

robotics



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robotics ¹|15

Photo: Nick Callaghan



Welcome to this issue of *Robotics Magazine*, which has a special focus on customer service. These are interesting times for the robotics industry: we are seeing double-digit growth due to ever-increasing flexibility, easy-to-use interfaces and more powerful and less expensive sensors, such as vision and force control, that allow robots to become more human-like. Additionally, the collaboration between robots and humans is signifying a new era in robotics.

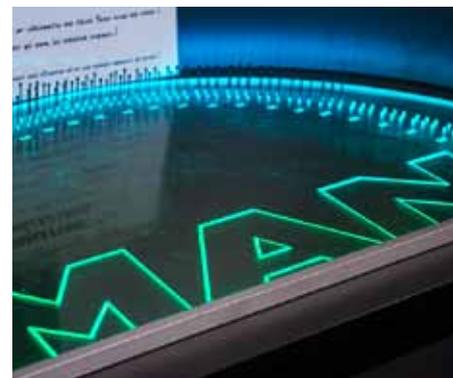
All these changes are bringing robots into new segments, such as entertainment, food and beverages and electronics. This creates a challenge for us at ABB Customer Service, where we have to tailor our services to the many different needs of our users. ABB Robotics Customer Service is proud to have over 1,300 dedicated service employees supporting customers in 53 countries. We are continuously investing in new technologies, training our employees and developing our workforce to make sure we can be there when you need us—a point reflected in the fact that our teams are available around the clock

to install equipment, train operators, and remotely monitor robots.

BMW's US plant, for example, is reaping the benefits of our newest robot controller, the IRC5 (page 10). And we are now providing Belgian packaging producer Deufol with a tailor-made service agreement for their robots that safeguards continuous production (page 15). We even have robots entertaining on cruise ships (page 14).

I hope that you find inspiration for your own operations in these and other stories from Germany, Denmark, the Netherlands and Switzerland. In the meantime, rest assured that ABB Robotics Customer Service is on hand to help you utilize your robots' full potential, keep your business up and running and make sure that your robots stay in tip-top condition for the duration of their life cycle.

Arno Strotgen
 Head of Customer Service, ABB Robotics



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Events calendar 2015

Come and see ABB's newest solutions at the following events:

> April 13-17
Hannover Fair
2015,
Hannover

> May 19-22
American Value
Provider Conference
& Customer Days,
Auburn Hills

> June 2
Asian Value Provider
Conference,
Chongqing

News

A portal providing true peace of mind

The new MyRobot portal intuitively places critical information about your robots at your fingertips so that you can feel more secure about your operations.

Text: Nick Chambers Photos: ABB



During 2015 MyRobot will be available on the MyABB Customer Portal for all customers that have Remote Service.

As customers begin to move away from the “break and fix” philosophy of service and toward a predictive, proactive, and immediate support mindset enabled by the Internet of Things, conventional customer service doesn't make sense to support these highly connected customers' needs (see the article on pages 12-14 for more on the Internet of Things).

Namely, with all that vital information and analytical power available in real time using ABB's Remote Service platform, it becomes possible to realize a situation in which customers know exactly what is going on with their equipment assured that they will be aware of potential issues before they turn into catastrophic failures.

With this newfound peace of mind, the present becomes a quantifiable entity enabling customers to move past the worries about unplanned production stoppage and into a mindset of constantly improving operations and planning a better future with “always optimized” production. This is the power of people, things and services talking to each other through the Internet.

While ABB's MyRobot portal has been at the cutting edge of providing this type of highly accessible customer service information and interaction for years now, with our newly upgraded version the vision of true peace of mind and forward thinking optimization is easier than ever to put into action.



> June 16-20
GIFA,
Düsseldorf

> June 29-30
European Value
Provider Conference,
Milan

> December 2-5
IREX,
Tokyo



**MyABB Customer Portal
can be accessed easily
from any mobile device,
anywhere and at any time.**

As part of ABB's larger push to modernize its interactions with customers across the company, the MyRobot portal has now been folded into and prepared for integration of the MyABB Customer Portal that will be rolled out during 2015. Fundamentally, the MyRobot Portal provides a direct channel to tackle service issues independently, and a fast track to immediate customer service for those issues that are more complicated. It also provides the critical analytics you need to optimize robot usage and improve productivity.

With its redesign, the underlying platform was changed so that it can be accessed easily from a mobile device, anywhere and at any time. Once you log in to the portal, it presents you with a personalized dashboard and intuitive self-service options, such as scheduling back-ups and running condition reports.

As a company, ABB realizes that our customers are our lifeblood, and the MyRobot portal is an expression of that understanding. It's also the direct connection to a future in which you have true peace of mind with your operation and can rest assured that things are running at peak efficiency, all the time.

ABB joins Industrial Internet Consortium to promote best practices

The Industrial Internet Consortium, or IIC, was founded in March 2014 to drive innovation, develop standards, boost interoperability and ensure security. ABB will join the IIC in 2015 to foster collaboration among technology companies as they seek to establish global standards for the Industrial Internet, an extension of the concept of the Internet of Things. The Industrial Internet is at the core of Industry 4.0. As part of this new partnership, ABB will work with others to ensure that end users reap the benefits it promises: improved efficiency, reduced costs and higher revenue.



Passage to India

ABB CEO Ulrich Spiesshofer visited Bangalore, India for one day. He visited the R&D Center in Bangalore and met with employees from Robotics Service Intelligence Unit (SIU). SIU plays a critical role for ABB Robotics Customer Service by remotely monitoring 3,500 robots in 31 countries, providing worldwide support to ABB Robotics' service engineers. The R&D center in Bangalore, India is one of the biggest in ABB globally.

ABB is at your service

ABB Robotics Customer Service is one of the main reasons that customers choose to buy from ABB. With 250,000 robots sold around the world, ABB is second to none when it comes to providing first-rate service.

