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NEWS

IChemE president-elect from Australia

The chief scientist to the Australian federal government, Dr Robin Batterham, is the president-elect of the Institution of Chemical Engineers (IChemE) for 2004.

He will be the first Australian president of the IChemE since Prof Rolf Prince in 1986.

Batterham believes that chemical engineers are central to the delivery of sustainable development and will carry this theme throughout his presidency.

“Chemical engineers can draw on their knowledge of process engineering, cou-

pled with an understanding of science and technology, to develop new approaches to challenging global problems,” he said.

Batterham will visit the UK next February to present the Danckwerts Lecture at the IChemE’s new headquarters in London.

A graduate chemical engineer from Melbourne University, where he also completed his doctorate, Batterham was awarded a CSIRO postdoctoral fellowship which he undertook at ICI’s Central Research Laboratories in the UK. He returned

to CSIRO, rapidly progressing to chief of the Division of Mineral and Process Engineering in 1985. Three years later he crossed to the private sector joining CRA Ltd, now part of Rio Tinto, where he fulfils the role of chief technologist. He was appointed chief scientist to the federal government in 1999.

Services Exporter of the Year

Brisbane-based engineering firm Ausenco Limited has won the Australian Business Limited Services Exporter of the Year Award at the 39th Australian Export Awards held in Melbourne last month.

Ausenco specialises in the provision of engineering design and construction services to the mining and minerals processing industries. It is able to participate in all phases of a project’s progression, from project scoping studies and process options assessments, through to feasibility studies utilised for project financing decisions, project design and construction, commissioning and ultimately operations support.

Ausenco has carried out 25 overseas assignments ranging from prefeasibility studies to full projects in the commodity areas of gold, copper, lead, zinc, mineral sands, industrial minerals, nickel and uranium.



Dr Robin Batterham ... chemical engineers are central to the delivery of sustainable development.

CONTENTS

News	1-4
Directory	2
IChemE/IEAust events	5
Protecting your innovation	6
Calendar	8
New products	9



NEWS

Showcase for students

Five prizes were awarded to chemical engineering students at Sydney University's Chemical Engineering Foundation Research Showcase held in October.

The showcase provides an opportunity for industry personnel to network with students and staff, and provides fourth-year students with a forum to present their thesis projects.

Three awards were given to fourth-year students for their thesis posters:

- Matthew Terry won the Visy Pulp & Paper Prize for best thesis poster, which was titled Bright Stock Haze Investigation. The paper examined the presence of waxy haze suspensions in heavy lubricating oil, and suggested changes to the manufacturing process to eliminate haze from the final product. The subject of his paper arose from a work experience placement at Caltex's Lubricating Oil Refinery in Kurnell, NSW.
- Sarah Scurr won the Business Liaison Office prize for best thesis poster on business merit. Scurr, who had six months of work experience with Alstom Power, developed a model to predict the start-up and other transient behaviour of heat recovery systems in modern combined-cycle power generation sys-

tems. Alstom has used the model in aiding the start-up of a new plant in Thailand.

- Radeth Chan won the Alstom Power Prize for best thesis poster, on the flow behaviour of magneto-rheological fluids. The project examined the response of fluids under strong magnetic fields and slow deformations, which can aid industry through materials optimisation and application strategies.

Two more awards, sponsored by Esso, were given to third-year students for their vacation employment reports submitted in the Third Year Vacation Report Competition, which was held earlier this year. Jennifer Williams won the prize for the best written report, with Kate Simpson winning the prize for best presented report.

The Chemical Engineering Foundation was created in 1981 as a means of fostering closer ties between the university's Department of Chemical Engineering and industry. The Foundation's activities include organising guest lectures and open forum discussions, facilitating access to specialist expertise between staff, students and industry, and conducting continuing education courses. Current company members include Visy Pulp & Paper, Alstom Power,

Shell and Caltex. They are joined by a number of individual members.

Correction

Professor David Boger is laureate professor of chemical engineering at Melbourne University, not Monash University as reported in the October issue of this newsletter.



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Five students were presented with an award at Sydney University's Chemical Engineering Foundation Research Showcase. The students, pictured with Prof Judy Raper (third from left), dean of engineering, are (l-r) Jennifer Williams, Matthew Terry, Sarah Scurr, Radeth Chan and Kate Simpson.



