SPED Update

Volume IV, Issue 2 February 2011

February 2011

Hi-CAD 3D Laser Scanning Presentation

On Monday evening, January 24, 2011, Hi-Cad America, LLC, Part of the Intertek Group, presented 3D Laser Scanning etc. to an audience of 40 plus attendees at SNC-Lavalin Engineers & Constructors, Inc. Houston office.

Kyle McNeil, Technical Operations Manager, Hi-Cad presented Surveying Services including Topography and Dimensional Control (onshore & offshore).

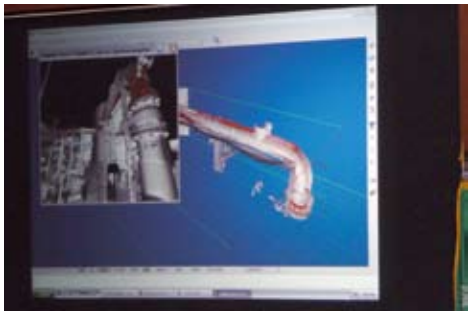
The content was focused on Refinery and Plant survey work and Monument Coordinate Systems (including GPS and Terrestrial Survey techniques). The Dimensional Control for onshore & offshore showed several examples of where Hi-Cad's knowledge, experience and consistent high accuracy has been used throughout the successful fabrication, construction, installation and hook-up of a variety of Offshore Platforms including, fixed platforms, Spars, Semi-Sub's, TLP's, Compliant Tower and FPSO's.

Attention was also given to the Dimensional Control of Piping Hook-up Spool Fabrications for Offshore and Onshore Hook-Up's, Shutdowns, Turn Around's and swap-outs. There was a clear emphasis made to Hi-Cad's ability to recommend and apply the correct surveying process to suit the Client requirements and expectations.

Shan Pehlman, Laser Scanning Operations Manager, talked about Hi-Cad Laser Scanning Services and technology progress within the industry. Explanation was given to the wide range of scanning activities within different industries and live examples were shown of various projects with particular attention given to the high accuracies that Hi-Cad is able to achieve in both onshore and offshore environments. This part of the presentation led directly into the actual processing of the data and preparation of deliverables.

Alfonso Hernandez, Software Technical Support, showed live examples of interrogation of Point Cloud Data and the flexibility of integration of the data into various Cad Packages. The demonstration focused on various options in providing automated Piping Isometrics, clash detections, automated and manual modeling techniques for structural and piping. Also highlighted were the accuracies of the final deliverables and all round abilities and options available within the LFM Software Suite.

Thank you to both Hi-Cad America, LLC and SNC-Lavalin Engineers & Constructors, Inc. Houston office for hosting SPED members and guests.



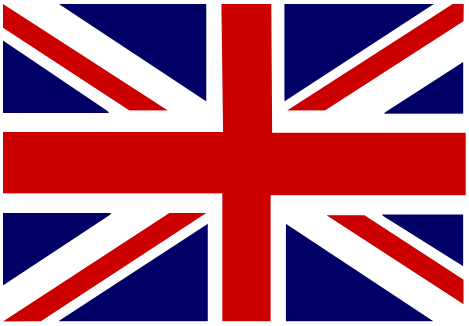
Alfonso Hernandez, Software Technical Support, Hi-Cad explains a slide of a spool piece being modeled in a bubble window and checked in the 3D window in order to print an ISO drawing.

40 plus SPED members and guests met in the first floor auditorium at 9009 West Loop South, Houston, Texas.

Kyle McNeil, Technical Operations Manager, Hi-Cad responds to an attendee's question at the SPED Open House on Monday evening.

Inside This Issue

U.K / Eire News	2
Welcome! To SPED's Newest Corporate Member, SIGMA Ingenieurgesellschaft mbH	2
Will Using Foreign Pipers Require an Export License?	2-3
SPED Contact Information Changes	4
Industry Updates	5-6
Goodbye to a Valued Member of SPED's Staff	7
Industry Training Calendar	8
Calendar of Events	9



U.K. & Eire CHAPTER NEWS

SPED in the UK & Ireland

My planned Anglo-American Christmas visit did not happen because of the severe weather, but nevertheless a good time was had by all in our circle. I hope the same applies to you, the SPED Member readers.

The Irish political scene is in turmoil which cannot help their economy. The UK's political resignations are minor by comparison.

