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QUARTERLY
JOURNAL
Q3-2012

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Published by
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Q3 – 2012

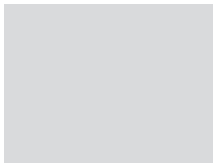
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Our Brand (title?)

by Uri Nooteboom

Twice a year our management team gets together to review our business strategies and to measure progress against those strategies. Last month we met in Delft, The Netherlands.

Our Delft office is across from a large IKEA store. Since I am familiar with their store in Houston, I expected they might have what I was looking for and went for a visit. It turned out that their Delft store is absolutely identical, inside and outside from the one in Houston and presumably in any other location.

Regardless whether you like or dislike their type of merchandise, their stores are brilliantly designed to expose the customer to literally everything they sell. Everything from merchandise, store layout, pickup, payment and checkout is the same; it defines how they want to be recognized and establishes their brand. It doesn't cater to taste or fashion that may differ from country to country; the strong globally identical "look and feel" (the brand) creates the appeal, trumps local fashion and creates followers.

What exactly is a brand? The dictionary defines a brand as "a trademark or distinctive name identifying a product or a manufacturer." By my own definition a brand can only exist if the respective product is consistent and similar no matter where it is sold or furnished. Coca Cola would not be a globally recognizable brand if it looked and tasted different in different places on earth. You buy a coke for the feel and taste and you expect it to be the same every time, everywhere.

With a brand product the customer no longer cares where the product is made or assembled because the brand assures the same quality regardless. The Honda sold and manufactured in the USA is expected to be of the same quality, not better or worse than the Honda sold in Japan. Protecting a brand means making sure these quality expectations are met everywhere around the world. That is why people trust brand names; without that trust the brand would quickly disappear.

Meeting global quality norms for products is expected and no longer difficult to achieve. Whether they are Nike shoes or Honda cars they can be manufactured on the same calibrated machines with the same processes and quality

systems anywhere in the world. Nowadays, with components and ingredients being furnished from the global marketplace, many products are better described by a "made on earth" moniker as the "made in..." label is neither relevant nor adequate as a place of origin.

Most brands are associated with a distinctive product. But, how about services? Can services attain global brand status? My view is yes, they can; it is just a lot harder. Getting brand recognition for a service is more difficult since reputation and subsequent acceptance of the brand will need to depend on the strength of the achievements, consistent performance and expected behaviors of a large number of individuals anywhere the brand is offered. Unlike a product that is churned out by programmed machines in identical assembly plants and with the same processes and tools whether in India, Korea or USA, the service brand relies on a multinational, multicultural team of people who need to be completely aligned on the values and the delivery of the brand.

It will not come as a surprise that we consider ourselves a brand. We rely on strong procedures, systems, processes, and knowledge base to drive people's behavior and provide the ability to perform in the consistent delivery of these services. Through workshare we have the ability to "assemble" our services anywhere in the world with the same quality.

Unlike branded products, however, our customers still care where the service is "assembled". But I expect that within the next ten years that distinction will disappear when the drive for efficiency will make workshare the norm and advanced mobile communication allows virtual teams working from virtual offices to connect to the world from anywhere.

Until then enjoy your morning and evening commuting routine.



We rely on strong procedures, systems, processes, and knowledge base to drive people's behavior and provide the ability to perform in the consistent delivery of these services. Through workshare we have the ability to "assemble" our services anywhere in the world with the same quality.



In-depth Design and Analysis for Shell's Olympus TLP in Gulf of Mexico

by S Devarajan, Floating Systems

INTECSEA Floating Systems Group has a pioneering heritage in its engineering sector, advancing both innovative and mature solutions for the challenges of developing new oil fields in deep waters.

This heritage is reflected in INTECSEA's numerous deepwater projects for Shell International Exploration and Production Inc. (SIEP). Success in each project was achieved by high quality service, advanced technical solutions to new challenges, and outstanding customer service. INTECSEA's ability to deliver successful projects with innovative solutions has earned a reputation for INTECSEA as leaders in the industry and has resulted in an excellent relationship and trust with SIEP.