Text: Danny Chapman

- Local Service Center
- Global Intelligence Unit
- ▼ Regional Spare Part Distribution Center
- ▼ Global Repair and Reconditioning Center
- ▼ Local Repair and Reconditioning Center

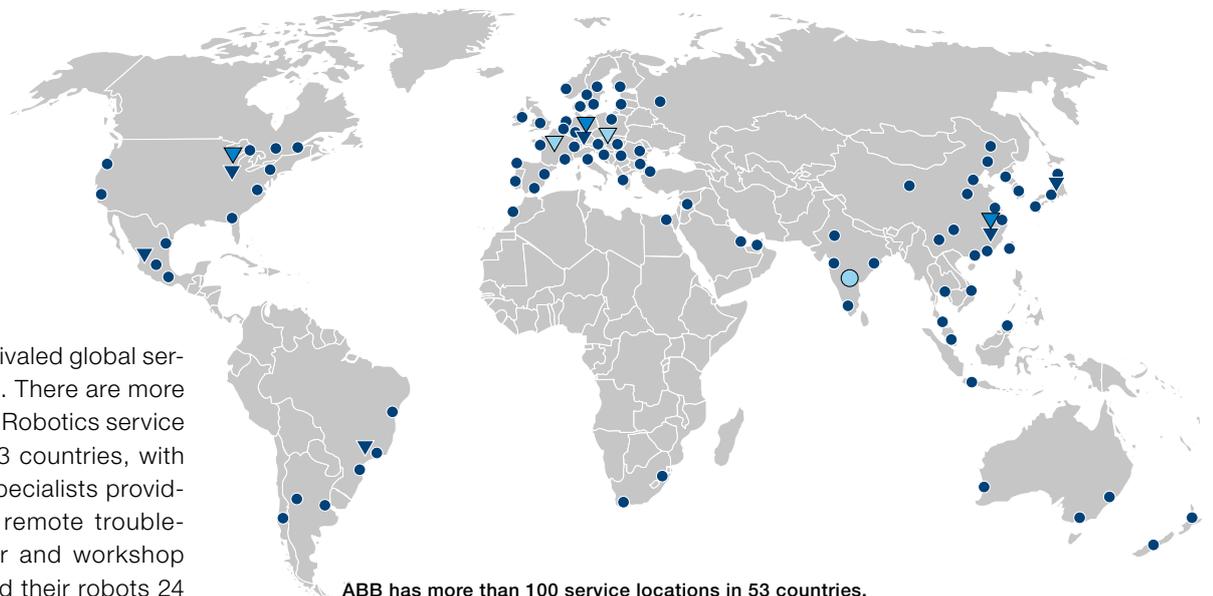


ABB has more than 100 service locations in 53 countries.

ABB has an unrivaled global service presence. There are more than 100 ABB Robotics service locations in 53 countries, with over 1,300 dedicated specialists providing technical support, remote troubleshooting, on-site repair and workshop repair for customers and their robots 24 hours a day, seven days a week.

The main focus of ABB Robotics Customer Service is to offer customers peace of mind in their day-to-day and long-term operations. With unplanned production stops being the main concern of most customers using robots, ABB has developed a range of innovative services to keep robot systems running throughout their life cycle. This allows customers to focus on their core business with stoppages kept to a minimum.

Of course no two production plants are the same and neither are their service requirements. Accordingly, ABB has expert advisers to offer customers service agreements tailored to their specific needs. Benefits include customized maintenance and support solutions, world-class preventive maintenance, improved robot system uptime and productivity, and reduced cost of ownership.

A supply of spare parts is essential to keeping stoppages to a minimum and ABB has original parts available for round-the-

clock deliveries. Customers can also keep spare parts in-house.

Retrofits and upgrades are available to prolong ABB robots' life cycles and improve the performance of older equipment, resulting in increased safety, reliability, quality and performance.

A key aspect of ABB's Customer Service offer is repairs. Service teams are on call 24/7 to provide whatever support is necessary to keep downtime to a minimum. This includes on-site repair, remote troubleshooting, corrective maintenance and workshop repair. ABB's patented wireless Remote Service troubleshooting tools enable a dedicated expert to be virtually on-site within five minutes of a problem or failure occurring.

Maintenance services are also available and include preventive maintenance, remote condition monitoring, life cycle assessment, inspection and diagnostics, refurbishment and reconditioning.

With new technical features and increased technical complexity, training is essential to realize the full potential of robots and reduce production costs. ABB offers customers' employees specialized courses at over 50 locations worldwide. These include standard robot training modules, process and applications courses, and systems training. Customized training is also available on-site, at external facilities and through e-learning.

Other services include installation and commissioning, data backup services, end-of-life services and engineering and consulting services.

ABB Robotics' global service organization receives over 300,000 customer calls a year through technical support centers and makes more than 30,000 service interventions. No matter where in the world there is a problem, ABB Robotics Customer Service is at your service.

Fine tableware made finer with ABB robots



Villeroy & Boch, a German producer of some of the world's finest porcelain, has fully automated their production using industrial robots from ABB.

Text: Nick Chambers Photo: Villeroy & Boch



Over the years, Villeroy & Boch has strived to maintain its reputation for high quality porcelain while achieving cost-efficient production and high productivity. With this goal in mind, the company has been automating production using ABB industrial robots since 2001 and now has a total of 64 robots in its factory in Torgau, Saxony, Germany.

One of the main reasons Villeroy & Boch has decided to continue partnering with ABB is the high level of usability and flexibility built into each and every ABB robot. So it was no surprise in 2014 that the company furthered its relationship with ABB by choosing six new IRB 2600 robots to replace the oldest of Torgau's robots after they had served an average of 85,000 operating hours each.

"We needed a simple means of re-teaching and correction given that

ceramics has unique characteristics," says Randolph Maass, Plant Manager for the company's Torgau factory. "Our production needs change all the time and no production process is 100 percent identical to another."

The Torgau factory is home to Villeroy & Boch's high-pressure die casting competence center. The casting process allows sophisticated shapes to be produced in one piece. After completion of the casting cycle, ABB IRB 2400 robots maneuver the parts and place them onto a conveyor belt, which takes them to a machining station. In the machining station, flashing is removed and the surfaces are smoothed with sponges. This process makes up the "finishing" steps.

The space-restricted machining cells are equipped with slim IRB 2400L robots with a long reach of 1.8 meters. Moving the raw, still unfired parts around a spindle and across different sponges requires a high degree of precision. In Torgau, ABB robots not only unload the high-pressure die casting machines and do the finishing, they also load the glazing machines and apply the company's mark on the bottom of the products.

To ensure high uptime and maximized production of the line, Villeroy & Boch re-

High pressure die casting at Villeroy & Boch.