UK Process News

Imperial College, the leading UK technical university, has announced a research project in support of a $70m CO2 storage project in Qatar. The research is geared to assessing how the gas will react with carbonate rock.

Petrofac has announced a huge expansion to the UK's LNG storage. But it will not be operable until 2016.

Still no news on the long awaited announcement of more nuclear generating capacity for the UK. But work is now well advanced on a $600m Evaporator plant to enable the vitrification process of nuclear waste.

Buncefield which was the largest peacetime explosion in Europe was caused by an overfill. This continues to stimulate debate on the safety philosophy to be employed. Overfill detection equipment is now fitted and the emphasis has swung from risk based approaches to an instance on standards and compliance. It is said that the US still relies on observant operators as directed in API2350. If you have never seen the Buncefield pictures, send me an email and I will be pleased to forward them.

The UK Government is heavily funding apprenticeships. I have spent some of this month trying to set the road map for this source of talent to progressively develop to the standard for professional engineers.

Norman Harris

norman.harris@20cc.co.uk
Please visit 20CC - Essential Consulting and Norman Harris Propounds and Proposes

Will Using Foreign Pipers Require an Export License?

Using foreign piping designers either through visas to work in the US or outsourcing work to foreign "Value Centers" has become a commonplace cost cutting practice on US capital projects. Under the "export control" law, employers are prohibited from sharing certain technological data with foreign workers they bring on board without a license from the federal government.

Though the law is old, what's new is a U.S. Citizenship and Immigration Services (USCIS) requirement that businesses affirm, under penalty of perjury, that they're following the law. After a recent reprieve, employers have until Feb. 20, 2011 to comply.

On that date, the new I-129 form goes into effect. This form is used for H-1B, H-1B1, L-1 and O-1A visa petitions concerning professional/specialty occupation, intracompany transferee, and extraordinary ability employees. A new set of questions (See Below) ask the employer to certify that the employer has reviewed the Export Administration Regulations (EAR) and the International Traffic in Arms Regulations (ITAR), and has determined that either a license is not required or that if one is required, the employer has received the license or that the employer will prevent the foreign employee from having access to the restricted technology until it has the license. See Figure 1. on page 3.

Many EPC firms could easily fall under the regulations. An employer failing to follow them could face fines or imprisonment. The complex rules treat workers from some countries, like China, different from workers from other countries, like India.

Many process industry items are on the Commerce Control List (see: http://www.access.gpo.gov/bis/ear/pdf/index-ccl.pdf). These items are common to the process industry as well as potential military applications. The selected items (Figure 2) are listed in a table on page 3.

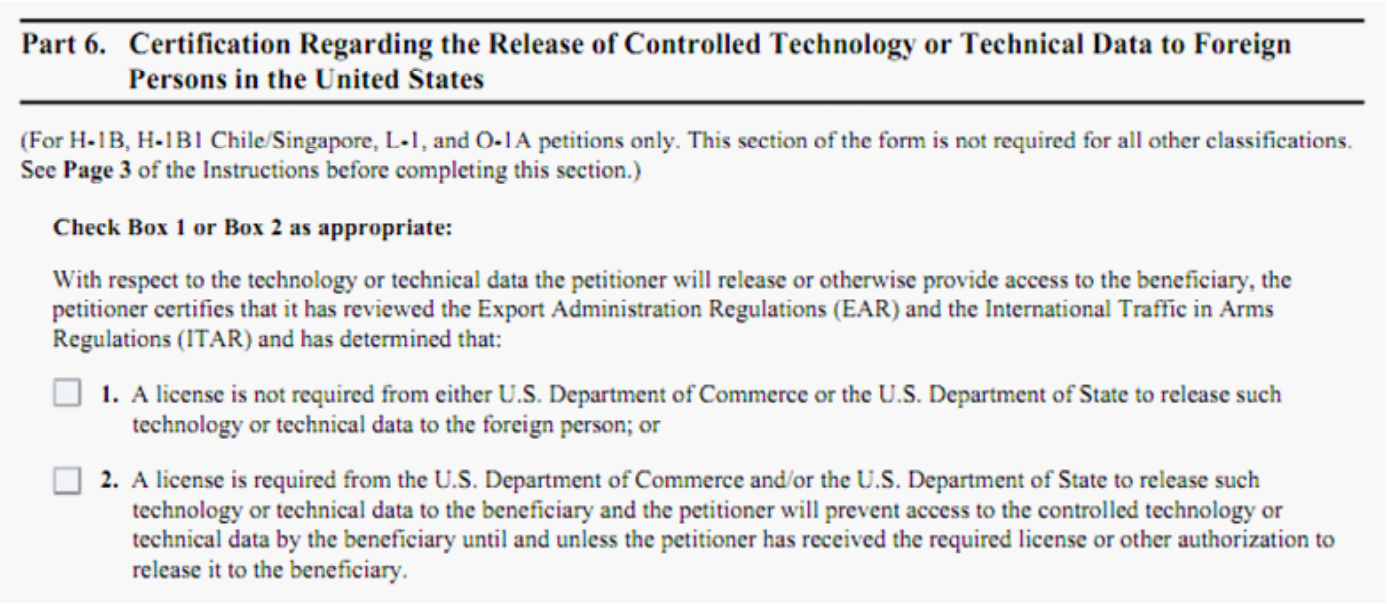
Certainly this issue needs continuing attention. For more information on the new requirement, consult:

