NEWSLETTER

Volume ChE 33 No 1 – ISSN 1446-0831

CHEMICAL ENGINEERING IN AUSTRALIA

FEBRUARY 2008

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NEWS

A thickener tank being transported from Darwin to the Ranger mine.

Transporting thickener tank

A thickener tank, 12m in diameter, was recently delivered from Darwin to the Ranger uranium mine in the Northern Territory 230km away.

The leech feed thickener tank is part of the laterite project on site.

Thickener tanks are normally built on site, but this time the designer FLSmidth Minerals decided to have it built away from the sun and dust. Construction in a factory would ensure the quality of the rubber lining and reduce costs. It would also minimise disruptions to the mine site.

EC & E constructed the thickener at Berrimah, near Port Darwin. The natural rubber lining was installed by Linatex.

Delivery was an eight hour drive down the Arnhem Highway with a crane and a semitrailer with the 12m wide load. "We had to knock down and rebuild traffic lights and road signs along the way. But determination and perseverance prevailed," project manager Adam Jennians said.

Once delivered, the team installed the tank in under four hours. The rubber-lined mechanical components, bridge and drive were bolted in place ready for connection to the processing plant and the thickener was fully operational within two weeks.

LNG plant for Gladstone

The Queensland Gas Company and BG Group have announced plans for an $8 billion LNG plant in Gladstone, Queensland.

The facility will draw upon the coal seam gas in the Surat Basin to produce 190 petajoules of LNG a year, more than the entire Queensland gas market currently. Pipes will connect the plant to the coal fields 380km away.

The first shipment is scheduled for 2013 and the plant is set to operate for at least 20 years.

BG Group is a UK-based energy company, operating in 25 countries around the world. This will be its first project in Australia. Queensland Gas Company holds interests in exploration and development permits for 7500 km^2 of the Surat Basin.

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More engineers needed

The federal government has been warned that signing up to the Kyoto protocol won't be enough to tackle global warming in Australia.

In an open letter to prime minister Kevin Rudd, Russell Scott, chairman of the Institution of Chemical Engineers (IChemE) in Australia, has warned that a shortage of scientists and engineers will damage the country's efforts to tackle the problems relating to global warming.

Scott warned that the Australian economy needs scientists and engineers more now than at any time in the country's history.

Russell Scott … Lack of engineers will hinder long-term plans.

"Any long-term plans will be significantly hindered if we cannot supply the required quantity and quality of young scientists and engineers," he said.

Scott recommended the introduction of five key initiatives to get more young people to consider a career in science and engineering:

- better pay for science teachers in schools to attract more top graduates into teaching
- properly qualified teachers in each science discipline (eg a physicist teaching physics)
- first-rate careers advice, including opportunities to hear from young scientists and engineers in industry
- greater support for science and engineering graduates in repaying their student debts
- a long-term target of a science specialist in every Australian primary school.

In a move to attract more students into engineering, the IChemE itself launched its whynotchemeng campaign in Australia at Chemeca last year. Designed to teach 14-18 year-olds about the benefits of a career in chemical engineering, the UK whynotchemeng campaign has played a key role in a recent upturn in applications and admissions to study the subject, with a record-high number of students studying the subject in the UK last year.

To read the letter in full, visit www.icheme.org/LetterDec2007.pdf.

Simulating oil and gas plants

An oil and gas plant simulator called Pearl is now available in Australia.

Pearl reflects the behaviour of a real plant and is suitable for training in areas like wellhead operation, gas and oil separation, gas compression, oil export systems, operating procedures, troubleshooting, handling of abnormal conditions, communication, fire and gas systems, emergency response assistance and aptitude assessment.

It has three levels of training – introduction, fundamentals and advanced.

Pearl is provided by ESD Simulation Training. ESD has a suite of stand-alone simulation models which can be incorporated into the training to complement Pearl on topics like glycol dehydration, acid gas removal and multistage reciprocating compressors.

The company provides training for the process industries.

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Addressing security risks of chemicals

A draft report on the "Control of chemicals of security concern" is up for public comment.

The report came out as a result of the Council of Australian Governments' Review of Hazardous Materials, which examined the regulation, reporting and security surrounding the illegal or unauthorised use of chemicals for terrorist purposes.

