

ICEnews

May 2008

All that's Cool in Instrumentation and Control Engineering

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Welcome to the May 2008 issue of *ICEnews*, the Instrumentation, and Control Engineering news source. A web version of this newsletter can be found at <http://www.iceweb.com.au/icenews/icenewsmay2008.htm>

ICEnews is a compendium of useful information which we endeavour to issue quarterly.

We want to make this newsletter a source of information that YOU can use in YOUR job, while also keeping you informed on what is happening in our industry both directly and indirectly. If you have something you would like to contribute, please send it to the editor at Ian Verhappen (<mailto:ian.verhappen@iceweb.com.au>) or Jim Russell (<mailto:jimrussell@iceweb.com.au>). We welcome your Press Releases, information, AND any technical articles you may have that could be appropriate for this newsletter or our web site <http://www.iceweb.com.au>.

ICEweb's primary purpose is to disseminate information about Instrumentation, Control, Electrical and Fire & Gas Engineering to you the practitioners and developers of these arts. ICEweb is averaging 36,000 page views each month. ICEnews is another mechanism to get this information out to you. Our database is in excess of 1800 quality contacts.

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As an ICEnews member you are on our mailing list so that we can keep you up-to-date technical information.

At ICEweb/ICEnews we take Spam very seriously and aim to make any information that we send out useful and informative.

Should you no longer wish to receive information from ICEnews, please reply to this email with “unsubscribe” in the subject line or contact <mailto:jimrussell@iceweb.com.au> and just put “unsubscribe” in the subject line.

If you select either of these options we will remove you from the list. If you wish to continue to receive the information you do not need to take any action.

ICEart — Technical articles related to instrumentation and control.

Over the years it has been difficult to source Exd Certified immersion heaters and often this has led to a certification nightmare for those engineers responsible for the associated equipment packages. A technical article outlining a solution can be found at

<http://www.grimwoodheating.com.au/HazardousAreaHeating.htm>

Eurotherm have an excellent range of Tutorials by Arthur Holland, there are Articles on Temperature and Power Control Technology in Industry and Research. You have to register to get them but it is worth the effort.

<http://www.eurotherm.com/training/tutorial/tutor.htm>

AS/NZS 2381.1 Electrical equipment for explosive gas atmospheres - Selection, installation and maintenance - General requirements has been amended by Standards Australia. You can get a free download of the amendment.

<http://www.saiglobal.com/shop/script/Details.asp?SAID=9000&UpdID=396&SID=151418&DocN=AS0733783945AT>

ABB have released a new flow meter selection guide. It provides readers with information on flowmeter selection. Every fluid behaves differently when flowing through a pipeline and so no flow meter is suitable for every application. The flow profile explains the way in which the flow of a fluid behaves in a pipeline, based on its velocity and viscosity. Understanding the fluid flow profile is crucial to ensuring that the flowmeter you select will match your needs, but it can be a confusing task. Copies can be obtained by contacting ABB with the reference 'Flow Profiling Instant Guide' together with your name and company identity.

<http://www.abb.com/cawp/abbzh251/18038db6c5254e4bc1256b5e00767acb.aspx>

The International Electrotechnical Commission (IEC)’s specialist conformity assessment system dealing with equipment for use in explosive environments – IECEx – has today launched a new mark of conformity – the Ex Mark. This new Ex safety mark – which will be granted by approved IECEx certifiers (ExCBs) located in IECEx participating countries for equipment that is covered by an IECEx Certificate of Conformity and hence has been tested and manufactured under systems that are under ongoing surveillance by ExCBs – will help governments, safety regulators, and industry have greater assurance that the equipment being operated or supplied for use in areas where flammable gases and vapours and combustible dusts (termed explosive atmospheres) meets the world’s most respected and vigorous safety standards as established by the International Electrotechnical Commission (IEC).

http://www.iecex.com/docs/080215_IEC_launches_Mark_of_Conformity_Ex_Industry.pdf

Brooks Instrument has released a new filling and dosing solution which features the patented QTA Dosing Transmitter. This transmitter offers all the benefits of digital technology, in a package specifically designed for filling and dosing processes. This system is packed with features for precise control and delivery of fluids in small quantities over broad ranges of process conditions.

http://www.emersonprocess.com/brooks/pdfs/brochures/1_QTAFillingFlyer_v3-7-07.pdf

IDC have a technical downloads site with thousands of valuable pages of information, software and booklets on Data Communications & Networking, Electrical Engineering, Electronics, Industrial IT, Instrumentation, Automation & Process Control, Mechanical Engineering and Project & Financial Management. You have to register to get to the papers but it is worth it.

<http://idc-online.com/technical%5Fpreferences>

It may only be May, but IDC Technologies are in the process of compiling their Engineering & Technical Planner for 2009 and want to hear from YOU. If you have any favourite quotes or citations you would like to see in next year's planner, please forward them along with the source, your name (and company name if you want) and we will include it on the date page of your choice (your birthday ?) ! They are also looking for additions to the Useful Websites and Technical References section and your inspired ideas for the monthly specials, so please send your suggestions to <mailto:register@idc-online.com> by 31st May 2008. In return for your help, IDC will send you a link to download their latest 140 page Automation and Process Control pocket guide - for free!

Emerson Process Management has announced approval of the Fisher® [FIELDVUE](#)® DVC6000 digital valve controller for natural gas applications, making the instrument an "energy-responsible" choice for the natural gas industry. The CSA (Canadian Standards Association) approved instrument is designed to help customers improve plant safety. This new design for natural gas applications eliminates the need for an additional seal or an associated wiring termination box, creating an integrated and more cost effective option to actuating the valve assembly.

http://www.emersonprocess.com/home/news/pr/803_energy-responsible-fieldvue.html

McCrometer have released a Multi-Mag™ L Series Flow Meter - With its advanced electromagnetic multi-point sensing technology for large line sizes, a smart programmable signal converter and a virtually noise-immune cable, it delivers exceptional performance in a NEMA 6/IP67 package that is ideal for demanding municipal water and industrial processes.

http://www.mccrometer.com/news_media/news_releases/pr2008_multi-mag_1.asp

The National Physical Laboratory in partnership with ETALON has developed a revolutionary new measurement system for high-speed, high accuracy calibration and verification of CMMs, CNC machine tools, and other leading-edge measurement applications.