http://www.seattleimmigration-lawyerblog.com/2010/12/employers-must-know-export-con.html

Welcome! To SPED's Newest Corporate Member, SIGMA Ingenieurgesellschaft mbH

SIGMA Ingenieurgesellschaft mbH are the makers of -ROHR2- a leading European software for pipe stress analysis, -SINETZ- for calculation of flow distribution, pressure drop and temperature loss in piping networks.
SIGMA additionally offers Software Training and worldwide user support. To learn more, visit http://www.rohr2.de, email Stefan Lipke at info@rohr2.de or, call +49 (0)2303 332 33-0.

Figure 1. USCIS Form I-129 Employer Certification.



Part 6. Certification Regarding the Release of Controlled Technology or Technical Data to Foreign Persons in the United States

(For H-1B, H-1B1 Chile/Singapore, L-1, and O-1A petitions only. This section of the form is not required for all other classifications. See **Page 3** of the Instructions before completing this section.)

Check Box 1 or Box 2 as appropriate:

With respect to the technology or technical data the petitioner will release or otherwise provide access to the beneficiary, the petitioner certifies that it has reviewed the Export Administration Regulations (EAR) and the International Traffic in Arms Regulations (ITAR) and has determined that:

☐ **1.** A license is not required from either U.S. Department of Commerce or the U.S. Department of State to release such technology or technical data to the foreign person; or

☐ **2.** A license is required from the U.S. Department of Commerce and/or the U.S. Department of State to release such technology or technical data to the beneficiary and the petitioner will prevent access to the controlled technology or technical data by the beneficiary until and unless the petitioner has received the required license or other authorization to release it to the beneficiary.

Figure 2. Process Industry Items on Commerce Control List

Description	ECCN Citation
Bellow valves	0B001.b.1
Bellow valves	0B001.d.6
Bellows forming dies	2B999.b
Bellows manufacturing equipment	2B999.b
Bellows or rings, gas centrifuge	0B001.c.6
Bellows seal valves	2A226
Bellows seal valves	2B350.g
Bellows sealed valves, n.e.s	2A999
Bellows-forming mandrels	2B228.c
Bellows-forming dies	2B228.c
Centralized network control	5A991.e
Centralized network control development/production technology	5E991
Chemical production process control software	1D390
Chemical production facility technology	1E350
Chemical vapor deposition (CVD) equipment, plasma enhanced	3B001.d
Chemical warfare (CW) precursors	1C350
Chemical lasers	6A005.d.5
Chemical manufacturing equipment	2B350
Chemical manufacturing facilities	2B350
Chemical (precursor) mixtures and test kits	1C395
Chemical (precursor) mixtures, used in the production of chemical warfare agents	1C995
Chemical storage tanks & containers	2B350.c
Distillation columns	2B350.e
Distillation columns, hydrogen-cryogenic	1B228
Distillation equipment, purification of UF6	0B003.b.2
Distillation Towers (ammonia)	0B004.b.4.b
Distillation towers and cold boxes (hydrogen cryogenic)	0B004.b.3.a
Distillation towers, packings	1A226
Gas turbine aeroengines, civil non-certified/supersonic	9A001
Gas turbine blade, manufacturing or measuring equipment	9B001
Gas turbine blade technology	9E003.a
Gas turbine blades, vanes or tip shroud casting equipment, tooling or fixtures	9B991
Gas turbine brush seal production/test equipment	9B003
Gas turbine components, solid state joining equipment	9B004
Gas turbine engine development systems/instrumentation	9B002
Gas turbine engine development control systems or instrumentation	9B002
Gas turbine engine propulsion systems assemblies/components	9A003
Gas turbine engine technology	9E003
Gas turbine engine development and use software	9D004
Gas turbine engines, parts and components, not controlled by 9A001 or 9A101	9A991
Gas turbine engines & assemblies/components, marin	9A002
Gas turbine test/flow modeling software	9D004.a
Gas turbine (aero engine) test software	9D004.b
Vacuum pumps	2B231
Vacuum pumps	2B350.i
Vacuum valves, piping, flanges, gaskets	2B999.k
Valve seats, made from fluoroelastomers	1A001.c
Valves, austenitic stainless steel	2B999.n
Valves, bellows seal	2A226
Valves, bellows	2B350.g
Valves, bellows	0B001.d.6
Valves, double-seal	2B350.g
Valves, of or lined with stainless steel, copper-nickel alloy or other alloy steel	2A292
Valves, diaphragm	2B350.g
Valves, gaseous diffusion isotope separation	0B001.b.1
Valves, monel	2B999.f
Valves, multiple seal incorporating a leak detection port	2B350.g
Valves, non-return (check)	2B350.g
Valves, stainless steel	2B999.g
Valves, vacuum	2B999.k

