

# Solutions



### Contents

Energy in focus	p2
Degussa - competing for the future	p3
In brief	p4
Conferences	p6
Seminar / training programmes	p7
Product news	p8



Martin Grady, sales & marketing manager, ABB Engineering Services

### Year on year improvement in customer satisfaction

Our latest customer survey shows that your level of satisfaction with our services continues to improve, as measured by our overall satisfaction score.

To ensure independence, accuracy and reliability the survey was again carried out by The Leadership Factor, a research agency specialising in satisfaction measurement. They conducted the survey over the telephone by approaching a representative sample of customers. A total of 208 individual customers participated; if you were involved we would like to thank you very much.

The survey tells us that our customers as a whole feel that we have improved on almost all measures since the last survey in 2004. Three areas show notable increases in satisfaction:

- Keeping to budgets
- Keeping to schedules
- Range of skills offered

When asked to score their satisfaction with ABB Engineering Services overall on a scale of 1 to 10, a score of 7 or more was recorded by 87% of respondents. Whilst we believe these results demonstrate the impact being made by our service improvement programme, the survey also guides us in how we can improve further. As a result our delivery teams are implementing a number of changes which we believe will make a difference and take satisfaction levels even higher.

As you no doubt realise, we find the customer survey very helpful in our ongoing drive to improve service quality and satisfaction. So we will be running it again in the future. If you are contacted we hope you will take the opportunity to let us know how we are doing. Of course we are happy to hear your feedback at any other time too. ■



## Energy savings programme

ABB Engineering Services has launched a new service focused on delivering secure and sustainable energy savings.

Most operating companies have carried out energy audits. Some of the energy saving measures identified in these audits may even have implemented. But many of the recommendations will not have been acted upon.

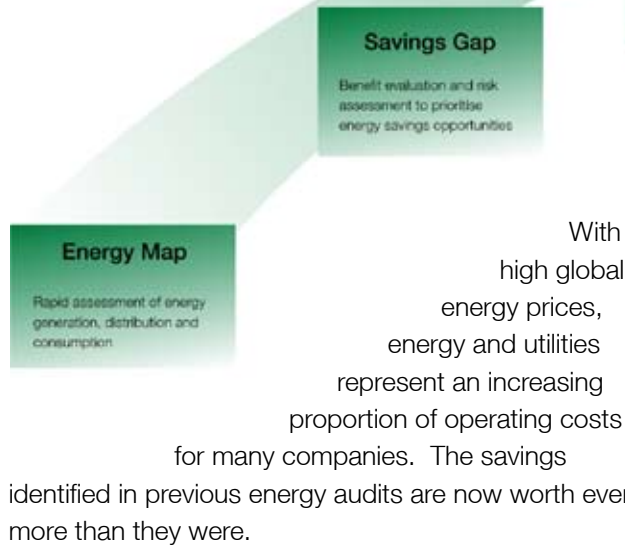


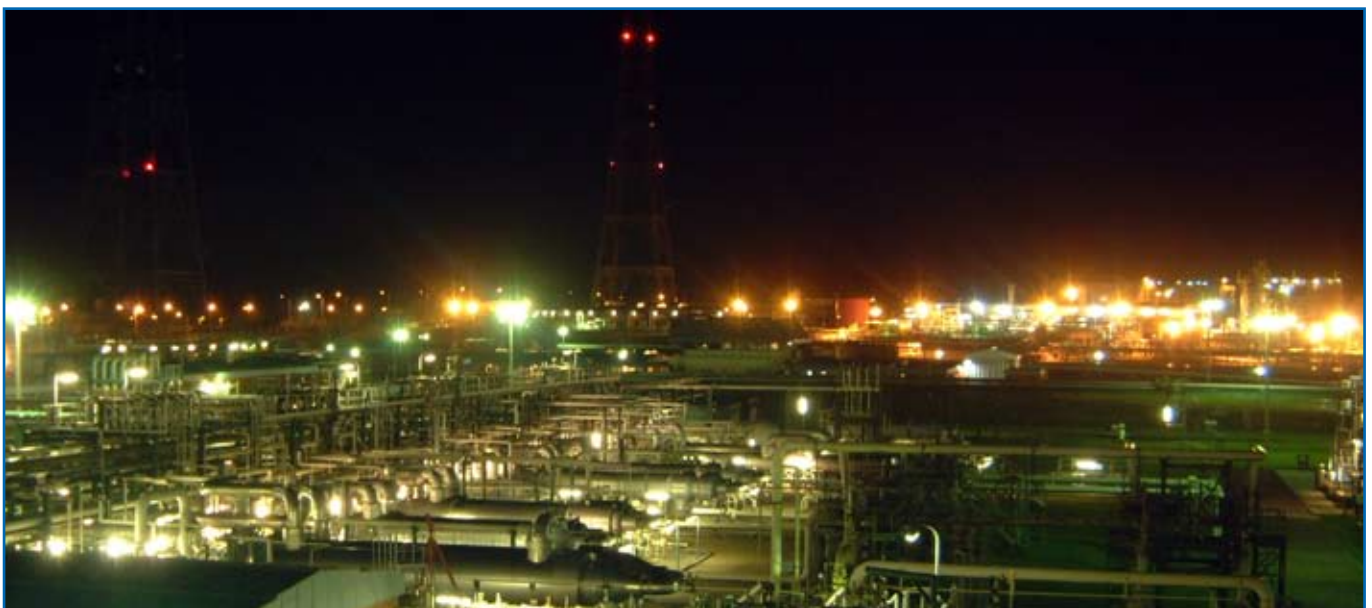
ABB recognises that savings are only realised when improvements are implemented. That is why we have launched an energy savings programme that is focused on delivering secure savings within a well-defined payback period.

