ABB has won a contract to supply a complete electrical balance of plant solution for one of the world’s first hybrid integrated thermo solar combined cycle (ISCC) power plant in Algeria. This solution significantly reduces delivery times, installation costs and project completion times—enabling the plant owners to start generating power and revenues faster and at lower cost than previously possible.
The 150 MW Hassi R’Mel power plant in Algeria will be one of the first hybrid thermo solar and combined cycle power generating facility in the world when it goes into production in 2010.

Located at Algeria’s largest natural gas field, Hassi R’Mel, the plant will consist of two 40 MW gas turbines, one 80 MW steam turbine, and two parabolic trough solar fields with a generating capacity of 25 MW. The solar fields will comprise 224 parabolic collectors in 56 loops in an area measuring 180,000 sqm (equivalent to 17 full-size soccer fields). Currently under construction, the plant is scheduled for completion in August 2010.

The solution is based on ABB’s electrical balance of plant and integrated instrumentation, control and electrical systems. The concept reduces delivery times, installation costs and project completion times, thereby enabling the plant owners to start production and generate revenues faster and at lower cost than previously possible.

ABB’s scope of supply includes design, engineering, supply, transportation, erection, startup and commissioning. The modules are pre-assembled, pre-tested and part-commisioned at the factory to facilitate rapid delivery and speedy installation.

ABB will complete the project in just 13 months—an exceptionally fast delivery.

Sustainable power generation

The Hassi R’Mel hybrid power plant uses a combination of natural gas, steam and concentrating solar power (CSP) technology to generate electricity. The gas turbine and steam cycle are fired by natural gas, with the steam turbine receiving additional solar-generated steam during the day.

In the solar fields, the parabolic trough collectors reflect and concentrate the sunlight onto tubes containing heat transfer fluid, which is pumped at a temperature of about 400º C to the power block. There, it goes through a heat exchanger to heat water and produce steam to power the turbines and generate electricity. The fluid is then pumped back to the solar field.

ABB has recently supplied comprehensive power and automation solutions for several CSP and photovoltaic power plants in Europe, North America and Australia. This includes Europe’s two largest solar energy plants, the 100-MW Andasol and Extresol power plants in Spain, both of which use parabolic trough technology similar to that of Hassi R’Mel.

ABB was selected to provide the EBoP solution for UTE Abener Hassi R’Mel Construction, the Spain-based engineering, procurement and construction (EPC) contractor for the project.

Mosenegro Moscow TPP-26:
The most efficient CCPP in Russia equipped with System 800xA

Russia’s first power plant to be built on the basis of a turnkey EPC (engineering, procurement and construction) contract by a non-Russian company is nearing completion in the capital city of Moscow. The advanced CCPP will also be the most efficient in the country. The plant is being built for Mosenergo by a consortium comprising Alstom and a local partner (EM Alliance or Energomachinostroitelyny Alliance) under a turnkey EPC contract. Mosenergo is the biggest utility provider in the Moscow region and a company devoted to developing electric power in the metropolitan region and central Russia. The plant is based on Alstom’s KA26 combined-cycle power plant in a multi-shaft configuration and will deliver 420 MW of electric power and up to 265 MW of district heating. The gas turbine will be controlled by ABB’s System 800xA for power generation solution with AC 400 Connect.
Leipzig public utility—control room for the combined cycle power plant

The combined cycle power plant (CCPP), which started production in 1995, consists of two gas turbines (63 MWel each), two waste-heat boilers and a steam turbine (46 MWel). It can feed up to 200 MWth into the Leipzig district heating network. Two additional peak load boilers each have a capacity of 120t/h. If required, 80 MW can be fed into the Stadtwerke Leipzig GmbH district heating network via a heat transfer station. The plant is operated as a mid-load plant; it is the largest generation plant of the Stadtwerke Leipzig. The control room is the control center for the CCPP and the peak load boilers.

