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In association with ABB
ABB service engineers can now devote more time to working for customers and less time chasing paperwork, thanks to digital pen and paper (DP&P) technology from Destiny. Completed service forms can now be sent from the field to the office in just two minutes, allowing ABB to respond more quickly to the needs of its customers.

“Our main objective was to improve the speed with which we get field reports disseminated,” said Neil Ritchie, manager of ABB’s Instrumentation & Drives Product Service. “This has been received very positively by customers who get the service details, recommendations and cost information quicker.”

ABB service personnel work for clients on a wide variety of sites, many of which are tough industrial environments that are unsuitable for laptops or PDAs. The DP&P technology is sufficiently robust to use almost anywhere that a traditional pen and paper can go. It also enables the engineers to incorporate the new technology into their existing working practices.

The technology uses a pen that records exactly what the engineer writes using a built-in camera and digital memory. Standard service forms are overlaid with a nearly invisible pattern of dots, which act like map references and show the pen exactly where on the form it is writing. Once the form is complete, the engineer ticks the box at the bottom to send the information to their mobile phone and back to the office. The hard copy can be left on site for the customer.

For contacts please see page 12.
Wellness for your profit line

Owners of industrial plants rightly expect their production lines to operate at highest performance all the time. Any outage of a component or system in the line directly translates into loss of profit. As technical equipment is not immune to wear and tear, maintenance plant operators have had to expect some downtime. But this is changing fast with the ever-increasing drive for enhanced productivity to cope with growing global competition.

Times have changed, particularly in an industrial plant: a plant operator who recognises a failure in a production line component no longer has to wait for a service technician to fix the problem. It used to take days to inform the supplier that something was wrong, for the supplier to send a service technician to get an overview, a service engineer to be contacted, spare parts to be ordered and delivered, and the service itself to be carried out at the customer site. With remote service, most of these time-consuming steps can be short-cut.

Remote services use existing and cutting-edge technologies to support field engineers, irrespective of location. The Internet, together with advances in communications and encryption techniques, has contributed enormously to this end. Remote service developments are a direct result of the changing needs of customers: customers expect more support at lower costs. Remote services are designed to maximise knowledge bases in the most cost-effective manner. The result ensures that the best knowledge is in the right place, at the right time, to support customers’ assets.

Remote service can significantly reduce equipment downtime and the customer’s on-site maintenance effort.

Elements of remote service

Whether the service is organised in a remote or on-site approach, the equipment performance must be monitored regularly. The traditional ways were to check critical operational parameters, such as oil pressure, wear of parts or other conditions, and make repairs if needed, or plan for preventive maintenance within fixed intervals.

With sophisticated sensor technology and intelligence built into the device, performance monitoring today is done continuously and an analysis of the monitored parameters is performed in real-time.

In process control systems like ABB’s System 800xA, it is the utilisation of the CPU and memory, the functioning of alerts and alarms or the network communication traffic, for example.

Pulp and paper quality control systems are checked for mechanical, electrical and electronic performance and the reliability of the loop controls.

With the secure and proven remote connectivity technology, the customer can be sure to have the best experts available 24/7. Remote service is one of the ABB technologies available to customers as part of a service agreement.

Instruments to measure pressure, temperature or flow are also devices that need monitoring. Here, it is the change of tolerances, communication issues, sluggishness and ‘stiction’ (static friction), for example, that need permanent checking. Circuit breakers are another product to be mentioned in the list: they record a number of operational parameters essential to the service task and are able to communicate the performance status to a remote centre.

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When the monitored signals arrive at the service centre, they are automatically analysed with the accumulated knowledge of hundreds of years of experience with the devices in focus.

Every new case adds to the knowledge, and whenever the stored knowledge is not sufficient to make an optimum decision, the service centre is backed up with an expert team to immediately analyse the situation. Once the situation is clear and decided upon, requesting local service personnel and potentially ordering spare parts, as well as generating appropriate instructions for the actual service operation, is a question of minutes with the help of the knowledge-based system.

