

# Shared goals lead to a successful partnership



In the pursuit of a cleaner and sustainable future, the demand for renewable energy, particularly from wind power, has witnessed remarkable growth over the years. As the wind energy sector continues to thrive, companies strive to innovate and provide improved solutions for the erection, assembly, and maintenance of onshore and offshore wind turbines. One collaboration that stands out in the field of wind energy equipment is the partnership between SpanSet Axzion, which has been revolutionizing the market with a comprehensive range of products and services designed to meet the unique challenges of the sector.

#### **The synergy of SpanSet and Axzion**

The partnership brings together two traditional companies, each with a long-standing history of excellence in their respective areas. Founded in 1991, Axzion has made a name for itself as a specialist in the development of lifting beams, grippers, and other load handling equipment specifically designed for the assembly of wind turbines. On the other hand, SpanSet GmbH & Co. KG is a recognized leader in lifting technology, load securing, and personal protective equipment against falls from height (PPE). The expertise of both companies complements each other, creating a powerful synergy that allows them to provide seamless solutions for the construction and operation of wind turbines.

#### **The Upending Tool: a breakthrough lifting device**

One of the most notable innovations from the collaboration is the Upending Tool, a revolutionary lifting device that has been proven since 2016 and stands as the world's largest grab, capable of raising monopiles weighing up to a staggering 2,500 tonnes with a diameter of up to eight meters. Its versatility and efficiency enable it to work seamlessly on both jack-up and floating installation vessels, making it an indispensable asset in the construction of offshore wind farms.

The implementation of the Upending Tool has been a success story for numerous high-profile projects in the North Sea and beyond. From the Hornsea 2 and Dogger Bank A wind farms to the Yunlin offshore wind farm in western Taiwan, the tool has demonstrated its capability to handle the most demanding tasks efficiently and safely.

#### **DNV certification and testing capabilities**

Ensuring the reliability and safety of lifting equipment is of paramount importance in the wind energy industry. To this end, Axzion SpanSet operates its own testing facilities to simulate the lifting of heavy loads. The test stand in Neustrelitz, Mecklenburg-Western Pomerania, is designed to handle loads of up to 3,000 tonnes and has been certified by DNV, a leading classification society, for its role in manufacturing load lifting equipment for offshore applications. Additionally, the company has commissioned another test facility in Großefehn, Aurich, further enhancing their testing capabilities and commitment to quality.

#### **Innovative solutions for rotor blade assembly**

The company has also developed innovative solutions for rotor blade assembly. Among them is the SBI rotor blade lifting beam, designed in collaboration with wind turbine manufacturers. This specialised lifting beam boasts a load capacity of 30 tonnes and can be controlled remotely, allowing for safe and efficient assembly of rotor blades even under challenging wind conditions.

The SBILight Traverse 2.0 has also been introduced, an improved version of its predecessor, specifically designed for single rotor blade assembly. It is more flexible, robust, and lighter, making it highly effective even in high wind speeds of up to 12 m/sec. The traverse's telescopic design enables easy transportation to construction sites using standard trucks, significantly reducing logistics challenges.

With an optional self-adapting support system, the SBI-Light 2.0 adapts much more easily to the different shapes of the rotor



blades to be assembled. The traverse can thus safely take on and handle diverse blade shapes with a blade weight of up to 30 tons.

A high flexibility and short set-up time when changing rotor blades make this equipment particularly beneficial for use during servicing different wind parks. The closed C-frame guarantees best possible stability, avoiding dropping the gripped rotor blade down the side and protects it against damage caused by robust handling in everyday site operation. Axzion has shortened the hook height of the traverse six meters, providing the user with more flexibility with regard to crane classification.

For a particularly environmentally-friendly assembly, the SBI-Light 2.0 has been equipped with akku-driven electro motors. Compared to traditional systems it is maintenance-free. Even in temperatures of  $-10^{\circ}\text{C}$  the akku can work for up to 16 hours. A diesel generator is not required, and the

traverse is independent of external power supply. For 24-hour operation a charging station with an exchange battery can be connected within a few minutes.

#### Enhancing safety with personal protective equipment

In line with its commitment to safety, SpanSet specialises in personal protective equipment against falls from height (PPE). On wind turbines and meteorological masts, workers use the Clima Tec system, a combination of safety harness and work positioning harness. The company offers a variety of rescue and evacuation systems to ensure the safety of personnel in case of emergencies.

SpanSet also provides Magnum-X round slings, known for their exceptional lifting capabilities, with load capacities of up to 500 tonnes. These round slings are made with high-performance fibres, making them significantly lighter and more compact

compared to conventional options. Their reduced volume reduces wrinkling during lifting, enhancing their longevity and safety.

#### Environmentally-friendly approach

In addition to the high-performance lifting equipment, SpanSet Axzion prioritises sustainability and environmental responsibility. The SBI-Light 2.0, for instance, is equipped with eco-friendly, battery-driven electric motors, eliminating the need for a diesel generator and making the traverse maintenance-free. With up to 16 hours of operation in temperatures as low as  $-10^{\circ}\text{C}$ , the traverse ensures reliable performance even in challenging weather conditions.

#### Meeting the needs of a growing market

With the ever-increasing demand for wind energy and the rapid growth of the wind energy sector globally, the company's continued dedication to innovation and excellence places it at the forefront of providing reliable and efficient solutions for the construction and operation of onshore and offshore wind farms. Their comprehensive range of products and services, from the groundbreaking Upending Tool to the versatile SBI-Light Traverse 2.0 and environmentally-friendly equipment, demonstrates their commitment to delivering top-notch solutions to meet the evolving needs of the wind energy market.

As the wind energy industry continues to evolve and expand, the collaboration between SpanSet and Axzion is poised to play a pivotal role in driving the progress and success of wind energy projects worldwide. With their commitment to safety, efficiency, and environmental responsibility, they are set to contribute significantly to a sustainable and cleaner energy future.

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