"The report proposes a national framework to manage the risks associated with the potential use of various chemicals by terrorists," federal attorney-general Robert McClelland said. "The national framework is designed to strike the right balance between making Australia a safer place, while not strangling industry, including our hard working farmers, in red-tape."

The report notes: "There is sustained terrorist interest in the illegal/unauthorised use of chemicals that is likely to continue for the near to medium-term future." Yet it is impossible to "mitigate all risks associated with the illegal/unauthorised use of chemicals for terrorist purposes and maintain a viable, effective chemical industry".

The draft recommends a methodology to assess the risk based on Australian and New Zealand standards. In particular, the report recommends a risk assessment of chemicals that are precursors for home-made explosives and chemicals stored in or transported in bulk.

Another recommendation is for security standards to be incorporated into industry codes. Industry bodies should also receive security training, the report said.

McClelland said the review took into account the concerns of industry representatives.

The public has until 4 April to comment. There will be consultation sessions in all states and territories.

Bans on lead proposed

The federal government is proposing to restrict the manufacture and import of some lead compounds used in industrial coatings or inks.

The compounds include lead monoxide, chromate, sulfate, molybdate, sulfochromate, chromate molybdate sulfate, chromate oxide, octanoate, 2-ethylhexanoate, oxide, nitrate, naphthenate, peroxide and carbonate.

The proposed changes would ban the use of these compounds in concentrations greater than 0.1% from 1 April 2008. There will be exceptions for commercial vehicle and aviation industries until 1 January 2009.

Share of consultant sold

Clough has sold its 50% share in Shedden Uhde for about $40 million. Shedden Uhde, based in Melbourne, is an engineering and project delivery contractor to the oil, gas and process industries.

Clough chief executive John Smith said Shedden Uhde's engineering services for chemical and petrochemical industries were "non-core to Clough's business".

He said Clough was focusing on upstream oil and gas whereas Shedden Uhde oriented itself towards the downstream sector.

The two companies will maintain an engineering services co-operation agreement.

The agreement gives Clough access to Shedden Uhde's expertise and services in Australia and Thailand.

German process engineering contractor Uhde has bought Clough's stake and now owns the whole of the company.

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Extra LNG train for Gorgon project in WA

Chevron Australia has announced its plans for an extra LNG train on Barrow Island as part of its Gorgon project. This brings the total number of LNG trains planned for the site to three, each with a capacity of 5Mt/a.

According to Chevron Australia's newsletter, the change in plans is due to recently completed optimisation studies.

Chevron said it will seek government approval for the new train.

The Gorgon project consists of underwater tie-back pipelines connecting the Gorgon and Jansz fields to a proposed 300 hectare processing and export facility on Barrow Island off the coast of Western Australia. Another pipeline will transport some of the gas from the island to the mainland for the domestic market.

Chevron will drill up to 30 wells in water 200m-1300m deep. Each well will have a subsurface safety valve controlled from the surface which will shut off gas flow if there is a mechanical failure or a loss of integrity.

The valves will sit 300m-500m below the seabed. Jumpers will join wells into clusters around manifolds which in turn connect to pipeline termination structures.