SPED Contact Information Changes

The table below reflects changes in responsibilities and contact information for SPED staff members, and the addition of contact emails for SPED Calgary and SPED U.K. / Eire. We have also added a payment option for International Membership online at www.spedweb.com. The cost is $100 USD.

Sales, PPD Certification, Membership	Andrea Macejak, Manager of Operations	+1 832.286.7678 spedexec@spedweb.com
SPED Piper Video Sales		videos@spedweb.com
Marketing, SPED Update, Certification, Membership	Sarah Evans, Marketing	spedsrvs@spedweb.com +1 832.286.3404
Houston Office	Dr. William G. Beazley, Executive Director	+1 832.286.7678 spedexec@spedweb.com
	Jack Belden, President	832.286.7678
SPED Calgary	Paul Bowers, Co-President	pbowers@pipingdesign.com
	Kevin Noakes, Co-President	kevin.noakes@worleyparsons.com +1 403-613-1227
SPED U.K. /Eire	Norman Harris, SPED Secretariat	norman.harris@20cc.co.uk + 44(0)20 8680 3511

Conference on 3D Imaging & Positioning for Engineering/Construction/Manufacturing/Security

SPAR2011

Where 3D Innovators Connect

Images courtesy of: Z+F UK, Minnesota DOT, CyArk

8TH ANNUAL CONFERENCE

SPAR International

March 21–24, 2011
Houston, Texas

The Woodlands Waterway
Marriott Hotel & Convention Center
The Woodlands (Houston), Texas

FEATURING:

35 Conference sessions | User meetings | Techical Seminars | Boot Camps | Exhibits | Mobile Scanning & Mapping Demos

Just a few of the 60+ Presenters and Panelists will include…

- Brian Mathews, Vice President, Autodesk Labs
- David Lafferty, Chief Technology Office, Technology Advisor, Information & Technology Services, BP
- James Beaman, Jacobs Group, NASA-JSC
- Joseph E. Chumbley, Engineering Visualization Services, Lockheed Martin Space Systems
- Chris Tucker, President, Point Geomatics Ltd.
- Robert L. Green, Vectors Incorporated

Register early and save!

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Register online at www.SPARConference.com

Industry News

SNC-Lavalin Acquires Engineering Firm in Colombia

January 12, 2011

SNC-Lavalin is pleased to announce its acquisition of Itansuca Proyectos de Ingenieria S.A., an engineering firm of 1,000 professionals and administrative staff in the energy sector based in Bogota, Colombia.

Since 1989, Itansuca has been offering energy consulting, project management, electromechanical installation, design and supervision services from its Bogota head office and 21 other locations around the country to clients in Colombia and in a number of other countries around the world. The word itansuca comes from the indigenous Chibcha language meaning to make a path.

"Our acquisition of Itansuca marks an important milestone in our ongoing strategy to develop, invest in, and establish a long-term local presence in key Latin American markets where we see enormous potential to grow our multi-product portfolio and maximize our synergies in the fields of energy, infrastructure, oil and gas, and mining and metallurgy," said Riadh Ben Aïssa, Executive Vice-President, SNC-Lavalin Group Inc. "We are delighted to welcome Itansuca into the SNC-Lavalin family as they share our strong values related to quality work and the importance of our employees. Itansuca also enhances the services we can offer to a number of our long-term clients now active in the Colombian and Latin American markets.