- + Summary of Robot Care service agreement benefits**
 - Peace of mind with ABB keeping the robots running
 - High productivity
 - Fewer unplanned stops
 - Longer life due to world-class maintenance
 - Fixed costs

- + Summary of Remote Service benefits**
 - Avoidance of unplanned stops
 - Immediate response
 - Faster failure detection and failure resolution

lies on services from ABB Robotics such as Robot Care.

“Robot Care is the all-around care-free package for our customers,” says André Dehlan, Regional Account Manager for Service-Sales Robotics at ABB. “One of the features of a Robot Care service agreement is our extended warranty, which means that customers can extend the standard warranty period. Together with a planned preventive maintenance schedule, ABB takes the responsibility for optimum operations while the customer can focus on their core business.”

But this service agreement is much more than just a preventive maintenance and repair service. “With ABB’s Remote Service we are in permanent contact with the customer,” says Dehlan. “We continuously monitor the robot system health and inform the customer immediately in case of a condition change.”

“Robot Care allows us to plan our maintenance costs and gives us 24/7 access to parts and service technicians,” says Maass. “In the case of a plant standstill, we can rest assured that ABB is working on a solution and is on its way to reducing the standstill to an absolute minimum.”

Besides the Remote Service moni-



About Villeroy & Boch

Villeroy & Boch with headquarters in Mettlach/Germany has production plants located in Europe, Mexico and Thailand. The product range includes articles from three domains: Bathroom & Wellness, Tableware and Tiles. With more than 265 years of company history behind it, today Villeroy & Boch is a European Lifestyle brand active in 125 countries.



Villeroy & Boch are on the cutting edge of automation.

toring and the emergency services, the ABB service offering includes an annual maintenance and inspection of all robots. In addition, customers receive a monthly report on the operating condition of their assets and can access detailed information via the ABB MyRobot homepage (see page 4). Villeroy & Boch has signed a Robot Care service contract for all 76 robots in their two German factories in Mettlach and Torgau.

This dedication to automation is something an ever-increasing variety of industries are pursuing, but companies such as Villeroy & Boch are on the cutting edge of automation by making full use of remote monitoring and fixed price service contracts. By focusing on improving operations instead of worrying about unplanned stoppages, the Robot Care package from ABB provides a distinct competitive advantage.

BMW upgrades US plant

The robot controller upgrade at BMW's US hub has resulted in reduced downtime and a better training program for staff.

Text: Martin Segerström/Nick Chambers **Photo:** BMW Group



The BMW Spartanburg production plant in South Carolina.

About BMW

With three brands, BMW, MINI and Rolls-Royce Motor Cars, the BMW Group has its sights set firmly on the premium sector of the international automobile market. To achieve its aims, the company knows how to deploy its strengths with an efficiency that is unmatched in the automotive industry. From research and development to sales and marketing, BMW Group is committed to the very highest in quality for all its products and services. The company's success to date is proof of this strategy's soundness.



At the start of the 19th century, the city of Spartanburg, South Carolina, USA, was dubbed the "Hub City." This was because it was a railroad center and the many railroads heading in and out of the city made it look, on maps, like a wheel hub.

Over the last century however the landscape has changed with the train being supplanted by the personal automobile as the preferred method of transportation. It is quite fitting therefore that now, nestled in the foothills of the Blue Ridge Mountains just outside of Spartanburg, rather than train tracks, BMW's first full manufacturing facility outside of Germany can be found.

Covering an area of 4.7 square kilometers, BMW's Spartanburg factory is currently the company's only US production facility. The plant was built in 1992



Michael Owen, Robot Specialist, BMW Manufacturing Co, and Krzysztof Paczek, Service Engineer, ABB Robotics, USA.

and employs some 8,000 people, with an average daily output of 1,100 vehicles, of which at least 80% are manufactured to customer order.

BMW's Spartanburg facility is also the sole global producer of the following models which are exported to more than 140 countries: X3 and X5 Sports Activity Vehicles, X4 and X6 Sports Activity

"Having common equipment for the maintenance staff to work on means that less training is required."

Darrel Carter, BMW

Coupe, X5 M and X5 M Sports Activity Vehicle and the X5 xDrive35d.

In this important manufacturing hub, more than 1,000 ABB robots are involved in spot welding, painting, sealing, arc welding and vision and material handling.

Until recently many of the robots were connected to the older S4C+ controller. But in the past few years, BMW has recognized that installing ABB's newest robot controller—the IRC5—on more units is incredibly beneficial.

Aside from the obvious benefit of standardization on one controller system, BMW has also seen the advantage of having a single platform when training personnel on how to operate the robots. And now the majority of the Spartanburg robots are connected to the IRC5.

BMW engaged ABB to conduct the upgrades and new controller software was ordered for 74 robots, including

several versions of the IRB 6400R that had been assigned for spot welding and material handling.

During the quoting stage ABB conducted a pre-study on the controller requirements and valuable instructions on how to update the S4C+ code were provided by ABB's author of the original IRC5 code. Prior to installation BMW performed much of the programming and setup. And after the ABB Service Team's initial pilot installation on two controllers, it was easy for BMW to assess the needs for the full installation.

"We work great as a team with ABB Robotics to resolve BMW's issues and concerns and meet our manufacturing needs," says Darrell Carter, Supervisor at BMW Manufacturing Co. "We have direct support on-site from ABB and bi-weekly meetings to address any issues and future needs. We are very pleased with the controller upgrade from the old S4C+ controllers to IRC5. This has resulted in reduced downtime and faster recovery. And having common equipment for the maintenance staff to work on means that less training is required."

Here at ABB we are looking forward to a continued mutually beneficial relationship with BMW by providing world-class robots and services for years to come.

- +** **Summary of upgrade benefits:**
- Standardization of systems
 - Single training platform
 - Reduced risk of failure
 - Easier maintenance and repair
 - Fewer spare parts needed



Remote Service - predictive, proactive and immediate support.

The future of customer service has arrived

Remote Service and the Internet of Things can change the way you interact with your robots, creating increased uptime and less worry.

Text: Nick Chambers **Photo:** Pia Nordlander/ABB

Ever since humans started building tools, there's been a need to fix them when they eventually break. As these tools have turned into ever more complicated machines, such as industrial robots, the ability to fix them subsequently becomes a more complicated venture. It's this complication that sometimes results in extended downtime that can signifi-

cantly affect factory output—and in the case of some operations, every hour of downtime results in hundreds of thousands of dollars of lost revenue.

