineers Conference in Johannesburg next month. Each member of the WCEC executive has been asked to report back to the executive on



*Emeritus professor David Wood is investigating how sustainability could be "embedded within the fundamentals of the educational program".*

projects that are under way in various regions and countries on this important topic.

At the May meeting I suggested that the Dankwerts Lecture given earlier this year by Batterham and published in the Transactions of the IChemE provides an excellent basis for the project. Furthermore I suggested that if the profession of chemical engineering is serious about its commitment to sustainability it should make sure that all future chemical engineers are thoroughly versed in sustainability in its broadest meaning. This requires that the chemical engineering programs in uni-

versities need to have sustainability embedded within the fundamentals of the educational program. My preliminary investigations of the Australian university courses as well as a number in the USA and the UK suggest that sustainability is a bolt-on topic covered in some subjects in the final or third year of the course. I have recently observed this even at a university which has a Chair of Sustainable Development.

I suggested to the WCEC executive and to the Australian and New Zealand federation that a possible mechanism for encouraging university departments to take this matter seriously is to use the accreditation process.

Modern accreditation systems are output driven and none is better at this than the Institution of Engineers Australia's system. If the WCEC can be instrumental in persuading the world's universities to better incorporate sustainable development in their chemical engineering programs, using accreditation if necessary, then I am confident that in a relatively short time we will see our industry greatly enhance its reputation in this important area.

At the next WCEC executive meeting I will present a summary of views from Australia and New Zealand including those of the constituent bodies of the federation. If you would like to make some suggestions please email me at [dgwood@unimelb.edu.au](mailto:dgwood@unimelb.edu.au).

**If the profession of chemical engineering is serious about its commitment to sustainability it should make sure that all future chemical engineers are thoroughly versed in sustainability.**

*David Wood is emeritus professor at Melbourne University's Department of Chemical and Biomolecular Engineering.*



# 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](#)

## Chemical Engineering

**Conference: Chemeca 2003: The 31st Australasian chemical engineering conference** Adelaide 28 Sept (4 days). *Inquiries:* Graham Teague, Hartley Management Solutions 08 8363 4399, fax 08 8363 4577, email chemeca2003@hartleymgt.com.au, web www.chemeca2003.adelaide.edu.au

## Control

**Exhibition: ICEX 2003: The instrumentation and control exhibition** Sydney 2 Sept (3 days). *Inquiries:* John Psalidas 03 9261 4500, email jpsalidas@ausexhibit.com.au, web www.austronicsexpo.com.au

## Energy

**Conference: Optimising capacity and efficiency of coal-fired powerstations** Brisbane 17 Sept (2 days). *Inquiries:* IBC Conferences 02 9080 4307, fax 02 9290 3844, email registration@informa.com.au, web www.ibcoz.com.au

**Conference: 41st annual conference of the Australian and New Zealand Solar Energy Society** Melbourne 26 Nov (4 days). *Inquiries:* Conference secretariat 03 8344 6389, fax 03 8344 6122, email ANZSES@destinationrenewables.com.au, web www.destinationrenewables.com.au

## Environment

**Courses: Transformation and fate of contaminants** Sydney 15 Sept (3 days); **Contaminant transport in the environment** Sydney 22 Sept (3 days); **Monitoring and remediation of radioactive waste** Sydney 13 Oct (3 days). *Inquiries:* The Munro Centre for Civil and Environmental Engineering 02 9385 5091, fax 02 9385 6139, email profedu@civeng.unsw.edu.au, web www.civeng.unsw.edu.au/munro/ **Conference: National clean air conference: Linking air pollution science, policy and management** Newcastle 24 Nov (4 days). *Inquiries:* Michelle Ross 02 4984 2554, fax 02 4984 2755, email casn@pco.com.au, web www.casanz.org.au

## Hazard and Risk

**Course: Risk management** Canberra 17 Sept (2 days) Sydney 15 Oct (2 days) Brisbane 21 Oct (2 days) Melbourne 6 Nov (2 days) Perth 18 Nov (2 days). *Inquiries:* Glenda Graham, Engineering Education Australia 03 9329 7021, fax 03 9326 9888, email glenda@eeast.com.au, web www.eeast.com.au

## Materials Engineering

**Workshop: 12th international workshop on sol-gel science and technology** Sydney 24 Aug (6 days). *Inquiries:* John Bartlett, ANSTO 02 9717