The programme starts with a no obligation assessment of energy saving opportunities on your site. If there are viable energy savings to be made we proceed to a detailed and focussed investigation into energy savings opportunities.

The output of this phase is a well-defined programme of energy savings projects, each scoped, costed and prioritised to deliver net savings within your target payback period. Improvements may include changes to operating and maintenance regimes, the installation of energy efficient technologies as well as activities to develop greater employee awareness of the need for energy conservation.

The implementation phase covers the delivery of these energy savings projects, managed by ABB to generate cash savings in accordance with the payback plan.

The benefits of the programme are clear. In addition to realising savings of up to 20% of energy costs, participating companies develop their own capability to make sustainable improvements in energy efficiency themselves in future. ■



Energy and utilities are prime areas for reducing costs and controlling emissions

## Degussa Knottingley - competing for the future

degussa.  
creating essentials

Degussa Knottingley Ltd. is part of Degussa AG, Germany's third largest chemical company, and Europe's only producer of paracresol, a chemical building block for pharmaceutical intermediates, agrochemicals, UV stabilisers and antioxidants. Faced with increasing competition, the site management team turned to ABB Engineering Services to equip its workforce for the changes ahead. With fewer people and more priorities, better customer service was the primary focus. From now on continuous improvement needed to become the norm if the business was going to improve its performance and output and everyone was going to have to 'step up to the plate' and be counted. But it wasn't going to be easy. Previous change programmes had been and gone and the business recognised the need to do things differently this time. As well as a successful track record in change management, ABB were able to demonstrate the capability to provide the "umph" - the motivation and confidence to achieve challenging goals, involving and engaging the workforce, identifying routes to increase production rates and intervening to challenge existing beliefs.

### Improvement priorities

Five improvement priorities were identified:

- Eliminate work that does not add value
- Implement a management control & reporting system (MCRS)
- Change behaviour and attitudes by developing all levels of management
- Become a continuous improvement organisation
- Get communication working for the benefit of the business

The activities that followed were designed to address these priorities in a cohesive improvement programme while allowing the organisation to function at its desired size and still achieve its output targets.

ABB's i2i (investigate, implement, integrate) methodology ensures that at every stage in the improvement programme the workforce are encouraged to share in the plan, contribute new ideas and develop the skills and capabilities required to actively participate in the changes. Performance coaching and training was provided at all levels and cross-functional improvement teams were established and facilitated to identify and implement high value improvements that required minimal or no capital.



Involvement in action - creating ideas

### Benefits delivered

Commenting on the benefits delivered by the improvement programme, Adrian Hayman, Operations Manager, observed, "I didn't believe how much our people changed, it exceeded my expectations." The organisation is now focused on continued, sustained improvement and has the skills and capabilities to deliver ongoing performance improvements. Target throughput increases have been achieved and exceeded and the business is on target to meet its financial goals. And customer service has improved significantly, with On Time in Full (OTIF) performance increasing by over 21%. ■



Degussa site - Knottingley

## Know your onions (oops, I mean tomatoes!)

ABB Engineering Services was recently involved in an exciting, innovative, groundbreaking project that will create new jobs and also brings the established industries of Teesside together with advanced and leading glasshouse technology in the growth of salad crops.

Terra Nitrogen UK Ltd a long established client of ABB successfully came together with John Baarda a leading company from Yorkshire well established in growing salad crops and recently awarded Salad Grower of the year predominantly for this project.