NEWS

2002 Pratt Prize

Emily Tan from Monash University was the winner of the IChemE Victorian Group's 2002 Pratt Prize. The prize is awarded to the best design project from the three chemical engineering departments in the state - at Monash, Melbourne and RMIT universities. Each department nominates its top project. Tan is now working for Mount Isa Mines in the metallurgical department.



Emily Tan is being presented with a certificate by Tony McPaul, MIM operations general manager for Mount Isa, for her efforts in winning the Pratt Prize.

New Australian section on IChemE website

The IChemE's website has been relaunched and now includes a new IChemE in Australia section. The website address is www.icheme.org. Members are invited to provide feedback on the content and new look of the website to ensure it meets their needs. All feedback can be directed to enquiries@icheme.org.au.

iwes

Short courses in environmental management and wastewater treatment

- [advances in nutrient removal and recovery](#)
- [principles of wastewater treatment](#)
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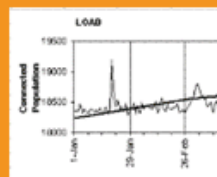
IWES will present a program of short courses in **Melbourne and Auckland in February 2003.**

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NEWS

Green light for iron project

The development of the Rio Tinto-led commercial Hismelt process is about to step closer to fruition following recent environmental approval from the WA government.

The \$400 million project has received state government assistance in the form of \$30 million worth of land and port access, and federal funding through the Strategic Investment Coordination Process.

The Hismelt plant is owned by a consortium comprising Rio Tinto, US-based Nucor Limited, Mitsubishi Corporation and the Shougang Group of China. Last September, a contract was let to Outokumpu Technology to design and build a circulating fluidised bed preheater for the plant.

The process converts iron ore to liquid pig iron through the injection of non-coking

coal and fine iron ore into a molten iron bath. As the process does not need sinter/pellet plants and coke ovens, it emits less greenhouse gas and has lower environmental impact than traditional blast furnace technology.

Construction of the plant will be finished late in 2004, with production to start at 820,000t/a of pig iron in stage 1, increasing to 1.64Mt/a in stage 2 (by 2006).



Artist's impression of the waste treatment facility to be built in Sydney.

Waste treatment instead of landfill

Global Renewables, subsidiary of gold exploration and production company GRD, has been granted government approval to construct an Alternative Waste Technology Facility in Sydney.

NSW minister for environment Bob Debus said the public/private partnership between Waste Service NSW and Global Renewables would lead to the first of a

new generation of waste processing plants capable of diverting 80% of waste from landfill and cutting greenhouse emissions.

Global Renewables managing director Dr John Waite said the new facility, to be constructed at Eastern Creek and known as the UR-3R, would be able to process 175,000t/a of municipal domestic solid

waste over a 25-year period.

"Over its life, the UR-3R facility will divert over 4.5Mt of waste that would have otherwise been landfilled," he said.

Petrol company British Petroleum has agreed to purchase the emission reduction units from the Eastern Creek facility as part of its BP Global Choice Program.



ICHEME/IEAUST NEWS

Abstracts invited for Chemeca 2003

The 31st Australasian Chemical Engineering Conference, Chemeca 2003, will be held in Adelaide from Sunday 28 September to Wednesday 1 October. The conference theme is *Products & processes in the 21st Century*.

Authors are invited to submit abstracts by Friday 31 January. Final papers are due for review by Thursday 24 April. Detailed information on submissions is available from the conference website www.chemeca2003.adelaide.edu.au.

Associate professor Brian O'Neill from Adelaide University is the chairman of the conference organising committee.

New administrator for Chemical College

The Institution of Engineers Australia has a new contact person for its Chemical College, following Phil Liddicoat's promotion to the position of director of finance and accounting.

David Gordon joined the Institution's Engineering Practice Directorate in Canberra on 2 December. He is the engineering policy coordinator responsible for administering the Chemical College and its membership of the Asian Pacific Confederation of Chemical Engineers (APCChE). He also looks after the IEAust's Board of Engineering Practice (BoEP), the Society chairmen, the President's Committee and the associate and technologist members.