Replacement of the operation and monitoring level

A planned shut-down in August 2008 was reserved, among others, for the replacement of the operating and monitoring level with the modern ABB System 800xA. The automation system Contronic E was coupled via seven L-Bus lines, which is the Contronic E control bus for the transfer of all the signals from and to the controllers (CMX40) and the gateway modules (CCO20) to the System 800xA. On the one hand, this extended the lifetime of the entire plant without changes to the automation systems, and on the other hand it prepared the way for the mid-term replacement of the control level.

A down-time of 15 days was available for the commissioning of about 5000 signals, 160 graphic displays and numerous standard applications for the visualization of the complete power plant.

Faster operational decisions

The control room equipment was replaced with four work places, a configuration place for the System 800xA and a PGIM Client. Networking via the local area network, which is the local network of the Leipzig Public Utility, provides direct access to information from many work stations and supports fast decisions for the operation and analysis of faults. The operator clients have been upgraded for the direct utilization of the PGIM shift log. This was already introduced in 2007 for the cross brace control room, the Bischofferode biomass power station and the CCPP of the Leipzig Public Utility. This application will also be used in the Piesteritz biomass CCPP, which is currently being commissioned.

ABB completed the replacement of the operating and monitoring level on time and to high quality standards by the end of the planned station down-time. The power station could be restarted immediately for commercial operation with all the effective concept improvements.
Waste disposal with modern technology in the RABA Southwest Thuringia

At the end of 2008, the joint waste authority for waste disposal for Southwest Thuringia (ZAST) in Zella-Mehlis, Germany, commissioned one of the most modern waste incineration plants. The plant disposes of 160,000 tonnes of waste annually, produces 14 MW of electrical power and feeds the supply network of the public utility of Suhl/Zella-Mehlis with up to 30 MW of district heating. ABB was responsible for the concept, design, engineering, integration, installation and commissioning of the major part of the electrical, control and building services systems.

The companies, MARTIN GmbH, Munich, Integral GmbH, Vienna and ABB Ltd, built the waste incineration plant (RABA) as a consortium – with MARTIN as the general contractor. The ABB scope of supply comprised the complete overall electrical, instrumentation, control and process control systems, the steam turbine with the complete water / steam cycle including the coupling of the district heating feed for the supply network of the Suhl/Zella-Mehlis public utility and the technical building equipment for the main areas of the RABA Southwest Thuringia. The System 800xA process management system handles about 4,400 signals.

ABB spoke with Ulf Haferkorn, the technical manager of the RABA Southwest Thuringia. Ulf Haferkorn was the ZAST project manager from the start of the project, throughout the approval procedure, up to commissioning.

ABB: Mr. Haferkorn, since November 2008, the RABA Southwest Thuringia is in normal operation. At present, what are your most important lessons learnt from the operation?

Ulf Haferkorn: In October 2008, ZAST took over the plant from the general contractor MARTIN GmbH. Initially, the main emphasis is to run the plant in secure, continuous operation. We have a well-trained and highly-motivated operating team, which gives us security for this task. In the phase of the changeover from commissioning to continuous normal operation, at first we want to gain operating experience. In addition, we are carrying out a detailed optimization process.

ABB: Were there any advantages in the decision for ABB as the supplier of turnkey solutions for ICE (Instrumentation, Control and Electrical) compared to the selection of different suppliers?

Ulf Haferkorn: A decision for a single supplier such as ABB, which is in a position to deliver turnkey solutions, reduces the
number of interfaces and ensures the secure functioning of the individual components within the overall system. In addition, we have ensured that selected ABB electrical components were defined as standard for the project. ABB supplied proven and robust technology. This is also an advantage for the plant maintenance and the number of spare parts to be kept.

**ABB: What can you say about ABB’s System 800xA process control system that is in operation at the RABA Southwest Thuringia?**

**Ulf Haferkorn:** The System 800xA is a very powerful, stable and user-friendly system. Our operating experience up to now confirms this statement. For the application in the RABA Southwest Thuringia, there was very intense coordination with ABB from the early project phase up to the completion of commissioning. Especially for the design of the screen contents and the graphical user navigation, as well as for the decisions concerning what information was to be presented in what way, we have also included the experience of the operating personnel during the commissioning phase.