To address this growing issue, companies around the world have increasingly focused on improving the reliability and durability of their machines—and ABB is proud to be known as a world-class leader in providing reliable and du-

rable industrial robots and automation solutions. But our focus on up-front reliability is only part of the story, because even the most reliable, well-built and durable products eventually need maintenance. This is especially true in industries that take machines to the limits of their capabilities, such as foundry environments or high-speed automotive welding lines.

Our newest products, such as the IRB 6700 and IRB 1200 robots, are built with ease of maintenance and low total cost of ownership as key design features. This makes it easier to access the most frequently maintained parts quickly. And innovations such as Lean ID and underline connections reduce wear and tear on the most exposed parts.

After 40 years of delivering these kinds of innovative and reliable robotic solutions, ABB Robotics has developed extensive experience in understanding and evaluating the most common types of maintenance situations, across a multitude of different industries, in the more than 53 countries around the world in which we operate. But even these innovative solutions only serve to prolong the inevitable maintenance.

What if there were a way to operate robots that avoided catastrophic downtime entirely and could predict any issues before they turned into larger maintenance problems?

Now, by connecting our experience in customer service with the power of the Internet, we have made it a reality for our customers to change from a “break and fix” conventional approach, into a predictive, proactive, and immediate support mindset. This is accomplished by merging our Remote Service platform with the burgeoning explosion of the Internet of Things.

“We talk about ‘Industry 4.0’ sometimes,” says Bertil Thorvaldsson, ABB Robotics Product Manager for Software. “The first industrial revolution was the steam engine, then it was the assembly line, then it was electronic control systems and now it’s the Internet of Things. But this is not just for Things—it is People, Things and Services, connected all the time. Once this happens, it

becomes possible for us to collect data, turn that data into valuable information and valuable advice and finally into action. With the Internet of Things, we can get a snapshot of what’s happening to our robots and equipment in real time, all the time.”

ABB’s Remote Service product monitors the health of your robots 24 hours a day, 7 days per week year-round through a wireless or wired connection to the Internet. This continuous monitoring generates an automatic alert if the robot condition changes or a problem arises. Clients can access this actionable information from smartphones and tablets at any place and any time, and, importantly, our central Service Intelligence Unit is always monitoring it as well. Altogether this provides information to optimize robot usage and extend its service life. Data is sent to cloud servers for back-up, reporting, diagnostics and benchmarking.

“Before the days of the Internet of Things, customers would maintain their robots according to a certain schedule,” says René Nispeling, ABB Robotics Product Manager for Customer Service, “but no robot is used in the same way. Thanks to the Internet of Things we can monitor key parameters of a robot, such as motor torques, temperatures, CPU loads, alarms and the hours that motors have been active. This allows us to predict maintenance needs and adjust the maintenance schedules for individual robots.



“Before the days of the Internet of Things, customers would maintain their robots according to a certain schedule, but no robot is used in the same way.”

René Nispeling, ABB Robotics

That reduces the cost to a customer and increases the lifetime of that robot.”

We know that with this technology and our support the majority of unplanned stops can be prevented. Robots can be brought back into production with remote support and immediate problem resolution, avoiding costly production losses due to travel and traditional troubleshooting. In addition, via ABB’s MyRobot web page (see page 4), a companion to Remote Service, valuable and up-to-date information about your robots is available at your fingertips at any time, at any place and on any device.

“Now, we can actually connect to the robot and get the information first hand,” says Thorvaldsson. “And this way, quite often we will be able to help the customer correct the problem without even having to send a service person to the customer’s facility, saving greatly on cost and time.”

“Let me put it this way,” says Nispeling, “to supply a robot to a customer is one thing, but to have a device that produces all the time for a customer is another thing entirely.”



With Remote Service up to 50 percent of unplanned stops can be prevented.

[Click here to see ABB Robotics - Remote Service and the Internet of Things.](#)



Robotic entertainment takes to the high seas

A merry band of high-tech firms has provided Royal Caribbean with something special.

Text: Nick Chambers **Photos:** James Halfacre

Royal Caribbean wanted to do something truly groundbreaking on their newest ship, the Quantum of the Seas: create an environment that was not only fun, but one that could also compete with the best that entertainment meccas like Las Vegas have to offer.

The signature venue on the ship is Two70°, a multi-level room named for its magnificent 270-degree panoramic views through vast, floor-to-ceiling glass walls at the stern of the ship. At night, that same grand vista is transformed into a gigantic “Vistarama” screen that is more than 30 meters long and 6 meters tall. In the center of this entertainment

spectacle is the RoboScreens® entertainment system, created by ABB partner Robotic Arts and featuring six ABB IRB 6620 robots mounted to an 8,200 kilogram capacity gantry with custom Daktronics screens.

This combination of robots and screens allows for previously unattainable styles of entertainment in which the RoboScreens become performers themselves, interacting with the dancers, acrobats and singers to create a vivid and powerful show.

“The RoboScreens transcend all age



ABB robots perform on the Quantum of the Seas.

groups,” says Andy Flessas, also known as andyRobot, Creative Director and founder of Robotic Arts. “A lot of what I do is targeted at specific age groups, but on board the Quantum of the Seas, I’ve seen that everyone from 8 year olds to 88 year olds is transfixed by the robotic performance. They are unlocking this potential that taps into a deep human desire to see futuristic and interesting things.”

Although the RoboScreens have been used in the past for major international touring rock acts such as Bon Jovi, this is the first permanent installation for a major performance venue and the first time they have been used on an oceangoing vessel.

“Based on the audience reaction to the system so far, it is clear our band of high-tech companies has hit on something special,” says Nick Hunt, an ABB Robotics technology manager working on the project. “People have never seen anything like it and often end up simply staring in wonder.”

[Click here to see the RoboScreens in action.](#)



An ABB robot IRB 6640 at Deufol's Packaging and Logistics Center.

“Scheduled inspections and remedial action by ABB specialists to keep our equipment in top condition reduces the risk of unplanned stops.”

Geoffrey Draelants, Deufol.

Privately owned castles, 700-year-old gothic churches, and a vast number of farms characterize the landscape surrounding the municipality of Heist-op-den-Berg in eastern Belgium. But it is also home to global packaging producer Deufol's Packaging and Logistics Center - Deufol België N.V.