The project is an example of how strategic partnerships with varying industries can benefit all concerned, utilise what would be waste products and reduce environmental emissions.



The glasshouse site and facility is staggering with a growing area of 950,000 sq-ft, the size of 20 football pitches; 360,000 tomato plants growing at any one time; producing 7000 tonnes of tomatoes per year.

ABB worked with Terra Nitrogen UK Ltd and provided engineering design and project management from their local offices. First discussions took place between ABB and Terra in Feb 2005, actual design started June 2005, the utilities were installed and the site commissioned producing tomatoes in November 2005, a remarkably achievement by all concerned.

Terra supplies CO<sub>2</sub>, steam and electricity to the new glasshouses which are located some 2km away from their operations. ABB managed the design of the steam and CO<sub>2</sub> pipe runs. To supply the CO<sub>2</sub>, an above ground 560mm polypropylene pipeline was installed, possibly the first time in the UK that a line of this material and size has been used in this way.

Neil Moody, Site Engineering Manager for Terra UK Industries, said "the very short timescale was achieved in part by the sort of joint working only possible through the experience and trust gained in a long term relationship between the Terra and ABB."



## Fire and Gas System Cause and Effect Review

ABB Process Automation have supplied the Fire and Gas system for Petro-Canada Netherlands' (PCNL) De Ruyter Development Area Project, an offshore platform in the Dutch sector of the North Sea.

Although PCNL had preliminary Fire and Gas system Cause and Effect (C&E) charts, ABB was concerned that these were not sufficiently detailed to support testing of the system. ABB Engineering Services had the necessary risk assessment expertise and understanding of fire and gas systems to complete the development of the charts.

ABB developed the C&E charts to ensure that all the detection devices were listed, and all executive actions were explicitly set out. Interactions to other platform systems such as Emergency Shutdown and Heating and Ventilation had to be fully accounted for. The types of devices deployed and the voting arrangements were checked against requirements. The actions to transfer information to operator interface systems, such as the control room alarm display were reviewed. Finally the overall configuration of the system was reviewed against PCNL's Fire and Gas System Philosophy document to ensure consistency.

## Integrity management for TOTAL

ABB Engineering Services have carried out a number of specialist audits for TOTAL E&P UK, based in Aberdeen. The audits focussed on corrosion management and stress corrosion cracking, and involved visits to three offshore platforms and an onshore terminal to review the implementation of TOTAL's procedures. The audits form part of TOTAL's on-going integrity management programme. ■



Elgin PUQ - Total offshore platform

## Medical device technology development

ABB Engineering Services have assisted DePuy CMW in developing a new and innovative medical implant technology. DePuy CMW had demonstrated the concept in laboratory conditions, but required assistance to prove the concept would scale up to a robust manufacturing environment. ABB brought a specification led project process, a thorough understanding of the production requirements, and specialist engineering resource to the project. We worked with DePuy CMW to advance their existing proof of concept to an automated laboratory facility capable of producing representative test pieces over ten times faster than with previous facilities. This permitted greatly accelerated specification and performance development, resulting in faster progress to the final product specification and greater confidence in the proposed solutions.



KAR revision hip stem

An integrated project team was formed consisting of DePuy CMW specialists, ABB project management consultants and specialist engineers, and DePuy CMW business representatives. This team could call on ABB specialists as necessary in disciplines such as safety engineering, materials sciences, production engineering and validation in a timely and effective manner. ABB were able to use established relationships in both the academic and production environment to identify potential technologies and suppliers not previously considered. In particular, the use of a partner familiar with engineering equipment for high quality applications such as testing parts for F1 cars brought considerable savings to the project.

In parallel with the product and process specification, the team worked to establish the likely market, scale and timing requirements for production and consequential effects on site inventory handling, effluent impact, and raw material handling issues. Where necessary, ABB initiated and progressed safety and management of change procedures within the DePuy CMW management system.

Following the initial phase of specification and process development, ABB developed the automated laboratory test equipment necessary to progress the project. ABB managed the integration, installation, commissioning and testing of the equipment, working within DePuy CMW's project process for procurement, management of change, safety and regulatory compliance. A full training and documentation pack was produced. Installation was completed to budget, on time and without incident.

Following commissioning and handover, the automated laboratory equipment has been in constant use, providing an efficient and consistent environment for formulation development.