Gordon spent 36 years with the Department of Defence in Canberra, Sydney and the US. He has a background in logistics (supply), programming and budgeting, project financial management, financial and administrative training and people management.



David Gordon



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INTELLECTUAL PROPERTY

Ways of protecting your ideas

There are a number of ways companies and individuals can protect their intellectual property. This article looks at different forms of protection and what types of invention they are best suited for.

by Andrew Butler and Geoffrey Covey

TYPES OF PROTECTION

Patents

To be patentable an idea must be new, it must have some sort of inventive merit and the patent can only be granted to the actual inventor or to someone who derives title to it from him. It will usually take at least two years from the date of filing a complete specification to the actual grant of patent. The term of a "standard patent" in Australia and New Zealand is 20 years from the date of filing the complete specification.

Innovation patents

About half the countries of the world have a form of second tier protection which is somewhat similar to patents, but which is available for less inventive ideas. This is intended to be a cheaper and simpler form of protection particularly for less significant inventions. It has a maximum life of only eight years.

This type of protection is new (it replaced the old Petty Patent in May 2001) and is so far untested. The advantages are rapid protection of new ideas. Therefore, it is particularly suited for products which have a comparatively short life cycle and which may be copied comparatively readily by competitors.

Designs

Registered designs provide protection for the visual appearance of a commercial product for a period of up to 16 years. Until recently, protection was only available for nonfunctional features of the design, and this is still the case in some

countries. But in many jurisdictions it can now also extend to functional features. The protection is essentially related to patterns and shapes and gives no protection against functional equivalents of different appearance.

Trade marks

Trade marks differ somewhat from the other forms of IP being considered here.

Firstly, prior use of a trade mark by the applicant does not prevent its registration. In fact, evidence of use will often make registration easier.

Secondly, trade marks can be renewed indefinitely so that there is no limit in principle on the time for which a trade mark may be registered.

Thirdly, a trade mark is only enforceable if it is put to a real use by the owner. It is not permissible to file a mark to prevent others from using it.

One difficulty with trade marks is that it is important for the trade mark owner to prevent others from using the trade mark in such a way that it becomes generic, in which case registration is liable to cancellation. For example Escalator and Elevator were originally trade marks; Dupont were in some danger of losing Teflon as a trade mark for their PTFE; and Sony have recently lost exclusive use of Walkman.

Secrecy

An alternative to patenting is secrecy. This gives protection for an indefinite period of time, but only until others are able to reproduce the results. If the process is complex, even if some portions of it are discovered by rivals they may have enough to reproduce your product. In all cases the only way of maintaining a trade secret is by vigilance.

MATCHING PROTECTION TO THE INVENTION

The type of protection that would be most appropriate will depend on what is to be

protected and the circumstances.

Consumer products

Trade marks are usually very important for products sold in large quantities at a consumer level. Registered designs may also be very appropriate if the attraction of the product lies largely in its appearance rather than merely in its functional performance. Depending on the nature of the product, patents or innovation patents may be very appropriate.

In some cases patents for the method of manufacture may also give effective protection. This will be particularly true if the product itself is not new, as a manufacture-method patent will protect against imports of products manufactured by using the same method. Secret working is not often an appropriate means of protection for consumer products unless the product is hard to copy or is made by an improbable process.

Industrial and commodity products

In general, considerations for protection will be similar for those for consumer products except that trade mark protection will probably be less effective and methods of manufacture will often be more important.

There are exceptions, however. For example, many people would regard petrol as an undifferentiated commodity product and supermarkets as a commodity service, but trade marks are extensively used in these industries.

Equipment and apparatus

Equipment and apparatus used for manufacturing products have somewhat different requirements for protection. Trade marks may be useful, but generally less so than for consumer products, as there will be a much smaller number of purchasers and they will generally be more aware of the alternative products available to them.

Registered designs are usually less ap-

Andrew Butler is a partner with Allens Arthur Robinson Patent and Trade Marks Attorneys in Melbourne. Geoffrey Covey is director of Covey Consulting Pty Ltd in Somerset, Tasmania. They both are chemical engineers.

This article is an abridged version of a paper Covey presented at the Chemeca Conference in Christchurch, NZ, last September.



appropriate for equipment as changes in the physical appearance of the equipment can be made which do not affect its functionality but avoid infringement.