<http://www.npl.co.uk/server.php?show=ConWebDoc.2617>

The Analytical Science Team at the National Physical Laboratory has recently completed a Joint Industry Project comparing methods to measure the hydrocarbon dew point of natural gas. The project page has the full report and also contains the full dataset generated during the project

<http://www.npl.co.uk/server.php?show=ConWebDoc.1950>

Expertune have advised that their ProcessApex software now benchmarks and tracks the business results of fired heaters, heat exchangers, and dryers. Use the results to make decisions that directly impact efficiency, throughput, operating targets, and bottom line of operations.

<http://www.expertune.com/NewsReleases.html#NewsReleaseApr08b>

Emerson Process Management has introduced the CSI 9330 Vibration Transmitter which continuously monitors rotating machinery for early detection of developing mechanical issues. The CSI 9330 is available in two configurations. The CSI 9330VP provides overall vibration and PeakVue data when connected to a standard accelerometer. The CSI 9330VT provides vibration and temperature data when connected to an accelerometer with an embedded temperature capability.

http://www.emersonprocess.com/home/news/pr/805_csi9330.html

Siemens Energy & Automation, Inc. has released the SIMATIC SM 336, reportedly the world's first TUV SIL 3 certified HART failsafe analog input module which supports single, dual and triple redundancy architectures. The SM 336 module does not require redundancy to achieve SIL 3 certification. HART communications and diagnostics for the module are set up from a central computer. A 50 percent reduction in size provides greater packing density for this certified failsafe I/O, which also has six isolated HART analog inputs between channels and its backplane bus. The module provides short circuit protection and supports two or four-wire transmitters. Local LED displays indicate failsafe operation, channel specific faults and HART status.

<http://www2.sea.siemens.com/News/Industrial/First-SIL-3-Certified-Hart-Analog-Input-Module.htm>

An interesting paper is available from Advantech titled "Chasing Moore's Law – The truth behind the OS and CPU Upgrades for Industrial PC Users". It also has a GREAT picture of the physically younger Dick Morley.

<http://www.advantech-eautomation.com/media/releases/osfinal.pdf>

International Standard ISO/IEC 29500 Office Open XML has been approved as a standard for word processing documents, presentations and spreadsheets that is intended to be implemented by multiple applications on multiple platforms. Ecma International, a Swiss based industry association <http://www.ecma-international.org/>, was the submitter of the specification. According to Ecma, one of the objectives of the specification is to ensure the long-term preservation of documents created over the last two decades using programs that are becoming incompatible with continuing advances in the field of information technology. ISO/IEC DIS 29500 was originally developed as the Office Open XML Specification by Microsoft Corporation, which submitted it to Ecma for transposing into an ECMA standard. Following a process in which other IT industry players participated, Ecma subsequently published the document as ECMA standard 376.

http://www.ecma-international.org/news/TC45_current_work/ISO_and_IEC_approve_Office_Open_XML.htm

BS EN 60034-2-1:2007 Rotating electrical machines. Standard methods for determining losses and efficiency from tests (excluding machines for traction vehicles) applies to d.c. machines and to a.c.c synchronous and induction machines of all sizes within the scope of IEC 60024-1 is now available from the British Standards Institute at

<http://www.bsigroup.com/en/Shop/Publication-Detail/?pid=00000000030113020>

ICEbooks – Useful books and new releases related to instrumentation and control.

Need some technical "know-how"? ICEweb has developed a new page which details a selection of excellent Instrumentation, Automation, Control, Electrical, Electronic and Information Technology books from IDC Technologies. These can be purchased from ICEweb . Also detailed are other links to more useful references. <http://www.iceweb.com.au/Books/books.htm>

IDC produces five brilliant comprehensive Engineer's pocket guides which are now available for you to download. Subjects include: Instrumentation/ Communications/Electrical/ Electronics/Conversion & Engineering formulas, you have to register but it is worth the effort!

http://www.idc-online.com/pocket_guides/?country=%23

IEC 61511 Guidelines - Written with guidance from members of CCPS's *Guidelines for Safe and Reliable Instrumented Protective Systems* subcommittee, author and safety standards expert Dr. Angela Summers explores the decision making processes necessary for the management of the protection systems commonly applied throughout the process industry.

Based on the framework defined in the harmonized ANSI/ISA 84.01/IEC 61511 standards, Dr. Summers provides readers with much-requested guidance in an easy to understand discussion that addresses IPS planning, risk assessment, design, engineering, installation, commissioning, validation, operation, and maintenance activities.

<http://instrumentedprotectionsystems.com>

Automation Applications in Bio-Pharmaceuticals -George Buckbee, P.E. and Joseph Alford, Ph.D., P.E., CAP This book is a guide for engineers and designers new to the field of bio-pharmaceutical process control. For the experienced automation professional, this book outlines the unique design and application issues for the bio-pharmaceutical industry. For those already familiar with this industry, the book provides specific advice for automating these processes.

<http://www.isa.org/Template.cfm?Section=Books3&template=/Ecommerce/ProductDisplay.cfm&ProductID=9374>

ISA have announced the latest in Gregory K. McMillan's collection of humorous cartoon books, "The Funnier Side of Retirement for Engineers and People of the Technical Persuasion". Engineers or technical people thinking about retiring, already retired, suspect a career change or those who just need a good laugh will enjoy this unique book.

<http://www.isa.org/Template.cfm?Section=Books3&template=/Ecommerce/ProductDisplay.cfm&ProductID=9370>

ISA recently announced its practical guide to the bio-pharmaceutical industry entitled "Automation Applications in Bio-Pharmaceuticals" by George Buckbee, P.E. and Joseph Alford, Ph.D., P.E., CAP. The book was developed to guide the new and experienced automation professional on how to apply automation to bio-pharmaceuticals, as well as try to accelerate the learning process.