With the addition of Itansuca, SNC-Lavalin now numbers approximately 1,150 employees in Colombia, including over 150 working in the infrastructure sector from its current office in Bogota. It has over 4,000 employees in Latin America and nearly 24,000 worldwide.

AVEVA Measures Cost & Time Savings For Instrumentation Design

January 13, 2011

New Business Value Calculator helps instrumentation engineers quantify potential project savings

CAMBRIDGE, UK - AVEVA (LSE:AVV) one of the world's leading providers of engineering design and information management solutions for the plant, power and marine industries, today announced the worldwide launch of the

continued on page 6

continued from page 5

Instrumentation Business Value Calculator (BVC), a brand new interactive tool that calculates the savings that can be achieved by engineering companies by adopting the latest instrumentation technology.

The BVC assists with estimating the time and cost savings a business could achieve by implementing AVEVA Instrumentation, a true lifecycle solution for designing, installing and maintaining instrumentation in both plants and ships.

Based on typical working practices and feedback from the users of AVEVA Instrumentation, the BVC demonstrates the savings that are achievable in a real project. Using parameters such as head count, hourly costs and input/outputs which users can input themselves, they can calculate savings in man hours and money across a number of deliverables.

The BVC highlights the major benefits of AVEVA Instrumentation such as more productivity through catalogues and rule-based automation, and better project quality through right first time design and automatic, accurate materials and production information.

“Users of AVEVA Instrumentation have already seen benefits such as a 30% cost saving in man hours and a 50% rise in productivity”, said Dave Gibson, Product Strategy Manager at AVEVA. “We have engaged with our customers to obtain real life working examples in order to assist their assessment of AVEVA Instrumentation with the BVC.

“Either stand-alone or fully integrated, AVEVA Instrumentation is the preferred choice for both the EPC in project design and the Owner Operator in everyday plant operations, not least because of its simple graphical interface and fully automated change management. This makes it far easier to use and far less prone to error than other instrumentation solutions currently available”.

For a demonstration of the BVC click on the website link www.aveva.com/instrumentation and register your interest.

Technip Awarded Subsea Contract for Jack & St-Malo Fields in the Gulf of Mexico

January 14, 2011

Technip was awarded a contract by Chevron North America Exploration and Production for the development of the Jack & St-Malo fields, located in the Walker Ridge area of the Gulf of Mexico at a water depth of approximately 7,000 feet (2,100 meters).

The contract covers the engineering, fabrication and subsea installation of more than 53 miles (85 kilometers) of 10.75" outer diameter flowlines, steel catenary risers, pipeline end terminations, manifolds, pump stations and tie-in skids.

Technip's operating center in Houston, Texas will perform the overall project management. The flowlines and risers will be welded at the Group's spoolbase in Mobile, Alabama. Offshore installation is scheduled to be completed by the Deep Blue, Technip's deepwater pipelay vessel, in 2013.

IMV Projects Awarded EPCM Contract by AltaGas

January 11, 2011

MV Projects, a Wood Group company, has been awarded a multimillion dollar contract by AltaGas to provide full engineering, procurement and construction management (EPCM) services for the C$235MM Gordondale sour gas processing facility and associated gas gathering system.

The facility will be designed to process 120 million cubic feet/day and will include deep cut liquids extraction capabilities to recover the natural gas liquids before the gas enters the sales gas pipeline. It will be located approximately 100km northwest of Grande Prairie, in the Gordondale area of the Montney shale gas play, and is expected to be on-stream by the fourth quarter of 2012, pending regulatory approval.

IMV Projects has been involved with the development of the project since its inception, performing the original scoping study and the front-end engineering design (FEED).

"We are very pleased to extend our relationship with AltaGas on this facility," said Kevin O'Brien, president of IMV Projects. "We aim to be Canada's go-to project execution provider for the energy industry and this project will showcase our gas processing capabilities."

IMV Projects also designed the expansion of AltaGas' Ante Creek processing facility, which is currently being constructed and features a new amine train, refrigeration unit and gathering system.

