



Creating a safer work environment thanks to TW TG's Neon Valve Sensors

Li-SOCl₂ technology, a solution that mitigates industrial risk, compatible with ATEX environments.

Key benefits for TW TG

- A mature and reliable technology that allows for peace of mind
- Batteries with unmatched autonomy: estimated 5 years lifetime
- A traceability of the cells that match ATEX Zone 1 / IECEx requirements
- Expert advice, flexibility, and top quality service from Saft's engineering team

Features of Saft's power solution

- 30-year track record supplying primary lithium battery technology, that has proven to offer excellent reliability
- A unique lifetime calculation model with proven correlation to ensure battery autonomy in operation
- Comprehensive ATEX-compliant batteries operating properly from - 60°C to + 85°C
- Dedicated development team focused on designing a fully bespoke battery solution

The challenge: Bringing together sensors, mobile communication, and large system integration to create a safer, sustainable, and more productive working environment.

Dutch tank storage company, Vopak, operates a total of 66 gas, oil, chemical and bio fuel storage terminals throughout the world. That's a total of more than 250,000 valves of different variations that require continued monitoring in order to avoid spillage and potential hazardous situations.

To address these concerns, Vopak has teamed up with TWTG to create a smart sensor that can be retrofitted on manual valves to offer granular insight into operations and industrial assets in ATEX

/ IECEx zone 1 environments. The devices are part of TWTG's NEON product line; they are battery-powered and connected using LoRaWAN technology. They continuously monitor infrastructure status, sending near real-time updates, thus increasing the overall safety of Vopak's sites and optimizing business processes.

Having to comply with ATEX European regulations makes the deployment of these devices a complex engineering quest. Requirements include an extended ambient temperature range of - 40°C to + 80°C, which must be combined with cutting-edge, low-power engineering. Additionally, a minimum of 3 years battery life was requested to ensure reliability and the price had to allow for market competitiveness. A real conundrum when it came to finding a battery that met all of these standards.

The solution: Saft LS 17500 cell, compliant with ATEX applications.

TWTG spent many hours testing various battery solutions before deciding on Saft's LS 17500 cell. Saft's specialized knowledge, ATEX compliant solutions, and experience working in TWTG's target markets weren't the only factors that prompted TWTG to choose Saft. Saft exhibited flexibility when special requests were made to further optimize the traceability of the device's parts — one of the key elements for ATEX / IECEx compliance requirements for TWTG's solution. Our team of experts worked closely with TWTG's engineering team to find the best battery for their use case and optimize the device's design within regulations.

“Dedicated engineers have been very valuable to us. The contribution of Saft during the development of our NEON products process was tremendous.”

Joost Peters, Product owner at TWTG



26 Quai Charles Pasqua
92300 Levallois
www.saftbatteries.com
energizeloT@saftbatteries.com



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