In 2008, SIEP awarded INTECSEA a multi-year contract to provide professional engineering support services for the Olympus TLP (Tension Leg Platform)--part of the Mars B deepwater development. SIEP engineers were able to draw as needed upon INTECSEA's engineering and drafting staff. A talented team of about 50 INTECSEA employees were mobilized at various stages of the project. Chunfa Wu, Vice President Floating Systems, has managed the group effort. INTECSEA's Naval Architects generated environmental load data for the hull structure. The Structural Engineers analyzed and detailed the hull design to ultimately develop contract drawings, and other supporting work. Drafting tackled some special assignments from SIEP in addition to drawing development. INTECSEA's flexible mode of responding to complex work tasks has provided value to SIEP.

INTECSEA's Tendon group was assigned tasks in engineering the tendon installation that will be addressed in a future article.

The Olympus TLP will be a new, self-contained drilling and production facility located in Mississippi Canyon Block 807 in the Gulf of Mexico approximately 95 miles south of New Orleans, Louisiana, in a water depth of approximately 3000 feet. The facility is being designed to process approximately 100,000 barrels of oil equivalent per day (BOE/d).

Major design challenges imposed by post-Katrina revisions to design practice were successfully managed by INTECSEA design engineers.

Olympus' hull has four round columns and four rectangular pontoons. A total of 16 tendons—four on each column—will anchor the unit and restrict vertical motions. The hull structure carries a deck consisting of four topside perimeter modules and a wellbay module in the center of the platform. The facility modules rest on pot bearings on top of the deck stools which transmit vertical axial loads to the columns. Upper column frames brace the column top against global motion.

Though the Olympus TLP is outwardly conventional, it incorporates important design refinements learned and developed through the course of previous TLP projects. Unlike other TLP structures, the Olympus hull structure is designed to withstand 1000 year storm conditions and a 50 year service life. Major design challenges imposed by post-Katrina revisions to design practice were successfully managed by INTECSEA design engineers.

Wave pressure and motion induced loads for Olympus TLP were developed by the Houston INTECSEA naval architecture group led by Bill Greiner using well proven methods used on various other floater projects. This includes pressure and motion load mapping from the hydrodynamic analysis software (WAMIT) to the structural analysis software (ANSYS). This work also included development of simplified regular wave load cases to capture the maximum hull stresses found from statistical response based analysis (RBA) methods.

The scope of work for the INTECSEA Structural team includes scantling design, global structural analysis, detailed hull structural analysis and design, fatigue analysis and design, load-out analysis, transportation analysis, and drafting AFC drawings with back modelling to 3D PDMS models. Additional scope includes supporting the Shell site team located at Samsung Heavy Industries in South Korea, designing the installation structures, and preparing the In-service inspection manual.

Primary structural design, including global analysis, and the challenging transportation engineering tasks were led to successful, timely delivery by Yaming Wan, Executive Engineer. Some of the most critical parts of the structure are the deck stool, pontoon column connection and top of column braces connection to hull. Dr Yonggang Zhang, Executive Engineer, was specially assigned for this task based on his extensive knowledge in the area. Another Executive Engineer, Richard Hang, led appurtenance design - comprising a wide range of tasks which typically gets pushed to the end of design work. Responses to yard queries, node detail design, load-out analysis and preparation of the In-service Inspection Manual were performed by Selvi Devarajan, Senior engineering specialist. The entire group effort was guided by two senior engineers Rajiv Kamal (Hull Structural Design lead, SIEP) and Bartholomew Jukui (Hull Appurtenance Lead, SIEP). Prior experience of the team with Shell's most stringent project requirements, in depth knowledge of Shell design specifications and code requirements helped immensely in meeting the customer's high expectations in designing the hull.

The Drafting team which was led by Tim Coats (drafting manager/lead) carried engineering designs to AFC AutoCAD drawings with back modelling to 3D PDMS model. Experienced people like Tim Coats and Robyn Russel played key roles in designing installation interfaces.

The group came together for a very full three days of sessions and presentations on important topics ranging from global business development to engineering in the new world.