Bechtel Completes Power Megaproject

January 12, 2011

Bechtel has turned over the Oak Creek power plant expansion project in Oak Creek, Wisconsin to the plant operator, Wisconsin Electric Power Company. The move signals the completion of the plant, which is now one of the most efficient coal-fired power plants in the United States.

“This is a tremendous achievement that was the result of a collaborative effort,” said Alasdair Cathcart, president of Bechtel’s Power business unit. “The successful completion of this megaproject is a testimony to the dedication and commitment of everyone, including the engineering, procurement, construction, and startup team members, who worked tirelessly on it.” Read more.

Goodbye to a Valued Member of SPED'S Staff

This final week in January 2011, we say goodbye to valued staff member, Ms. Amy Voss-Foster. Among her many responsibilities, Amy played a key role in helping grant students from 2007 through 2010. She also created the first PPD Certification processing and contributed to the operation of SPED in nearly every area. We wish her the best in all of her endeavors. "You will be missed."

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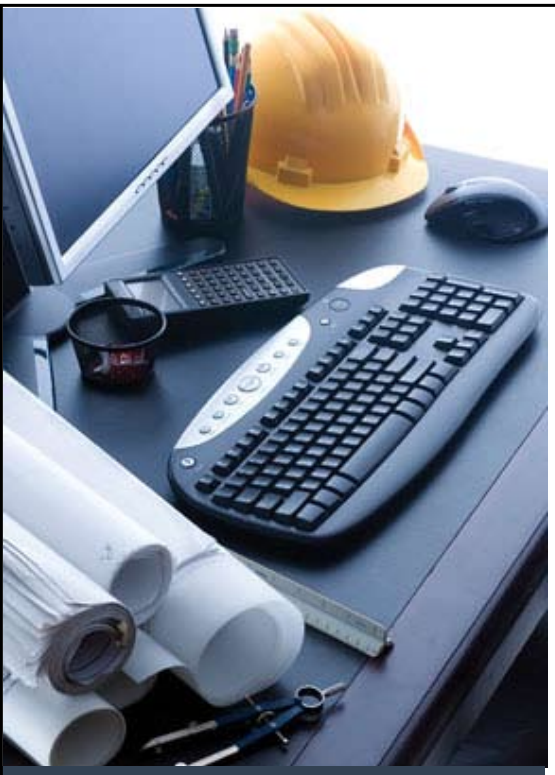
Join us and enjoy discounts and other benefits.
Join online at www.spedweb.com.

Individual Professional Membership	$70 USD
Student Membership	$20 USD
Small Corporate Membership	$500 USD
Large Corporate Membership	$1000 USD
Global Corporate Membership	$10,000 USD
Academic Institution Membership	$500 USD

For Corporate Membership inquiries,
email spedexec@spedweb.com or call +1 832.286.7678.



New project?
Staffing issues?

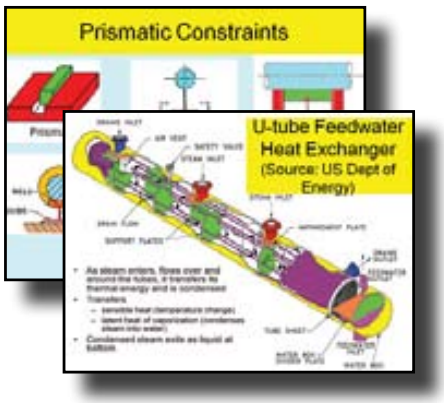
THE SPED PIPER VIDEO SERIES IS YOUR ANSWER.

"It's the Piper's resource for Information and Just-in-Time Training."

PIPER BOOTCAMP covers equipment and fittings necessary for routing pipeline from nozzle to rack to nozzle.

PROCESS PLANT LAYOUT covers knowledge and skills required for plant equipment and layout. Targets pipers already familiar with in-line pipe routing.

Version I contains original video recordings of live presentations by industry leaders.
Version II contains newly recorded videos with additional topics, and extended notes.



Designed for the new Piper and as a useful resource for experienced Pipers, the SPED Piper Video Series is considered the Industry Standard for piping training.

For more information, call 832.286.7678 or email videos@spedweb.com.

