

BEATING STRICT TIMEFRAMES TO DELIVER AT TURKISH POWER PLANT

PROJECT DETAILS

Location:	Kirikkale Independent Power Plant (KIPP), Kirikkale, Yahşihan District, Turkey
Completion Date:	June 2018
Contract Scope:	Design, engineering, procurement and construction plus maintenance contract (by our partner Gizil Enerji)
Applications:	Frost protection for water and steam lines supplying two gas turbines, two heat recovery steam generators and one steam turbine, winterization of instruments and process temperature maintenance for adjoining water treatment plant (WTP).
Technology:	32 km of nVent RAYCHEM heating cables (self-regulating, power limiting, polymer insulated (XPI) and mineral insulated (MI) heaters, and 21 power distribution panels equipped with PASC controllers



KEY CHALLENGES

The new Kirikkale Independent Power Plant (KIPP) was designed to deliver 7,557GWh of electricity per year to Turkey's National Interconnected System. So a swift construction and smooth running of the plant was essential, and our customer had a very strict deadline with serious penalty clauses for late delivery.

The project involved pipe freeze protection of complex water and steam feed pipes for the plant's turbines, as well as process temperature maintenance for the dedicated water treatment plant.

During the construction phase some delays in the installation of vital pipelines and instruments meant that nVent and Gizil Enerji teams were under severe time pressure to complete the heat tracing erection works.

In addition, the project had three unforeseen EHT scope increases which further complicated the installation process. This required additional designs and materials - especially MI heaters - in a drastically shortened timeframe.



SOLUTION

To ensure turbine feed pipes and water treatment conduits were effectively protected, 32km of nVent RAYCHEM Self-Regulating (SR), VPL Power Limiting, MI and XPI heating cables was installed, while 21 power distribution panels, equipped with Proportional Ambient Sensing Control (PASC) technology, were fitted to provide simple, accurate and energy efficient heat tracing control. The finished installation totaled 2,148 EHT circuits.

By increasing the number of employees on site and improving team efficiencies, nVent and their Partner Gizil Enerji were able absorb the scope increases and ensure the expanded scheme of work was completed according to the client's strict deadline.

Throughout the installation, our teams maintained a continuous dialogue and monitoring process of the scope changes with the customer. As a result, potential disputes surrounding the scope of work were mitigated and the customer was kept informed of each stage of the project's progression.



BENEFITS

- As a global leader in heat tracing solutions, nVent is capable to handle turnkey projects of any size and scope with tight deadlines.
- Our experienced engineering teams have rigorous processes and design tools in place to handle scope changes fast and accurately, and to report progress continuously.
- The rapid response of the nVent supply chain allowed the onsite teams to cope with the unexpected scope changes without delay to the project.
- Our local Partner Gizil Enerji has trained and qualified personnel to provide best-in-class site services, and is committed to provide EHT maintenance services during the plant's operational life. All supported by nVent's project services organization.
- nVent's proven EHT systems and advanced control and monitoring solutions guarantee a safe, reliable and energy-efficient operation of this power plant.



nVent was awarded the KIPP contract because of its expertise in turnkey projects, its local presence with Partner Gizil Enerji, and its short response time and quick adaptation to field changes.



The valuable lessons learned during this project have allowed nVent's regional teams to further refine their adaptable, professional approach to large installations and bring the benefits of practical experience to future power plant projects.

North America

Tel +1.800.545.6258
 Fax +1.800.527.5703
thermal.info@nvent.com

Europe, Middle East, Africa

Tel +32.16.213.511
 Fax +32.16.213.604
thermal.info@nvent.com

Asia Pacific

Tel +86.21.2412.1688
 Fax +86.21.5426.3167
cn.thermal.info@nvent.com

Latin America

Tel +1.713.868.4800
 Fax +1.713.868.2333
thermal.info@nvent.com



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