3652, fax 02 9543 7179, email jxb@ansto.gov.au, web www.icms.com.au/sol-gel/

**Courses: Stainless steel specialist course** full certificate (6 months) intermediate certificate (3 months). *Inquiries:* Australian Stainless Steel Development Association 07 3220 0722, fax 07 3220 0733, web www.asdda.asn.au

**Conference: Corrosion control and NDT (incorporating Corrosion and prevention 03 and the biennial AINDT conference)** Melbourne 23 Nov (4 days). *Inquiries:* Sally Nugent 03 9874 0800, fax 03 9874 4800, email aca@corrprev.org.au, web www.corrprev.org.au

**Courses: Heat shrink sleeve applicators** Brisbane 25 Aug (3 days); **Coating inspection** Melbourne 1 Sept (5 days) Perth 20 Oct (5 days); **Cathodic protection monitoring** Perth 10 Sept (3 days); **Cathodic protection advanced** Perth 15 Sept (5 days) Melbourne 1 Dec (5 days); **Coatings selection and specification** Sydney 24 Sept (3 days) Perth 27 Sept (3 days); **Coating inspection instrumentation** Sydney 15 Oct; **Corrosion and cathodic protection of concrete structures** Sydney 16 Oct (2 days); **Coating inspection refresher** Melbourne 27 Nov. *Inquiries:* Australasian Corrosion Association 03 9874 0800, fax 03 9874 4800, email aca@corrprev.org.au, web www.corrprev.org.au

## Mineral Processing

**Conference: 3rd international conference on computational fluid dy-**

**namics in the minerals and process industries** Melbourne 10 Dec (3 days). *Inquiries:* Peter Witt, Conference secretariat 03 9545 8902, fax 03 9562 8919, email cfd@minerals.csiro.au, web www.cfd.com.au/cfdconf **Symposiums: 2nd international gravity concentration symposium** Perth 22 March 2004 (2 days); **4th international comminution symposium** Perth 24 March 2004 (3 days). *Inquiries:* Barry Wills +44 1326 312236, fax +44 1326 318352, email bwills@min-eng.com, web www.min-eng.com

## Petrochemicals

**Exhibition: Australia's international oil and gas exhibition** Sydney 9 Sept (5 days). *Inquiries:* George Martin, Reed Exhibitions 02 9422 4999, email george.martin@reedexpo.com.au, web www.aimex.reedexhibitions.com.au

## Water

**Conference & Exhibition: Onsite 03: Future direction for onsite systems – best management practice** Armidale 29 Sept (3 days). *Inquiries:* Robert Patterson, Lanfax Labs 02 6775 1157, fax 02 6775 1043, email lanfax.labs@science.com.au, web www.lanfaxlabs.com.au/onsite03 **Conference: 3rd IWA specialised conference on sequencing batch reactor technology** Noosa 22 Feb 2004 (5 days). *Inquiries:* Australian Water Association 02 9413 1288, fax 02 9413 1047, email sbr3@awa.asn.au, web www.awa.asn.au ■

## OVERSEAS

### Chemical Engineering

**Conference: 2003 South African chemical engineering congress** Sun City, South Africa 3 Sept (3 days). *Inquiries:* Ammie Wissing +27 12 348 4493, fax +27 12 348 1563, email wissing@iafrica.com, web sachec.saiche.org

**Exhibition: Chemtec Malaysia 2003** Kuala Lumpur, Malaysia 7 Oct (4 days). *Inquiries:* Monica Lim +65 6534 3588, fax +65 6534 2330, email hqlink@singnet.com.sg, web www.hqlink.com

**Conference: 4th international conference on fluid and thermal energy conversion** Bali, Indonesia 7 Dec (5 days). *Inquiries:* Ali Mansoori, University of Illinois (Chicago) fax +1 775 890 8596, email mansoori@uic.edu, web

www.uic.edu/labs/tri/FTEC2003.html

### Control

**Conference: European control conference** Cambridge, UK 1 Sept (4 days). *Inquiries:* International Federation of Automatic Control email jmm@eng.cam.ac.uk, web conferences.iee.org/ECC03/

**Conference: Control systems design** Bratislava, Slovakia 7 Sept (4 days). *Inquiries:* International Federation of Automatic Control email csd2003@kshr.elf.stuba.sk, web www.kshr.elf.stuba.sk/csd2003