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In the process and utility sectors, $65 billion of global installed automation systems have reached the end of their lifecycle, states research and advisory firm, ARC. But because some have failed to put into place an automation system migration plan, many companies could face an expensive upgrade bill that is further compounded by the need to close plants and processes for long periods to carry out the repairs.

In the few cases where there is a migration plan, it often entails extensive and expensive rework, automation application redevelopment and disruptive ‘rip and replace’ of existing equipment just to return functionality to current levels of performance.

ABB has developed a six-stage automation system management programme called Evolution for Life, and aims to avoid the last-minute panic and excessive costs of a failing automation system by providing a clear roadmap to maintain, repair, upgrade or replace the existing system and its component parts over an agreed time frame.

By extending the lifecycle of existing systems and adding new functionality at the right point in the lifecycle, then significant savings in operational and capital cost, as well as optimised production, can be attained.

How Evolution for Life works

Stage 1: Identify customers’ business goals
Working alongside customers’ business and operational/technical management, ABB carries out an all-encompassing business review that considers activities such as:
- Environmental effects including carbon footprint analysis.
- Energy saving and energy measuring opportunities.
- Legislation, regulations and directives: a review of what is currently in force; what is changing; and how these may affect the automation system.
- Productivity programmes such as Overall Equipment Effectiveness (OEE).
- Asset, production and information management issues, such as plant life and usage changes.
- Plant and system maintenance schedules.

Stage 2: Analysis of installed systems and how they are affected by business goals
ABB audits the installed automation systems using tools and techniques to ascertain:
- the current configuration and status of the systems;
- how well the systems are currently performing;
- the current and future lifecycle of the installed base.

Stage 3: Assess ABB’s system and services offering
ABB’s existing technology is reviewed in order to identify products, systems or services which could provide immediate and longer term benefit to the existing installation.

The customer receives an initial plan as well as an audit report detailing the technical steps recommended and a summary of the commercial consequences.

Stage 4: Develop long term and short term technical and commercial plans
Armed with the findings of stages 1 to 3, ABB produces a recommended Evolution for Life plan for the existing system, to meet the agreed business goals over an appropriate time frame. The plan contains details such as:
- scope of supply
- a programme of maintenance solutions targeting: system lifecycle in terms of functionality, hardware and software; software revisions; operational enhancements; obsolescence
- a breakdown of the above into stages with planned timings, commercial effects and responsibilities.

‘By extending the lifecycle of existing systems and adding new functionality at the right point in the lifecycle, then significant savings in operational and capital cost, as well as optimised production, can be attained’
ABB leads the way in the Evolution of North Sea assets by extending the life of current ICSS (integrated control and safety systems) on platforms and providing low outage, low risk evolution plans to the next generation of technology.

Current ongoing projects in the North Sea demonstrate how ABB’s Evolution for Life programme enables customers to extend the life, upgrade and expand their existing automation systems to benefit from improved performance and reduced lifecycle costs.

For the BG-Group Armada North Sea Gas Platform, which produces 300 million scfd (square cubic feet per day), ABB has developed a comprehensive five-year Evolution plan that will upgrade and extend the ICSS to monitor and control every aspect of the platform’s process and safety systems. In time, the existing ABB Master System will be upgraded to ABB’s Extended Automation System 800xA which will extend the reach of the traditional DCS (distributed control system) beyond process control to provide total asset management. This promises to deliver increased reliability, improved asset integrity and enhanced performance. Furthermore, the scope of the ICSS is being extended to incorporate additional sub-sea tiebacks.

The scope of the Evolution plans for the Armada platform extends beyond the upgrade of the ICSS. ABB also provides full maintenance support for the ICSS including all field equipment which includes technical support, lifecycle planning, spares management and operator training.

lifecycle whatever the status of the commercial, legislative and technical environment. It is regularly updated by the customer and ABB.