<http://www.isa.org/Template.cfm?Section=Books3&template=/Ecommerce/ProductDisplay.cfm&ProductID=9374>

The ISA20 Instrument Specification Forms for the pharmaceutical industry have been released on CD-ROM.

<http://www.isa.org/Template.cfm?Section=Books3&template=/Ecommerce/ProductDisplay.cfm&ProductID=9731>

Hazop: Guide to Best Practice, 2nd Edition - The second edition of this bestselling title has been brought completely up-to-date. HAZOP is a technique developed specifically for use in the chemical and process industries, and is a detailed method for systematic examination of a well-defined processor operation, either planned or existing. This guide describes and illustrates the HAZOP study method, highlighting a variety of proven uses and approaches.

<http://hs.environmental-expert.com/resultteachpublication.aspx?cid=1272&codi=4150&level=143&idProductType=5>

ICEbus — Information on any of the 26 different bus systems in use in the area of Instrumentation and Control.

The ICEweb fieldbus pages have become available for sponsorship – this is a great opportunity as they receive an average of 700 page views a month!

For further information please contact us - <mailto:jimrussell@iceweb.com.au>

Power plant sees green with new digital bus system - John Blaney, Jim Murray, and Gary Tingley - Chasing advantages in design and construction savings, the utility wanted to incorporate digital bus technology in as many areas as possible. Both Foundation fieldbus and PROFIBUS are used significantly throughout the balance of plant systems - From the ISA and InTech. See this paper and more at ICEweb's Fieldbus page.

<http://www.iceweb.com.au/Instrument/fieldbus.htm>

Surge Protection for Fieldbus without Performance Limitations - This article discusses a complete surge protection solution for an entire Foundation Fieldbus system without performance limitations.

<http://www.iceweb.com.au/Instrument/fieldbus.htm>

Yokogawa and Pepperl+Fuchs have announced the release of a new solution for managing the physical layer of FOUNDATION™ fieldbus H1. This is being released as one of the diagnostic solutions of Plant Resource Manager (PRM™) R3.02. In addition to supporting the use of powerful tools such as oscilloscopes and data historians, ADM's unique commissioning wizard can reduce up to 80% the amount of time required for the critical plant start-up phase.

<http://www.yokogawa.com/pr/Corporate/News/2008/pr-news-2008-08-en.htm>

The Fieldbus Foundation, conducting its 2008 General Assembly in Antwerp, Belgium announced plans for FOUNDATION for Safety Instrumented Functions (SIF) demonstrations at multiple end user sites around the world. Demonstrations of SIF technology will be conducted at Shell Global Solutions, Amsterdam, The Netherlands; Saudi Aramco, Dhahran, Saudi Arabia; BP, Gelsenkirchen, Germany; and Chevron, Houston, Texas, USA.

http://www.fieldbus.org/index.php?option=com_content&task=view&id=440&Itemid=281#sif

ODVA announced that ControlNet, one of the family of CIP Networks, is now wholly under the management of ODVA. This action, unanimously endorsed by ControlNet International, the organization that established ControlNet as an open standard for automation networks, puts ODVA in the position of being the single standards development organization responsible for developing, managing and promoting the adoption of the Common Industrial Protocol (CIP) and the family of CIP Networks. This family currently includes EtherNet/IP, DeviceNet, CompoNet and ControlNet.

<http://www.odva.org/Home/tabid/53/ctl/Details/mid/372/ItemID/43/Default.aspx>

ICEed

HIMA Australia are running 1-Day IEC/AS 61511 Safety Lifecycle Awareness Courses in Darwin 14th May, Brisbane 3rd June, Gladstone 5th June and Melbourne 25th June. The outcome of the workshop will be an understanding of how to practically apply the AS61511 standard. The workshop will cover the requirements of each stage of the life cycle and how they apply to process industry projects today.

<http://www.hima.com.au/html/modules/piCal/>

HIMA Australia are running a 4-Day TÜV FS Engineer Course in Melbourne 30th September - 3rd October - HIMA's functional safety course is a TÜV Rheinland Group certified training course for engineering professionals. The course focuses on functional safety for the process, oil & gas, and chemical industries according to IEC/AS 61508 / 61511 and gives engineers the opportunity to certify their

functional safety knowledge through TÜV.

http://www.hima.com.au/html/modules/piCal/index.php?action=View&event_id=128

Abhisam Software, a young knowledge based company set up to provide training to technical professionals by e-learning has developed several cost effective courses relevant to ICE personnel. Subjects are Gas Monitors, RFID and Hazardous Area Instrumentation. <http://www.abhisam.com/>

The IICA are running a range of courses at various locations in Australia.

<http://www.iica.org.au>

IDC have a comprehensive range of worldwide training courses.

http://www.idc-online.com/course_schedule/?country=%23

IDC's 2008 Safety Control Systems Conference is coming up May 28th to 29th in Calgary (Pre-conference workshops on May 27th). Conference topics include: Integrating HAZOP and LOPA, Functional Safety - Guiding Principles for End-Users and System Integrators, Process Safety Management Legislation - A History of Incidents, When SIL Suitability is required for Final Control Elements, A Practitioner's Approach to IEC 61508/61511 and SIL Review: A Practical Methodology for Risk Assessments in Process Plants.

<http://www.acm.ab.ca/uploads/Safety%20Control%20Systems%20Conference%202008.pdf>

Another safety course the following week will be run by Spectral Design and Exida. The course will run from June 3 - 5, 2008 in Calgary. The cost is \$2195 (Canadian +GST) per person.

http://www.spectraldesign.ca/pdfs/FSEI&II_Course_June3-5.pdf

ACM offer SIS TUV Functional Safety Engineering Courses across various locations in Canada.

http://www.acm.ab.ca/uploads/TUV%20-%20Functional%20Safety%20Eng.%20SIS_%20Course%202008.pdf

Able Instruments and Controls (UK) have a range of Instrumentation and Control Courses.