### Hazard and Risk

**Workshop: OECD workshop on sharing experience in the training of engineers in risk management** Montreal, Canada 21 Oct (4 days). *Inquiries:* Marie-Chantal Huet +33 1 4524 7903, fax +33 1 4524 1675, email

marie-chantal.huet@oecd.org, web www.oecd.org/ehs/

### Materials Engineering

**Conference: 2003 international surface engineering congress** Indianapolis, US 15 Sept (4 days). *Inquiries:* +1 440 338 5151, fax +1 440 338 4634, web www.asm-intl.org/content/navigationmenu/events/

**Symposiums: 12th international symposium on processing and fabrication of advanced materials** Pittsburgh, US 13 Oct (4 days); **Fuel cells: Materials, processing and manufacturing technologies** Pittsburgh, US 13 Oct (4 days). *Inquiries:* web www.asminternational.org/materialssolutions/

### Mineral Processing

**Symposium: 15th international biohydrometallurgy symposium**

2003 Athens, Greece 14 Sept (6 days). *Inquiries:* Maria Tsafou email ibs2003@nereusgroup.gr, web www.nereusgroup.gr/congress/IBS2003

**Symposium: 1st international symposium on hydrocyclones** Cape Town, South Africa 24 Sept (3 days). *Inquiries:* Barry Wills +44 1326 312236, fax +44 1326 318352, email bwills@min-eng.com, web www.min-eng.com

**Conference: 22nd international mineral processing congress** Cape Town, South Africa 28 Sept (6 days). *Inquiries:* web www.impc2003.org.za **Conference: The international conference on the science, technology and industrial applications of gold** Vancouver, Canada 28 Sept (4 days). *Inquiries:* The Canadian Institute of Mining, Metallurgy and Petroleum web www.cim.org/mce/gold2003/ ■



## NEW PRODUCTS

### Data analysis for wastewater treatment

Endress+Hauser has released a wastewater industry data analysis package for its paperless MemoGraph data recorder. Designed for early identification of invalid or unwanted operating conditions (and correspondingly increasing the time available for preventative or remedial action) the new package monitors the efficiency and economical running of treatment plants as well as the condition and status of individual components involved in the treatment process.

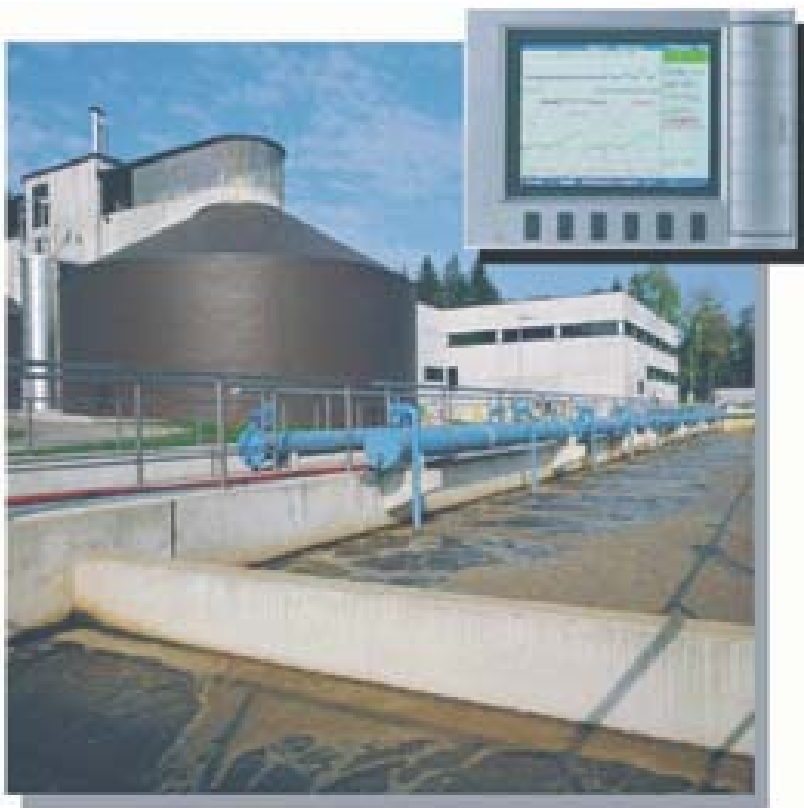
Using signal analysis that complies with the latest international EKVO (*Eigenkontrollverordnung*) self-monitoring regulations, the wastewater MemoGraph package records every relevant parameter, ranging from flow measurement to pH values, turbidity, conductivity and dissolved oxygen.