This ensures a current plan based on the commercial, production and technical requirements, centralised around the customer’s business priorities. It enables avoidance of the issues that ARC has highlighted. Evolution for Life, therefore, eliminates automation system surprises.

Production process stability
In high performance process and utility industries, the need to keep abreast of industry-leading performance is vital. Falling behind can reduce margins, reduce throughput and build a gap which, ultimately, becomes economically unbridgeable.

ABB’s Evolution for Life programme focuses on preserving the production process stability. The integrity of the customer’s existing installed base is preserved by providing a ‘hot cutover’. This results in a seamless implementation of modern, robust and supportable equipment and can eliminate the need for costly interruptions to production.

Automation Sentinel
ABB’s Automation Sentinel software management service is designed to help companies actively manage and extend the lifecycle of their ABB automation system by keeping existing control systems updated with the latest software technology as well as providing an affordable evolution path to ABB’s next generation control system, Extended Automation (System 800xA).

Automation Sentinel is a key part of ABB’s Evolution for Life programme. It provides software lifecycle maintenance, service and upgrading support for process automation systems, extending their lifetimes and introducing the latest software technologies.

Sentinel enables customers to take advantage of extended support for their existing ABB control system software, helping to control operating costs and maintain the value of their current investment, while establishing a flexible forward path so they can apply the latest system software technology at a pace that suits their needs and their budgets.

Automation Sentinel subscribers will have access to all the latest software and firmware updates and enhancements to their current control system software. In addition, they have a choice on how long they stay with a particular version, upgrading or not, giving them greater flexibility to apply newer technologies when it is most suitable for their business and applications. This degree of choice and length of support is unprecedented in the automation industry, says ABB.

ABB also provides optional Software Management Services to select and install software changes, virus protection updates and Microsoft hot fixes for those who do not want to undertake these tasks themselves.

North Sea’s future in safe hands
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As a field service engineer in the pulp and paper industry, I am well aware that preventing problems is infinitely preferable to curing them. Establishing a preventive maintenance campaign means that equipment failures which result in production downtime and cut profits can be kept to the bare minimum or even prevented entirely.

Between 60 to 80% of all equipment malfunctions, on QCS (Quality Control System) scanners, and other equipment located on the actual production process, are caused by not carrying out maintenance correctly. This should include basic routines such as detailed cleaning, lubrication, alignment and following operation and installation procedures.

Harsh environments, producing lots of dust and heat, are particularly challenging. Such environments are to be found in the pulp and paper industry. Elimination or reduction of the effects of these inherent challenging environments keeps me busy during my working week. These activities are carried out at three major paper manufacturers in the South East of England, on a total of seven QCS and DCS (Distributed Control System) systems.

The paper machines all have ABB’s quality control measurement scanners, which have onboard sensors measuring various properties of the sheet during manufacture. These can include: basis, weight, moisture, ash, colour, thickness, and more. As well as this, I look after the ABB Distributed Control Systems used by the mills to control the paper making process.

My experience working every day on the maintenance of equipment installed within the paper industry has allowed me to draw up a list of the top 10 tips for maintaining the health of pulp and paper mills.

The following primarily applies to the QCS which is at the heart of the paper process. Other equipment, such as variable speed drives, motors and instrumentation, may or may not be within the hostile dusty parts of the process. However, whenever this equipment is located in a dusty environment, some of the following housekeeping practices can be observed.

**General advice**

1. **Keep it clean** - One of the ‘by-products’ within the manufacturing areas is dust. If this is not controlled, then it can cause many potential risks in terms of measurement accuracy and overheating of critical electronic components. This is controlled using well-developed head package design and well-engineered air wiping devices.

2. **Be systematic** - A good preventive maintenance schedule is one that is based on first class record keeping. A logbook should track what has been checked; what was found; and any corrective action that was taken. These records form a platform on which to base preventive maintenance schedules. At a minimum, the logbook should include what, how and why an inspection was done.