One and a half years ago three IRB 2600 and seven IRB 6640 robots were installed at the center for the picking and palletizing of batteries. And in this relatively short period the Benelux ABB Robotics Service Team has achieved a solid and mutually beneficial relationship with Deufol.

This comes as no surprise since ABB has been supplying Deufol continuously with both robot system training and recommended critical spare parts. And now Deufol and ABB have agreed on a five-year service agreement for all 10 robots. This covers annual preventive maintenance, standard maintenance parts like oil, grease, batteries and fans, 4-12 hour response time during working days and Remote Service-enabled robots.

“As a packaging service provider, we must be able to deliver at all times 24/7,” says Geoffrey Draelants, Operations and Project Engineering Manager, Deufol in Belgium. “During peak season, from July to December, production losses due to unplanned stops are unacceptable. Thus it is essential to have critical parts on-site.”

“For us, having spare parts is meaningless without a tailor-made service agreement, covering both maintenance and repair services,” Draelants continues. “Scheduled inspections and remedial action by ABB specialists to keep our equipment in top condition reduces the risk of unplanned stops. In case of a sudden breakdown, we get a guaranteed variable on-site reaction time of four hours



Tailor-made solutions

The good relationship between the Benelux ABB Robotics Service Team and a Belgian packaging center has resulted in a five-year service agreement that includes Remote Service.

Text: Martin Segerström Photos: Deufol

for the most critical equipment and up to 12 hours for less critical equipment. This helped optimize the required services and reduced the cost of the service agreement. Better yet, avoiding unplanned stops is one of the key features of Remote Service. All our robots are continuously monitored and in the event of condition changes or alarms, the system automatically notifies ABB technicians to conduct remote diagnosis and to act to avoid potential failures. Avoiding failures is equal to avoiding production losses.”

“A key to a high productivity is our equipment operators,” continues Draelants. “With the training provided by ABB in the robot training center, our operators are equipped with the right knowledge to get the best out of the robots. This includes the ability to maintain, troubleshoot, solve problems and also have the competence to provide the right infor-

mation to ABB technicians who, with the help of Remote Service data, can determine the right actions to bring a robot back into production as fast as possible.”

All of the above, including on-site critical robot spare parts, a service agreement for preventive maintenance, guaranteed response time and Remote Service and training, will ensure that Deufol can produce the right volume and deliver on time, thus sustaining their business with their customers. The service agreement with Remote Service has already been put to the test, as testified by Davy Leenen, Field Service Manager, ABB Robotics in Belgium.

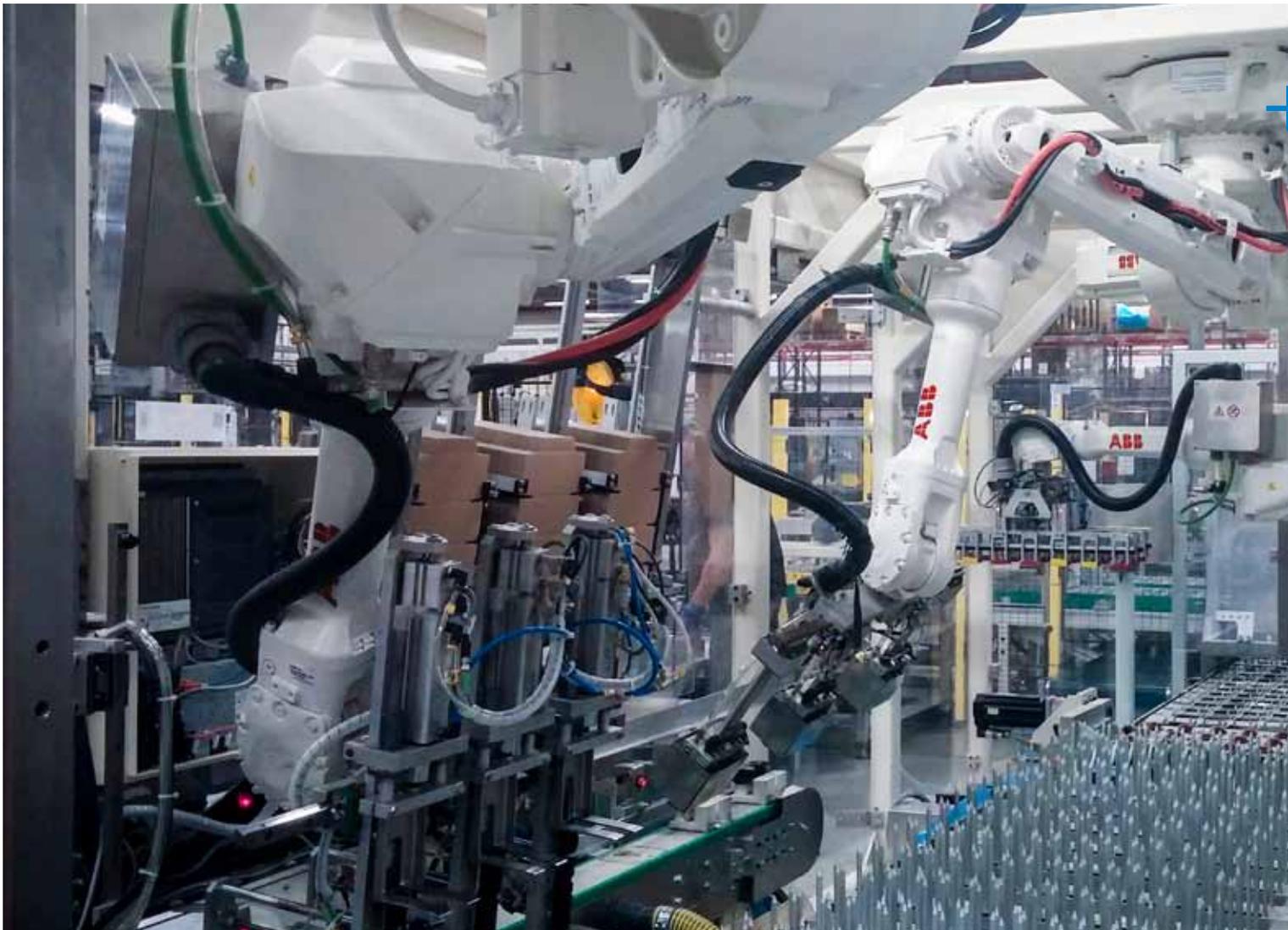
“We noticed that one of the robots was generating Collision Supervision alarms,” says Leenen. “Thanks to Remote Service, we quickly found that the robot was configured with the settings for a floor-mounted robot, instead of those of a suspended robot. Via quick phone guidance we saved

+ Summary of Robot Care service agreement benefits

- Peace of mind with ABB keeping the robots running
- High productivity
- Fewer unplanned stops
- Longer life due to world-class maintenance
- Fixed costs

+ Summary of Remote Service benefits

- Avoidance of unplanned stops
- Immediate response
- Faster failure detection and failure resolution



Avoiding unplanned stops is a key feature of Remote Service.