It calculates peak and low value intervals with the help of input integration and intermediate mathematical channels and offers additional alarm functions via relay outputs. Alarm set points are documented and can be transmitted to audible alarms, contactors and pumps.

The package also allows for selective recording of external influences such as seepage water. For example, the device's flow module can be set to record only between, say, 3am and 5am when normal flows are at their lowest level and any measurements can be used as a basis for a more accurate calculation of seepage.

Running times of pumps, controllers and valves can also be recorded and analysed.

All recordings generated in the package can be displayed with daily, monthly and yearly analysis. By combining a serial inter-



*The new MemoGraph data analysis package will provide additional operational data.*

face and the Endress+Hauser ReadWin operational software, stored data can be downloaded and then analysed and displayed on a PC.

● *More info? Qikreply 21*

### Dosing pump for sodium hypochlorite

International Chemicals Engineering has released the Pulsar HypoPump. The pump provides a pressurised flushing system integral to the pump head. It has been specifically designed to meter concentrations of sodium hypochlorite and its vapours for industrial and municipal water, wastewater and disinfection applications.

According to the company, the pat-

ent-pending design allows pressurised process fluid to cyclically flush vapours and liquids through the pump's discharge check system, while maintaining high performance and chemical dosing accuracy. The design is integral to the pump head and eliminates the need for bypass systems including piping, valves, fittings, and instrumentation.

The system is closed-loop and not open

to atmosphere at any point, therefore eliminating crystallisation of the sodium hypochlorite. The company claims the design also enhances self-priming capabilities since the pump automatically evacuates entrained air in the piping system and pump head.

The pump is already installed overseas in a variety of applications.

● *More info? Qikreply 21*



## NEW PRODUCTS

### Titanium heat exchangers

The Dimpleflo tubular heat exchangers produced by Teralba Industries are now available with titanium tubes, making them suited to heat or cool very corrosive products.

The heat exchangers are available in a range of sizes and configurations including "tube in tube" and "shell and tube" designs. With the former, the inner tube can cool 540L/h of nitric acid from 115°C to 25°C using 5760L/h of 5°C chilled water in the jacket.

● *More info? Qikreply 16*



*Teralba Industries' Dimpleflo heat exchangers are now available with titanium tubes.*

### Furnace heating elements

A new grade of silicon carbide heating element has been launched by furnace heating specialist Kanthal AB.

Called Kanthal Global SD, the new element has high mechanical strength, a lower rate of reaction with the process atmosphere, longer life potential and has been designed for maximum performance in a wide range of high temperature applications.

Global SD elements are extruded from a closely controlled blend of high purity, alpha silicon carbide grain, which is then recrystallised at over 2500°C to form a strong, self bonded structure, with uniform heating characteristics.

Manufactured in a one-piece or three-piece construction, depending on the application, and in a range of sizes, Global SD elements can be supplied as straight rods or as multileg elements. Special glazes and coatings are available for added protection in aggressive furnace atmospheres.

Porosity and average grain size are the two main features that determine the life and performance of recrystallised silicon carbide heating elements. The new Global

SD elements are less porous than other Kanthal elements and have a relatively large grain size. These features reduce the total surface area of silicon carbide that is exposed to the furnace atmosphere, and this reduces the rate of resistance increase over time.

The rate of resistance increase is the most convenient measure of element performance since it determines the theoretical life that can be achieved.

● *More info? Qikreply 19*

### Pumps for corrosive liquids

Australian Pump Industries has developed a 30% glass filled polyester transfer pump capable of handling corrosive liquids including Flexi N.

The company has developed a wide range of seal options for the pump to suit specific applications. For example Buna-N seals and elastomers are suitable for handling diesel fuel and oil based substances, including olive oil. Buna will also handle salt water and brine.

EPDM elastomers and seals, also available as a common option on the transfer pumps, handle agricultural chemicals and some acids.

Viton enables the pump to handle corrosive chemicals including many acids.

The pump is powered by a Honda industrial engine producing a maximum flow of 650L/min and its high pressure configuration can achieve heads of up to 32m.

● *More info? Qikreply 18*

For more information on any of these products, send an email to [dgrant@engaustr.com.au](mailto:dgrant@engaustr.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.