Successful preventive maintenance depends on information recorded on the service reports provided by the system owner. If there is not enough information available, a site survey for the system should be carried out before preventive maintenance is undertaken. Any preventive maintenance must be planned well in advance in order to reserve the resources and service parts needed.

3. **Inspect regularly** - ABB’s planned maintenance programme sees me visiting each machine weekly. Weekly checks on the quality control scanners, for example, can mean inspecting the sensor window material for damage or wear. Early detection of these problems will ensure sensor accuracy and hence more efficient production costs.

Monthly maintenance and verification checks are also carried out on the scanners and sensors. I also carry out an annual inspection in addition to regular maintenance, trying to ensure that the scanner and sensors give optimum performance through their entire lifetime. I have found that it is best to inspect equipment while it is operating, not only to minimise shutdown time, but also to detect such things as vibration, correct operating pressures and leaks, which cannot be assessed on stationary equipment.

ABB will advise on the frequency of inspection for particular products, and will always endeavour to work within the constraints of an operating production plant.

**Machinery issues**

Although I personally specialise in QCS and DCS equipment, other machinery such as drives and motors obviously
play a major role in paper production
and also require maintenance.

ABB has a product lifecycle
management model based on many
years of service information and experience.
In this model, there are preventive
maintenance programs for different
product families, including QCS and
DCS and drives and motors. By follow-

ing these maintenance schedules, life-
cycles costs can usually be minimised.

As well as maximising availability of the equipment, it also provides low
price service parts through preventive
maintenance kits, which are 15-40%
cheaper than the same parts sold separately.

Pre-defined, genuine service parts
are provided according to the mainte-
nance schedule, making it easy to plan
a long-term maintenance material
budget and increasing the efficiency of
maintenance tasks.

4. Inspect and maintain scanners -
Scanners and their onboard sensors
are fundamental to maintaining qual-
ity and I am careful to give them par-
ticular attention.

The probability that a scanner will
fail increases after three to 10 years of
operation. One of the main reasons for
failures is aging of components, but it
can be affected by environmental con-
ditions, such as dust and heat and
therefore maintenance is key.

Preventive maintenance for scanners should involve:
• Visual inspection of the system and its environmental conditions
• Inspection of the connections
• Inspection of the ribbon and fibre optic cables
• Functional inspection of the fan and cooling system
• Inspection of the health pages and alarm history
• Inspection and storage of the parameters
• Functional testing of the system under normal conditions
• Basic measurements with supply voltage
• Inspection of the spare part inventory
• Cleaning of the system

All these are offered and recom-
mented by ABB and can form part of a
Service Contract.

ABB has developed tools and ser-

vices to ensure its customers maintain
a high level of system availability and
performance. I use ABB software tools
to check if the sensor is still reading
the same values as it did when it was
set up and that such parameters as
moisture and basis weight are stable
and correct.

5. Apply regular maintenance to
drives - Variable speed drives keep the
plant moving, so regular preventive
maintenance is vital to maintain their
health. Keeping drives and motors

clean ensures they are within their
operating temperatures and helps
achieve the best possible efficiency.

One of the options we have is to keep
an eye on the drives in a plant remotely.
This allows such features as drive
system parameter verification, parame-
ter changes, on-line measurements,
changes to application software,
upgrades to system software, remote
guidance and written instructions sent
to the maintenance PC. Remote moni-
toring can also be carried out.

6. Upgrade motors - Motors are
another essential in the drive chain
and those designed for high reliability
will help maintain availability. A
recent motor for process industries has
a 20-30% greater cooling surface than
previous motors, reducing the internal
temperature considerably.

This gives longer component life
and will protect your motors from
overheating. With improved cooling,
lubrication intervals are 50% longer,
as lower temperatures increase the life
of the bearing grease.

Managing preventive
maintenance

7. Assign the right people for mainte-
nance - A key strategy is to control
who implements the preventative mainte-
nance procedures and to have an agreed
planned programme of work. I have
found that the best results are achieved
when specific people with the correct
training are given personal ownership.