## ABB Engineering Services in largest Inspection & Corrosion Management Services Contract Award

BP Exploration Operating Company Ltd., has awarded to Oceaneering International the largest Inspection and Corrosion Management services contract in Oceaneering's history. The contract has expected revenue of approximately \$90 million over an initial three-year term. Oceaneering, providing total management responsibility for the contract, will be supported by ABB Engineering Services for onshore facilities in the U.K at Sullom Voe, CATS (Teesside) and Dimlington. Under the terms of the contract Oceaneering / ABB will provide Risk-Based Inspection plans derived from detailed corrosion assessments. These assessments will be based on conventional non-destructive testing (NDT) and specialized inspection services. ■



Sullom Voe terminal

## Chemical Engineering Show

ABB recently attended the Chemical Engineering Show held at the York Exhibition Centre, Harrogate. This event provided a convenient and focused trade event where the latest technologies, systems and services could be showcased. The two-day event included practical and educational seminar sessions where leading speakers offered their latest insights and solutions into the 'hot' operational issues of today and the future. Paul Jackson, together with Steve Cane of Victrex, presented a paper 'Pressure Systems - RBI Case Study Implementation at Victrex'.

## Petroleum Institute of Thailand

Ken Bell recently made a presentation to PTIT (the Petroleum Institute of Thailand) in Bangkok entitled 'Development of Technical Competencies in Oil, Gas & Petrochemical Industries'. The event was attended by representatives from many of Thailand's largest companies and was an excellent opportunity to showcase the capabilities of ABB in the region.

## Asset Maximisation Conference

Brian Hudson presented a paper entitled "Risk Based Maintenance - An extension of Risk Based Inspection for All Equipment" in the Reliability session of the European Refining Technology Asset Maximisation Conference in Vienna. The paper set out a structured methodology for reducing maintenance costs and improving reliability. Bottom line improvement is delivered by making better choices to ensure that the right maintenance is carried out on the right equipment at the right time.

## Energy Institute Dinner

ABB Engineering Services hosted a table at this year's Energy Institute Dinner in London with guests from Total, BP and ConocoPhillips. It was a key oil and gas event, with many offshore oil producers present. Peter Hunt was the judge for the ExxonMobil Innovation Award and this year's guest presenter was Sir Ranulph Fiennes.



Peter Hunt, ABB Engineering Services, talking to Sir Ranulph Fiennes along with the Master of Ceremonies at the Energy Institute Dinner

## IChemE Assembly 2006

ABB Engineering Services sponsored and exhibited at the IChemE 2006 Assembly. This event was hosted by the Northern Branch of the IChemE and held at the Wynyard Rooms on Teesside. There was a series of presentations highlighting IChemE's ongoing and planned work programmes with specific relevance to industry. In his role as Northern Branch Chairman, Peter Hunt gave a presentation at the session entitled 'We're in this together - forging partnerships with industry'.



Martin Grady making the opening speech at the evening reception.

## Prize winning turnarounds

Tom Lenahan and Jim Miller carried out an assignment in Colombia for Monomeros to reduce their turnaround duration from a planned 25 days to 20 days delivering huge business benefit. The methodology will be used by Monomeros in future turnarounds. The case study was awarded a prize after being presented jointly by ABB and Monomeros at the VII Colombian International Maintenance Congress.

## ATEX Seminar Rotterdam

ABB ran a successful ATEX seminar in Rotterdam, featuring speakers from the Dutch regulator and Total as well as ABB Engineering Services. The lessons from ABB's experiences with the U.K. Health and Safety Executive were particularly relevant. It is clear that the Dutch regulatory authorities have similar expectations of documented hazardous area classifications, mechanical risk assessments and maintenance systems for hazardous area equipment.

## Tees Valley Business Awards

ABB Engineering Services sponsored the manufacturing award which was presented to Roman Showers at the Tees Valley Award Dinner. Over 500 industrialists attended the event, including representatives from Lucite, Rohm and Haas and Dow who joined ABB for the dinner. ■

Seminars are focused on industry 'hot topics' and include inputs from external speakers.

#### Seminar programme - July to December 2006

5th September	Complying with DSEAR / PFEER	Aberdeen
19th September	Technical Briefing	Leeds
20th September	Experience of Implementing IEC 61508 / 61511	Aberdeen
26th September	Alarm Management in Practice	Edinburgh
28th September	Excellence in Operations Improvement	Manchester
3rd October	Technical Briefing	Southampton
11th October	Pipework Integrity	East Midlands
31st October	Technical Briefing	Warrington
8th November	Occupied Buildings	Edinburgh
14th November	Alarm Management in Practice	Cardiff
21st November	Technical Briefing	Preston
28th November	Experience of Implementing IEC 61508 / 61511	Leeds



\*Technical briefings give an overview of several 'hot topics' including: occupied buildings, living with your PPC permit, human factors, alarm management, SIL assessment, and integrity management. Each overview covers main issues, key points of legislation and provides an insight into learning and experiences of the topic.