At Deufol robots are continuously monitored by Remote Service.

About Deufol

Deufol SE is a global packaging company with 83 locations in 10 countries, specializing in industrial and export crating, consumer goods packaging, value-added services, IT solutions and data packaging. The group headquarters, Deufol SE, is based in Hofheim Wallau, Germany.

“Thanks to Remote Service, we saved the customer hours of production, travel time, troubleshooting and problem correction.”

Davy Leenen, ABB Robotics.



the customer hours of production, travel time, troubleshooting and problem correction. In another case the load settings were set higher than the maximum robot payload, causing overloads which could ultimately result in damage to gears and motors. By reprogramming the trajectories that caused the overload, this problem could be fixed. Without Remote Service this would have caused irreversible damage to the robot and days of production losses.”

The goal of ABB Robotics Remote Service is to eliminate, as much as possible, any unplanned stoppages by continuously evaluating the performance of ABB robots using a wireless Remote Monitoring System. In fact ABB Robotics was one of the pioneers within the area of Industry 4.0 and The Internet of Things (see page 5) several years ago with Remote Service. At the center of the

fourth industrial revolution, Industry 4.0, through the computerization of traditional industries such as manufacturing, lies the intelligent factory. The Internet of Things suggests a paradigm shift, where we will be surrounded with interconnected devices, enabled by technologies just like Remote Service. ABB Robotics has the ambition to stay at the very forefront of the evolution of intelligent manufacturing.

“I believe that our customer focus, problem-solving skills, and ability to go the extra mile are contributing factors to why Deufol trusts our service organization,” says Marianne Vertommen, Sales Engineer, ABB Robotics in Belgium.

Rest assured that the Benelux ABB Robotics Service Team will continue their hard work to help optimize Deufol’s output, by providing the kind of proactive and world-class service you can always depend on.

Service around the clock

A new agreement with Kongsberg Automotive's Swiss plant provides an innovative modular contract and faster response times.

Text: Martin Segerström/Nick Chambers
Photo: ABB



IRB 2600

Just 45 minutes from Geneva airport, the town of Cluses sits on the outskirts of beautiful forests in the Northern Alps. Once renowned for its watchmaking industry, Cluses is still a focal point for precision manufacturing industries like Kongsberg Automotive – one of the world's foremost parts suppliers to the automotive industry. In fact, the Cluses Kongsberg plant, with its 210 employees, is one of the company's most important, manufacturing a wide range of automatic and manual gear shifters, shift cables and shift towers for light duty vehicles for the global automotive market.

Already a well-established supplier of products and services for Kongsberg Automotive worldwide, ABB Robotics began a close collaboration with the Cluses plant eight years ago. And now ABB has been selected to support the growth of Kongsberg Automotive in France by developing its industrial robotics solutions further.

The Cluses plant exclusively uses ABB robots, consisting of eight IRB 140 robots and three IRB 2600 robots. These robots are involved in material handling, injection molding and testing. A newly signed one-year service agreement includes preventive maintenance, 24-hour on-site response time and a 24/7 hotline for immediate response.

The 24/7 hotline combined with an innovative modular service contract was the most decisive factor in why

ABB Robotics was awarded the service agreement. Together, these offerings, providing easily accessible technical knowledge and speed of response due to the close proximity of the French ABB Robotics Service Team, ensure the best productivity for Kongsberg.

"We have been working exclusively with ABB Robotics for several years," says Ulrich Grabiasz, Maintenance Manager, Kongsberg Automotive, France. "The new service agreement ensures that our robots are maintained at all times, preventing production stops and letting us control our maintenance costs associated with training and spare parts."

Eric Bouvier, Customer Service Sales Engineer, South of France, ABB Robotics, adds: "In line with its growth strategy Kongsberg has committed to a training plan to increase the skills of 10 employees by the end of 2014. As an additional proof that our service offerings and skills are well recognized, ABB Robotics has been selected against tough competition for a new test line with six new robots which will be integrated in the service contract in 2015."

The future looks brighter than ever for the mutually beneficial relationship between Kongsberg Automotive and ABB Robotics in France.

+ Summary of service agreement benefits:

- Fast service response time, on-site within 24 hours
- Annual preventive maintenance
- 24/7 hotline

About Kongsberg Automotive

Kongsberg Automotive provides seat comfort systems, driveline related systems, fluid assemblies and industrial driver-interface products for global vehicle manufacturers. With revenues of around EUR 1 billion and over 10 000 employees in 20 countries, Kongsberg Automotive is truly a global supplier. The company is headquartered in Kongsberg, Norway, and has 47 production facilities worldwide.



Jesper Ladegaard, Service Manager, MAN Diesel & Turbo, and Ebbe D Højlund, Service Sales Engineer, Robotics Customer Service, ABB A/S in front of an IRB 4600.

An open attitude wins over Danish ship-engine builders

The ABB Danish Service Team's honesty, openness and flexibility when providing service agreement packages has helped convince MAN Diesel & Turbo to sign a new three-year service agreement.

Text: Martin Segerström/Nick Chambers **Photo:** Svend Christensen

MAN Diesel & Turbo's Danish manufacturing plant is just 10 minutes by car from Copenhagen's international airport, Kastrup. Situated on the peninsula of Teglholmen, the facility overlooks the South Harbor of Copenhagen, which was once busy with shipyards and foundries. Teglholmen, "The Tiles Islet," takes its name from a tile factory established

on the island in 1871—so it is no stranger to industry.