8. Give the right training - Employees
should be trained both in correct
normal operation, so as not to exceed
the device’s parameters, and in what
to do when problems occur. Shift engi-
neers need the training so they know
all about the operation of the system.
I have found that customers might
train their staff when the equipment is
commissioned but later may not be so
concerned about maintaining current
training. This can cause more callouts
to our service engineers than needed,
resulting in production delays.

You can get a lot of help from equip-
ment vendors, many of whom will
provide training to help you carry out
your own checks on the equipment
and also how to clean the areas most
affected by dust.

9. Get professional help - Many vendors
will also perform on site preventive
maintenance. The best vendors will
assign dedicated service engineers
to a mill to develop a close relationship
with customers. In my case, this means
my customers keep me informed about
their shutdown schedule so I can plan
the more intensive maintenance activi-
ties and ensure that the installed base is
operating in peak condition.

Beyond my maintenance duties, part
of my work involves advising customers
about new products or developments
that could enhance the functionality of
their existing systems and to warn them
about obsolescence issues. As ABB field
service engineers, we are taught to be
proactive - we don’t just look at what
repairs are needed today, but at what
equipment the customer will need to
support its processes in the future.

An alternative to performing pre-
ventive maintenance on site is to con-
sider sending modules to the vendor’s
own workshop. If a module is to be
sent to the workshop for repair, it is
often practical to perform preventive
maintenance at the same time.

Customers can also choose to have
Remote Diagnostic Services (RDS). We
operate in a fast-moving electronic age
and must keep pace with technologi-

cal changes and need for cost control.
RDS offers facilities for monitoring
current performance against bench-
mark data using asset monitors. This
provides opportunities for predictive
maintenance, and all of its benefits.

10. Develop models and programmes
to enhance maintenance - Many com-
panies, including ABB, provide the
process and manufacturing industries
with a structured program to improve
and sustain the performance of produc-
tion assets.

The best of these arrangements
occurs when the client and the vendor
work together as a team to develop a
business model that supports the client
by providing world-class reliability
and maintenance services. Look for a
risk/reward performance mechanism
that ensures that continuous improve-
ment opportunities are identified and
captured over the life of the contract.

For contact details please see page 12
The three levels to the programme, DrivesAdvantage, DrivesActive and DrivesActive+, enable customers to choose from a range of services that can be tailored to suit their needs and budget precisely.

The aim is to maximise the reliability of drives over their entire lifecycle. The portfolio of services ranges from the installation and commissioning of new drives, through maintenance and spares support, to replacing products as they reach the end of their active lifecycle.

“The idea is that we never reach the point at which obsolete equipment becomes difficult to support,” says Neil Ritchie, manager of drives and instrumentation products service for ABB. “It is a cradle-to-cradle approach.”

DrivesActive
DrivesActive provides 24/7 support with a high level of technical expertise, available both over the phone and through a team of UK based field engineers. Urgent repairs can be carried out on-site, while less urgent work can take place at ABB’s workshop. Customers can also opt to implement planned maintenance programmes, to prevent failures occurring in the first place. Spare parts or exchanged drives can often be delivered to site within 24 hours, while the inventory access service allows customers to lease their own customised parts package from a convenient location. The programme can offer scalable support for customers with a small number of drives.

DrivesActive+
DrivesActive+ is an advanced lifecycle management programme that focuses on extending the life of critical equipment and planning for obsolescence. A lifecycle audit highlights the exact condition of equipment. This enables ABB to recommend the right steps to maximise the reliability of each drive, whatever stage it has reached in its lifecycle. Drive systems analysis enables ABB engineers to uncover hidden faults and predict future drive behaviour.

DrivesActive+ also includes harmonic surveys to ensure equipment complies with the latest legislation.

DrivesAdvantage
DrivesAdvantage completes the offering, providing installation, start-up assistance and after-sales service by the certified partners in ABB Drives Alliance. This is a comprehensive drives network, with nine partners strategically located around the UK. The members of the team have been handpicked by ABB because they are drives experts in their local area.

