

Solutions



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Paul Alton, Teesside Regional Manager of the Operational Support Service, ABB Engineering Services

Access to skills for safety, productivity and competitiveness

The ongoing success of the UK process industry will be underpinned by the ability to attract new talent and develop the skills of the current workforce. Innovation, productivity improvement and moves to higher added value products or services all require access to high-level skills. Engineering skills are in high demand throughout the world, with fast growing economies, especially in the far east, exerting pressure upon this already shallow pool of resource.

An aging skilled population and increasing efficiency demands on UK industrial operators have tended to lead to a reduction in the level of in house expertise to the minimum necessary for safe operation. This has also been compounded by ongoing acquisition and merger activity. Generally, this has resulted in only a few operators retaining access to in-house specialist engineering support.

In this edition of Solutions, we profile Operational Support from ABB Engineering Services, which is aimed at providing and maintaining a bank of engineering expertise. This product is designed for industrial operators who require access to just the sort of expertise that cannot be efficiently retained in house. Access to this resource has to be efficient and flexible and tailored to suit the level of support required.

The maintenance of such engineering expertise within the UK requires commitment and vision. ABB encourage development both internally through activities such as our graduate programme and externally through our suite of training events and seminars. ■

Saudi petrochemicals giant relies on ABB for reliability assessments



When Saudi petrochemical giant SABIC required an assessment of maintenance performance at their Ibn Sina site they turned to ABB's World Class Reliability® WCR Benchmark. A team from ABB Saudi Arabia with maintenance and reliability consultants from ABB Engineering Services (UK) and ABB Reliability Services (US) provided the necessary local service with global expertise and access to world class methodologies.

The Ibn Sina site was scored well above average in the WCR Benchmark and the ABB team were able to identify improvements that would deliver benefits of \$1.6 million over a two year period. These improvements included adoption of proactive reliability practices including preventable maintenance concepts and root cause failure analyses as well as creating a culture of viewing all repair work as potentially avoidable.

Rohm & Haas new site infrastructure project



As part of the overall \$3.4 million site restructuring strategy at the Rohm & Haas Jarrow UK site. ABB Engineering Services are providing engineering support in the detail design of civil, structural and piping for new ground level pipe routes and pipebridges.

ABB working in conjunction with Rohm & Haas developed the most cost effective solution to provide the new services to the remaining plant areas. The Jarrow site is situated on the bank of the River Tyne on compacted, built up ground. Based on the topographical and geotechnical survey works carried out by ABB this required the whole of the new pipebridge system to be piled. The design also had to take into consideration the existing very fragile underground services and the fact that the site will continue to operate throughout the construction phase.



Pipebridges and boiler house at Rohm & Haas

ABB prepared detail calculations for the civil and structural elements, overall general arrangements of the pipebridges, reinforced concrete and piling details. Pipe stressing was carried out for new gas, steam and condensate systems and then detailed isometrics provided for all new site services. ABB was also requested to carry-out Hazcon reviews, prepare CDM designer risk assessments and scope documentation for civil structural tender packages.

A safer future in steel

Over recent years, steel company Corus have embarked upon a programme of improving the arrangements for managing process safety throughout the company. The programme will address not just operational and asset integrity at site operations level, but also the arrangements for corporate governance.



Blast furnace at Port Talbot

ABB Engineering Services carried out an initial status review of the arrangements for managing process safety at 8 sites, representing a cross-section of the company's operations. The findings from the review have been used to define and shape the strategy for improving process safety management arrangements.

ABB is continuing to provide expert advice to Corus during the implementation of the strategy. ■

Shared services for business success



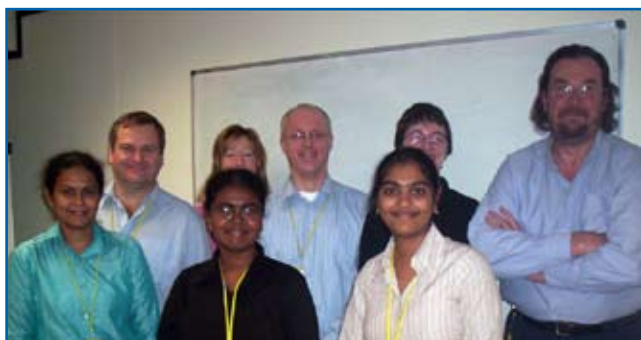
Pfizer's a global roll out of a shared services business system is being delivered to tight time scales with complex interfaces to local systems. ABB were called in when Pfizer wanted to improve their processes and to deliver several software releases within a year. Using the existing techniques the team would have been completely overloaded.



