

CHEMICAL ENGINEERING IN AUSTRALIA

APRIL 2009

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NEWS

Salary increases less than expected, survey finds

Chemical engineers are among the highest paid engineers in Australia, only surpassed by mining engineers, according to Engineers Australia's 2008 Salary and Benefits Survey.

Released last month, the survey found that the combined private and public sector average salary for chemical engineers was \$113,400.

Chemical engineers maintained the second highest paid position throughout their careers. The average starting salary package for chemical graduates was \$77,000, compared with \$104,100 for mining graduates, \$65,900 for mechanical and electrical graduates, \$65,000 for structural graduates, \$64,400 for civil graduates, \$62,700 for IT & electronics graduates and \$62,000 for environmental graduates.

At grade 5, with 15 or more years experience, the average salary package for chemical engineers was \$179,600, compared with \$200,000 for mining engineers, \$165,700 for civil engineers, \$151,600 for mechanical engineers, \$150,500 for structural engineers, \$140,400 for electrical engineers, \$138,800

for IT & electronics engineers, and \$131,800 for environmental engineers.

Overall, the survey found that salaries of professional engineers on average last year increased only slightly, about 2% for base salaries and 1% for salary packages. These increases are less than what might have been expected due to the skills shortage last year.

The chartered professional engineer status remained a valuable asset. A quarter of the survey respondents indicated that the salaries of their chartered professional engineers were higher than those of other engineers with comparable job duties. The main benefits of employing chartered professional

engineers were given as experience, recognition and better client acceptance.

Completed last December, the survey was carried out on behalf of Engineers Australia. The survey data came from employers, rather than employees, with 234 organisations responding, representing more than 67,000 professional engineers.

The survey is available in electronic version and hard copy. It can be purchased online at www.eabooks.com.au or by contacting eabooks@engineersmedia.com.au or phone 02 9438 5355. Engineers Australia members receive a discount.

LNG plant proposal for Gladstone

The Queensland government has accorded major project status to a proposal to build an LNG plant in Gladstone in Queensland.

A joint venture of Origin Energy and ConocoPhillips is considering building an LNG plant with up to four process trains in the Port of Gladstone area. The plant would be similar to ConocoPhillips' plant

in Darwin. So far, the preferred site is Curtis Island, located north of Gladstone.

Each train would have a capacity of 3.5Mt/a-4Mt/a.

The plant would process coal seam gas from the Walloons gasfields. According to the company, 800PJ of gas would be required each year to fill the four trains.

A pipeline would connect the gas wells to the plant.

The proponents also propose to treat the water produced as part of extracting gas from the coal seams so that it could be used by farmers or in local towns.

The joint venture expects front-end engineering design to begin this year with a final decision due by the end of 2010. If approved, the first train could become operational in 2014 with all four to come online after 2015.

IChemE deputy from Australia

Caltex chief executive Dr Desmond King has been confirmed as the IChemE's deputy president for 2009/10.

He will officially assume the post at the IChemE's AGM in May and succeed Ian Shott as IChemE president next year.

King, who is based in Sydney, has a degree in chemical engineering from Imperial College London, and a PhD from Cambridge University. He has spent much of his career at Chevron, working his way from process researcher via refinery manager to key roles in technology, marketing and strategic planning.



Caltex CEO Des King will be IChemE president in 2010.

King has been CEO of the Chevron subsidiary Caltex since 2006, prior to which he was general manager of Chevron's Pembroke refinery in Wales.

"I truly feel honoured to be elected deputy president," he said.

IChemE CEO David Brown welcomed the appointment: "Des is an ideal person to fulfil the role of president, with a distinguished career in the energy industry following experience as an academic, combined with a strong international profile having worked in North America, Europe and now Australia."

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NEWS

University upgrades chemical engineering labs

The School of Chemical and Biomolecular Engineering at the University of Sydney upgraded its labs over the summer using process control equipment donated by energy management company Schneider Electric.

The new laboratories were officially opened on 1 April. Dr Merv Jones, board member of the IChemE in Australia, was present.