A brochure that describes Drives Advantage, DrivesActive and Drives Active+ is available free of charge – telephone 01480 488 080 or email customerservice.uk@gb.abb.com

For contact details please see page 12
HVAC consultants benefit from checklist

ABB’s checklist for HVAC consultants aims to ensure that neither consultants nor their clients miss out. Variable speed drives selection for building services: Checklist for HVAC consultants highlights all the drive features that can help to deliver the best possible performance from the HVAC system.

In recent years, the performance of variable speed drives has improved. They offer greater energy efficiency and lower energy bills, reduced maintenance and more flexibility for end-users, as well as faster installation and commissioning for contractors. Yet an estimated 70% of building services consultants may not be using the most up-to-date specifications when selecting variable speed drives for their HVAC installations.

The reason is that consultants do not purchase drives, so they are not always targeted with the latest information by manufacturers. ABB’s checklist is designed to arm them with the knowledge they need. It provides a guide to the product features and associated benefits available from today’s bespoke HVAC drives.

Drive software enhances pump control

ABB’s Intelligent Pump Control (IPC) software eliminates the need for an external PLC and can help to save energy, reduce downtime and prevent pump ragging and pipeline blocking.

IPC is a software add-on for ABB industrial drives, which cover a power range from 0.55 to 5600kW. It contains all the common functions needed by water and waste utilities, industrial plants and other pump users.

Multi-pump control – Where several pumps are operated together and the required flow rate is variable, IPC uses multi-pump control.

Level control – Level control is typically used to control the filling or emptying of waste water storage tanks, and can be used with a single pump, or two to three pumps with AC drives in parallel.

Preventive maintenance – Preventive maintenance is important for all industrial equipment, and IPC achieves this through its anti-ragging function.

Flow monitoring – IPC eliminates the need for flow meters with its flow calculation function, used to control a single-pump installation.

Sleep boost – The package also offers a sleep boost function.

Pump priority control – Pump priority control is used to balance the operating time of all the pumps in the system.

Predicting drive system failures

Drive System Analysis (DSA) is a condition-based monitoring system. It is delivered through a contract which includes an initial assessment of the drives where ABB assists in locating access points for signals. This is followed by a measurement visit that involves building a measurement database to be used in subsequent visits. A scheduled visit programme, typically two or three times per year is then established measuring between 20 and 30 drive sections per day with remote analysis and delivery of a report and recommendations.

Our key objective is to help prevent failures and production losses by keeping your drives running at maximum efficiency.

For more information on DSA please call 01480 488080.
Managing an instrument to ensure optimum efficiency and performance throughout its lifetime requires consideration of a multitude of factors. It is, therefore, imperative to have an effective maintenance plan that will allow you to quickly address any deterioration in performance.

Predictive maintenance is not just about preventing failures. Across the entire range of process industries, where product specifications are extremely tight and the pressure to minimise operating costs is essential, planning and initiating maintenance activities at the right time can make the difference between profit and loss.

**Device selection**
The starting point for reliable, accurate instrumentation is choosing the right device. Look out for low-maintenance options and equipment incorporating protection against arduous environments. When selecting the construction materials for an instrument, consider all operational scenarios, such as whether it may come into contact with cleaning chemicals or whether pressures or temperatures may vary outside the rating of the instrument.

Consider also the service and technical support offered by the supplier.

**Installation and commissioning**
Optimising an instrument’s set-up can maximise its operational lifetime by reducing the risk of subsequent problems during operation. This requires not just following the manufacturer’s operational specifications, but also considering post-installation maintenance requirements. Instruments that are difficult to access are typically overlooked when performing maintenance activities.

Another consideration is the operating environment. Check the instruction manual or installation guide for ideas on avoiding operational problems. Better still, utilise the expertise of the instrument manufacturer’s service and applications engineers, who will have practical knowledge and experience to assist with commissioning.