## Technical training

Training courses provide in-depth knowledge on key subjects as part of an engineer's professional development.

#### Technical training courses - July to December 2006

6/7th September	IEC 61508 / 61511 SIL Determination*	Leeds
12-14th September	Pressure Relief*	York
4/5th October	Essentials of pressure systems	Edinburgh
11/12th October	Design and operation of piping systems	Leeds
16-20th October	Hazard Assessment	Edinburgh
24th October	Assessment and control of electrostatic ignition hazards*	Leeds
24/25th October	Area Classification	Edinburgh
6-10th November	Hazard Study Leaders	Warrington
7/8th November	Alarm Management	Aberdeen
7/8th November	Delivering Energy Savings*	Edinburgh
14-16th November	Pressure Relief*	Edinburgh
29th November	Hazard Study Awareness*	Billingham

\* IChemE approved course.



For more information on:

Seminars please contact: Debby Law on +44 (0)1642 372029 or e-mail: seminars@gb.abb.com

Training courses please contact: Jackie Kendall on +44 (0)1642 372121 or e-mail: jackie.kendall@gb.abb.com

## Focus on value

Over the last 6 months ABB Engineering Services has been working to better define and refine the range of services we offer to our customers. Our offer is now more focused and clear and built around our technical leadership and delivered value.

The work has highlighted common characteristics that underpin our capability and approach;

- Pragmatism** - our operational heritage and technical know-how means we interpret business and regulatory requirements into the most appropriate solutions for production environments
- Total Solutions** - from early diagnostics to final implementation we provide joined-up solutions to broad industry challenges
- Confidence** - our track record gives confidence in our ability to deliver sustainable benefits in the areas of compliance, performance improvement and effective project implementation ■

Safety	Integrity Management	Operational Improvement	Validation	Environment	Inspection	Technology Projects	Integrated Engineering	Project Services
<ul style="list-style-type: none"> <li>■ Risk assessment</li> <li>■ ATEX / DSEAR</li> <li>■ IEC 61508</li> <li>■ Human factors</li> <li>■ Consulting</li> <li>■ Alarm management</li> <li>■ Safety implementation projects</li> </ul>	<ul style="list-style-type: none"> <li>■ Asset life studies</li> <li>■ Criticality studies</li> <li>■ Due diligence</li> <li>■ Technical training</li> <li>■ Integrity implementation projects</li> <li>■ Asset health checks</li> </ul>	<ul style="list-style-type: none"> <li>■ Maintenance assessment</li> <li>■ Maintenance improvement</li> <li>■ Reliability assessment</li> <li>■ Reliability improvement</li> <li>■ Operational assessment</li> <li>■ Manufacturing improvement</li> <li>■ Process improvement</li> </ul>	<ul style="list-style-type: none"> <li>■ Computer systems</li> <li>■ Business systems</li> <li>■ Laboratory systems</li> <li>■ Spreadsheets</li> <li>■ IT qualification</li> <li>■ Equipment &amp; facilities</li> </ul>	<ul style="list-style-type: none"> <li>■ Energy</li> <li>■ PPC permit applications</li> <li>■ PPC permit management</li> <li>■ Environmental implementation projects</li> </ul>	<ul style="list-style-type: none"> <li>■ Inspection management</li> <li>■ Pressure systems inspections</li> <li>■ Civil &amp; structural inspections</li> <li>■ Risk based inspection</li> </ul>	<ul style="list-style-type: none"> <li>■ Chlorine production</li> <li>■ Reformer revamps</li> <li>■ Analytical</li> <li>■ Automation</li> <li>■ Demolition &amp; remediation</li> </ul>	<ul style="list-style-type: none"> <li>■ Design services</li> <li>■ Operations support</li> <li>■ Inspection technical support</li> <li>■ Project services</li> <li>■ Pressure relief</li> <li>■ Electrical studies</li> </ul>	<ul style="list-style-type: none"> <li>■ Front end studies</li> <li>■ Project consultancy</li> <li>■ Project management</li> <li>■ Design management</li> <li>■ Construction</li> </ul>



ABB Engineering Services  
 Daresbury Park Business Centre  
 Daresbury  
 Warrington  
 Cheshire WA4 4BT  
 United Kingdom  
 Tel: +44 (0)1925 741111  
 Fax: +44 (0)1925 741212  
 E-mail: [contact@gb.abb.com](mailto:contact@gb.abb.com)