**ABB: The motivation to increase the energy efficiency comes from the necessity, both to maximize the profit of the plant operator and also to meet the challenges posed by climate change through a reduction in the emissions. How does the ZAST meet these challenges?**

**Ulf Haferkorn:** Initially, the ZAST has to meet the challenge of the changeover of the newly constructed plant from commissioning to secure continuous operation in order to fulfill the obligations of the ZAST – the disposal of the municipal waste from the authority area and within the legal limits. We not only have the task of energy optimization before us, through technical measures or changes to the control of the process, we also have to achieve the overall optimization of the operation of the plant. Here I think foremost about reducing the operating resources while at the same time maintaining the operating parameters, especially the emissions in the clean gas.

**ABB: What further challenges do you see in the near future as the operator of a waste incineration plant?**

**Ulf Haferkorn:** As a local authority plant operator, we are especially responsible to the people of our joint authority area. We have the clear task to operate the RABA Southwest Thuringia securely and also to optimize it economically and environmentally friendly.

**Mr. Haferkorn, we would like to thank you for this interview.**
Increased output and extended life-time of the Forsmark nuclear power plant in Sweden

ABB has won an order to provide engineering expertise and supply power products for a project at the Forsmark nuclear power plant owned by the Swedish utility Vattenfall. The project comprises electrical system studies, design, engineering, installation and commissioning. ABB will provide the electrical package needed to increase the gross output from 1,200 MW to 1,360 MW at Unit 3. ABB will also supply a range of power products including three generator step-up transformers, two auxiliary transformers and an excitation transformer. The project is due to be completed by 2014. Vattenfall is Europe’s fifth largest electricity generator, and its Forsmark power plant with a total power output of about 3,200 MW amounts to one-sixth of Sweden’s electricity demand.

ABB sponsor of the GT13E2 Users’ conference in Indonesia

Hosted by PT Indonesia Power and organized together with Alstom Power, Switzerland, the 8th GT13E2 User’s Conference was held in Bali, Indonesia on November 20 and 21, 2008.

As the centre of excellence for combined cycle power plants, ABB Switzerland has supplied the original control systems for all GT13E2 power plants world-wide. In addition to the control system, ABB also provides solutions and products in the field of electrification and instrumentation. The focus of ABB’s presentation was to show efficient migration solutions and full life cycle services for the continuous and efficient operation of the plants.

This very well organized conference is important for all users and OEMs such as ABB, to share experience, to present further developments and to strengthen the network. ABB is looking forward to support the next GT13E2 Users’ Conference in 2010.
Flue gas cleaning reduces power station sulfur emissions by more than 95% in the Iberian Peninsula

Within the scope of the upgrading of Spanish and Portuguese power stations with flue gas cleaning equipment, ABB received in 2005 an order to equip the planned wet sulfur removal process with Melody control systems. The order was placed by the plant constructor Hitachi Power Europe (HPE) and concerned the power stations Aboño 2 and Soto 3 in Spain and Sines 1–4 in Portugal.

The value of the complete order was about 14 million Euros and, in addition to the control systems, it comprised the extension of the existing OperateIT B system in Sines and the new System 800xA in Aboño/Soto as well as a part of the field instrumentation.

The work started in the autumn of 2006, and was carried out together with the Portuguese consortium partner since 20 years, EFACEC*. Commissioning of the equipment for Sines 3 and 4 was completed in the autumn 2008. Here the existing Melody basis was extended to currently 92 cubicles, which demonstrates the great confidence that EDP, as the plant operator, puts in ABB.

*EFACEC: the company was founded in 1945 by the merger of two companies. On the one hand the “Empresa Fabril de Máquinas Eléctricas” with its headquarters in Portugal, and on the other hand the ACEC, “Ateliers de Constructions Électriques de Charleroi, S.A.”, originally based in Belgium. The EFACEC supplied among others switchgear, transformers, motors and services such as engineering and installation.
New and environmentally friendly—an alpine pumped storage power station in the south of Austria

To increase its own power generation, Kelag extended the Fragant group of power stations by the Feldsee pumped storage power station. ABB supplied the static frequency converter (SFC), the complete electrical equipment and the machine controls for the new pumped storage power station. The plant will start operation at the beginning of 2009.