The equipment includes two variable speed drives for pumps, a programmable logic controller, pressure transducers, flow-meters and current-to-pressure converters. Director of undergraduate laboratories Dr John Kavanagh said variable speed drives are becoming increasingly used in the industry and students need to know how to work with them.

He said the school is retaining the old equipment – consisting of hydraulic pumps and valves installed about 20 years ago – to teach fundamentals.

Fourth-year chemical engineering and finance student Harry Chan worked on the upgrade as part of his internship with Schneider.

The company is a corporate member of the Chemical and Biomolecular Engineering Foundation. The foundation's executive officer Skender Bregu said it functions as a compact between the school and the indus-



Engineering student Harry Chan (l) worked on upgrading the chemical engineering laboratories at the University of Sydney. He is shown here with Schneider Electric's national support and training manager Lyle van der Veer.

try. Companies involved in the foundation typically offer placements and sometimes

even ongoing employment to engineering students, he said.

Minerals research centre upgrade

The upgrade of the CSIRO's Australian Minerals Research Centre near Curtin University in Perth is largely complete. The acting theme leader of high-performance minerals processing at CSIRO, Dr David Robinson said the centre will be officially opened in the coming months.

The upgrade includes new and refurb-

ished labs, additional office space and associated IT facilities.

This will allow the CSIRO to accommodate the Parker Cooperative Research Centre for Integrated Hydrometallurgy Solutions and collaborators from the industry. CSIRO will also be able to increase its staff numbers.

IChemE
in Australia

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College contact

Bill Chaffey

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

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NEWS

Indigenous owners agree on LNG project

The WA government has reached an agreement with traditional indigenous owners and Woodside Petroleum about locating a 1000ha gas hub at James Price Point in the Kimberley.

The government and Woodside will also have to conclude another agreement about land use with the indigenous owners.

The government aims to complete environmental approval in 2010 so that Woodside could begin construction in 2011.

The facility would process and ship LNG from the Browse Basin. It would start with two process trains with a total capacity of



Woodside's existing site on the Burrup Peninsula near Karratha (shown here) is being considered as an alternative site for the gas hub.

PHOTO: WOODSIDE

some 15Mt/a and may later be expanded to three or four. In addition to LNG, the

hub would produce some LPG and condensate.

Environmental activist groups like the Wilderness Society oppose the project.

The Browse Basin is being developed by a joint venture of Woodside, BHP Billiton, BP, Chevron and Shell. Although James Price Point is the preferred location, the venture is also considering an alternative location at Woodside's existing operations on the Burrup Peninsula near Karratha.

Woodside is the operator of the joint venture and holds the largest stake.

NEW Courses coming soon

Coal Seam Methane

- A Technical Overview

Coal Seam Methane

- A Non-Technical Overview



Control Room Simulator-PEARL

Limited places available in Perth during May and June 2009
Call 08 9355 5599 for more information

ESD Simulation Training

Dynamic Simulation Training Specialists

TRAINING COURSES

Practical Aspects of Process Control & Instrumentation

4th - 6th May 2009 in Perth

Mechanical Aspects of Centrifugal Gas Compressors

11th - 12th June 2009 in Melbourne

Control Operation & Design of Reciprocating Gas Compressors

15th - 16th June 2009 in Brisbane

Control & Operation of Centrifugal Gas Compressors

17th - 19th June 2009 in Brisbane

Subsea Systems

22nd - 23rd June 2009 in Perth

The Oil & Gas Industry A Non-Technical Overview

26th June 2009 in Perth

Mechanical Aspects of Centrifugal Gas Compressors

8th - 10th October in Perth

Control Operation & Design of Reciprocating Gas Compressors

12th - 13th October in Perth

Control & Operation of Centrifugal Gas Compressors

14th - 16th October in Perth

Floating LNG - Production Storage Offloading and Re-gasification

19th - 20th October in Perth

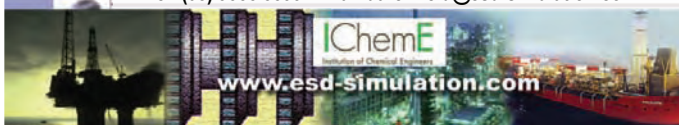
Subsea Systems - A Non Technical Overview

21st October in Perth

For more information contact:

Daren Reid, ESD Simulation Training Pty Ltd

Tel: (08) 9355 5599 Email: daren.reid@esd-simulation.com



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**CHEMECA
2009**

Celebrating 40 Years

Engineering our Future: Are We Up to the Challenge?