<http://www.able.co.uk/training.htm>

ICEfolks - News about promotions and changes people in the Instrumentation Control Engineering world.

Please let us know of any personnel or other job changes in your organisation.

If all you Foundation Fieldbus folks are wondering what happened to Maggie Carlson, she is now the North American Marketing person at the FDT Group. Maggie can be reached at na.marketing@fdtgroup.org or +1 512 428-4979.

Another person has made a change and should have been announced last issue, and that is Shannon Foos. Shannon is still in the Cleveland area but now works with Rockwell Automation where she is leading up a team focusing on Industrial network integration in the process automation arena. Shannon can be reached at (440) 585 – 8155 or via e-mail at Shannon.Foos@us.ab.com

Congratulations Shannon and Maggie.

Larry Wells has joined the world of the “semi-retired” departing from Georgia-Pacific to start as an independent consultant. The name of Larry’s company, CCSA, LLC "Confidential Control Systems Assessment" pretty much sums up what he is doing. Larry can be reached at CCSALLC@bellsouth.net or 404-993-8055.

ICEJobs – Vacancies and Wanted

Are YOU looking for good people? With ICEweb's 36,000 page views a month plus ICEnews getting out to 1600 quality contacts and very competitive rates we are a very cost effective method of advertising, contact Jim Russell (<mailto:jimrussell@iceweb.com.au>) for further details.

Looking for a job? As a service to the ICE community ICEweb and ICEnews will post your details for Free!

ICElinks— electronic newsletters and links of potential interest to our readers.

A really great website for the latest news is the Read-Out Instrumentation Signpost.

<http://read-out.net>

Control Engineering has a great range of newsletters covering;

- Weekly News - <http://www.controleng.com/enewsletter/CA6560001/2361.html>
- Advanced Process Control Monthly - <http://www.controleng.com/enewsletter/CA6558265/2487.html>
- Information Control Monthly - <http://www.controleng.com/enewsletter/CA6559026/2363.html>
- Machine Control Monthly - <http://www.controleng.com/enewsletter/CA6554579/2365.html>
- Process Instrumentation and Sensors Monthly <http://www.controleng.com/enewsletter/CA6552146/2488.html>
- System Integration Monthly - <http://www.controleng.com/enewsletter/CA6556258/2362.html>
- Product Review - <http://www.controleng.com/enewsletter/CA6549208/2369.html>
- Automation and Controls - <http://www.controleng.com/enewsletter/CA6284850/2370.html>
- Profibus E-News - <http://www.controleng.com/enewsletter/CA6542248/2360.html>
- Fieldbus Facts - <http://www.controleng.com/enewsletter/CA6551355/2352.html>
- Fieldbus Reports - <http://www.controleng.com/article/CA6251171.html>
- Sign-Up – You can sign up here to have any of the above newsletters delivered to your mailbox. <http://www.controleng.com/subscribe.asp>

ICEmerge — Mergers, acquisitions and news from the Instrumentation Control Engineering community.

Cooper Industries, Ltd. (NYSE:CBE) has announced that its subsidiary, Cooper Controls (U.K.) Limited, has acquired more than 98 percent of the outstanding shares of The MTL Instruments Group plc.

<http://www.crouse-hinds.com/crousehinds/newproducts/newproducts.cfm?id=258&action=view&CompanyID=1>

GE Fanuc Intelligent Platforms, a unit of GE Enterprise Solutions, and MTL Instruments Group plc, announced that the two companies have signed an agreement for GE Fanuc to acquire the assets of the MTL Open Systems Technology (MOST) product lines including the MTL8000 general purpose I/O, intrinsically safe I/O, SafetyNet system, and process control technologies.

http://www.gefanuc.com/as_en/docs/652344_1206968084_20080331_mtl_pressrelease.pdf

Martel Electronics Corporation has completed its acquisition of privately held Murch Associates. Murch has been a major supplier for mechanical parts and the manufacturing and assembly of pneumatic and hydraulic test pumps including the MECP100, MECP500 and MECP10K. With the acquisition Martel Electronics, through its Calibrator division: www.martelcalibrators.com will expand its offering of test pumps used in process instrumentation to a wider range of end users.

http://www.martelcalibrators.com/press_releases/murch_associates_acquisition.html

Yokogawa Electric Corporation has announced the acquisition of Analytical Specialties, Inc. (ASI), a company with a unique gas analyzer technology. ASI developed the TruePeak family of laser based analyzers.

<http://www.yokogawa.com/pr/Corporate/News/2008/pr-news-2008-09-en.htm>

The Measurement Systems division of Cameron has announced the acquisition of Jiskoot Limited, a world leader in the design, manufacture and commissioning of sampling, blending and multiphase systems for the global oil and gas industry.

http://www.c-a-m.com/images/File/NFPA00030_Jiskoot_080326.pdf

Metso Automation and The Linde Group have signed a purchase agreement regarding MAPAG Valves GmbH, a manufacturing company of high performance butterfly valves for the petrochemical, air separation and liquefied natural gas (LNG) industries.

<http://www.metsoautomation.com>

ICEnet — Internet related topics and sites that may be of interest to our readers. In addition to ICEWEB that is!

An interesting forum on "PC-based" Industrial Automation solutions can be found at <http://www.adamforum.com/>. The ADAM forum has been created to exchange information, thoughts, and opinions regarding with subjects of Software, I/O, Industrial Communications, and Vertical markets.

If you want to learn more about OPC and DCOM, go to

<http://enews.opcti.com/html.asp?Bk4Er4uQJbtDrw2qnNpMdgc0vFwZW0/5iGdIVg7HqC8eYH3obGYTLgKFjJWL+Gw9QVgxS8tPs7HtjcBlwvIIQ> and either download the associated 9 page white paper or watch the series of videos that make the explanation of this important technology a little easier.