And today, the Low Speed Engine Division of MAN Diesel & Turbo, where parts for two-stroke engines and power plants are developed and manufactured, is located on the island too.

The reliability of low-speed engines makes them the preferred choice for ocean-going merchant vessels such as

bulk carriers, oil and gas tankers and giant container ships. The parts are sold both directly to end customers and through MAN's worldwide sales organization.

ABB Robotics and MAN Diesel & Turbo have had a solid relationship ever since the first robots were purchased eight years ago. And today, 150 MAN employees work alongside 12 ABB robots in





Summary of service agreement benefits:

- Fast service response time
- 24/7 hotline
- Access to full maintenance history
- Annual preventive maintenance
- Competitive prices on spare parts and consulting

the ship valve manufacturing process. The robots include IRB 1600s and IRB 2400s that are used for welding, and IRB 1600s and IRB 4600s that are used for material handling.

Now, maintenance and on-site support for the 12 robots are covered by a recently signed one-day response service agreement. Decisive factors for MAN Diesel & Turbo in signing the agreement with ABB's Service Team included ABB's fast service response time, the 24/7 hotline, access to the full robot maintenance history, the annual preventive maintenance package, the competitive prices on spare parts and consulting and the good financial standing of ABB.

"I really appreciate ABB's general

honesty and openness in discussions on flexible service agreement packages," says Jesper Ladegaard, Service Manager MAN Diesel & Turbo. "It really makes for the right solution, perfectly tailored to our needs. For us it's crucial to keep a high uptime on all machinery. Since we use our equipment very hard we need to plan the service in advance and to be able to call the right person for fast on-site service. When we need support, we just use the 24/7 hotline to get help from ABB's Service Team, whose problem-solving skills are outstanding."

This is music to our ears at ABB and we hope to be there for MAN Diesel & Turbo as a strong and dependable robot and service provider into the future.



About MAN Diesel & Turbo

MAN Diesel & Turbo is the world leader in large diesel engines for ships and power stations, and is one of the leading suppliers of turbo machines. The company employs around 15,000 staff at more than 100 international sites. The MAN Group is one of Europe's leading manufacturers of commercial vehicles, engines and mechanical engineering equipment with annual sales of approximately EUR 14.9 billion and approximately 49,500 employees worldwide.



Innovative products from ABB

IRC5P - Controller upgrade

The IRC5P controller brings the latest paint controller technology to your paint shop. The new paint robot control system is available as an upgrade to your IRB 5400 S4P (6 or 7 axis model) and features the Ex FlexPaint Pendant and the next level in paint cell supervision, RobView 5.

Automatic start-up diagnostics, fast error log filtering with Pareto diagrams and process diagnostics help to reduce the time for fault tracing and keeps the system up and running.

[Click here for more information.](#)



FlexPendant Retractable Cable

ABB's spring-loaded FlexPendant™ Retractable Cable system (standard and special version) is certified to ensure a safe work area. By keeping teach pendant cables off the production floor and out of the way of equipment cable damage is reduced.

The FPRC has been tested to minimize noise frequency on cables and to

reduce signal loss.

Thanks to its spring-loaded retraction system, the FPRC automatically wraps teach pendant cable inside the reel.

The new foundry version is halogen-free and has excellent oil resistance and a limited short-term flame protection.

[Click here for more information.](#)



IRC5 - Controller upgrade

The IRC5 controller is an intelligent way of giving old robot systems and your operation a significant boost. By simply replacing the old controller with an IRC5, a range of new possibilities are unleashed for the entire robot cell. The value of an older cell can be enhanced many times

over simply by enabling it to work more freely and productively. The IRC5 controller is flexible and compatible and allows you to minimize the number of components. Different cabinets are available, all designed to make it as easy as possible to upgrade the cell.



Atomizer upgrade

ABB Atomizers improve spray pattern control using a Dual Shaping Air (SA) Structure. This pattern control function results in a reduction in paint consumption by making it possible to easily adapt the width of the pattern to the exact size of the object being painted. The reduction in paint waste can be 20 percent or more,

depending on the object being sprayed. In addition to improved spray pattern control, ABB provides a wide selection of atomizer upgrades. These upgrades include other advantages such as high fluid flow capability and easy maintenance.

[Click here for more information.](#)

