

Maritsa Improves Process Efficiency and Reliability with Honeywell Solutions



“Honeywell’s advanced technology helped improve process efficiency and reliability at the Maritsa East 2 plant. With Experion PKS acting as the nucleus to support our safety systems, advanced applications, field hardware devices and wireless technology, our operators and engineers now have timely access to data to make informed plant decisions resulting in better performance. Honeywell’s industry expertise, products, local service capabilities, competitive pricing and team approach helped us achieve excellent results.”

Michail Mitkov, Operations Manager, Maritsa East

Benefits

As one of the largest thermal power plants (TPP) in Bulgaria, Maritsa East 2 needed to modernize its legacy distributed control system and improve process efficiency and reliability while ensuring plant safety. After conducting an open bid for solution providers, Maritsa turned to Honeywell for its power industry and technical expertise to help update its plant.

Honeywell provided a complete solution anchored by its Experion® Process Knowledge System (PKS) for all of Maritsa’s process automation needs. With advanced applications including Safety Manager, Profit® Loop, Uniformance® PHD, field hardware devices and OneWireless™ solutions, Maritsa is able to provide operators and engineers with the information they need to improve plant performance. Other benefits include:

- Improved operational performance due to automated replacement of otherwise manual tasks
- Increased safety with proactive analysis and innovative alarm management to help reduce number of alarms
- Reduced energy costs helped boost plant efficiency
- Increased availability of startup heavy oil burner due to redesign and reconstruction
- Lowered startup time - all control loops based on patented Profit Loop technology
- Increased security - integrated Experion and safety solution maintains security of an independent environment from mainline control system



Honeywell modernized Maritsa East 2 and improved plant productivity.

Background

Maritsa East 2 is the largest TPP in Bulgaria with an installed capacity of 1465 MW. It consists of eight generating units, two of which are equipped with flue gas desulphurization plants. TPP Maritsa East 2 is a public limited company that is 100 percent state-owned with its main activity being production of electricity, as well as construction and repair activities in the electric and thermoelectric power engineering sector. It is one of the three power plants in the complex Maritsa East, which is situated in the southeastern part of Bulgaria.

Under Honeywell scope are units 1, 3 and 4. Each of these units has two coal-fired boilers on a common header to the turbine. Each boiler has four coal mills and eight startup heavy oil burners. All subsystems are unit control, but coal handling is under Honeywell direct or supervisory control.

The various European high-voltage electrical transmission systems are connected to each other and were expanded in 2003 with the Transelectrica (Romania) and NEC (Bulgaria) in order to provide a stable, secure and efficient electrical network within Europe. The UCTE organization, founded in 1951, provides standards and procedures and coordinates the network requirements of the current and future EU members in order to be able to link almost 450 million people synchronously. Being part of this network and organization, the Maritsa power station has to pass the primary and secondary frequency support procedures according to the UCTE rules.

Challenges

At the TPP Maritsa East 2 plant, the company wanted to update its existing control system that lacked redundancy and functions such as maintenance diagnostics and upgrade to a more advanced technology to improve process efficiency and reliability.

“Most of our startup procedures on the main equipment were manual and our heavy oil startup burner was very unreliable,” said Michail Mitkov, Operations Manager, TPP Maritsa. “We wanted to move to a fully automated control system that would increase plant performance and modernize our entire facility.”

Solution

After an open bid conducted under Bulgaria local procurement law, Maritsa selected Honeywell’s proposal to help modernize its plant.

“Honeywell presented the best overall solution from both a technical and financial standpoint,” said Mitkov. “Its presence and experience in Bulgaria and knowledge of the local power generation market were also key factors in the decision.”

Honeywell provided a completely integrated solution to Maritsa’s plant automation needs that included Experion PKS, Uniformance PHD, Profit Loop, Safety Manager, Field Device Manager, eServer, field transmitters and configuration tools, and Honeywell’s OneWireless technology.

Honeywell’s comprehensive automation solution has improved the ability of plant operators to gather process data and transform it into knowledge for faster, more effective decisions.

“Although the entire system has only been in operation for five months, the results so far are excellent,” said Mitkov. “Experion has superseded all other systems we have installed and our operators are able to get a much more accurate picture of plant operations allowing them to ensure safety of assets and people.”

With plans to further integrate and improve its facility, Maritsa will utilize the Honeywell service and engineering expertise that demonstrates deep product, system and process knowledge. “Honeywell fully understands our needs and has demonstrated a future modernization path for our facility to truly reach its goal of being a major power producer,” concluded Mitkov.

Thanks to Honeywell’s team, Maritsa was able to modernize its facility with a safe, reliable, robust automation system to help enhance efficiency through better controls, higher reliability and less downtime.

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More Information

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Automation & Control Solutions

Process Solutions

Honeywell

2500 W. Union Hills Dr.

Phoenix, AZ 85027

Tel: +1-602-313-6665 or 877-466-3993

www.honeywell.com/ps

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