ICEnew — Great new technical links posted on <http://www.iceweb.com.au/new.htm>



More new pages! ICEweb has developed the following pages thanks to our sponsor Prochem Pipeline Products;

Heat Tracing and Bundles - Heat Tracing, Bundles, Heated Hose, General theory, Applications and more!
<http://www.iceweb.com.au/HeatTracing/HeatTracing&Bundles.htm>

Instrument Valves, Accessories, Enclosures, Sunshades and Supports
<http://www.iceweb.com.au/InstValve+Access/home.htm>

Pressure Regulators - General Theory, Technical Papers, Maintenance, Applications and more.
<http://www.iceweb.com.au/PressReg/home.htm>

Samplers - On-Line Samplers Liquid Samplers, Gas Samplers, Solids Samplers, Applications and more.

<http://www.iceweb.com.au/Samplers/home.htm>

Monoflanges, Instrument Manifolds - Technical Data, Specifications, Application Data, Installation, Operation, Maintenance and more.

http://www.iceweb.com.au/Technical/monoflanges_details.htm

This is a section that highlights those useful technical links that are new to ICEweb.

Control Valves

Overboard Dump Valves - Overboard dump valves are valves that are typically used to control the flow of seawater being dumped overboard on off-shore installations. Process conditions that would be innocuous on standard applications, become severe when applied to overboard dump valves. Often users fail to realise the criticality of the application which results valves being incorrectly specified, ultimately leading to vibration, erosion and failure. This technical article addresses this - From Weir Valves.

http://www.weirvalves.com/weir/valves/home.nsf/page/Case_Study_Overboard_Dump_Valves

More articles like this can be found on ICEweb's [severe service](#) page.

http://www.iceweb.com.au/Valve/severe_service_valves.htm

Control Systems

ICEweb's Control Systems Page has been extensively upgraded with new links on control systems, alarm management, process security and more!

<http://www.iceweb.com.au/Control/Control%20Web.htm>

Glossary of Process Control Terms - Looking for a Control Term? You are likely to find it here - John Gerry, P.E., ExperTune Inc. <http://www.expertune.com/glossary.html>

A new section on Cascade Control has been added to our Control Systems Page and the following papers included.

- Cascade Control- Handle Processes that Challenge Regular PID Control - Arthur Holland, Holland Technical Skills- A paper which explains how Cascade Control can be used to cater for lags in Process Control.

- Cascade Control - The Basics - from learn control.com
<http://www.iceweb.com.au/Control/Control%20Web.htm>

Corrosion

ICEweb's Corrosion Page has been updated with new links.
<http://www.iceweb.com.au/corrosion/index.htm>

DataLoggers

ICEweb has another new page! This one covers DataLoggers, have a look as it has a "heap" of great papers covering the huge range of uses that this technology embraces. Thanks to our new sponsor HINCO.
http://www.iceweb.com.au/DataLogger/data_loggers.htm

Electrical

Development and Analysis of a Novel Vertical Axis Wind Turbine - Paul Cooper and Oliver Kennedy - This paper describes the development of a novel vertical axis wind turbine used for teaching and research purposes.
http://www.datataker.com/public_domain/PD71%20Development%20and%20analysis%20of%20a%20n%20ovel%20vertical%20axis%20wind%20turbine.pdf

How much does it cost you to change a light globe? - Do you want to dramatically reduce your lighting maintenance costs and reduce your risk hazards? Lighting maintenance is a necessity and often an expensive job in the industrial work place today. The costs involved are usually high due to the positioning of light fittings. This no longer needs to be the case. The installation of an In2 Light Hatch® will dramatically reduce the costs involved in changing light globes on industrial work sites. Thanks to our sponsor Zedflo Australia.
<http://www.iceweb.com.au/ElectricalWeb/Lighting/LightHatch.pdf>

Flow

Many new very useful links have been added to Our Ultrasonic Flow Metering page, thanks to our sponsor Zedflo Australia. <http://www.iceweb.com.au/Flow/ultrasonic.htm>

University chilled water plant plays it cool with ultrasonic flowmeters - An application article - From InTech and the ISA -
http://www.isa.org/InTechTemplate.cfm?Section=Article_Index1&template=/ContentManagement/ContentDisplay.cfm&ContentID=66909

Top Tips for Flow meter selection- The huge array of flow technology options on offer can make selecting the correct flow meter for an application a bewildering task. A broad range of factors can influence flow meter selection, of which cost is just one. Dr Bryan Franklin, Flow Products Manager, ABB Limited recommends a list of top tips for selecting the best all round flow system for an application.
<http://www.abb.com/cawp/seitp202/12439c2f1ac1a1a180256c800037b15d.aspx>

Hazardous Areas Instrumentation and Electrical Equipment

Abhisam Software has announced that it has launched a new version of its popular hazardous area instrumentation e-learning course.
<http://www.abhisam.com/hazareainst.html>

[Intrinsic Safety Technical Manual](#) from Cooper Crouse-Hinds covers;

- Determining Safe Energy Levels
 - Intrinsically Safe Barriers - Grounded Zener Barrier - Isolation Barriers- Remote I/O Products
 - Selecting the Proper Product for Your Intrinsically Safe Application
 - Installation, Maintenance & Troubleshooting of Intrinsically Safe Circuits
- http://www.crouse-hinds.com/crousehinds/sound_ideas/Chapter9.pdf

ICEweb's Australian Standards for Electrical Apparatus in Hazardous Areas- Explosive Gas Areas paper has been updated. <http://www.iceweb.com.au/Ex-web/electstandards.htm>

A new section "On Line Hazardous Areas Ex Newsletters and Journals" has been added to the Electrical Equipment in Hazardous Areas Technical Information page. This includes;

- HazardEx: The Journal - A bi-monthly publication distributed to 8,500 readers in the months of January, March, May, July, September and November.

- HazardEx & Hazardous Areas International (HAI): The eNewsletters - Hazard Ex is emailed to safety & hazardous area engineering specialists throughout the UK. HAI is distributed across EU & the Middle East; Includes legislation updates, comment, products & services round-up editorial.

<http://www.iceweb.com.au/Ex-web/HA%20Tech.htm>

AS2380.9 has been superseded by Standards Australia on 31 December 2007 by AS/NZS 60079.15:2006 (Electrical apparatus for explosive gas atmospheres - Construction, test and marking of type of protection, 'n' electrical apparatus).