The Pfizer Shared Services Building in Dublin

This work is jointly estimated to have resulted in an annual cost reduction of €1.25M. Five major software releases were successfully delivered in the year. Pfizer have also benefited from streamlined business processes and compliance with pharmaceutical and SOX (Sarbanes-Oxley) regulations.

ABB provided validation, quality and business process improvement consultancy to assess and improve existing processes and then deliver these on each of the new releases. ABB worked with Pfizer's team to embed them into normal operation so that it would be reproduced reliably when ABB completed its assignment.



Feedback was excellent from the Indian team

One of Pfizer's key goals was to effectively outsource key activities to their Indian office. The Indian team were technically very able, but did not have a pharmaceutical quality culture. ABB developed training and improved documentation for effective knowledge transfer. ABB then coached the Indian team and provided second line support and auditing to ensure that processes were carried out effectively and efficiently.

Joe Calme, Validation and Audit Manager, said "ABB provided the support we needed to successfully complete a busy project schedule while at the same time implementing several improvements in our process. Combined with the off-shoring of resources, trained by ABB, our savings objectives will be comfortably met."

Securing future production with the ABB Asset Life Study

ABB Engineering Services recently concluded a joint study with the Technical Services Group of a major Oil and Gas group in SE Asia. This concluded with a joint workshop to review the overall study results and development for the Technical Services team. The outputs of the workshop provide the impetus to drive the plant improvement initiatives in support of the group's corporate objectives.



Jeremy Lewis and the Technical Services Group

ABBs' Asset Life Study Process was used to evaluate the condition of the equipment. Long term planning for maintenance reinvestment and operational excellence means that the business needs to be aware of future investment to sustain operations. The study also identified opportunities for major savings in overall operational costs. These savings come from better understanding of equipment condition and requirements to carry out timely preventative maintenance. Also where planned interventions will reduce the impact of identifiable deterioration of the equipment on availability for production.

The study showed that investment made at the right time could protect the business performance from loss of production in future. ■

Bridging the skills gap

ABB has recently launched a new range of 'Operational Support' services aimed at process operators who require access to just the sort of specialist expertise they cannot efficiently retain in house.

One company already benefiting from this service is National Grid, the organisation that owns, operates and develops the high-voltage electricity transmission network in England and Wales and Great Britain's principal natural gas transportation system. Steve Reveley, LNG Support Team Leader of National Grid comments, "It is my view that it is important for companies such as ours to maintain skill levels. This is not always easy to achieve and so there is sometimes the need to call upon the broader industry to bridge these skill gaps. The current partnership with ABB is a good example of this."

Paul Alton, Teesside Regional Manager of the Operational Support Service, said "I think what makes ABB Engineering Services special is the depth and breadth of skills and support we have available. We have functional and engineering expertise in areas such as fired equipment, piping, stressing, process, machines, civil, materials, vessels, control, electrical and pressurised equipment to name a few, all backed up by a range of consultancy offerings should they be required."



Operational Support Services

ABB has successfully set up Operational Support contracts with a number of operators and initial feedback has been very encouraging. One such contract is used to support in-house expertise where there is a specific skills gap or the internal resource is stretched. The client has called upon ABB to supply functional engineering resource for a range of diverse activities including attending design reviews, performing vessel and control electrical design appraisals, and performing third party reviews of some recent installation work.

In these circumstances it is important to have the correct resource and expertise offered under a suite of flexible arrangements to meet the client's exact requirements. Paul Alton notes "all our clients' requirements are individual to them so we have designed a number of flexible methods of engagement from one off assignments through to full Professional Service Agreements."