Kelag generates about one billion kilowatt hours in its 62 hydro power stations, and is one of the most important energy companies in Austria. This represents about a third of Kelag’s customer demand in Kärnten. The 62 hydro power stations have a total output of 470 MW. The major part of the generation is produced by pumped storage power stations.

The Fragant group of power stations located in Caranthia, the southernmost Austrian federal state, has for many years formed the backbone of the Kelag power generation with an installed power of 334 MW and an annual production of 550 million kilowatt hours of peak electricity. This power is available at the push of a button and is an important prerequisite for the security of the electricity supply in Caranthia.

With the construction of the Feldsee pumped storage power station, Kelag will increase the proportion of its own genera-
Model predictive control and optimization improves plant efficiency and lowers emissions

Coal fired power plants have come a long way in the last decades to become generators of electrical energy with high efficiency and greatly reduced emissions. Big steps have been taken particularly with improved boilers, steam turbines and advanced cycles.

Model Predictive Control (MPC) being one of the most widely used model-based control technology has become common in the process industries over many years of practical application. The current drive for higher energy efficiency and lower emissions has made MPC applications a worthwhile investment, also for powerplants. ABB’s plant optimization solutions based on MPC have demonstrated their excellent performance and realized significant savings in operational and environmental costs.

For large utility power plants, one of the common applications of MPC today is the Combustion Optimization System (COS), which optimizes the distribution of fuel and air in the boiler to reduce emissions (particularly NOx), while improving combustion efficiency.

The Combustion Optimization System (COS) models the multivariable nonlinear relationships of the combustion process. Based on this combustion model and its multivariable optimizer, it determines the most suitable set points for closed-loop control in order to achieve the predefined targets and respect the imposed constraints.

This solution has resulted in significant improvements such as NOx reduction (15%), reduction of reheat spray flow (40%), and reduction of excess air (15%). This has substantial economic benefits such as increased power or steam generation efficiency and reduced emissions, resulting in annual savings in operating costs and typical payback times of 1 year or less.

In addition, Model-based solutions have been deployed in other areas of the plant, such as main and reheat temperature control, boiler startup optimization, and boiler-turbine coordination.

Coal fired power plants have come a long way in the last decades to become generators of electrical energy with high efficiency and greatly reduced emissions. Big steps have been taken particularly with improved boilers, steam turbines and advanced cycles.

Model Predictive Control (MPC) being one of the most widely used model-based control technology has become common in the process industries over many years of practical application. The current drive for higher energy efficiency and lower emissions has made MPC applications a worthwhile investment, also for powerplants. ABB’s plant optimization solutions based on MPC have demonstrated their excellent performance and realized significant savings in operational and environmental costs.

For large utility power plants, one of the common applications of MPC today is the Combustion Optimization System (COS), which optimizes the distribution of fuel and air in the boiler to reduce emissions (particularly NOx), while improving combustion efficiency.

The Combustion Optimization System (COS) models the multivariable nonlinear relationships of the combustion process. Based on this combustion model and its multivariable optimizer, it determines the most suitable set points for closed-loop control in order to achieve the predefined targets and respect the imposed constraints.

This solution has resulted in significant improvements such as NOx reduction (15%), reduction of reheat spray flow (40%), and reduction of excess air (15%). This has substantial economic benefits such as increased power or steam generation efficiency and reduced emissions, resulting in annual savings in operating costs and typical payback times of 1 year or less.

In addition, Model-based solutions have been deployed in other areas of the plant, such as main and reheat temperature control, boiler startup optimization, and boiler-turbine coordination.

157 million kW hours of peak power

With the generator set of the pumped storage power station it will be possible to generate peak power during high power demand using water from the Feldsee, while the tail race flows into the Wurtenalm reservoir. At times of low demand, water can be pumped from the Wurtenalm reservoir up to the Feldsee. The generator set is designed for a power output of 70 MW and will generate about 157 million kilowatt hours of peak power annually.