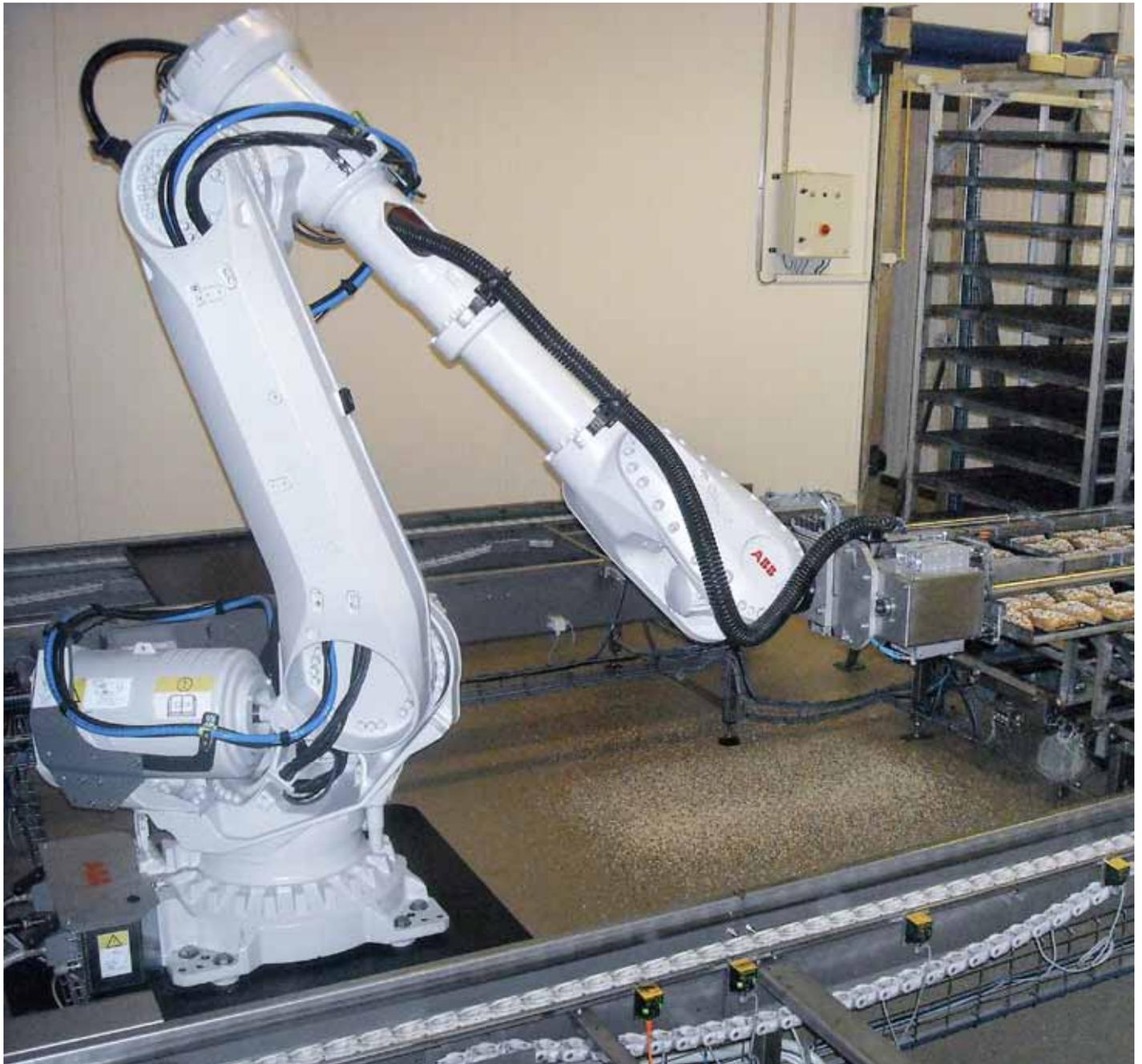


New Valve Unit for ROBABEL® 625/925/926

With this atomizer upgrade package, maintenance time can be cut by up to 80%. Given that the new valve unit is the same size as the current one no other changes are needed. A transparent cover makes it possible to visually check

if the valves are still functioning, while the valves themselves can be easily replaced without stopping the airflow or disassembling the atomizer. The kit contains all the parts necessary for upgrading T-valve, TD-valve and WTD-valve units.





Quick thinking delights Dutch customer

The problem-solving skills of ABB Robotics sales staff during a sudden production stop convinced Bakkersland to invest in ABB Robotics Remote Service.

Text: Martin Segerström **Photo:** Bakkersland/iStock

Founded in 1999 by 10 progressive family owned companies, Bakkersland Group is, with 16 bakeries, the largest bakery company in the Netherlands and one of Europe's largest too.

The Bakkersland Tilburg West bakery is located in the city of Tilburg in the southern province of Noord-Brabant in the Netherlands. There, some 300 employees make a wide assortment of vacuum-wrapped home bake-off products with the help of IRB 6650, and soon IRB 6700 robots from ABB Robotics.

The bakery was recently visited by Tijn van Pelt, ABB Robotics Service Sales Engineer in the Netherlands and René Nispeling, ABB Robotics Global Product Manager Customer Service.

"The mission was to convince Robert Rothier, Maintenance Manager at Bakkersland, to have Remote Service installed as part of an Early Warning project for an IRB 6700 robot," says Nispeling. "And to test and validate the

MCC [Mechanical Condition Change] module."

The MCC module is being developed to strengthen ABB Robotics proactive service even further, providing an early warning if a robot is about to fail.

After introductions and a presenta-

"The customer recognized the true value of Remote Service not only in identifying the nature of the problem but also in preventing unplanned stops."

René Nispeling

tion by Nispeling, Rothier said: "Our robot just went down and since I knew you two were coming I waited for you instead of calling ABB."

This was the last thing the visitors expected to hear during their sales visit. And instead of small talk on weather, traffic and the performance of the Dutch national soccer team, van Pelt and Nispeling found themselves receiving safety shoes, protective clothing and a hair net and off they went to production.

The anxious production staff were waiting by the empty conveyor belt with the IRB 6650, responsible for the off-loading and loading of baking plates, now frozen in its highest picking position with a baking plate in its gripper.

After interviewing personnel on robot behavioral patterns, van Pelt and Nispeling saw that the event log presented error messages indicating a short circuit in the motor axis 3 wiring. This demanded further troubleshooting by deduction.

"We found that the brake-release and brake of axis 3 were not working," said Nispeling. "We asked the maintenance engineer to open the motor axis 3 cover for inspection, while we returned to the meeting room to start our meeting. In minutes we learned that the engineer had found short-circuited power leads. After cleaning and isolation of the power leads, the robot could be brought back in operation. With the day's events fresh in mind, Remote Service was an 'easy sell' to add to the service agreement for the new IRB 6700. The customer recognized its true value not only in identifying the nature of the problem but also in preventing unplanned stops."

PowerPoint presentations and good sales skills usually get the job done, but it is wise to always prepare for opportunities to prove the excellence of ABB Robotics Customer Service. Thanks to the experienced ABB Robotics Service Team, Bakkersland was back in production after only two hours.

About Bakkersland

With an annual turnover of approximately EUR 434 million and some 2,100 employees, Bakkersland Group's 16 bakeries produce and supply bread, specialties, and chilled pastries to food service and food retail industries in the Netherlands. Bakkersland markets its products through supermarkets, retail stores, cafés and restaurants, and catering and convenience channels in the Netherlands and exports via sales partners to over 20 countries. Bakkersland BV was founded in 1999 and is based in Hedel, the Netherlands.



Summary of Remote Service benefits:

- Immediate feedback on current robot performance and status in production line area
- Analyze tool to verify the quality of the integration and programs of the robots
- Reduced problem-solving process time
- Faster response time
- Earlier failure detection
- Data logging and event driven data capture



ABB Robotics Customer Service. Securing your productivity. Anytime. Anywhere.

With more than 250,000 robots sold worldwide, we know how to provide world-class service for robots and robot equipment. Our 100 service locations in 53 countries around the globe mean that we are always nearby. And thanks to 1,300 dedicated specialists, you get fast issue resolution and local support at the right time. We have the deep competency to support your needs, and original spare parts available for 24/7 delivery, so your operations can keep on running. If you want to maximize equipment lifetime and secure your productivity, please visit www.abb.com/robotics