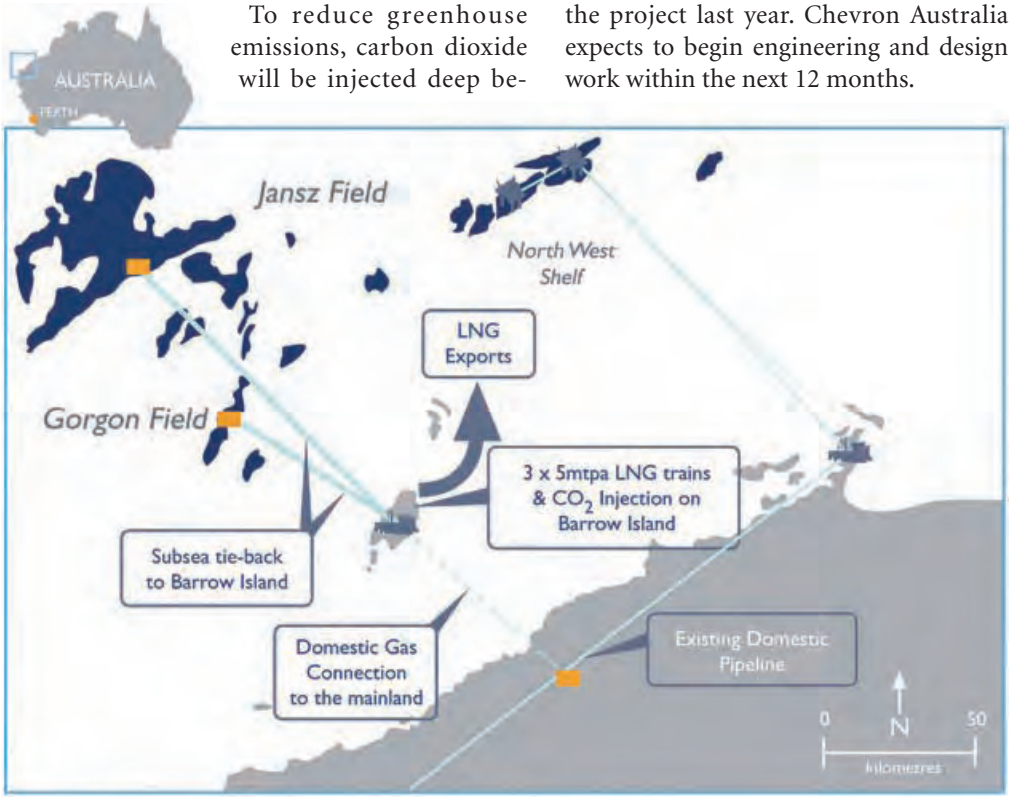
The carbon steel pipelines will have either internal corrosion-resistant alloy cladding or a chemical anticorrosion system. Monoethylene glycol injections will prevent the formation of hydrates in the pipelines.

To reduce greenhouse emissions, carbon dioxide will be injected deep beneath Barrow Island.

Chevron is the operator of the project, with a 50% share. Shell and ExxonMobil hold 25% each.

The fields are considered Australia's largest undeveloped gas source.

State and federal governments approved the project last year. Chevron Australia expects to begin engineering and design work within the next 12 months.



Map of the Gorgon project on the North West Shelf.

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Salary survey in progress

Chemical engineers in Australia are for the first time included in the IChemE's biennial salary survey, which is currently under way.

The survey findings, designed to help chemical engineers know their worth and as a benchmarking resource for human resources/personnel departments, will be published in April.

"The IChemE salary survey is widely regarded as the authoritive guide in the UK, when it comes to benchmarking salaries in chemical and process engineering," explained Russell Scott, chair of the Board of IChemE in Australia.

"By extending the survey to include members in both Australia and Malaysia, we're able to get a better understanding of the international chemical engineering community. The findings will be of great interest to our members in Australia and will be a useful resource for companies when it comes to the recruitment and retention of staff," he said.

For more information about the IChemE 2008 Salary Survey contact Matt Stalker at mstalker@icheme.org.

New source for biofuels

Researchers from the CSIRO and Monash University have developed a new way of producing biocrude oil.

The process, known as Furafuel, produces fuel from lignocellulose in green waste, wood thinnings and waste paper.

The resulting bio crude oil can be turned into high-value chemicals, and petrol and diesel replacement biofuels.

"By making changes to the chemical process, we've been able to create a concentrated biocrude which is very stable," Dr Steven Loffler of CSIRO Forest Biosciences said.

As it draws on waste materials, the process is an alternative to the conventional way of making biofuels from food substances like grains, corn and sugar.

CSIRO and Monash will apply to patent the chemical processes involved once laboratory trials are complete.

Funding for the project comes from CSIRO's Energy Transformed program, Monash University, Circa Group and Wood Products Australia.

Training for hazardous substances

A new multimedia demonstration highlighting the potential of industry partnerships in developing innovative e-learning programs has been released.

The "Chemical awareness industry e-learning demonstration" is an online interactive multimedia package for employees required to work with or near hazardous substances.

Jointly developed by IMP Printed Circuits and registered training organisation Workstar, the package was funded by the national training system's e-learning strategy, the Australian Flexible Learning Framework. The framework is funded by state and federal governments.

