SGS helps 44west verify solar power reliability during transatlantic crossing

Ensuring dependable power throughout unsupported Atlantic rowing challenge

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BAAR, SWITZERLAND, April 7, 2026 /EINPresswire.com/ -- SGS, the world's leading testing, inspection and certification company, partnered with the Swiss rowing team 44west ahead of the World's Toughest Row – Atlantic to independently test and verify the reliability of the solar photovoltaic (PV) system powering the vessel during its 4,800 km unsupported ocean crossing.

With no backup energy source onboard, the team's ability to navigate, communicate and run essential equipment depended entirely on consistent solar output.

Across 31 days between La Gomera and Antigua, the team faced conditions that can severely impact solar performance. Salt spray, high humidity, UV exposure, constant mechanical stress and sharp temperature swings all posed risks to panel durability and electrical safety. Even minor degradation could have disrupted critical systems, prompting 44west to engage SGS to confirm whether the PV system could operate reliably throughout the crossing.

SGS performed a comprehensive testing program aligned with IEC 61215 and IEC 61730 standards. Visual inspections identified defects that could allow corrosion or moisture ingress, while insulation resistance testing ensured electrical isolation to reduce seawater related hazards. Wet leakage current testing confirmed safe operation under saturated conditions.

Performance testing under standard test conditions verified maximum power output and efficiency. Environmental simulations reproduced the expected marine stresses, including salt-mist corrosion, sand abrasion, outdoor exposure and humidity-freeze cycling. These tests

validated the system's ability to maintain energy production despite continuous environmental pressures.

Results confirmed that the PV panels remained structurally sound, electrically safe and stable in output. During the crossing, they consistently delivered 1.2-1.5 kilowatt hours per day, enough to power navigation, desalination and satellite communications. In one instance, the system enabled a satellite phone call home after days of rough weather, demonstrating how dependable renewable energy directly supported the crew's well being.

By validating system performance before departure, SGS helped the 44west crew manage energy confidently throughout the race. Instead of operating on uncertain assumptions, the team could make informed decisions about equipment use, allowing them to focus fully on performance and safety.

As solar technology is deployed in increasingly challenging environments, from offshore locations to remote and high-altitude installations, independent testing is essential to confirm durability and performance. The collaboration with 44west shows how trusted verification can turn solar PV systems into dependable power sources capable of supporting critical operations in real-world extreme conditions.

Through its global laboratory network and renewable energy expertise, SGS provides environmental durability testing, performance benchmarking, corrosion assessment and lifecycle assurance services. These solutions help ensure solar technologies perform reliably wherever they are used, from demanding expeditions to large scale energy infrastructure.

To discover more visit: 'Proving Solar Reliability: From 44west to Global Energy Systems.'

Ruth Roy
Sugarloaf Marketing
+44 7933 563883
email us here