27 - 30 September 2009
Perth, Western Australia
Burswood Entertainment Complex
www.chemeca2009.com

Plenary Speakers

Professor Ravi Naidu

Ravi Naidu graduated from the University of the South Pacific (USP) with a double major in chemistry and maths. He has worked as a teacher and was the head of the USP's School of Pure and Applied Sciences. Ravi has also worked as a research scientist at CSIRO Land and Water (Division of Soils in 1989). He is now at the University of South Australia and is the Director of the Centre for Contamination Assessment and Remediation.

Mr Ian Shott

Ian Shott is the founder, majority owner and CEO of Excelsyn. Ian built his career in the International Pharmaceutical and Fine Chemical Industries over 25 years in senior executive leadership positions in the UK, France, Switzerland and the U.S.A. Ian became Technical VP of the Institution of Chemical Engineers in May 2004, and Deputy President in May 2008, and Chairs the Board of the Centre of Excellence for Life Sciences. He is a visiting professor and on the council of Newcastle University, and is on the Industrial Advisory Boards for Chemical Engineering at Imperial College and Engineering Sciences at Oxford University as well as the Strategy Advisory Board of the American Chemical Society.

He joined the Innovation Strategy Board for the Chemical Innovation- Knowledge Transfer Network in early 2007, has chaired the UK's Innovation Growth Team for Industrial Biotechnology since October 2007 and joined the Ministerial Advisory Group for Manufacturing Strategy in early 2008."

Mr Laurence Stonehouse

Laurie has worked for Alcoa Inc for 30 years in a variety of technical and operating positions, including Refinery Technical Manager, R&D Manager Global Refining, Refinery Manager, Vice President Technology Global Refining and Vice President Manufacturing AWA Atlantic. He has worked in Brazil, the USA and Australia. From February 2008 Laurie has been Vice President, Manufacturing Excellence and Global Refining Support, Alcoa Global Refining. In this position he is responsible for setting up systems and processes to drive the 9 refineries of the Alcoa system along the path to Manufacturing Excellence. This includes Best Practice transfer, operating problem resolution, identification of opportunities and driving the implementation of a holistic operations management system. Laurie holds the degrees of BSc (Hons) in Chemistry from the University of Western Australia, BEng (Hons) in Chemical Engineering from Curtin University of Technology and BEc from Murdoch University. He is a Fellow of the Royal Australian Chemical Institute.

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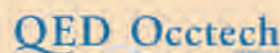


THE UNIVERSITY OF
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Welcome Reception Sponsor

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Keynote Speakers

Professor Ian Cameron
Professor Ravindra Datta
Professor Duong Do
Professor Keisuke Fukui
Professor Jinghai Li
Mr Des King
Professor Ric Pashley
Dr Jenny Purdie
Russell Scott
Dr Andrew Shook
Dr Philippe Tanguy

Online registration will be available in May on the conference website

www.chemeca2009.com



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NEWS

Change of host for Chemeca 2011

Sydney has been invited to organise Chemeca in 2011.

The conference was scheduled for New Zealand.

However, the country is hosting the Rugby World Cup 2011 around the same time, which means there would be a clash between the two events.

Therefore the Australia and New Zealand Federation of Chemical Engineering (ANZChE) has allocated Chemeca 2012

to the Society of Chemical Engineers in New Zealand and has approached the Joint Chemical Engineering Committee (JCEC) in Sydney to stage Chemeca 2011.

The chair of the JCEC Sydney Dr Debashis Raha has asked members to express their views about this proposal.