The package has been designed to engage employees from a range of educational backgrounds and experience levels to promote an industry wide standard for the safe handling of hazardous chemicals. It is to be used as part of organisational induction and/or the reskilling and upskilling of existing staff.

The package covers topics like hazard identification, occupational health and safety procedures, understanding warning labels and correct use of personal protective equipment.

The package can be used as a guide to complement on-the-job occupational health and safety training across a range of industries.

To view the "Chemical awareness industry e-learning demonstration" visit: http://industry.flexiblelearning.net.au/demo_imp/index.html.

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CHEMECA AWARDS

Nine awards for 2008

by Gordon Weiss

Each year, the Chemical Engineering Federation presents the Awards of Excellence in Chemical Engineering. These awards recognise excellence in the various aspects of our profession. The 2008 Awards of Excellence will be presented during the 2008 Chemeca Conference in Newcastle in September. The awards are:

- the Chemeca Medal, the highest individual award for a chemical engineer in Australia and New Zealand
- the ExxonMobil Award, which recognises significant ongoing contributions to chemical engineering through innovations or a series of related publications over a number of years
- the Fluor Award, which recognises exceptional management and leadership talent that has directly resulted in a sustained corporate success over a significant period
- the Rio Tinto Award, which recognises outstanding applied chemical engineering.
- the Shedden Uhde Medal and Prize, which recognises practical services to the profession and to the practice of chemical engineering; a candidate must be a member of Engineers Australia, IChemE, SCENZ or RACI and under 40 years of age
- the Fonterra Award, which 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; the candidate must be a member of Engineers Australia, IChemE, SCENZ, or RACI and under 50 years of age
- the WorleyParsons Award, which acknowledges 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 Caltex Award, which recognises outstanding achievements in the teaching of chemical engineers.

This year, the Chemical Engineering Federation is pleased to announce a new national Award of Excellence – the Freehills Innovation Award. The inaugural award last year was presented only for Victoria. This award recognises innovation in product design or development, or service delivery by a chemical engineer from Australia or New Zealand.

The federation thanks Freehills and all the other sponsors for their generous support of the Awards of Excellence.

Over the next few months, nominations for all these awards will be sought. Contact Bill Chaffey (bchaffey@engineersaustralia.org.au) for more information.

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

Presidential visit

The president of IChemE, Dr Ramesh Mashelkar, will be in Australia and speaking to IChemE members in Melbourne on Tuesday 15 April on "Chemical engineering and innovation – The emerging challenges". Details of this event are currently being finalised. Contact the IChemE in Australia office on 03 9642 4494.

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EVENTS

AUSTRALIA

Seminars: **Pump fundamentals** (2 days) Sydney 1 Apr, Brisbane 8 Apr, Perth 14 Apr; **Liquid piping fundamentals** (2 days) Sydney 3 Apr, Brisbane 10 Apr, Perth 16 Apr. *Inquiries:* 9868 1111, fax 8246 6387, email info@kasa.com.au, web www.kasa.com.au

Courses: **Control operation and design of reciprocating gas compressors** (2 days) Brisbane 7 Apr, Perth 15 Sep, Melbourne 10 Nov; **Control and operation of centrifugal gas compressors** (3 days) Brisbane 9 May, Perth 17 Sep, Melbourne 12 Nov; **Control and operation of industrial gas turbines** (2 days) Perth 29 May; **Design and opereation of FPSOs** (3 days) Perth 30 Jun; **Subsea systems** (2 days) Perth 3 Jul; **Floating LNG** (2 days) Perth 17 Sep; **The oil and gas industry – a nontechnical overview** (1 day) Perth 19 Sep; **Production processing and emergency systems on offshore oil and gas installations** (3 days) Perth 7 Nov. *Inquiries:* Renae Watson 08 9355 5599, fax 08 9355 3899, email renae.watson@esd-simulation.com, web www.esd-simulation.com

Conference: **Chemical engineering and innovation – the emerging challenges** (1 day) Melbourne 15 Apr. *Inquiries:* email TGraham@icheme.org

Conference: **17th world hydrogen energy conference** (5 days) Brisbane 15 Jun. *Inquiries:* ICMS 07 3307 4000, fax 07 3844 0909, email whec2008@icms.com.au, web www.whec2008.com