2012 Semi-Annual Planning Conference

by Ashley Helmer

Back Row (standing) Left to Right:

Lee Chong Fong, Steve Lee, Alvin Alleyne, Bill Westcott, Craig Reeves (WorleyParsons), Frank Drennan, Phil Cooper, Brian McShane

Middle Row (standing) Left to Right:

Mike Paulin, Ashley Helmer, Suhaimi Ismail, Bharath Neravetla, Ping Liu, Ron Ledbetter, Holger Kelle, Richard Luff, Uri Nooteboom

Front Row (kneeling) Left to Right:

Ian McRobbie, Mac McKee, Bernard Mackin, Carlos Bomfimsilva

Not pictured is Sarah Westhaver, who joined via teleconference



INTECSEA's Global Leadership Team, along with Craig Reeves, Director of Global Businesses for WorleyParsons, recently gathered in Delft, The Netherlands for the 2012 Semi-Annual Planning Conference. The conference was a great success, so many thanks to Mac McKee, INTECSEA Manager of Planning and Development, and the Delft office for organizing the event. The group (around 25 people), came together for a very full three days of sessions and presentations on important topics ranging from global business development to engineering in the new world. The meeting was kicked off by Uri Nooteboom, with the team reviewing items such as regional

outlooks, human resources initiatives and global business and collaboration with WorleyParsons. The overall goal of the conference was to discuss ways to improve

our global operation, and ultimately, customer satisfaction. Day two topics included training and career development, improving internal and external communications, technology and updates on field development. The group also had the chance to explore Delft, with a guided boat tour through the city's canals, followed by dinner. The third and final day of the conference revolved around floating systems, Local/global initiatives and action planning. Internal focus was also given to structured succession planning as well as talent acquisition to meet our customers' demands in the upcoming market place.

The conference was a great opportunity for the team to come together and focus on improving our operations. The upcoming year should be a good year for INTECSEA. There will be challenges, there will be changes, but the team is focused and ready to meet them head on!



Technology Corner

by Larry Forster

INTECSEA strives to achieve excellence and growth through innovation and the application of technology. The global Technology Strategy begins with **Innovation**, the first of four critical workstreams, and includes **Tools**, **Knowledge** and **Publications**. I plan to have interesting news on Technology activities in the upcoming issues of Global Frontiers. In this first installment, I would like to illustrate how these four workstreams come together to form the Technology Strategy.

Innovation begins with an idea, an idea that fits our business, and our customers' business. The key is to get these innovations into projects, and for INTECSEA, that means developing our capability to progress the idea and to support our customers in effectively applying it. Developing our capability brings us to **Tools**, often innovations in themselves, which enable us to be more effective in supporting our customers. As we continue to develop our capability, it becomes vital that we share our **knowledge**, first, within and among all our global offices, so that we draw on all our strengths, wherever they might reside. Then, to get the knowledge to our customers, we emphasize **Publications**, in many forms: capability flyers, conference papers, and journal articles, to name a few.

What's on our list?

Subsea Active Production Technology - including flowline heating and subsea processing,

Novel Riser Configurations, enabling challenging field developments

Updated Standardized Design Tools - achieving consistency and efficiency, a competitive edge

Advanced Numerical Analysis Tools - potential major risk reduction for customers

Arctic Technology: Fiber Optics - a potential new approach to Leak Detection in sensitive areas

HPHT - up to 20KSI capability at 350 degrees

Among Others - Stay Tuned!



Larry Forster is Subsea Technology Advisor at INTECSEA Houston, working in conjunction with Global Technology Director Phil Cooper and the Global Technology Committee.

WorleyParsons Infrastructure & Environment and INTECSEA-Collaboration Leading to Shared Success

by Bill Westcott

WorleyParsons Infrastructure & Environment and INTECSEA recently participated in a collaboration workshop, meant to further establish an integrated value offering for customers and accelerate front end positioning in key markets.

The Houston workshop was attended by global and regional leadership from both organizations, and was focused on understanding key capabilities and increasing customer engagement, with emphasis on specific opportunities. A summary of the workshop is captured in the presentation located here.