“Organising Chemeca is a team effort and involves many members,” he said.

The ANZChE has asked for a response by 15 May.

Agreement with Singapore

The IChemE has signed a Memorandum of Understanding with the Institution of Engineers Singapore (IES), paving the way for cooperation in accreditation, conferences and other activities.

IChemE CEO David Brown signed the MoU in Singapore in March alongside IES executive director Stephen Chor. IChemE has almost 300 members in Singapore.

The MoU follows similar agreements with the Chemical Industries Council of Malaysia (CICM) last year and the Indian Institute of Chemical Engineering (IICChE) in 2007.

Later this year, IChemE will stage its first Innovation and Excellence Awards event exclusively for the Singaporean chemical and process engineering community.

tce now online

The IChemE's news magazine *tce* is now available in a new digital version, which allows members to read the publication online.

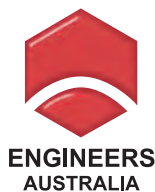
According to *tce*, members can log on to the latest news, features, and jobs as soon as the magazine goes to press.

All links in the magazine are live and the main contributors to the latest issue will answer follow-on questions from members in the newly-relaunched forums.

Also on the magazine's website are a searchable jobs database with up-to-the-minute opportunities, a searchable pdf archive of *tce* back issues covering almost 10 years of process engineering expertise, and daily news and job updates via email or RSS.

tce online can be accessed at www.tce-today.com by clicking on the cover image in the top right hand corner of the page.

It's your
CPD:
understand it...
do it...
record it...



visit www.engineersaustralia.org.au/cpd/



Training courses in Australia 2009

**HAZOP study for team leaders
and team members**

Brisbane, QLD 13–15 May 2009

**Chemical engineering for
non-chemical engineers**

Melbourne, VIC 1–3 June 2009

Sydney, NSW 15–17 June 2009

Contact: Victoria Reznikov
Email: austcourses@icheme.org
Tel: +61 (0)3 9642 4494

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CHEMICAL ENGINEERING APRIL 2009 IN AUSTRALIA

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AWARDS

2009 Chemical Engineering Awards of Excellence

The Australia and New Zealand Federation of Chemical Engineering is now seeking nominations for the 2009 Chemical Engineering Awards. The awards for 2009 are:

The Chemeca Medal

This is the most prestigious award in the chemical engineering profession in Australia and New Zealand. It is awarded to a prominent Australian or New Zealand chemical engineer who has made an outstanding contribution, through achievement or service, to the practice of chemical engineering in its widest sense and who continues to serve the profession. The recipient of the award is invited to present a plenary lecture at the annual Chemeca conference.

The Caltex Teaching Award (\$5000 and Certificate)

Recognises outstanding achievements in the teaching of chemical engineers.

The ExxonMobil Award (\$5000 and Certificate)

Recognises significant ongoing contributions to chemical engineering through innovations or a series of related publications over a number of years.

The Fonterra Award (\$NZ4500 and Certificate)

Recognises outstanding contributions in the industrial application of novel technology in the bioprocessing field from an individual or group of chemical engineers in Australia or New Zealand.

Achievements may be in technical or management fields.

The candidate must be a member of Engineers Australia, IChemE, SCENZ, or RACI and under 50 years of age.

The Freehills Award (\$5000 and Certificate)

Recognises innovation in product design or development, or service delivery by

a chemical engineer from Australia or New Zealand.

The Rio Tinto Award (\$5000 and Certificate)

Recognises outstanding applied chemical engineering.

The WorleyParsons Award (\$5000 and Certificate)

Recognises personal commitment and leadership by a chemical engineer in the area of safety and/or the environment. Applicants will have demonstrated outstanding leadership and/or commitment to safety or the environment during design, construction or operation of process plant.

The Uhde Shedden Medal and Prize (\$4000)

Recognises practical services to the profession and to the practice of chemical engineering in Australia or New Zealand.