At times of low demand, pumped storage power stations can utilize electric power by pumping water up to higher reservoirs. Later, at a time of high demand, electric power can then be generated and fed back to the grid. Today, with the Fragent group of power stations, Kelag already has a pumping capacity of about 100 MW.

The power generation from wind generators, which varies with the wind, can be ideally evened out by pumped storage hydro power stations. In addition, it is possible to generate regulating energy with the Kelag pumped storage power stations to compensate for the fluctuations in customer demand.
ABB’s energy-efficient solutions in focus at the World Future Energy Summit in Abu Dhabi

Close to 17,000 attendees, including top government officials, heads of global organizations, leading environmentalists and international investors, attended this year’s WFES event to discuss the future of renewable energy. At ABB’s high-tech exhibition stand, ABB showcased its solutions in four key areas: solar and wind generation, long-distance power transmission, green buildings and carbon management. The stand featured a number of intriguing exhibits, including the company’s solar tracker and the NorNed bi-pole cable—the world’s longest submarine cable with 580 km route length. A model of ABB’s well-known North Sea HVDC (High Voltage Direct Current) project received a lot of attention. The project reduced CO₂ emissions by nearly 1.5 million tons annually by replacing fossil-fuel generation. Leading power, oil and gas companies visiting ABB’s stand expressed a strong interest in using ABB’s pioneering HVDC technology. Another major attraction on the ABB stand was the Fourier Transform Spectrometer, which collects and transmits global CO₂ and methane densities from an impressive 650 km above the earth.
Total upgrade of Termobarranquilla CCPP in Colombia

Started in 2003 and finished in 2008, the Termobarranquilla CCPP has undergone a total upgrade resulting in a modern control system allowing efficient and smooth operation. The upgrade was realized in three steps to ensure uninterrupted power generation.

The original control system consisted of a hybrid solution with ABB’s Procontrol P13 and MOD300. The first upgrade in 2003 included an upgrade of the operator workplaces, replacement of the previous plant management system by the modern System 800xA as well as in-house training and commissioning on site. The aim of the second stage was to replace the MOD300 and include commissioning, supervision and training. Due to the complexity and the number of gas turbines, the upgrade had to be planned in close cooperation with TEBSA in order not to interrupt production.

No downtime and higher efficiency
The whole upgrade was accompanied by a close and flexible collaboration between TEBSA and ABB. All the upgrades have been installed with no downtime to allow TEBSA to deliver continuous, reliable and cost effective thermal power to the country. In addition to higher efficiency, the power plant is now easier to operate, provides more information for fast and easy decision making and has a more advanced management system for operation and maintenance.

The founding of Termobarranquilla S.A. (E.S.P.)

Known as TEBSA was a result of the 1992 energy crisis in Colombia. The Termobarranquilla project is the largest thermal generator in Colombia and also one of the cleanest. The plant consists of five Gas Turbines ALSTOM GT11N2, operating in combined cycle mode with two steam turbines, with a total output of 791 MW.
The System 800xA brings great benefits for the operation and maintenance of the Sohlstufe Hallein Power Station

Following the power stations Rott, Gamp and Wiestal, the Sohlstufe Hallein power station will now be included in the automation group of the Flachgau/Tennengau group of plants. Through the application of the ABB System 800xA, new possibilities are opened up for the operations management and maintenance of the group of plants. Previously these could only be achieved with great difficulty.

The power stations of the plant group are connected via a fiber-optic cable ring network, which is more than 50 km long. The application of ABB technology, which is based on Ethernet TCP/IP, allows the grouping of the power station functions over more than one plant, without having to extract the data with difficulty from a telecontrol system. A further advantage is the possibility of the remote parameterization of each individual controller from every network access point.

The distributed installation of the redundant servers further increases the security of the plant.

For the Sohlstufe Hallein power station, ABB supplied the automation, turbine controller and the synchronization for the generator sets. The controller for the general equipment provides joint control and reservoir-level regulation functions. Because of the availability requirements of a river hydro power station, the controllers are executed redundantly.