**Recording and tracking activities**
Keeping service histories updated can offer real benefits and cost savings throughout a product’s lifecycle.

Noting down an instrument’s original set-up parameters can improve recovery time if a crisis occurs. Many instruments have memory ‘scratchpads’ to allow these parameters to be saved independently of the normal instrument working memory.

Subsequent service actions should also be recorded and planned, to meet regulatory requirements and avoid over-maintaining a device. Recording and tracking activities in real-time reduces the need for regular and costly audits to establish current lifecycle status and condition of instruments.

**Planning and co-ordination**
The longer service life of more reliable and robust equipment means ensuring maintenance, support and upgrades occur at exactly the right time.

Lifecycle planning meets this need by offering a plan based on the manufacturer’s research, experience and knowledge overlaid with the skill set and service product. For example, calibration may take place annually to ensure optimum performance, but wearable components require replacement before they can introduce measurement or control inefficiencies.

Good planning eliminates unnecessary intervention, cost and attention caused by over-maintaining products. ABB offers complete lifecycle management programmes that include planned programmes of activity either for the customer to perform or which can be delivered by certified engineers.

**Assess and reassess**
A properly designed lifecycle programme should involve continuous tracking and recording, rather than being handled as a separate, more frequent, high cost activity. The actual lifecycle programme in place should be assessed periodically, challenging the methods and practices employed rather than just focusing on the needs of the discrete instrument.

Root cause analysis should also be included. This is a well-documented approach to analysing failures and finding ways to improve or remove any reoccurrences. This could be within product design, access or maintenance needs. This same approach can be applied to the practices undertaken. For example, keeping a spares inventory or a complete ‘hot spare’ instrument on standby for emergencies could avoid long periods of downtime or measurement error.

**Health and safety**
Following the right processes and recommendations and embedding health and safety into plant culture can significantly reduce risk.

**What ABB can offer**
ABB offers a complete range of customised or ‘off the shelf’ services, from full lifecycle management programmes to simple calibration services packaged within its Advantage, Active and Active+ portfolios. For a copy of ABB’s new Instrumentation Service Brochure, email customerservice.uk@gb.abb.com ref. ‘Service brochure’.
The largest manufacturer of recycled newsprint in the UK, UPM Shotton produces newsprint for national and regional press and has a capacity of more than 500,000 tonnes a year, providing more than 20% of UK demand.

The site uses Fischer & Porter electromagnetic flow meters installed over 20 years ago to measure water and low-consistency paper pulp. For the paper mill, using established technology is the best way to ensure successful metering in difficult applications.

"ABB has a good familiarity with applications in pulp and paper and provides excellent support for the Fischer & Porter meters," says Ray von der Fecht, UPM Shotton. "Changes in the consistency of the pulp or the mixture of chemical additives can often have a major impact on flow equipment, with some manufacturers’ meters failing to work at all. There’s a lot to be said for experience in this field," he adds.

New brochure outlines full range of instrumentation services

ABB has released a new brochure detailing its full range of after sales support and services for instrumentation equipment. The 16-page Instrumentation Service Brochure presents plant operators with a choice of three levels of service for instrumentation equipment, ranging from the entry level InstrumentationAdvantage scheme through to the more comprehensive InstrumentationActive and InstrumentationActive+ programmes.

InstrumentationAdvantage is aimed at helping users optimise instrument performance and ensure problem-free operation for their application. It includes installation, commissioning and validation support, backed by ABB’s experts nationwide.

InstrumentationActive provides the added security of 24/7 support and access to technical expertise and assistance, ideal for more complex instruments and applications. This option includes complementary services, such as telephone support, corrective and preventive maintenance and calibration and verification assistance, which can be combined to meet individual needs.

InstrumentationActive+ is a portfolio of specialised services providing a full cradle-to-cradle lifecycle management programme. The package provides a customised solution to prolonging the performance of critical equipment through targeted maintenance and upgrades, based on the probability of failure and the severity of the consequences.