Achievements may be in technical, marketing or management fields. Nominations can be made either by individuals themselves or by nomination from others. A candidate must be a member of Engineers Australia, IChemE, SCENZ or RACI and must be under 40 years of age.

Information on the awards and details on the nomination process can be found on the Australia and New Zealand Federation of Chemical Engineering website at www.anzfcche.org. Nominations close on 5 June 2009. Please contact Bill Chaffey (bchaffey@engineersaustralia.org.au) for more information.

The Australia and New Zealand Federation of Chemical Engineering acknowledges the generous support of the sponsors of the awards.

Dr Gordon Weiss is the chair of the Awards of Excellence Selection Committee

Entries invited for international IChemE awards

IChemE is now accepting entries for its 2009 Awards. Now in its 16th year, the IChemE awards program recognises and rewards chemical engineering innovation and excellence.

Celebrating individual and team achievements, this year's awards dinner takes place in York, UK, on Tuesday 3 November.

Any process, project, service or equipment developed or launched since January 2008 is eligible for entry and entries are welcomed from all over the world.

Alongside the established innovation and excellence awards program, the Dhirubhai Ambani award returns for a

second year, with a US\$10,000 prize on offer to the entry that best demonstrates the development and use of chemical engineering technology to support people living on less than US\$2 a day.

"We expect another year of strong candidates and some tough choices for the judging panel," said IChemE chief executive David Brown.

"The increasingly international interest in our awards has made both the awards and the awards dinner a key date on the chemical engineering calendar," he added.

For more information about the IChemE Awards, visit www.icheme.org/awards.

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EVENTS

AUSTRALIA

Seminars: **Pump fundamentals** (2 days) Perth 2 Jun, Darwin 15 Jun, Sydney 23 Jun; **Liquid piping systems fundamentals** (2 days) Perth 4 Jun, Darwin 17 Jun, Sydney 25 Jun. *Inquiries:* Kasa Redberg 02 9868 1111, fax 02 8246 6387, email info@kasa.com.au, web www.kasa.com.au

Seminars: **Control operation and design of reciprocating gas compressors (2 days) Brisbane 15 Jun; Subsea systems** (2 days) Perth 22 Jun; **Practical aspects of process control and instrumentation** (3 days) Perth 4 May; **Mechanical aspects of centrifugal gas compressors** (2 days) Melbourne 11 Jun, Perth 8 Oct; **The oil and gas industry: A nontechnical overview** (1 day) Perth 26 Jun; **Floating LNG – production storage offloading and regasification** (2 days) Perth 19 Oct; **Production process and emergency systems on oil and gas installations** (3 days) Perth 9 Nov; **Design & Operation of FPSOs** (3 days) Perth 16 Nov. *Inquiries:* Darren Reid 08 9355 5599, email daren.reid@esd-simulation.com

Conference: **Chemeca 2009** (4 days) Perth 27 Sep. *Inquiries:* web www.chemeca2009.com

Conference: **12th IUPAC international congress of pesticide chemistry** (5 days) Melbourne 4 Jul, 2010. *Inquiries:* Royal Australian Chemical Institute 03 9328 2033, fax 03 9328 2670, email iupacipc2010@raci.org.au, web www.raci.org.au/iupacipc2010

OVERSEAS

Conference: **Achema 2009** (5 days) Frankfurt 11 May. *Inquiries:* email

achema@dechema.de, web www.achema.de

Conference: **2nd international conference on self-healing materials** (4 days) Chicago 29 Jun. *Inquiries:* Dr Solar Olugebefola +1 217 333 2578, fax +1 217 244 0181, email solar@illinois.edu, web conferences.beckman.uiuc.edu/ICSHM2009

Conference: **XVII international conference on chemical thermodynamics in Russia** (5 days) Moscow 29 Jun. *Inquiries:* Prof J D Tretjakov +7 8 495 939 2074, fax +7 8 495 939 0998, email rcct2009@kstu.ru, web rcct2009.kstu.ru

Conference: **13th international IUPAC conference on polymers and organic chemistry** (5 days) Montreal 5 Jul. *Inquiries:* Prof Will Skene +1 514 340 5174, fax +1 514 340 5290, email wskene@umontreal.ca, web www.poc09.com