Conference: **Chemeca 2008** (4 days) Newcastle 28 Sep. *Inquiries:* web www.chemeca2008.com

OVERSEAS

Seminars: **Quality and reliability of CFD simulations IV** (1 day) Nottingham, UK 5 Mar; **Simulation of complex flows – applications and trends** (1 day) Wiesbaden, Germany 10 Mar; **Simulation driven design – potential and challenges** Wiesbaden, Germany 12 Mar. *Inquiries:* web www.nafems.org/events/nafems/2008

Conference: **LogiChem – the 7th annual European bulk and specialty chemical supply chain conference** (3 days) Düsseldorf, Germany 14 Apr. *Inquiries:* +44 20 7368 9465, fax +44 20 7368 9401, email logichem@wbr.co.uk, web www.logichemeurope.com

Conference: **ProcureCon indirect** (3 days) Amsterdam, The Netherlands 14 Apr. *Inquiries:* Yasemin Karaman +44 207368 9896, email Yasemin.karaman@wbr.co.uk, web www.procurecon-indirect.com

Conference: **Hazards XX** (4 days) Manchester, UK 14 April. Inquiries: Mike Adams email mikeadams@rawgreen.fsworld.co.uk, web www.icheme.org/hazardsxx

Conference: **9th China international chemical industry fair** (3 days) Shanghai, China 23 Apr. Inquiries: email mokai@ccpitchem.org.cn, web www.icif.org.cn

Conference: **Magnetic & electrical separation 08** (1 day) Falmouth, UK 5 May. *Inquiries:* Minerals Engineering International, email amanda@min-eng.com, web www.min-eng.com/magnetic08/index.html

Conference: **Gravity concentration 08** (2 days) Falmouth, UK 6 May. *Inquiries:* email amanda@min-eng.com, web www.min-eng.com/gravityconcentration08/index.html

Conference: **Hydrocyclones 08** (2 days) Falmouth, UK 8 May. *Inquiries:* email amanda@min-eng.com, web www.min-eng.com/hydrocyclones08/index.html

Conference: **Comminution 08** (5 days) Falmouth, UK 16 Jun. *Inquiries:* email amanda@min-eng.com, web www.min-eng.com/comminution08/index.html

Conference: **24th international mineral processing conference 2008** (5 days) Beijing, China 24 Sep. *Inquiries:* email impc2008@impc2008.org, web www.impc2008.org

Conference: **NAFEMS UK conference 2008 – engineering simulation: Effective use and best practices** (1 day) Cheltenham, UK 10 Jun. *Inquiries:* web www.nafems.org/events/nafems/2008

Conference: **24th international carbohydrate symposium** (6 days) Oslo, Norway 27 Jul. *Inquiries:* +47 225 55011, fax +47 225 63510, email ICS-2008@meeting-management.no, web www.ics2008.uio.no

Conference: **22nd IUPAC symposium on photochemistry** (5 days) Gothenburg, Sweden 28 Jul. *Inquiries:* web photoscience.la.asu.edu/Goteborg2008

Conference: **20th international conference on chemical education – chemistry in the ICT age** (6 days) Mauritius 3 Aug. *Inquiries:* email 20icce@uom.ac.mu, web www.uom.ac.mu/icce

Conference: **20th international conference on chemical thermodynamics** (6 days) Warsaw, Poland 3 Aug. *Inquiries:* email info@icct.2008.org, web www.icct2008.org

Conference: **13th international biotechnology symposium and exhibition** (6 days) Dalian, China 12 Oct. Inquiries: Mrs Cui-Ling Lan +8610 68597751, fax +8610 68597753, email cllan@cashq.ac.cn, web www.ibs2008.org

Conference: **ChemEng 08** (3 days) Birmingham, UK 28 Oct. *Inquiries:* email chemeng08@icheme.org, web www.chemeng08.com

CALL FOR PAPERS

Conference: **ICCE 2008 – fifth international conference on chemical engineering** (3 days) Paris, France July 4. *Inquiries:* web www.waset.org/icce08

Abstracts due: 31 Mar

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NEW PRODUCTS

Measuring with radar

The new radar Sitrans LR250 from Siemens can reliably measure the level of slurries or liquids in minutes. The plug-and-play compact 25 GHz 2-wire radar transmitter is easy to install and quick to configure.