The power stations are on the rivers Salzach and Saalach and are operated by the local infrastructure company Salzburg AG.

The river hydro power station is equipped with 2 Kaplan bulb turbines with horizontal shafts, a rotor diameter of 3,900 mm and a nominal power per machine of 6,100 kW.

The generators - 2 AC synchronous generators—are directly coupled to the turbine shaft, and each generates a nominal apparent power of 7,600 kVA.

The energy transmission is made directly to the Salzburg AG medium voltage network (30 kV).
Control systems optimization improves the economic viability of the Neurath Block A–C power station in Germany

In mid 2006, ABB received the order for the replacement of the control system and for the upgrade of the instrumentation of blocks A to C of the Neurath power station from RWE Power AG. In the meantime, the order has been extended by the upgrade of the general part. The units A to C are lignite fired blocks with a power output of 300 MW each, which first went into production in 1972 and 1973, respectively.

Uniform process control system
In addition to the installation of a uniform, modern process control system, the objective of the measures is to significantly improve the operation and efficiency of the blocks. Numerous verification criteria were defined, which had to be fulfilled during comprehensive testing and test runs.

The ABB scope of supply for the local control systems comprises the updating of the reusable control system components and the replacement of older system components with the Procontrol P system. In addition, further developments of the control systems are to be implemented, such as new input modules, which assign a time stamp to binary signals.

Improved efficiency
To improve the operation and efficiency, the degree of automation was increased, significant improvements in the analog controls were made, and the new block control concept Modan was implemented. In the field area, old measuring transducers were replaced with new ABB devices and new instrumentation was installed.

In the meantime, the first block has been upgraded and the contractually agreed improvements could be verified by numerous tests and test runs. The RWE Power AG is now in possession of a modernized block, presenting the following, significant improvements:

- Fully automatic start-up and shut-down procedures
- Significant reduction of the decrease in the load required during boiler cleaning. For this aspect, additional reductions could be achieved in addition to the contractually agreed savings
- Increased efficiency of the block by improvements in the quality of the control
- More efficient and material conserving operation

The remaining two blocks will be upgraded in 2009. Based on the previous experience, all involved in the project expect a similar, positive result.
ABB highlights at POWER-GEN Europe, POWERGRID and Renewable Energy World Europe

Power-Gen Europe is the main exhibition and conference for the European power generation industry and has become the place to be for power technology and its business partners. Since 2007, POWERGRID (for Power T&D) and Renewable Energy World Europe are co-located with this event. You will find ABB in hall 8 featuring a broad portfolio of systems, products and services for the power industry.

Solutions for solar plants
ABB has been a leading force since the early 1990s in the solar power industry in just about every type of photovoltaic (PV) and concentrating solar power (CSP) technology that has been developed. Current state-of-the-art solutions will be demonstrated.

Solutions for hydro power plants
ABB focuses on the integration and optimization of plant automation and electrical balance of plant for hydro power including pumped storage plants.

Generators
ABB offers one of the most comprehensive ranges of generators for many applications.

Gas insulated switchgear
The main features of the ABB GIS, such as the extremely low space requirements and high reliability, offer smart and economic solutions for complex switchgear applications.

Electrical Balance of Plant (EBoP)
ABB offers complete EBoP solutions including a broad portfolio of products from “high to low voltage” levels. ABB can provide modular units for your projects through its integrated instrumentation, control and electrical systems.

Drives and excitation systems
ABB drives offer a product range that is simply the widest available by any manufacturer.

System 800xA for Power Generation
ABB’s award winning System 800xA provides you with a better way to achieve measurable productivity and profitability improvements. System 800xA is an integrated architecture specifically designed to give the power generation industry the best in class DCS solution for next generation power plants.

Power plant simulation and optimization
With the OPTIMAX® power plant simulation and optimization suite, ABB assists power generators in identifying potential performance improvements, enhance predictive maintenance and extend asset life-times.

Integrated multi-domain engineering and documentation with EIP
EIP is the new benchmark for efficient engineering. It ensures the consistent and concurrent workflow between multiple engineering domains in the automation and electrification of plants.