Development of Professional Engineers

Sharing our knowledge and promoting professional development throughout industry is at the heart of ABB Engineering Services business strategy. As well as maintaining a large pool of experienced and specialist engineers, we actively promote activities to develop skills and enhance the attractiveness of an engineering career within schools and universities. These include our range of training events, support for the activities of the professional institutions and our sponsorship of industry awards.

Our courses are prepared and presented by experienced practising engineers and consultants, with the sessions being designed to be self-contained. They can be readily combined into a structured development programme, covering the following levels:

- Awareness, aimed at providing a basic understanding and appreciation
- Intermediate, more in depth analysis of the subject
- Advanced, leading to practitioner level

The topic sessions are presented in an interactive manner by presentation and discussion of the key issues and case studies based on actual incidents.

IChemE approved training courses:

The following ABB Engineering Services training courses are accredited by the IChemE

- Alarm Management
- Area Classification
- Delivering Energy Savings
- Electrostatic Ignition Hazards
- Hazard Study Awareness
- IEC 61508 / 61511 and SIL Determination
- Pressure Relief
- SIL Determination and Hazard Assessment

El Awards dinner

The annual Energy Institute Awards Dinner was held in the Savoy Hotel, London, hosted by Lord Coe. ABB again sponsored the event and hosted guests from Total, Centrica and BP. Peter Hunt was also a member of the judging panel for the awards.



Peter Hunt, ABB and Lord Coe

Oil and Gas mature assets

ABB Engineering Services sponsored and exhibited at the IQPC (International Quality and Productivity Center) event on Mature Assets held in Aberdeen. This two-day event was a great opportunity to exchange timely and important information with fellow industry professionals and included a presentation from Stewart MacIntyre on Alarm Management which was extremely well received. There were over 60 delegates at the event from companies such as Centrica, BP, Marathon Oil and Shell.

HazardEx

ABB Engineering Services exhibited at the HazardEx 2007 Conference in Birmingham. Karl Watson gave a paper entitled 'Experience of Assessing Installed Safety Instrument Systems in a Far Eastern Gas Separation Complex'. ABB also sponsored the Safety Award at the Gala dinner during the conference and this was presented to MTL by Peter Hunt.

Shutdowns and turnarounds

The precision and effectiveness of shutdowns and turnarounds has become critical to ensuring consistency in throughput and profitability. ABB exhibited at the IQPC (International Quality and Productivity Center) Conference on 'Shutdowns and Turnarounds' in London. Martin Brown delivered a presentation entitled 'Striving for Turnaround Excellence'. The event was chaired by Alan D'Ambrogio, ABB.

North West Chemicals Sustainability event

Clive Smith and Mike Johnson of Operational Improvement, gave a presentation at the North West Chemicals Group Sustainability Event in Manchester. Clive has conducted a survey into the use of Continuous Improvement in chemical organisations, and following Mike's presentation on the benefits of adopting a Continuous Improvement approach, they both ran a workshop to identify areas where the North West Chemicals Group can deliver assistance to companies in the region.

OECD Human Factors workshop

A joint paper entitled 'Alarms for Operators', authored by Tony Atkinson of ABB Engineering Services and Martin Hollender of ABB Research was presented at the OECD-CCA (Organisation for Economic Co-Operation and Development) Workshop on Human Factors in Chemical Accidents in Potsdam recently. The paper was presented to a highly influential workshop group tasked with revising the OECD 'Guiding Principles for Chemical Accident Prevention, Preparedness and Response' document and generated significant interest. A copy of the presentation accompanying the paper can be viewed by following the link on the solutions web page at www.abb.co.uk

Success for Syngenta at CIA Awards Dinner

The ABB Engineering Services Manufacturing Award is presented to the Chemicals Industry Association (CIA) member organisation that has shown the greatest improvement across a site or within a specific production unit. This year the award dinner was held in the unique surroundings of the National Railway Museum at York; a fascinating evening where Tim Yates, Operations Director of winners, Syngenta, Huddersfield, was presented with the award by Martin Grady.