<http://www.saiglobal.com/shop/script/Details.asp?SAID=9000&UpdID=407&SID=151418&DocN=ASO733770924AT>

Standards Australia have updated the Electrical Equipment for Hazardous Areas Handbook HB2007 - The main objective of this updated handbook is to provide a basis for understanding the principles involved in the identification of a hazardous area, relevant statutory requirements and the selection and installation, maintenance, testing, overhaul and repair of appropriate electrical equipment. This handbook also provides a basic introduction to the relevant Australian, New Zealand, Joint (Australian/New Zealand) and International Standards dealing with hazardous areas.

<http://www.saiglobal.com/shop/script/Details.asp?SAID=9000&UpdID=404&SID=151418&DocN=ASO73378514XAT>

Level

New Page! Check out ICEweb's new Laser Instrumentation page, it covers General Theory, Laser Level, Laser Positioning, Laser Measuring, Laser Survey and more. Thanks to our sponsor Zedflo Australia.

<http://www.iceweb.com.au/Laser/LaserInstrumentation.htm>

A Free 20-page Sight Glass Application Handbook from LJ Star is a convenient reference for experienced engineers and a great primer for those new to sight glass selection. It offers a full overview of sight glasses for chemical and pharmaceutical processes, including types of glass, construction, lighting, installation and maintenance.

<http://www.ljstar.com/Default.asp>

Test and Calibration

The following technical articles have been added to ICEweb's reworked Test and Calibration pages.

- Low Pressure Calibrations - When you're performing a low pressure calibration, there are some things you can do to make the job easier and better (more accurate).

- Temperature Calibrations (Thermocouple Edition) - There are a few "gotchas" in temperature calibration when we're talking about T/Cs and RTDs. Each has its own problems, this article focuses on the calibration of T/C instrumentation.

- What is the difference between calibration and adjustment?

- Calibrating Non Destructive Testing Instruments

- Automated calibration planning lowers costs

- Calibrating Fieldbus Transmitters.

- How often should calibrators be calibrated?

- How often should instruments be calibrated?

- Traceable and efficient calibrations in the process industry.

- The Safest Way to Calibrate - An introduction to intrinsically safe calibrators

Calibrating and Testing Control Components on your Heat Process - What, When and How Should I Calibrate? - Arthur Holland, Holland Technical Skills - an excellent explanation on the basics of calibration.

<http://www.iceweb.com.au/Test&Calibration/Test%20and%20Calibration.htm>

Signals

Signals - A look at 4 - 20 Milliamp Signals - Arthur Holland, Holland Technical Skills - A good description of 4-20Ma technology.

<http://www.eurotherm.com/training/tutorial/instrumentation/holland/4-20.htm>

Security

Chemical industry gets serious about security: Perfecting programs, educating users - Ellen Fussell Policastro - This excellent article describes how the industry is sharing its knowledge about security and helping manufacturers build their fortresses, to not only comply with new government regulations, but to enhance the overall security of control systems throughout the industry - ISA and InTech

http://www.isa.org/InTechTemplate.cfm?Section=Article_Index1&template=/ContentManagement/ContentDisplay.cfm&ContentID=67483

Protecting Process Control Systems & Networks - Chris Taylor, Larry Falkenau and WBF org.

http://www.wbf.org/associations/2718/system_protection_taylor_falkenau_020901.pdf

Solenoid Valves

The Following new papers can be found on ICEweb's Solenoid Valve Page, thanks to our sponsor ASCO.

- Solenoid Valve Engineering Information- This excellent engineering information sheet details most of what you need to know in regards to selecting a solenoid valve. It details maximum/minimum pressures and temperatures, viscosity, response times, valve seat tightness and degrees of protection provided by electrical enclosures (IP code).

- How to Install, Troubleshoot and Maintain Solenoid Valves- Good Installation and Maintenance Tips.

<http://www.iceweb.com.au/Solenoids/solenoids.htm>

Surge and Lightning Protection

The following new papers have been added to ICEweb's Surge and Lightning Protection page – Thanks to our sponsor MTL Australia.

- Lightning Protection for Wind Turbines - The Lightning Protection Project was conceived by the National Renewable Energy Laboratory (NREL) to improve the understanding of lightning caused damage to wind turbines and how to protect them. This project report is very comprehensive.

- A New Lightning Protection System for Wind Turbines Using Two Ring-Shaped Electrodes - Yasuda Yoh - This technical paper focuses on a method for protection of low-voltage and control circuits in a wind tower, detailing a new lightning protection system with two ring-shaped electrodes attached to the wind turbine.

- Surge Protection for Fieldbus without Performance Limitations - This article discusses a complete surge protection solution for an entire Foundation Fieldbus system without performance limitations.

- Preventing Direct Lightning Strikes - Roy B. Carpenter, Jr - This paper looks at lightning strikes and how to prevent them - from lecglobal.com

<http://www.iceweb.com.au/Surge+Lightning/Surge+lightning.htm>

ICESafety — Information and news on Safety Instrumented Systems along with Health and Safety.

A huge swag of new technical papers have been added to ICEweb's Safety Instrumented Systems Page, thanks to our sponsor Hima Australia. http://www.iceweb.com.au/sis/sis_index.htm

HIMA safety controllers monitor heating installation on the Queen Mary 2 - Two safety-related controllers, acting as a Boiler Management System, reliably provide operational safety to the application. - <http://www.hima.com.au/html/modules/news/article.php?storyid=43>

Looking for more on Burner Management Systems? ICEweb's comprehensive BMS page has it! <http://www.iceweb.com.au/BurnerManagement/burnermanagement.htm>

When did you last inspect your safety light curtains? - Companies using light curtains to safeguard machinery often do not appreciate the implications of the regulatory requirement for inspections. Thanks to Pilz. For this and more articles like this see ICEweb's Manufacturing and Automation Safety page. <http://www.iceweb.com.au/Manu+Auto%20Safety/man&autosafety.htm>