Instrumentation for the power industry
Based on ABB’s vast, global expertise in power generation applications, we have refined and developed the performance of our portfolio of intelligent instrumentation products to ensure that customers get a solution that meets their precise requirements every time.

Please refer to the enclosed flyer for more information on exhibits, presentations and locations.
E.ON activates control system order for high-efficiency power plant in the Netherlands

ABB will equip E.ON’s 1,113MW hard coal-fired power plant in Maasvlakte Unit 3, in the Rotterdam region, with a state-of-the-art power plant control system. The new super critical plant will have a thermal efficiency of more than 46 percent, making it one of the world’s most energy efficient coal-fired plants. Because of the high efficiency the CO₂ emissions of the new E.ON plant are approx. 20% lower than the average coal fired plant currently in operation in the Netherlands.

After the power plant in Datteln in Germany’s Rhein-Ruhr region, which was ordered in 2007, this is the second unit of their 1.100 MW class convoy of advanced super critical plants.

“This order demonstrates the trust E.ON places in ABB’s power plant control technology and expertise,” said Franz-Josef Mengede, head of ABB’s Power Generation business unit. “Our integrated systems combine the latest ABB platform with our extensive knowledge of power plant processes, resulting in very reliable operation, as well as reduced maintenance and operational costs.”

ABB’s scope of supply comprises a System 800xA control installation, with boiler protection and all instrumentation. This includes electrical actuators, which will be integrated into the process control system via a Profibus network, and as a highlight the integration of MV-switchgear into the control system via IEC 61850. ABB will also carry out the complete engineering, installation and commissioning.
**BoilerLife—a product in the OTPIMAX® product family**

To calculate the total degree of exhaustion of thick-walled steam-generating components which are subject to high pressure and temperature. The results are stored and accumulated to derive total stress factors and lifetime consumption of boilers and their individual components. These evaluations may automatically be executed on a daily basis or on user request. In addition, a set of standard reports is available. The new BoilerLife 5.0.2 release supports the EN-12952 norms and addition to the TRD norms. At installation time, users can choose if they desire calculation of lifetime consumption either according to the TRD and VdTÜV norms, or according to the EN norms.

---

**2009—events in brief**

<table>
<thead>
<tr>
<th>Event</th>
<th>Location</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABB Power Generation Days</td>
<td>Cologne, Germany</td>
<td>May 25–26</td>
</tr>
<tr>
<td>Power-Gen Europe</td>
<td>Cologne, Germany</td>
<td>May 26–28</td>
</tr>
<tr>
<td>VGB Conference</td>
<td>Mannheim, Germany</td>
<td>May 24–25</td>
</tr>
<tr>
<td>GT &amp; GT operation</td>
<td>Basel, Switzerland</td>
<td>September 1–4</td>
</tr>
<tr>
<td>go automation/Ineltec</td>
<td>Lyon, France</td>
<td>September 23–25</td>
</tr>
<tr>
<td>VGB Congress: Power Plants 2009</td>
<td>Bangkok, Thailand</td>
<td>October 7–9</td>
</tr>
<tr>
<td>WTE Forum 2009</td>
<td>Baden, Switzerland</td>
<td>November 10</td>
</tr>
<tr>
<td>Power-Gen International</td>
<td>Las Vegas, NV, USA</td>
<td>December 8–10</td>
</tr>
</tbody>
</table>

---

**ABB Schweiz AG**

Power Systems
Bruggerstrasse 72
5400 Baden
SCHWEIZ
Phone +41 58 585 11 11
Fax +41 58 585 30 80
powerplant.control@ch.abb.com

---

**ABB AG**

Power Systems
Kallstadter Straße 1
68309 Mannheim
DEUTSCHLAND
Phone +49 621- 381 30 00
Fax +49 621- 381 26 45
powertech@de.abb.com

---

**ABB AG**

Energy & Automation (EA)
Clemens-Holzmeister-Straße 4
1109 Wien
AUSTRIA
Phone +43 1- 60 100 0
Fax +43 1- 60 100 8910
office@at.abb.com