Patents and innovation patents are usually the most effective form of protection.

Secret working is not appropriate if the apparatus is to be sold (other than to a limited number of clients under conditions of a secrecy agreement).

Copyright protection may be useful to varying degrees for consumer, industrial and commodity products and for equipment and apparatus in some circumstances. However, copyright protection will rarely be useful for processes.

Manufacturing processes

If the idea relates primarily to a process, then trade marks, registered designs and copyright are rarely of much help. Secrecy may be appropriate if it is enforceable but this requires a high level of vigilance. Also, as noted above, there is no possibility of subsequently seeking patent protection in

Australia or New Zealand if the process has previously been worked on a commercial or nonconfidential basis.

Usually by far the most effective way of protecting a process is by means of one or more standard patents. It is possible to just patent the whole process.

However, this is often a high-risk strategy because a competitor may find an alternative way of undertaking one or two stages of the process and so avoid infringement. It is better to also patent specific stages of the process and/or particular pieces of equipment used in it, if they individually have sufficient merit. This makes it harder for a competitor to avoid the patent and it will sometimes give additional benefits by being useful in other industries or in other processes thus providing an additional source of royalties or at least a useful cross-licensing opportunity. Often it will be possible to patent the product made by the process as well as the process itself, and this does not usually require additional patents (just extra claims).

Innovation patents may be inappropriate for processes because of their short life relative to the lead time of building the process. However, they may be important in parallel with standard patents as a means of obtaining rapid control of infringement actions.

Business schemes and computer software

Until recently there was little scope for protecting such ideas. Copyright (but not registered design) was available for forms and limited copyright protection was available for software.

Quite recently business methods and computer related inventions have become fairly freely patentable in the US, Australia and some other jurisdictions, and with some constraints in New Zealand and Europe.

However, it is still necessary to demonstrate inventive merit – and this may be difficult for something which is merely the transfer of a known process to a computer. ■

MASTER OF ENGINEERING SCIENCE IN PROCESS INTEGRATION

COURSEWORK AND MINOR THESIS

OPPORTUNITIES FOR ENTRY – MARCH 2003

Applications are invited for admission in 2003 to Master of Engineering Science part-time degree program in Process Integration.

Subjects planned for first semester 2003

- CHE5172 HEAT INTEGRATION
- CHE5182 CHEMICAL PROCESS SAFETY
- CHE5175 ADVANCED DISTILLATION

Subjects planned for second semester 2003

- CHE5173 COGENERATION AND UTILITY SYSTEMS
- CHE5180 CLEANER PRODUCTION
- CHE5176 OPTIMISATION METHODS AND APPLICATIONS

Study as you work

FOR FURTHER INFORMATION PLEASE CONTACT:



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email: david.brennan@eng.monash.edu.au



www.eng.monash.edu.au/chemeng/process_integration/



CONFERENCES SEMINARS EXHIBITIONS

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

[CLICK HERE TO VISIT CONFERENCES DATABASE](#)

Control

Exhibition: PACEX – the process and control exhibition Melbourne 20 May 2003 (4 days). *Inquiries:* George Martin, Reed Exhibitions Australia 02 9422 2511, fax 02 9422 2553, web www.nmw.reedexpo.com.au

Engineering – Other

Course: The Deakin Master of Business Administration for engineering, science and technology professionals Melbourne. Enrol now for 2003. *Inquiries:* Frank Martinelli, Engineering Education Australia 03 9326 9777, fax 03 9326 9888, email frankm@eeaustr.com.au, web www.eeaustr.com.au

Conference: Harnessing innovation in the pursuit of competitive advantage Sydney 12 Feb 2003 (3 days). *Inquiries:* Ark Group Australia 1300 550 662, fax 1300 550 663, email hassan@arkgroupasia.com

Conference: 12th national engineering heritage conference Toowoomba 29 Sept 2003 (4 days). *Inquiries:* Shelley Stewart-Christie, University of Southern Queensland 07 4631 2190,

fax 07 4635 5550, email stewart@usq.edu.au

Environment

Conference: Environmental Engineering Society national environmental conference – whose business is it anyway? Brisbane 18 June 2003 (3 days). *Inquiries:* Colleen Hanahan, Environmental Engineering Society – Queensland 07 3510 2114, email admin@eesq.com.au