How functional safety helps to save lives -In this article Ron Bell explains functional safety and looks ahead to the revision of the IEC 61508 standard that is due for publication in 2010. <http://www.iceweb.com.au/Manu+Auto%20Safety/man&autosafety.htm>

Emerson Process Management has announced enhancements to its SIL 3 certified Fisher® **FIELDVUE**® DVC6000 digital valve controller for Safety Instrumented Systems (SIS). The enhancements help improve reliability, flexibility, and availability of [Emergency Shutdown \(ESD\) valve solutions](#). The ESD final control system components are integrated with safety-certified sensors and SIL3 rated systems in Emerson's digital smart SIS solutions. The DVC6000 SIS instrument enhancements include manual reset, a stored safety demand event log, pass / fail status after a partial stroke test, and third party certification to SIL3, SIF loop.

http://www.emersonprocess.com/home/news/pr/803_sis-fieldvue.html

[ESD Valve Fire Shelter](#) - This is a neat idea, these cabinets will provide the valve actuators with a minimum of 30 minutes of protection against fire, so that the plant's emergency shut down systems and services can quickly isolate and minimise damage, to protect employees, assets and environment.

http://www.iceweb.com.au/Valve/SDV_BDV_ESD_Valves/home.htm

Yokogawa Electric Corporation has announced that it is releasing an enhanced version of the ProSafe®-RS Safety Instrumented System, ProSafe-RS R2.01.00. This new version is smoothly integrated with Yokogawa's latest production control system, CENTUM®VP, and offers improved security and support for Windows Vista.

<http://www.yokogawa.com/pr/Corporate/News/2008/pr-news-2008-10-en.htm>

Looking for courses on Safety Instrumented Systems? See the ICEed section in this newsletter.

ICEtools— Software and offers that will help with engineering design.

Really excellent free tools to help you in your job and at home can be found on ICEweb's "Tools" page. <http://www.iceweb.com.au/Tools/tools.htm>

Want to learn more about Ethernet? You may want to consider signing up for the Educational Link on the Ethernet Direct web site at <http://www.ethernethdirect.com>.

National Instruments has a 10 page document "Fundamentals, System Design, and Setup for the 4 to 20 mA Current Loop" that is a good refresher for all of us on how analogue current loops work. It can be viewed at <http://zone.ni.com/devzone/cda/tut/p/id/6940?metc=mttuxp>. Another useful article "Five Tips to Reduce Measurement Noise" is available at <http://zone.ni.com/devzone/cda/pub/p/id/262?metc=mtw9z2>.

Here is the link to an on-line unit conversion calculator <http://www.calculatoredge.com/> that was passed on to us by reader MD. Perwaiz Alam

ICewireless – News and technical links to Industrial Instrumentation Wireless items of interest

The following wireless links are thanks to our sponsor Abhisam Software.

<http://www.abhisam.com/index.htm>

RFID Case Study ebook -This excellent 61 page technical reference has details on 25 different RFID applications from around the world. The password to the document is "abhisam". .

<http://www.iceweb.com.au/Newtech/RFID/RFIDCaseStudyBook.pdf>

Emerson Process Management have added the Rosemount Analytical® Model 6081-P wireless pH transmitter to its growing Smart Wireless plant solutions. Closely following approval of the WirelessHART standard, the new field device is the industry's first wireless pH/ORP transmitter.

http://www.emersonprocess.com/home/news/pr/804_6081p-wireless.html

Emerson Process Management is the first process automation supplier to begin taking orders for *WirelessHART™* enabled products, based on the recently approved open standard for in-plant wireless communications. These measurement and communications products are available as a core part of Emerson's Smart Wireless plant automation solutions portfolio.

http://www.emersonprocess.com/home/news/pr/803_WirelessHART.html

The Fieldbus Foundation, conducting its 2008 General Assembly in Antwerp, Belgium announced ongoing progress in its cooperative initiative with the HART Communication Foundation and Profibus Nutzerorganisation e.V. (PNO) to develop wireless technology used in the manufacturing and process industries. The wireless project is an extension of the organisations' successful collaboration on Electronic Device Description Language (EDDL) and another step to deliver consistent functionality to automation end users.

http://www.fieldbus.org/index.php?option=com_content&task=view&id=440&Itemid=281#wdw

Dive into wireless technology with this free, On-Demand webcast titled from Automation World, "The Range of Wireless." Engineers, managers and IT professionals will find information of interest in this first series of webcasts on Wireless Technologies.

<http://www.automationworld.com/view-4036>

ELPRO's Industrial Wireless Handbook provides a single-source reference on wireless technology.

Included in each chapter is relevant information on basic telemetry, security, wireless reliability, antenna technology and useful data on applications and installation techniques.

<http://www.elprotech.com>

ICEtime— Seminars, Tradeshow, Conferences and Events of interest to our readership.

If you would like to have your event listed in ICEtime, please send a note or press release to <mailto:jimrussell@iceweb.com.au>

2008**May**

- 20 Packaging Automation Forum 2008 - Tuesday, May 20, 2008 - Chicago Marriott Schaumburg
<http://www.packworld.com/paf/>
- 25-30 Information and Communication Technologies: Key Factor for Construction of Knowledge Societies, St.Petersburg, Russia. Telephone +7 (812) 312 0937 or e-mail <mailto:int@aanet.ru> for information
- 28-29 Safety Control Systems Conference- The Coast Plaza Hotel & Conference Centre, Calgary, Canada
http://www.idc-online.com/newsletters/brochures/SCSconf_CA_May08_Z.pdf