Conference: **19th international symposium on plasma chemistry** (6 days) Bochum 26 Jul. *Inquiries:* Prof. Achim von Keudell +49 234 322 3680, fax +49 234 321 4171, email Achim.vonKeudell@rub.de, web www.ispc-conference.org

Conference: **22nd international congress on heterocyclic chemistry** (6 days) Newfoundland, Canada 2 Aug. *Inquiries:* Prof Mohsen Daneshdalan +1 709 777 6958, fax +1 709 777 7044, email mohsen@mun.ca, web www.ichc2009.ca

Conference: **Advances in emulsion polymerization and latex technology** (5 days) Davos, Switzerland 3 Aug. *Inquiries:* Dr John Schork +1 301 405 1074, email davoscourse@gmail.com, web www.davoscourse.com

Conference: **8th world congress of chemical engineering** (5 days) Montreal 23 Aug. *Inquiries:* www.wcce8.org

ENGINEERS AUSTRALIA PROFESSIONAL STANDARDS SCHEME

Now available to Chartered members of Engineers Australia and their companies

The Engineers Australia Professional Standards Scheme can reduce the amount of liability you and your company will be subject to if you are sued in relation to engineering and related services. It does this by means of a monetary cap on the court judgement that can be awarded. The cap applies to legal actions for economic loss or property damage, but excludes personal injury and death.

The Scheme is designed not only to limit civil liability but also to improve the occupational standards of the profession and to protect the consumers of engineering services.

For further information on the scheme visit our website, obtain a copy of our free Professional Standards Scheme CD Rom, or visit your Division office for more information.

www.engineersaustralia.org.au/estpss

The Scheme is set up in accordance with the Professional Standards Acts of NSW, Victoria, Tasmania, Northern Territory, Queensland, South Australia, and Western Australia, and the Civil Law (Wrongs) Act of the ACT (the legislation). The scheme is not yet in force in Victoria, Tasmania or South Australia at the time of printing.



ENGINEERS
AUSTRALIA

IChemE 2009 awards for innovation and excellence



Tuesday 3 November 2009
York Racecourse, UK

Entries are now being accepted for ICHEM E's
2009 awards programme

For sponsorship enquiries or to book your place, contact Nigel Stephens
– nigel.stephens@mainlinemedia.co.uk / +44 (0)1536 747333

www.icheme.org/awards Email: awards@icheme.org

Entry deadline: 31 July 2009



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NEW PRODUCTS

Flow meter measures a variety of gases

The new Proline t-mass 65 thermal dispersion flow meter is suitable for measuring a variety of gases.

It can measure pure gases, such as carbon dioxide, or a mixture of up to eight different ones, as long as the exact composition is known.

Proline t-mass 65 can be used to measure air, ammonia, argon, butane, carbon dioxide, carbon monoxide, chlorine, ethane, ethylene, helium, hydrogen, hydrogen chloride, hydrogen sulphide, krypton, methane, neon, nitrogen, oxygen, propane and xenon.

Proline t-mass 65 is equipped with gas-specific temperature compensation and is compatible with 4mA-20mA galvanically isolated combined current, pulse outputs, as well as Profibus DP and Modbus interfaces.

In its flanged version, the meter is suitable for pipe diameters DN15 to DN100, process temperatures -40°C to $+100^{\circ}\text{C}$ and medium pressures -50kPa to 4000kPa .

An insertion version, the Proline t-mass

65I, is also available with lengths of 235mm to 608mm. It is suitable for temperatures from -40°C to $+130^{\circ}\text{C}$ and pressures from -50kPa to 2000kPa .

www.au.endress.com



The Proline t-mass 65 meter can measure a variety of gases.

Filtering viscous fluids

Pentair Industrial has introduced the Resflex series of resin-bonded filter cartridges for removing contaminants from viscous fluids, such as adhesives, chemical coatings, petroleum products, paint and printing ink, at temperatures of up to 120°C .