The compact stainless steel horn allows installation in small openings and the concentrated high frequency beam ensures interference from vessel walls is minimal. A high frequency and narrow transmission pulse system can measure the entire vessel capacity.

The Sitrans LR250 is equipped with polyester powder-coated aluminum enclosure, encapsulated electronics, glass antenna seal, and optional hastelloy antenna material.

The new "Process Intelligence" signal processing evaluates dynamic echo signals. It applies algorithms, based on field data collected from over one million level measurement applications, to the raw echoes to produce the readings. A new algorithm that improves the measurement accuracy in the low level of vessels containing low dielectric media.

The transmitter can be programmed via the infrared handheld programmer or remotely using Simatic PDM without opening the lid and exposing the electronics to corrosive atmospheres.

The graphical interface displays echo profiles and diagnostic information allowing the user to determine dynamics in the tank at a glance. The device also includes self-diagnostic features that can be communicated across networks. For example, a timer can be preset to alert the user of a required maintenance or a scheduled quality check.

More info? Qikreply 22

Designing pipelines

SmartPlant Isometrics is a new way of generating industry-standard pipeline isometric drawings for greenfield and brownfield design projects.

A successor to the I-SketchT program, SmartPlant Isometrics allows users to sketch piping systems in only minutes and generate isometric drawings with full bills of materials in seconds. The software is based on ISOGEN technology, the industry standard for automatic generation of piping isometrics.

Once a pipeline has been designed, data such as drawing, materials, welding and pipe cut lengths can be electronically transferred to the pipe fabricator in seconds.

The software is easy to learn to use and requires no previous CAD or drafting skills.

More info? Qikreply 23

Portable recorders

Yokogawa Australia has launched the MV1000 and MV2000, two new paperless portable recorders for continuous recording of onsite changes in temperature, voltage, current, flow, pressure and the like. Both feature an increased number of input channels and more memory.

The recorders have integrated display, recording, and communications functions.

The number of input channels is almost twice that of previous models. The MV1000 has 24 channels and the MV2000 has 48. In addition, when used together with an external unit, the number of channels can be extended up to 348.

With 200MB of memory, data can be stored for approximately 70 days at one second intervals with a 12 channel model.

Measured data can be copied to other media for processing and backup.

More info? Qikreply 19

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Measurement instruments

Fluke Australia has released a range of new products.

Fluke 566 and 568 infra-red thermometers can troubleshoot equipment with a one per cent measurement accuracy. The 566 measures from -40°C to 650°C and the 568 measures from -40°C to 800°C. The thermometers are compatible with most type-K thermocouples, and can measure any type of surface with the adjustable emissivity feature and a built-in material table, They have two levels of backlight for work in dim conditions as well as instant audio and visual alarms. The 568 model can monitor temperature hands-free when connected to a PC.

The Fluke 289 multimeter, diagnoses problems in electronics, plant automation, power distribution and electromechanical equipment. This can be combined with FlukeView Forms PC software to turn logged data into graphs, tables and reports as well as monitor unattended equipment.

Users can save multiple logging sessions before PC download is necessary and can review logged readings in graphical format directly on the meter display using the TrendCapture capability.

FlukeView Forms documents, stores and analyses individual readings or a series of measurements and then converts them into professional documents. Once the data is downloaded, FlukeView Forms software provides an analysis capability that a meter alone can't provide, enabling an overlay of logged data from six meters or six time periods for conditioning monitoring applications, to troubleshoot intermittent problems, or to identify cause and effect relationships.

The software allows the archival storing and retrieving of waveforms with text so users can create their own library for easy reference and comparison. Data can be shared by using the free FlukeView Demo/Reader or by exporting data or reports to other software programs.

FlukeView Forms documenting software is also available as an option for the Fluke 287 True-rms Electronics Logging Multimeter with TrendCapture, a high-accuracy logging digital multimeter designed with advanced features for electronics professionals.

More info? Quikreply 17

The multimeter diagnoses problems in plant equipment.

