

Press Release

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Special wells with GWE screen systems to safeguard Dubai's water supply

- Storing 26 million m³ of water beneath the desert to secure the water supply
- GWE supplies 960 PVC double-walled screens with glass bead filling for special wells
- Other countries in the Middle East interested in the system for similarly projects

Dubai, UAE – The Dubai Electricity and Water Authority (DEWA) is currently implementing one of the largest future-oriented infrastructure projects in the Emirates. The goal is to store roughly 26 million m³ of water from sea water desalination plants in a natural underground reservoir. This should secure Dubai's water supply for 90 days in the event of an emergency. To construct the required special wells, GWE GmbH is supplying the screen systems.

The preliminary studies for the project began roughly four years ago. In the first phase, the authorities tested various well configurations, such as standard extraction wells, standard monitoring wells and special wells. This last category concerns Artificial Storage and Recovery Wells (ASR), which are used to inject and extract water in the subsoil. The material qualities for ASR wells are subject to particular requirements, since it has to be ensured that both injection and extraction can be carried out without restrictions on the long term and as energy efficient as possible; ultimately, wells have a tendency to become clogged during their lifecycle.

GWE's double-walled screen system was used starting in the first phase as part of the special well tests. The test wells were closely monitored over a period of two years and the results were analyzed in a study. The study showed that the GWE double-walled screen system is ideally suitable for ASR applications, so the authorities decided to use this well system for the implementation phase of the project.

A total of 542 wells with different depths were drilled for the project. The ASR wells occupy the largest share with roughly 108 and are also the deepest wells, at a depth of 70 m. They form the centerpiece of the project for which GWE is supplying 960 factory-made turnkey PVC double-walled screens with glass bead filling. What makes this screen system unique is that it comprises an outer screen (diameter 640 mm) and an inner screen (diameter 470 mm). The two screens have different slot widths and the interstice is filled with glass beads. They ensure minimal entry resistance. The screen system also features excellent characteristics for regeneration with a variety of methods, thereby guaranteeing long-term operation of the wells.

The order volume for GWE is roughly 3.1 million euros. “Other countries in the Middle East have already expressed their interest in the system for similarly oriented projects,” reports Markus Hollmann, GWE Managing Director, with enthusiasm. The project in Dubai is planned to conclude in 2025.

Images: pressebild-press-image-filter-dubai-spezialbrunnen-special-wells-dewa-gwe...



(1) The PVC double-walled screens are manufactured in GWE GmbH's plant in Peine and dispatched to Dubai as turnkey units.



(2) The space between the external and internal screens is filled with glass beads.

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About GWE

The GERMAN WATER and ENERGY GROUP moves the world of today and tomorrow with innovative solutions. With several business divisions and subsidiaries, we act as a manufacturer of pioneering products and as a developer of integrated applications for well construction and geothermal energy. Like no other company, we combine a broad spectrum of expertise in water extraction, irrigation and well planning and offer a comprehensive portfolio of products and services. Based on many years of experience, state-of-the-art technology and pioneering in-house developments, our specialists realize even the most unusual projects. As a [BAUER Resources GmbH](https://www.bauer-resources.com) company, we have access to a global network and have already successfully implemented several thousand well and geothermal projects together with our partners. For more information, please visit www.gwe-gruppe.de.

About Bauer

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