CHEMICAL INDUSTRIES ASSOCIATION



Martin Grady, ABB, Tim Yates, Syngenta and Steve Elliot, CIA

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

Seminars - December 2007 to June 2008

4th Dec 2007	IEC 61508 / 61511 & SIL Breakfast Briefing	Leeds
5th Dec 2007	Site Based Projects & Modifications	Teesside
5th Feb 2008	Human Factors Breakfast Briefing	Grimsby
12th Feb 2008	IEC 61508 / 61511 & SIL Breakfast Briefing	Aberdeen
19th Feb 2008	Alarm Management in Practice	Edinburgh
28th Feb 2008	Manufacturing & Processing Excellence	Leeds
5th Mar 2008	Maintenance & Reliability in Practice	Manchester
2nd Apr 2008	Site Based Projects & Modifications	Grimsby
9th Apr 2008	Complying with ATEX Offshore	Aberdeen
17th Apr 2008	IEC 61508 / 61511 & SIL Breakfast Briefing	Teesside
23rd Apr 2008	Integrity Management in Practice	Manchester
13th May 2008	Human Factors Breakfast Briefing	Grangemouth
20th May 2008	Occupied Buildings	Manchester
10th Jun 2008	Site Based Projects & Modifications	Manchester
12th Jun 2008	IEC 61508 / 61511 & SIL Breakfast Briefing	Grimsby
24th Jun 2008	Human Factors Breakfast Briefing	Leeds



Technical training

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

Technical training courses - Jan 2008 to May 2008

16th Jan 2008	Legislation Awareness Training - CDM	Leeds
20th Feb 2008	Legislation Awareness Training - DSEAR / ATEX	Leeds
4th & 5th Mar 2008	Essentials of Pressure Systems	Leeds
5th & 6th Mar 2008	IEC 61508 / 61511 & SIL Determination*	Cheshire
11th & 12th Mar 2008	Design & Operation of Piping Systems	Edinburgh
11th-13th Mar 2008	Pressure Relief*	Chester
18th Mar 2008	Working with CDM Regulations	Grangemouth
1st & 2nd Apr 2008	Managing Deterioration of Plant Equipment	Leeds
2nd & 3rd Apr 2008	Alarm Management*	Daresbury
16th Apr 2008	Legislation Awareness Training - PSSR / PED	Leeds
21st-25th Apr 2008	Hazard Study Leaders	Edinburgh
22nd & 23rd Apr 2008	Delivering Energy Savings*	Chester
29th & 30th Apr 2008	Area Classification*	York
1st May 2008	Electrostatic Ignition Hazards*	Manchester
7th May 2008	Legislation Awareness Training - LOLER	Leeds
12th-16th May 2008	SIL Determination & Hazard Assessment*	Cheshire
14th May 2008	Working with CDM Regulations	Teesside
21st May 2008	Hazard Study Awareness*	Warrington

* IChemE approved course.

For more information on:

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

Training courses please telephone: +44 (0)1642 372064 or e-mail: courses@gb.abb.com



A bit of a walk

How would you celebrate 30 years service?. Putting your feet up, perhaps. How about walking the length of the Pyrenees?. That's just what Mike Heyes, Senior Validation Consultant with ABB did to celebrate his 30 year anniversary. He set off on his solo fund-raising expedition along the Pyrenean Haute Route, leaving the Atlantic coast on 11 July and 47 days later reaching the Mediterranean. This coast to coast adventure is 800 km long with over 40,000 m of total ascent, passing through wild and remote country as it criss-crosses the border between France and Spain.

Now he's back Mike said "The whole experience has left me feeling strong and self-confident but also very humble, in that I am very fortunate to be healthy enough to have completed this adventure. We should not forget that many people are not as fortunate as their lives get turned upside down by cancer. The main event here is to give something back by raising money for Macmillan Cancer Support."

If you would like to sponsor Mike you can do this through Mike's JustGiving site. It is simple, fast and totally secure. Please log-on to www.justgiving.com/MikeHeyes



Day 20 Col des Gorges-blancs 2877m



Mike deep in the Pyrenees



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