Industry Training Calendar				
Dates and Times	**Day(s)**	**Location**	**Cost**	**Registration**
Piping Technology & Products, Inc. Slide Plates & Pipe Rollers Webinar February 3rd - 10 a.m. or 2 p.m.	M/Th	Online	FREE	http://cts.pipingtech.com/t/37727470/139187614/90221/0/
Lisega University: Pipe support Symposium February 15, 2011, 8 AM - 5 PM Appreciation Dinner, 6:15 PM	T	Houston Petroleum Club	See contact info	training@lisega.com
Total CAD, Inc. Plant 3D Webinar: Modern 3D Modeling to Your Everyday Plant Design Projects, February 17, 2011	Th	Online	FREE	Email Nhi Hong hong@tcadsys.com or call 281.445.6161 to register
Total CAD, Inc. AutoCAD Plant 3D Essentials, February 21-24, 2011	M/Th	Total CAD Systems Houston Office	$795 for Customers $1195 for Non-Customers	Register at www.tcadsys.com/training.html
Intergraph PV Elite Productivity Training March 7 - 9, 2011	M/W	Houston, Texas	See website	Register
Total CAD, Inc. AutoCAD Fundamentals, March 7-10, 2011	M/Th	Total CAD Systems Houston Office	$595 for Customers $895 for Non-Customers	Register at www.tcadsys.com/training.html
AVEVA Webinars: 12 informative webinars available anytime.	M/W	Online	FREE	www.avevawebinars.com
FIATECH Tech Tuesday Webinar Seriesl	M/Th	Online	FREE	http://fiatech.org/tech-connections/techtuesday.htm
SPED Process Plant Layout Course, Ongoing	T/Th	Online	FREE	www.spedweb.com
SPED Piper BootCamp Course, Ongoing	TBD	Online	FREE	www.spedweb.com
SPED PPD Review and Exam Levels I or III, Ongoing	TBD	Online	FREE	www.spedweb.com

Most vendors have their webinars listed in an online library for viewing; go to the webinar hosting site and search in their online library for a chance to see what you missed. SPED will give a PDU credit for viewing it from the vendor's library.

Have you renewed your SPED PPD Certification? Renewals for any PPD Level of Certification are only $90 annually, and due from the date on your original certificate.

For more information about certification, or to renew, visit www.spedweb.com.

Calendar of Events

Dates and Times	Day(s)	Location	Cost	Registration
TOPSIDES Conference & Exhibition, February 1-3, 2011	T/Th	Moody Gardens, Galveston, TX	See website	http://www.topsidesevent.com/index.html
National Association of Steel Pipe Distributors, Annual Convention 2011 February 17-19, 2011	Th/Sa	The Westin Galleria, Houston, TX	See website	https://secure.dellamark.net/naspd.com/conf_20110217.cfm
SPAR 2011, March 21-24, 2011	M/Th	The Woodlands Waterway Marriott Hotel and Convention Center, The Woodlands, TX	See website	www.sparllc.com/spar2011.php
Fiatech Technology Conference & Showcase, April 18-20, 2011	M/W	Sheraton Wild Horse Pass, Chandler, AZ	See webiste	www.cvent.com/EVENTS/Info/Summary.aspx?e=d34c790ad13d-40a3-8acd-c29709050ae3
Intergraph, International Users Conference, June 6-9, 2011	M/Th	Orlando, FL	See website	www.intergraphusersconference.com
ChemInnovations, Sept 13-15, 2011	T/Th	George R. Brown Convention Center,Houston, Texas	See website	www.cpievent.com
2011 SPED Corporate Member Showcase and 31st Annual General Business Meeting,November 2011	TBD	Houston Marriott Energy Corridor, Houston, TX	See website	www.spedweb.com

Take the Pledge!

100% CLUB
SPED Professional Piping Designers

Join the SPED PPD 100% Club

When choosing among pipers, clients and employers know that Certified Professional Piping Designers (PPDs) meet the specific requirements of the Process Piping Industry. In today's competitive marketplace, the most qualified pipers have the best careers and their firms receive the most contracts. That is why SPED is promoting certification for all pipers. To that end, SPED has developed the PPD 100% Club to help pipers achieve excellence and document their skills with PPD Certification.

Designers Benefit from documented skills and competency, increased employability at higher pay, improved professional recognition and a defined professional development path.

Contractors Benefit from 3rd Party verification of employee skills and competency, the qualification of a candidate for hire, the competitive advantage on contracts, and the defined professional development guidelines.

Clients Benefit from 3rd Party verification of an employee skills and competency, contractor differentiation, certification as a staffing qualifier and as an indication of commitment to professional development.

For more information, or to sign up for the PPD 100% Club, call 832.286.7678 or email spedexec@spedweb.com.