

Alcad batteries at the heart of corrosion protection system on Qatar Petroleum wellheads

- *The batteries are built to withstand the desert heat, therefore ensure a high level of resilience for equipment in the Dukhan Gas Field.*
- *They are combined with solar photovoltaic modules to protect the integrity of gas wellhead casings.*

Oskarshamn, Sweden, October 3rd 2018 – Alcad, one of the world's leading manufacturer of nickel-technology battery solutions for industrial power backup, has supplied battery systems to form the heart of a solar-powered cathodic protection scheme at Qatar Petroleum's Dukhan Gas Field.

TSS4U, a specialist solar system integrator, has incorporated the Alcad batteries, solar photovoltaic (PV) modules, cathodic protection equipment and controllers into six autonomous systems that will protect the integrity of gas wellhead casings.

Alcad supplied a total of 114 cells in six battery systems, each of which comprises 19 Alcad PV1115 cells. Each battery system stores up to 1030 Amp-hours (Ah) of energy and supplies 24 Volts (V) to provide up to 3 days of autonomous operation for cathodic protection and up to 7 days of power for communication and control equipment.

At the heart of the solar-powered cathodic protection application, the battery systems are designed to store solar energy throughout the day and discharge it to provide a continuous electrical current to the steel wellhead casings that maintains a small electrical charge in the steelwork. This charge prevents the chemical reactions that happen naturally when steel corrodes to iron oxide, also known as rust. Because overcast days are rare in the desert climate, 3 days of reserve energy will ensure that the system is able to operate continuously.

The cathodic protection systems will provide confidence in the structural integrity of the wellheads. As a result, they will reduce the need for maintenance and manual inspection of assets in remote and inhospitable sites.

Alcad's battery systems are based on its PV solar cells. They are purpose-built for solar-powered applications in off-grid and remote industrial applications. Alcad's PV solar battery systems are capable of achieving a long and reliable lifetime of up to 15 years in the Qatar desert, where temperatures can fluctuate from 5 °C to 50 °C.

A long lifetime is important in reducing the Total Cost of Ownership (TCO) of a battery installation and optimizing running costs for remote facilities, where logistical costs for replacing time-served batteries can be significant.

High temperatures can impact the performance of batteries, with the lifetime of lead-acid batteries dropping away as the temperature rises. However, nickel technology batteries such as Alcad's PV solar batteries can tolerate high temperatures, meaning that they are well suited to oil and gas installations in the Middle East.

"Continuous unbroken electrical supply for cathodic protection systems means that Qatar Petroleum's operators can have faith in the integrity of their installations. Alcad's battery systems support this with their proven ability to work reliably over a long life in desert conditions." said Jan-Willem Linsen, Director of Operations for TSS4U.

About ALCAD

Alcad is one of the world's major suppliers of nickel-cadmium batteries for industrial and commercial applications. The company offers an extensive range of cutting-edge battery solutions, designed to deliver high performance, safety and reliability.

With a commercial presence in more than 80 countries worldwide, the Alcad team supports customers with a broad portfolio of services, from initial consultancy through sizing, installation and commissioning to after-sales with an uncompromising focus on quality.

Alcad's long established ISO 9001 and ISO 14001 certified production sites and headquarters in Sweden incorporate a century of knowledge and experience to provide advanced battery solutions for the global industrial standby market. www.alcad.com

About TSS4U

Founded in 2003, TSS4U has extensive global experience designing and delivering reliable and high performance solar energy solutions.

TSS4U solar energy solutions are designed for reliability, even in the harshest conditions. TSS4U has deployed solar and hybrid off-grid solutions for mission-critical applications including telecom cell towers, oil and gas platforms, water treatment plants and industrial microgrids.

TSS4U is headquartered in The Netherlands with local offices in Abu Dhabi and Malaysia. TSS4U also work together with a network of experienced local partners across the Middle East, Africa and Asia Pacific. www.tss4u.com

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