Outcomes of the workshop have led to immediate improvement in project opportunities for all parties including:

- Enhanced Pre-FEED scope capture to INTECSEA, related to subsea pipeline support on a large port development (currently worked through

Infrastructure & Environment).

- Strong support to Infrastructure master planning scope capture for a Confidential LNG development (currently worked through INTECSEA).
- Collaboration on offshore platform and subsea systems restoration/decommissioning programs for a Tier 1 Hydrocarbon customer.

The next steps in the ongoing collaboration process include monthly pursuit discussions, integrated positioning with customers, and development of an integrated **Select** offering in frontier markets (including Africa and Latin America).

We are confident that the combination of our capability and front end positioning will produce significant value for the company and enhance our ability to further support our customers.

Oil & Gas, A Candidate's Industry

by John Sanders



A "Candidates Market" is a scenario where the number of opportunities is significantly greater than the number of available workers. Therefore job applicants can enjoy the benefits of companies stiffly competing with one another for talent.

The spoils of such competition can be seen in large sign-on bonuses, inflated salaries, grander titles and even expanded benefits that can include car allowances, per diems, etc...

The opposite of a Candidates Market is an "Employers Market". This is where jobs are so scarce and candidates plentiful that employers become highly selective and even the most qualified applicants can't find reasonable jobs.

So what is a "Candidates Industry"? It's an industry where unemployment rates are consistently lower than the national average. Oil & Gas is an industry that fits this description and today's state of affairs are a clear indication of it truly being a "Candidates Industry".

With an unemployment rate at 4.9% as of September 2012 (according to the US Bureau of Labor Statistics), we are well below the current 7.6% national average. A rate of 4.9% also means that Oil & Gas employers are working harder and are competing fiercely with one another for an ever-decreasing talent pool.

And with average tenure down to ~three to four

years, attrition is another front where employers are facing stiff challenges to retain their employees in a market where opportunities are outpacing available workers.

What is scary is that in October 2005, the Oil & Gas unemployment rate was .3%. During this time almost anyone who wanted a job in Oil & Gas had one. It is the closest to employment Utopia we will get.

The average rate from 2005 - 2008 was 3.2% with many stretches in the low 1%'s. With rates like that, even remotely qualified candidates were landing well-paying jobs in the Oil & Gas industry. And if the macro-trends continue in the direction they have been, then we should return to the unemployment rates of mid-2000 in the next few years.

If that happens, it is going to be a wild ride for those of us on the hiring side of Oil & Gas and a candidate driven industry for the folks in the job market during that time.

In the end a thriving Oil & Gas industry is good for America and good for the global economy. So although it will be challenging for employers, it's a problem we'd take over many others any day.

The data in this article was referenced from the United States Bureau of Labor Statistics Economic News Release from 2002 - 2012.
<http://www.bls.gov/bls/newsrels.htm#OEUS>

Woking Engineer Receives Award from Surrey University

by Cynthia Calderon



Congratulations to Martynas Zalianekas (pictured left), a Graduate Engineer from the Woking office, for winning the Institution of Structural Engineers (Surrey Branch) Undergraduate Project Prize for Surrey University for his project report on "CRA Spool Numerical Modeling & Verification by Numerical Testing."

Reliable Offshore Pipeline Leak Detection Technologies for Arctic Applications

by Premkumar Thodi, Mike Paulin, Duane DeGeer, and Glenn Lanan

Arctic offshore pipelines are used for the safe and economic transportation of hydrocarbons. While pipelines are designed not to leak, excessive strains due to the effects of ice gouging, strudel scour, frost heave and permafrost thaw settlement along with other loading and failure mechanisms (e.g., corrosion, third party damage) could result in a leak. Failure to detect leaks in a timely manner could have severe safety, environmental, and economic impacts. Large leaks can easily be detected, but small/chronic leaks may go undetected for a period of time, especially when the pipelines are in remote locations or under seasonal ice cover.