The cartridges' outer spiral wrap removes large particles and agglomerates. Resflex's inner layers are available in sizes from 2 microns to 150 microns.

To ensure long-lasting operation and effective filtration, Resflex cartridges are impregnated with phenolic resin. The units contain long acrylic fibres that resist breakage and help prevent migration.

Resflex's silicone-free construction is designed to filter fluids without contaminating them.

www.pentairindustrial.com



The Resflex resin-bonded filter cartridges remove contaminants from viscous fluids.

Solenoid valve

The Bürkert Type 6240 solenoid valve is suitable for liquid, gas and steam processes. The valve delivers flow up to 0.6kL per hour with media ranging -40°C to $+180^{\circ}\text{C}$ and pressures of up to 4000kPa .

The Type 6240 solenoid valve is available in brass or stainless steel, with a variety of seal materials. All internal parts are made of stainless steel, brass or engineered thermoplastics.

www.burkert.com.au

Pump for food production

Pioneer Pump has released a 200mm food pump for vegetable processing and hot chips applications.

The pump incorporates an expanded offset volute and single port impeller designed to reduce damage to food products. It has also been designed to use less water.

The SCF88S16N72-B pump is available with either a food-grade packing seal or a mechanical seal.

www.pioneerpump.co.uk

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NEW PRODUCTS

Gas cleaners use granules to filter gases

Ozone has launched a new range of cleaners for gases, vapours and odours, such as those produced by printing, chemical and plastics industries.

Ozone Gas Cleaners use granular

media – like activated carbon or chemically impregnated alumina – to capture and filter gases through a process known as “dry scrubbing”. Each granule has millions of pores through which the gas

passes, creating a huge active surface area.

Six different types of media are available to suit a range of gases. The filter cartridge can hold anywhere between 4kg and 54kg of granules, depending on the model of the cleaner. Electrically charged pre-filters prevent any airborne particles from blocking the granular medium and prematurely reducing filter life.

The cleaner range includes small, portable and mobile units, and large, fixed units for multi-inlet high flow systems. Cleaners can be either used as recirculators to clean ambient air in the workshop or equipped with an inlet to filter gases at their source.

The cleaners' case and filter housing are coated against corrosion. A flow rate control damper is fitted and discharge ducting can be added if necessary.

www.ozonetec.com



Ozone gas cleaners are suitable for cleaning the ambient air in a workshop.

Improving performance

Honeywell has created a website with ideas, information and tools to help manufacturers maximise plant performance and get the most out of existing assets.

The site focuses on four key strategies: reducing maintenance and operational costs, risk and improving cash flow. It includes a variety of tools including videos, podcasts, white papers, case studies and web seminars.

The site contains tips on extending the life of current assets, improving product quality, using certified recycled parts to reduce maintenance costs, installing applications to reduce energy consumption, implementing cost-effective migration strategies, reducing raw materials costs, optimising existing advanced applications, and complying with regulations.

www.theoptimizedplant.com

Chromatography columns

Agilent Technologies has released DB-1ms and HP-1ms Ultra Inert columns for capillary gas chromatography.

The columns have been designed for trace-level analysis of active compounds, such as acids and bases. Low column bleed provides increased detector sensitivity and faster baseline stabilisation.

The columns are suitable for environmental, food, fragrance, forensic, pharmaceutical and specialty chemical analyses.

www.agilent.com/chem/ultrainert



The EJX transmitter can monitor the condition of impulse lines in process applications.

Transmitters with advanced diagnostics

The Yokogawa EJX transmitter is capable of monitoring the condition of impulse lines using the DPharp pressure sensor and the newly developed pressure fluctuation detection function. The transmitter will register an alarm on the local digital display or trigger an analogue alert when a preset blockage level is reached.

The EJX transmitter can also use diagnostics to determine if the impulse line heat tracing is broken. Built-in temperature sensors measure cover flange temperature and trigger an alarm if there is a significant change.

The unit is compatible with HART and Foundation Fieldbus communication protocols.

www.yokogawa.com