Treating industrial wastewater

Clearmake has launched a new range of compact, skid-based industrial water treatment systems.

The Enhanced Gravity Separator Systems (EGI and EGII) are clarification and separation treatment systems developed for improving wastewater quality to a level acceptable for sewer or environmental discharge, where filtration is not required.

Both systems have a capacity to manage flow rates of <700L/h per unit.

The EGI clarification and separation process is completely chemical-free. Depending on the level of hydrocarbons and contaminants in the input process water, the EGI may be all that is required to produce water quality acceptable for returning to the sewer.

Wastewater from a wash-down pad is collected in a beach pit or holding tank and pumped into a clarifier, allowing for solids to settle. The clear phase of water is then pumped through an oil/water/solids separator and finally discharged to the sewer. A manual release valve allows sludge remaining in the clarifier to be removed or returned to the holding tank.

The system can incorporate a rain sensor to identify if the water source is rainfall or from the wash-down pad. Rainwater can be captured and stored for reuse or diverted to stormwater, rather than treated and

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pumped to the sewer. An override switch permits wash-down during wet weather.

Discharge to the environment requires a higher quality water output, so the EGII applies a similar process to the EGI, but has a dosing pump that injects and mixes flocculent into the water upon entry to the clarifier. The flocculent agglomerates suspended solids particles into floccules. These then settle at the base of the clarifier. A control panel is included to monitor operation of the system and periodically open an automatic sludge decant valve to discharge waste build-up.

More info? Qikreply 20

Rheometer cell

Rheology Solutions has released its Haake RheoStress 6000 universal rheometer.

The rheometer is fully compatible with existing accessories for previous RheoStress models including temperature control units, measuring geometries and application oriented measuring cells.

A variety of temperature control units is available to handle temperatures ranging from 80°C up to 500°C. Other accessories include a pressure cell, a UV cell, a measuring cell for construction materials such as pastes and mortars, double cone geometry for small quantities of viscous material and disposal measuring geometries for difficult-to-remove samples like cross-linking and curing material.

The instrument has a compact design consisting of a single-column aluminium frame with integrated controls and electronics. The fixed measuring head contains a drag cup motor with inertia of 10μNms^2, an optical encoder with 12 nrad resolution, an air bearing system and a temperature-compensated normal force sensor based on strain-gauge technology.

An optional control unit displays rheological data online even without a PC.

More info? Qikreply 18

Monitoring liquids and slurries

The Gladiator Smart Admittance Level Switch is designed to detect the level of liquid, slurry or powder in a tank or vessel. The unit measures the capacitance or "admittance" between a probe and the wall of the container. As the level of the product rises to the level of the probe, or drops below that level, the capacitance measured at the probe changes.

The Gladiator detects this change and produces an output. It can monitor materials with a range of dielectric constants, so the system is suitable for many liquids, slurries and powders.

The unit can operate in tough industrial environments. It is simple to set up and calibrate, and has excellent temperature stability. Several probe types are available to meet specific application requirements, and all types are resistant to product build-up.

The Gladiator communicates using Modbus, HART, or Profibus protocols. A remote amplifier can be positioned up to 500 m away from the unit. The HawkLink GSM/CDMA communication option allows a technician to commission, calibrate, test, or check the output of the unit from anywhere in the world.

The instrument can monitor liquids applications in the petrochemical, food and beverage, and water and wastewater industries. It can also monitor levels of dry powdered material for industries including cement, glass, pharmaceutical, mining and minerals, power generation and fertilizer.

More info? Qikreply 16

The unit can monitor materials with a range of dielectric constants.

Reducing noise

Valtek Stealth, a patented gaseous noise trim that reduces sound pressure levels in control valves, has been released.

The device, capable of reducing noise by up to 40 decibels, consists of laser-cut disks stacked to form a seat retainer. The cuts in the discs form channels for the fluid to pass through. As the flow passes through the retainer, it expands and contracts creating gradual, controlled pressure drops. Irregularly shaped cross-sections shift frequencies to further reduce audible noise.

More info? Qikreply 21

For more information on any of these products, send an email to kharrison@engineersmedia.com.au with the subject headline "CEA Qikreply".

Your contact details and the Qikreply number of the product should be included in the body of the email.