Conference: National clean air conference: Linking air pollution science, policy and management Newcastle 24 Nov 2003 (4 days). *Inquiries:* Michelle Ross 02 4984 2554, fax 02 4984 2755, email casn@pco.com.au, web www.casanz.org.au

Equipment

Conference & Exhibition: 7th international operating pressure equipment conference and exhibition Sydney 2 April 2003 (3 days). *Inquiries:* Institute of Materials Engineering Australia 03 9326 7266, fax 03 9326 7272, email events@mateng.asn.au, web www.mateng.asn.au

Materials Engineering

Symposium: 26th Australasian polymer symposium Noosa 13 July 2003 (5 days). *Inquiries:* Andrew Whittaker, University of Queensland 07 3365 4100, fax 07 3365 3833, email 26aps@polymer.org.au, web www.polymer.org.au/26aps

Workshop: 12th international workshop on sol-gel science and technology Sydney 24 Aug 2003 (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/

Conference: Corrosion control and NDT (incorporating Corrosion and prevention 03 and the biennial AINDT conference) Melbourne 23 Nov 2003 (4 days). *Inquiries:* Sally Nugent 03 9874 0800, fax 03 9874 4800, email aca@corrprev.org.au, web www.corrprev.org.au

Petrochemicals

Course: Recommended practice for fitness-for-service Perth 3 Feb 2003 (3 days). *Inquiries:* The Equity Engineering Group Inc fax +1 216 283 6022, email gmbuchheim@equityeng.com, web www.equityeng.com

Conference & Exhibition: 2003 conference and exhibition of the Australian Petroleum Production and Exploration Association

Melbourne 23 March 2003 (4 days). *Inquiries:* Julie Hood 02 6267 0907, fax 02 6247 0548, email conference@aprc.com.au, web www.aprea.com.au/whats_happening/2003CallforPapers.html

Exhibition: Australia's international oil and gas exhibition Sydney 9 Sept 2003 (5 days). *Inquiries:* George Martin, Reed Exhibitions 02 9422 4999, email george.martin@reedexpo.com.au, web www.aimex.reedexhibitions.com.au

Process Engineering

Conference: 9th international conference on flow analysis Geelong 17 Feb 2003 (5 days). *Inquiries:* Simon Lewis, Deakin University 03 5227 2325, fax 03 5227 1040, email flow-analysis-9@deakin.edu.au, web www.deakin.edu.au/flowanalysis9/

Water

Conference & Exhibition: OzWater convention and exhibition: Innovations in water Perth 6 April 2003 (5 days). *Inquiries:* Quizt Event Management 02 9410 1302, fax 02 9410 0036, email quizt@bigpond.net.au, web www.awaozwater.net

Conference: Chemicals of concern in water Sydney 4 June 2003 (2 days). *Inquiries:* Australian Water Association 02 9413 1288, fax 02 9413 1047, email dwiesner@awa.asn.au, web www.awa.asn.au

OVERSEAS

Biotechnology

Conference: Bioanalytica 2003 Munich, Germany 1 April 2003 (4 days). *Inquiries:* German-Australian Chamber of Industry and Commerce 03 9867 1198, fax 03 9867 1199, email gcmel@germany.org.au, web www.bioanalytica.de

Chemical Engineering

Conference: ACHEMA: International meeting on chemical engineering, environmental protection and biotechnology Frankfurt, Germany 19 May 2003 (6 days). *Inquiries:* Messe Frankfurt GmbH +49 69 75750, fax +49 69 7575 6788, email info@messefrankfurt.com, web www.messefrankfurt.com

Conference: 5th international confer-

ence on boiling heat transfer Montego Bay, Jamaica 4 March 2003 (5 days). *Inquiries:* Jamie Richetelli +1 352 392 1701, fax +1 352 392 5437, email jrichet@doce.ufl.edu, web www.doce-conferences.ufl.edu/icbht/call.asp

Control

Conference: Advances in process analytics and control technologies York, UK 28 April 2003 (3 days). *Inquiries:* Natalie Driscoll +44 141 548 4836, fax +44 141 548 4713, email natalie@cpact.com