With the right consideration, a good instrument maintenance plan, including verification, calibration and routine checks, can be invaluable in ensuring reliable, energy efficient plant performance. The brochure forms part of ABB’s commitment to helping plant operators to achieve these goals through effective lifecycle management.

For a copy of the brochure, email customerservice.uk@gb.abb.com or telephone 01480 488 080 ref. ‘Instrumentation Service Brochure’.

ABB’s service expertise has secured an order for instrumentation that is fitted to five new ovens installed at Messier Dowty’s site in Staverton, Gloucestershire. Used in the production of aircraft landing gear, the ovens are fitted with ABB instruments as standard, including temperature controllers and videographic data recorders.

The order is the latest development in a relationship with Messier Dowty which started over 50 years ago with ABB heritage company Cambridge Instruments. ABB has been supplying instrumentation to Messier Dowty since the 1970s, ABB is currently the preferred supplier.

Since that time, the agreement has grown in scope, with ABB also now responsible for servicing and supporting around 200 temperature instruments installed across the site, plus pH and conductivity. The temperature instruments are used to measure the performance of various processes during the production of the landing gear components, including heat treatment, and surface finishing. The main role of the instruments is to ensure that each process remains within the strict tolerances required for the production of the landing gear components, where even a slight variation could have serious consequences.

“The stresses placed on aircraft landing gear mean that it is vital that each component is produced to a precise specification,” says Bob Clow, ABB’s service engineer for Messier Dowty.

ABB service agreement keeps Messier Dowty flying high
Products change over their entire lifecycle either through hardware degradation or software enhancements. Many products and systems need support for well over 20 years and require upgrades that are designed with backward compatibility to overcome obsolescence and provide a path towards latest supportable technology.

In addition customers require a high level of availability and a generally non-disruptive lifecycle performance. To meet all these requirements ABB offers comprehensive lifecycle management and evolution programmes.

**Lifecycle Management Model**

ABB’s Lifecycle Management Model consists of four phases: Active, Classic, Limited and Obsolete.

**Active**

Typically 5–10 years, this phase is the current phase of the products release where the units are available for sale and are fully supported with spare parts, maintenance schedules and product design enhancements. Upgrades and retrofit from older models to the latest technology are also covered in the Active phase.

**Classic**

This phase, typically during the next 7–10 years supports products that are no longer in the standard production and development cycle. Products and systems are supported with enhancements, lifecycle extensions and the full range of services and spare parts.

**Limited**

Availability of technology and components limit the support on older generation products. Typically 12–20 years after the initial product release spare parts and maintenance is provided where availability of materials permit. Planning of migration to next generation products, retrofit options and upgrades are typical services in this phase.

**Obsolete**

At this stage of the lifecycle ABB can’t guarantee the availability of lifecycle services, for reasons such as technical knowledge or component cost. Migration to the next product generation is strongly recommended and lifecycle management planning at earlier stages ensures that a products transition into the obsolescence stages do not risk the integrity of plant operation.

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**ABB Service contact information**

For Service enquiries on Automation Systems, Drives, Instrumentation, Repairs and ABB Full Service® (Maintenance Outsourcing):

Tel: 01480 488 080  
Fax: 01480 470 787  
Email: customerservice.uk@gb.abb.com

For Service enquiries on Automation Systems in Marine, Oil and Gas and Spare parts:

Tel: 01224 592 123  
Fax: 01224 592 690  
Email: customerservice.uk@gb.abb.com  
Spare parts out of hours call 07703 504 334

For Service enquiries on Robotics:

Tel: 01908 350 300  
Fax: 01908 350 301  
Email: robotics@gb.abb.com

For copies of:

- ABB Drives Service brochure  
- Instrumentation Service brochure  
- Plant Maintenance Guide  
- Workshop flyers  
- Sentinel flyer

Tel: 01480 488 080  
Fax: 01480 470 787  
Email: customerservice.uk@gb.abb.com