Press Release

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Contact:
Katharina Weinmann
BAUER Aktiengesellschaft
BAUER-Strasse 1
86529 Schrobenhausen, Germany
Phone: +49 8252 97-3947
public.relations@bauer.de
www.bauer.de/en

Anything but old school: Geothermal heat system for high school in Diessen

- On the sports fields of the Ammersee High School, Bauer Resources is constructing a geothermal probe field to supply heat and cooling
- A total of 57 single-U probes installed at depth of 100 m
- Project running smoothly despite ongoing school operation

Diessen am Ammersee – How does geothermal energy actually work? How deep in the ground do you have to drill in order to extract heat? And how does that contribute to climate change mitigation? Stimulating questions like this could soon become part of classroom discussions at the high school in Diessen. The inspiration is the new geothermal probe system that BAUER Resources GmbH is installing as part of the school's expansion. In the future, this system will supply the new building of the high school with heat and cooling, making the school not only larger but also greener.

Practical, efficient, effective
The first of three construction sections for this sustainable project broke ground in September 2024. A total of 57 probes were drilled into the ground – each reaching an impressive depth of 100 m. Two powerful KLEMM KR 805 drilling rigs and two drilling teams accomplished this task, completing a total of 5,700 drilled meters. The choice of technology is particularly worth noting, as explained by Site Manager Mirco Muelling from Bauer Resources: “Instead of the typical double-U probes, single-U probes were used here.” What does that mean? With double-U probes, the doubled pipe layout ensures a higher heat transfer, while the single-U probe manages with one pipe. “These are more practical, more economical and nearly as efficient – which makes them ideal for a system of this magnitude,” explains the experienced site manager. To ensure that the geothermal heat can be utilized effectively, the team will also excavate 2,300 m³ of trenches where they will install more than 8 km of pipelines. The probes will then be connected to the heat pump via a central distribution shaft. Finally, the system will be filled with roughly 13,500 l of a water-glycol mixture and undergo hydraulic balancing.

School meets construction site
A construction site in the middle of ongoing school operation? That sounds like chaos, but everything is running like clockwork here. A strictly fenced-in work zone ensures that no one will end up in the construction zone accidentally. “Keeping students safe is our top priority, which is why the entire site perimeter is monitored around the clock,” remarks Site Manager Mirco Muelling The project logistics is also absolutely on the mark: Material deliveries are scheduled exactly during time windows where no school buses are in transit.

This allows for smooth transport without disrupting daily traffic. “Precision, planning and attention to detail – this is the key to success,” remarks the site manager in summary.

Generating geothermal heat while the games go on
After completion in March 2025, the geothermal system will provide heating and cooling for the school – directly from the sports fields. The geothermal probe field was installed in the middle of a once-green lawn area. “Thanks to the deep anchoring of the probes, the field can still be used for athletic activities. So the sports field will be preserved in its old form – and soccer fans can rest easy,” emphasizes Robert Sherlock, drilling specialist at Bauer Resources. Beyound its unique location, the site also stood out because of its vicinity to Ammersee Lake. A breathtaking view of this picturesque lake was practically the icing on the cake for the geothermal heat specialists. “We’ll definitely miss this view once the project is completed,” the drilling specialist says with a smile, summing it up perfectly “A green project in a green environment.”

Images: pressebild-press-image-geothermieanlage-geothermal-heat-system-diessen-bauer-resources…


(1) Bauer Resources is constructing a geothermal probe system for a high school in Diessen with a spectacular view of Ammersee Lake.


(2) Using two powerful KLEMM KR 805 rigs, two drilling teams executed roughly 5,700 drilled meters.

(3) In total, 57 geothermal probes were installed at a depth of 100 m.

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About BAUER Resources Group

The regionally organized BAUER Resources GmbH is aligned to projects around the world with its subsidiaries in Germany, Africa, the Middle East and South America and has extensive expertise in the areas of drilling services and water wells, environmental services, constructed wetlands, mining and rehabilitation. With more than 30 years of experience, BAUER Resources GmbH's Bauer Umwelt business division is one of the leading specialists in site remediation, soil remediation and waste disposal, both in the domestic market and internationally. As an expert in pollution reduction, Bauer Umwelt offers a diverse range of services for all environmental issues. Other companies of the BAUER Resources Group are GWE GmbH, SCHACHTBAU NORDHAUSEN GmbH and SPESA Spezialbau und Sanierung GmbH. More at https://resources.bauer.de/en.

About Bauer

The BAUER Group is a leading provider of services, equipment and products dealing with ground and groundwater. The Group can rely on a worldwide network on all continents. The Group’s operations are divided into three forward-looking segments with high synergy potential: Geotechnical Solutions, Equipment and Resources. Bauer profits enormously from the collaboration of its three business segments, enabling the Group to position itself as an innovative, highly specialized provider of products and services for demanding projects in specialist foundation engineering and related markets. Bauer therefore offers suitable solutions to the world’s greatest challenges, such as urbanization, the growing infrastructure needs, the environment, as well as water. The BAUER Group was founded in 1790 and is based in Schrobenhausen, Bavaria. In 2023, it employed about 12,000 people and achieved total Group revenues of EUR 1.8 billion worldwide. More information can be found at https://www.bauer.de/en. Follow us on Facebook, LinkedIn, Instagram and YouTube!