INTECSEA is currently proposing a JIP for the Assessment of Subsea Leak Detection Systems (LDS) for Arctic and Cold Region Applications. The main objectives of this study are to: conduct a technology evaluation of existing and emerging technologies for potential use on Arctic offshore pipelines; estimate minimum thresholds of leak detection; determine the minimum response time for leak detection; evaluate operational reliability; and assess installation and maintenance requirements. These goals can be achieved through a combination of desktop study, numerical modeling, laboratory experiments and large scale field experiments. This study will assist JIP sponsors in rational decision making regarding the application of LDS in Arctic pipelines. The performance assessment of the selected LDS will also help with the permit application and regulatory review process.

Initial desktop studies indicate that distributed Fiber Optic Cable (FOC) sensors and passive acoustic sensors can be used to detect and locate leakages. Pipeline fluid and gas leakage can generate a local rise and fall in temperature, respectively. These thermal anomalies can be captured by FOC Distributed Temperature Sensing (DTS) technologies with good spatial and temporal resolution. Similarly, the sound

signature generated by leaking fluid or gas can be measured using FOC Distributed Acoustic Sensing (DAS) technologies. Inelastic Brillouin and Raman light backscattering principles are used for measuring temperature in DTS, whereas the elastic Rayleigh backscattering principle is used for measuring acoustics in DAS. Passive acoustic LDS technology can also be applied to liquid, gas and multi-phase flowlines. Acoustic sensors are essentially hydrophones and use sound waves in water to detect leaks.

The goal of the JIP is to independently verify the capabilities of LDS and recommend the most suitable technology for Arctic offshore pipeline continuous leak monitoring. This JIP will provide an overview of the state-of-the-art LDS technologies, the operational boundaries and LDS reliability.

For more information on INTECSEA's leak detection research and development, please contact Duane.DeGeer@intecsea.com or Mike.Paulin@intecsea.com.

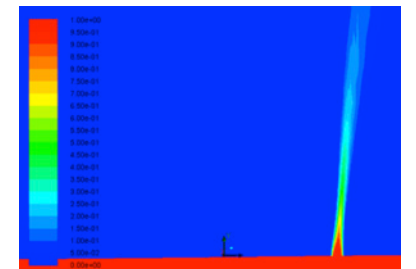


Figure 1: Fiber Optic Cable Distributed Sensing System being installed on an Offshore Arctic Pipeline Bundle

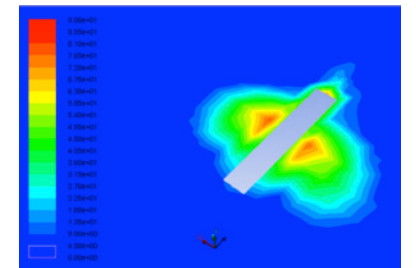


Figure 2: Oil Leak Profile (Mass Fraction Dispersion)



Figure 3: Oil Leak Acoustic Energy Contours in the Horizontal Plane

In Picture: ??



INTECSEA Singapore in MOSS Exhibition

INTECSEA Singapore sponsored in Marine Operations Specialty Symposium (MOSS) which was organized by the National University of Singapore's Centre for Offshore Research and Engineering (CORE). The event was held from 6th August 2012 to 8th August 2012 at Furama Riverfront Hotel, Singapore.

This symposium was held primarily to highlight and discuss all offshore operation and installation related issues. Initiated in 2011 by Mr. Yong Kuek Kien who was the Operations Director of INTECSEA at the time of this year's symposium attracted a number of other offshore installation contractors such as McDermott and EMAS.

Representing the INTECSEA Singapore office, Ms. Kavitha Raghavendra and Mr. Goh Kia Hock presented the "Insulation of Flowlines: Pipe-In-Pipe-Design" paper, which discussed both the flow assurance and the mechanical design challenges of a waxy crude pipeline designed for a project in offshore China. This paper has been published in the MOSS proceedings made available for future reference for practicing engineers and technical staff in the oil & gas sector, universities, research institutes, third parties, and offshore industries.

Overall, it was a great opportunity to showcase INTECSEA's capabilities to the target audience of companies in the region, particularly vessel operators, contractors, vendors, classification bodies and tertiary institutions.



UK Opens New Facilites by ??