Energy

Conference: 4th international colloquium on fuels Stuttgart, Germany 15 Jan 2003 (2 days). *Inquiries:* +49 711 340 0812, fax +49 711 340 0843, email Renate.Pfeiffer@tae.de, web www.tae.de/fuels/

Materials Engineering

Conference: International conference on cathodic protection Manchester, UK 24 Feb 2003 (2 days). *Inquiries:* David Scantlebury, Corrosion and Protection Centre, UMIST +44 161 200 4841, fax +44 161 200 4865, email scantlebury@umist.ac.uk, web www.cp.umist.ac.uk/CPC/STAFF/JDS/CP1stAnnouncement.html

Conference: 9th international conference on the mechanical behaviour of materials Haifa, Israel 18 May 2003 (5 days). *Inquiries:* ICM9 +972 3 514 0014, fax +972 3 514 0077, email icm9@kenes.com, web www.kenes.com/icm9

Petrochemicals

Exhibition: IFB Berlin: International gas industry exhibition Berlin, Germany 7 April 2003 (5 days). *Inquiries:* Messe Berlin GmbH +49 30 30380, fax

+49 30 3038 2325, email central@messe-berlin.de, web www.messe-berlin.de

Process Engineering

Exhibition: International exhibition for industrial furnaces and thermic production processes Dusseldorf, Germany 16 June 2003 (6 days). *Inquiries:* Messe Dusseldorf GmbH +49 211 4560 01, fax +49 211 4560 668, email info@messe-dusseldorf.de, web www.messe-dusseldorf.de

Conference: 7th international conference on optical methods of flow investigation Moscow, Russia 24 June 2003 (4 days). *Inquiries:* Prof B Rinkevichius, Moscow Power Engineering Institute (Technical University) +7 95 362 7755, fax +7 95 362 8938, email Rinkev@deans.mpei.ac.ru, web www.mpei.ac.ru/omfi-2001/eng/ ■



NEW PRODUCTS

Modular heater

The Kanthal High Power Reflector is a new compact fibre insulated modular heater suited for use in foundry and metal processing industries. Each module consists of Kanthal Super heating elements set into ceramic fibre and contained in a sheet steel casing. Combined contact and hanging straps are preinstalled for connection to a standard power supply.

Designed for power up to 110kW/m² at 1650°C, the reflector provides concentrated, high and clean power, suitable for single



The Kanthal High Power Reflector from the new Superthal range of heating modules.

billet heating, aluminium melting furnace and ladle heater applications. The standard unit size is 600mm x 600mm x 230mm and multiple units can be joined together in rows or squares.

MORE INFO? QIKREPLY 16

Velocity flow meter

John Morris Scientific has released the new 2151 intrinsically safe flow meter. It measures open channel flow in hazardous locations and is CSA approved for Class 1, Div 1 environments.

The 2151 is designed for potentially explosive areas such as manholes, digesters and storage tanks. Area velocity flow measurement provides greater accuracy where weirs and flumes are not easily accessible, and where submerged, full pipe, surcharged and reverse flow conditions may occur. It is suited for monitoring inflow and infiltration, combined sewer overflows and sanitary sewer overflows.

The meter also measures flows in small pipes as the low-profile area velocity sensor minimises flow stream obstruction and senses velocity in flows down to 25mm in depth.

ISCO Flowlink 4 Software is used to set up the 2151, and to retrieve and analyse stored data. Its variable-rate data storage allows automatic changes in the data storage interval when programmed conditions occur.

The 2151 is powered by two alkaline batteries. In a typical set-up, power management provides battery life up to eight months, with 15min data storage interval. The system also stores battery voltage information to inform the user when to change batteries.

MORE INFO? QIKREPLY 17

Temperature sensor

Heraeus Sensor-Nite has released a new platinum temperature sensor with a standard wire length of 170mm and an operating range of -40°C to 180°C.

The new M-FK 233 CC sensor is based on a Pt-1000 elementary sensor, which has two wires directly connected at the sides. The sensor body including the connection area is totally enclosed. It is equipped with a silver-coated copper wire with a cross section of 0.14mm², teflon-insulated. It is suited for measuring liquids where no signal drift is permitted.

