Armstrong Industrial partners with Hystar to deliver hydrogen installations

Armstrong Industrial has formalized a strategic partnership with Hystar, the Norwegian developer and manufacturer of ultra-efficient PEM stacks, to deliver integrated and modular hydrogen production plants ranging from 1 MW to 20 MW with larger options available.

The collaboration combines Hystar's high-efficiency proton exchange membrane (PEM) stack technology with Armstrong Industrial's balance-of-plant (BOP) integration expertise, providing customers with scalable and industrial-grade green hydrogen solutions.

Michael Cline, General Manager of Armstrong Industrial – a division of Armstrong Fluid Technologies – said the partnership positions the companies at the forefront of the rapidly expanding hydrogen market.

Combining strengths. "While Hystar focuses on producing the world's most efficient PEM stacks, Armstrong Industrial brings its decades of manufacturing experience to integrating complex systems for industrial applications," said Cline. "By combining these strengths, we are providing a single, highly competitive product offering into the green hydrogen market."

He adds that their involvement in this sector aligns directly with both companies' strategic commitment to sustainability through energy efficiency and lower carbon emissions.

"We are seeing strong demand for electrolyzers in the years ahead," he explains. "With our existing competencies, Armstrong Industrial is well positioned to become a global force in integrating electrolyzers that are designed to last for decades and are easily maintainable."

Complete systems. The partnership supports a strategic focus on stack innovation and serial manufacturing, while working with experienced integrators to deliver complete systems. The model sees Hystar retaining responsibility for stack performance, while Armstrong assumes responsibility for the surrounding systems – including power conversion, thermal management, water treatment, gas handling, safety systems, enclosure integration and system controls optimization.

According to Mark Browne, Product Specialist – Hydrogen at Armstrong Industrial, the collaboration has been developing for nearly two years now, with increasing engineering interaction in recent months. Joint on-site workshops in Oslo and coordinated customer engagements in markets such as Poland have strengthened technical and commercial alignment.

"This makes the arrangement a fully aligned engineering partnership rather than a conventional supplier relationship," said Browne.

Modular scalable solutions. Armstrong designs and integrates these systems into purpose-built, non-containerized enclosures for a 40-year operational life and lower running costs. These units also have improved maintenance access compared with repurposed container solutions.

"Our modular format allows simplified expansion to larger hydrogen production capacities," Browne added. "This ensures that customers investing at 5 MW today can scale efficiently towards 20 MW and beyond."

Hystar's CEO, Fredrik Mowill, highlighted that the partnership brings together unique capabilities.

"Having two players leverage each of their special focus areas in a unified front – to deliver reliability and performance for customers – is a critical requirement for this industry to move forward," Mowill said. "Hystar and Armstrong together provide that."

Stringent standards. He emphasized that industrial hydrogen projects demand stringent standards and accountability for complex, integrated systems.

“Armstrong has valuable experience as a large player in industries such as refineries and data centers, delivering to the highest standards,” Mowill said. “We are convinced that Armstrong, with their experience and capability, is the ideal choice for this partnership.”

He also noted that reputation is critical in the emerging hydrogen sector, with project success or failure directly impacting on Hystar’s standing in the market.

“That is why we seek deeply involved partners whose experience critically complements our own,” he said.