Due to continued strong growth in its business INTECSEA is delighted to announce the official opening of its new facilities at its site in the Lansbury Business Estate, Knaphill. Since first opening its offices in Knaphill in 2001, INTECSEA has grown its business to the point where it has almost two hundred highly skilled employees in

its UK offices and more than 1,000 employees globally.

To celebrate the expansion of the business and confirm its commitment to the Woking community, INTECSEA held its opening ceremony on October 15th attended by local MP Jonathan Lord, the Mayor and Mayoress of Woking and representatives of INTECSEA, WorleyParsons and the Lansbury Estate.

Happy after the race: Jason Gibson, Peter Brownlie, Cynthia Calderon, Candice Heapes, Kerri Smith and Julie Burke



Perth Chevron City to Surf

The Perth Chevron City to Surf for Activ has a 38 year history and is Western Australia's most popular race. This year more than 45,000 people took part with a record number of participants in the marathon and half marathon.

A total of 45,046 people registered for this community sporting event which was blessed with perfect weather conditions.

A record 1,201 people took part in the marathon while another record number of people, 4,312, competed in the half marathon.

Athletes from 26 countries participated in this event. Paul Watson from our floating systems team represented INTECSEA in the marathon finishing it in 3 hours and 29 minutes. Well done Paul!

INTECSEA was represented by:

- | | |
|-------------------|------------------|
| 4 km walk | Peter Everett |
| Chris Plummer | Tim Hart |
| 12 km walk | Tom Walshe |
| Ashini Attawar | 21 km run |
| Hema Wadhwa | Cameron Hannan |
| Larry Parkes | Candice Heapes |
| Maryam Mehdizadeh | Cynthia Calderon |
| 4 km run | Jason Gibson |
| Karina Fratzcak | Julie Burke |
| 12 km run | Peter Brownlie |
| Baptiste Llobell | 42 km run |
| Daniel Coughlan | Paul Watson |
| Joseph Graville | |
| Kerri Smith | |

Jakarta Breaking News by Arjun Balachandran

On 8th September 2012, INTECSEA Jakarta Engineer Zenal Abidin tied the knot to his sweetheart Arie Susanti, at their hometown in Cirebon, West Java. The entire INTECSEA Jakarta staff took a three hour train ride from Jakarta to Cirebon to attend his wedding. Even though we had to leave Jakarta at 6:00am, it was great to note that everyone turned up, we took Cirebon by storm much to Zenal's surprise, but most importantly we all had a chance to mingle informally outside the working environment. We returned also by train, that same day, reaching Jakarta at 6.00pm.



INTECSEA Jakarta Staff blessing the Bride & Groom

On Tuesday 14th August, in conjunction with the Muslim fasting month of Ramadhan, the INTECSEA Jakarta staff had a team building "break-fasting" session together at a popular Yemenese restaurant in heart of Jakarta. It was a sit on the floor concept. The food was very good, and everyone had a great time bonding with each other.



INTECSEA Jakarta - All for one and one for all

Subsea Asia 2012 a Success for INTECSEA by Sharon Cheng

INTECSEA Malaysia made its first appearance at Subsea Asia 2012, held at the Kuala Lumpur Convention Centre October 3rd - 5th. The two-day exhibition was preceded by a one day conference where Mustafa Mahmood, Flow Assurance Manager of INTECSEA KL, presented a paper titled "Case Study of Insulation Selection for Deepwater Development."

The exhibition was open to the public on the 4th and 5th of October with a total of 51 participating exhibitors. INTECSEA's booth attracted visitors from various companies in roles ranging from top management to graduate engineers; our presence at the event gave them a brief understanding of our business and our contribution to the subsea industry. The four panel wall projection display screens and overall look of the booth proved to be a hit amongst visitors wishing to know even more about what INTECSEA has to offer.

Overall, INTECSEA's involvement in Subsea Asia 2012 was a success, as delegates and visitors were given a great introduction to our company's capabilities, as well as exposure to the opportunities and challenges faced by the subsea industry.



Booth attendees connect with INTECSEA AME Senior Vice President, Steve Lee



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visit intecsea.com/contact_us.asp