June

- 9-11 — Sensors Expo & Conference - Rosemont, IL United States
<http://www.sensorexpo.com/sensors2007/v42/index.cvn>
- 10-11 Subsea Control and Data Acquisition – Total Conference Centre – PAU, France
http://www.instm.org.uk/component/option,com_extcalendar/Itemid,99999999/extmode,view/ex tid,307/
- 11-12 Engineering Solutions to SA's Power Crisis Conference - Midrand, South Africa
http://www.idc-online.com/newsletters/brochures/PowerCrisisConf_1day_June08_SA_Z.pdf
- 11-13 2008 American Control Conference - Seattle, Washington
<http://www.a2c2.org/conferences/acc2008/>
- 15-19 Honeywell User Group Americas - Arizona Biltmore, Phoenix, Arizona
<http://hpsweb.honeywell.com/Cultures/en-US/NewsEvents/UsersGroupSymposia/Americas/default.htm>
- 19-22 Canadian Process Control Association Annual General Meeting, Halifax, Nova Scotia
<http://www.cPCA-assoc.com/events.html>
- 20 Geek Pride Day at "The Barn" in New Hampshire USA. Theme this year is biotech. Contact Deb Morrison <mailto:Deb@barn.org> for information and to register. Registration is limited to approximately 75 people.
<http://homepage.mac.com/morley2/filechute/GEEK%20PRIDE%20INTRO%2008.doc>
- 23-26 ISA France Forum on Wireless Technology (ISA-100 Committee will also meet at this time) - Nice France
http://www.isa-france.org/telechargement/fichiers/Forum_25-26-06-2008/Forum_ISA-France_2008_V2.4.pdf
- 29th June-2nd July - The 6th International Conference on Computing, Communications and Control Technologies - <http://www.infocybereng.org/imeti2008/website/default.asp?vc=3>

August

4-7 — Cyber Security Conference Focusing on Potential Causes, Prevention of Recent Power Blackouts and Plant Shutdowns (Trips), Burr Ridge, Illinois <http://realtimeacs.com/>

24-27 - Honeywell Pacific Users Group - The Esplanade Hotel, Fremantle, Western Australia
<http://hpsweb.honeywell.com/Cultures/en-US/NewsEvents/UsersGroupSymposia/Pacific/default.htm>

September

17-18 — Second Annual Oil & Gas US Exchange, Crowne Plaza-Reliant Park, Houston Texas
www.oilandgas2008.com

21-28 — Singapore Technology Management Council Chapter in cooperation with the IEEE Singapore Section will be hosting an engineering management conference in Bangkok, Thailand.
www.ICMIT2008.org

29- 3rd Oct — 2008 Emerson Exchange - Gaylord National Resort & Convention Center, Washington, DC
<http://www.emersonexchange.org/home/index.html>

November

10-12 — WBF 2008 European Conference - Barcelona, Spain - <http://www.wbf.org/europe2008>

17-19 — Brazil Automation - ISA Show 2008, XII International Congress of Automation, Systems and Instrumentation, Expo Center Norte – São Paulo – Brasil
http://www.isashow.com.br/index_en.php

ICESponsor— Newsletter sponsor recognition. The following companies have kindly contributed to the creation and sharing of this information by offsetting the costs associated with its production and distribution.

abhisam

The power of e-learning!

Abhisam Software is a young knowledge based company which has been set up to provide training to technical professionals by e-learning. The innovative e-learning courses help professionals to stay on top of the learning curve.

What better way to get training, other than by enrolling in an e-learning course? E-learning frees you from attending classrooms, or cramping your work or leisure schedule in any way. It enables you to learn & get training **anywhere & at anytime**.

Get trained anywhere & at anytime by making use of **ON DEMAND LEARNING!**

Learn anytime, anywhere by taking advantage of our e-learning courses. These e-learning courses are available in a variety of ways including as online learning courses, SCORM & AICC compliant courses which can be hosted on your Learning

Management System (LMS) or as stand alone courses on CD ROMs.

Abhisam Software have also started an m-learning course on RFID, which can be downloaded to your mobile phone.

They have e-learning courses on the following subjects:

E-learning course on [Gas Monitors](#)

E-learning course on [RFID](#)

E-learning course on [Hazardous Area Instrumentation](#)

M-learning course on [RFID](#).

For further details please contact via their website Abhisam <http://www.abhisam.com/>



The **Grimwood** range of flanged immersion heaters can now be manufactured to provide hazardous area protection for users in the Asia Pacific region. Depending on the location and operating environment, units can be made in either carbon steel or stainless steel. The benefits of using locally designed and manufactured product fully complying with hazardous area requirements are shorter supply chains and lead times and quicker, clearer communication.

<http://www.grimwoodheating.com.au/flangeheaters.php>



Well recognised by such brand names as Circle Seal Controls, Hoke Gyrolok fittings and Go Regulators, CIRCOR International Inc is a leading supplier of valves, related products and services to a wide range of users who require precise, efficient and safe fluid control systems. For over 125 years they have been providing a complete array of fluid control products and technologies to a highly fragmented industry.

For more information go to <http://www.circle-seal.com>

HONEYWELL ANALYTICS FIRE AND GAS DETECTION

The **Honeywell Analytics group** of companies provides gas detection solutions in industries where potentially hazardous chemicals and gases exist. A full range of fixed gas, portable gas and flame detection equipment is available for the measurement of flammable gases, toxic gases and oxygen concentrations. The company provides design, development and manufacture of electrochemical, catalytic and infrared sensors, along with Chemcassette technology, placing the company at the forefront of innovation. The company offers solutions to increasingly difficult gas detection and monitoring applications. They also offer project management for specialized fire and gas systems, a global network of service centers and 24-hour on-line technical support.

For more information go to http://www.iceweb.com.au/Suppliers/honeywell_analytics.html



Prochem is Australia's leading supplier of quality stainless steel piping and mechanical instrumentation products. They are agents for a huge range of instrumentation products including Hoke Gyrolok, Hoke Instrumentation Valves, Circor Tech Products, Go Regulators, Circle seal, Atkomatic Solenoid Valves, Classic Filters, Manual Sample Systems, King Instrument Company, Hoke Pipe Fittings, Anderson Greenwood Instrument Valves, Anderson Greenwood Primary Isolation Valves, Pacson Valves and ATC Actuators, BSM Valves, O'Brien Tracepak and O'Brien Analytical, BuTech, Stainless Steel Tube, Saddles and Leak Check, Teflon Lined Braided Hoses.

<http://www.prochem.com.au>

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