MORE INFO? QIKREPLY 20

Light screen enclosures

US-based Banner Engineering Corp has added new heavy-duty tubular enclosures and corner mirrors to its Mini-Screen emitters and receivers for food processing applications.

The enclosures are constructed of FDA-approved materials and the stainless steel mirrors are suited for applications where glass is not appropriate.

Designed specifically for use with Banner's Mini-Screen safety light screens, the MSA-TE series enclosures are available in 12 different lengths to accommodate light screen sen-

sors from 102mm to 1220mm.

The SSM-S series corner mirrors enable guarding along more than one side of an area using only one light screen emitter/receiver pair. Mounting hardware is included and an end cap design allows for rotation of the mirror to any angle.

MORE INFO? QIKREPLY 22



Watertight light screen enclosures and corner mirrors for food processing applications.



NEW PRODUCTS

Automatic sampler

Bristol Equipment Company has added the new Series MSC to its Isolok family of automatic sampling devices. Designed for flowable medium-viscosity process materials, the samplers draw measured amounts of heavier fluids such as cream, condensed milk, whey or single-strength orange juice from an automatic control.



Bristol Isolok MSC sampler for medium viscosity fluids.

Actuated by a compressed-air cylinder, the units tap process streams moving through pipes or vessels pressurised up to 13.8 bar, as well as troughs or tanks.

Isolok design keeps the sample path completely enclosed to avoid spillage waste, contamination of sample or process, and material exposure to personnel or the plant environment. Units mount through an access port installed in the process equipment, secured by a standard 51mm ferrule clamp and gasket. The sampler body encloses a plunger that extends into the process stream then immediately withdraws. Samples are trapped in an annular ring at the end of the plunger, sized to capture 14cm³ of material by positive displacement with each cycle. The sample is drawn into the unit body and discharges by gravity directly into an attached container or transfer line. Field-changeable O-ring seals encircling the plunger at both ends of the annular ring keep the process material isolated regardless of the plunger position.

Standard MSC sampler construction includes a built-in bottle mount that accepts standard plastic labware containers with 70mm threads. Adapters are available for other bottle-thread sizes. Sample containers are offered in sizes ranging from 125mL to 4L.

Available cycle controls include automatic time-base, flow proportional, manual cycling and PLC interface modules. Custom-designed control stations and automated multisample collection devices can be provided.

MORE INFO? QIKREPLY 23

Level and interface measurement

The new Siemens Sitrans LC 500 is a high-performance field instrument that provides continuous level and interface measurement, suitable for the chemical and hydrocarbon processing industries.

It has been designed for extreme conditions characteristic of high-pressure coalescers, fractional distillation columns, catalytic crackers, glycol regenerators, heater treaters, gas and oil tankers, FPSO ships and LNG processing plants.

The two-wire transmitter has HART communications for remote commissioning and inspection. Its electronics provide for one-step calibration and local display for easier on-site installation. One-point calibration makes set-up possible without shutting down the production process. Full-function diagnostics comply with NAMUR NE 43 for both local and remote diagnostics.

Sitrans LC 500 uses an inverse-frequency approach with capacitance technology to provide high resolution. The patented Active-Shield technology protects the measurement from the effects of moisture, vapours, foam, material build-up and temperature or pressure variations.

The probe has a high integrity seal, which allows for reliable use in high pressure/high temperature and high pressure/low temperature conditions. The PFA probe-insulating sleeve is chemically resistant. The probe design prevents cold flow of plastic,

ensuring stable measurement without the need for frequent recalibration.

The instrument is effective in temperatures from -200°C to 400°C and pressures from full vacuum to 525 bar. An integrated zener safety barrier blocks excess energy from the transmitter to the sensor for intrinsically safe conditions. A 55kV ESD protects the transmitter from electrostatic discharge.

Sitrans LC 500 offers an auxiliary milliamp output and a solid state switch, enabling the instrument to perform the additional function of a level controller when these are connected to a relay that activates a pump. Modular construction features a range of probe options and process connections, as well as customised configurations.

*MORE INFO?
QIKREPLY 18*

For more information on any of these products, send an email to 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.