Case Study 19: Wind Turbine Access

Hackberry - Albany, TX

Turbine: Siemens 2.3MW

Contractors: Lankford Company Inc.

Project Scope:
Access for blade inspection and repair work for Siemens 2.3 MW turbines

Challenges:
• 360 degree access needed to perform repairs at multiple locations on blade surface
• Extremely hot site conditions for uptower rigging and installation work required more active health monitoring
• Limited time schedule for the work

Solution:
• Spider provided a 5 x 10 ft (1.5 x 3 m) configured 360 Blade Access Platform (BAP) with independent lifeline.
• With Spider’s expertise in safety, rigging and training, Lankford Company was able to bring in the 360 BAP closer, could simply adjust to the larger blade tip with the manual winch, and could easily access the blade repair area.
• With the 360 BAP assembled on the ground, workers engaged the blade tip in less than 8 minutes to start the work.
• Storage buckets positioned the workers’ tools at waist height for added productivity.
• With both a primary and secondary suspension wire rope to each hoist, the workers were able to attach their fall protection lanyards directly to the engineered PFAS safety anchor device on the walk-thru stirrup. This point is also engineered for use with a descent device, if users choose not to use the hoists’ no-power controlled descent system.
• Compared to other equipment options, the Lankford crew was able to get working very quickly.
• Siemens recognized this platform system in its national newsletter for ingenuity in wind farm maintenance.

Check out the product featured in this case study:
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Case Study 20: Wind Turbine Access

Costa Rica

Turbine: Neg Micon 750 KW

Contractor: CR Corporation

Project Scope:
Entire blade tip replacement and additional blade repair work on Neg Micon 750 KW turbine

Challenges:
• 360 degree access required with high load rating to support workers and tools
• No rigging points available on the nacelle
• Very short nacelle, making rigging points also very close to the tower
• Small tower with tight clearance
• Remote location in Costa Rica
• Crew unfamiliar with swing stage platforms

Solution:
Spider custom designed the blade access solution to ensure user productivity. The 360 Blade Access Platform (BAP) was powered with three SC1500 hoists allowing faster mobilization and more load capacity. The platform featured an alternative stirrup design to improve platform stabilization and reduce the load on the hoists. In collaboration with CR Corporation, Spider installed engineered slings on the blade root and hub to provide the rigging solution. Spider performed multiple onsite training sessions.

Check out the products featured in this case study:
360° Blade Access Platform - page 191
SC1500 Hoist - pages 26-32

Custom engineered solution
Call Spider if your project requires more than standard equipment.
Case Study 21: Wind Turbine Access

Los Vientos Wind Farm - Lyfor, TX

**Contractor:** Lankford Company

**Project Scope:**
Installation of VG rails to blades

**Challenge:**
• Siemens 108 3.2 MW turbine with an extremely large blade length of 171 ft (52 m) means the point of capture was over 40 ft (12.2 m) from the tower

**Solution:**
360 Degree Blade Access Platform with special Siemens’ steel sub frame, enabling the platform to traverse far enough away from the tower to capture the blade tip. Spider’s solution provided better ergonomics, greater safety, and a higher quality final product compared to alternative solutions.

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Check out the product featured in this case study:

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