



Personnel access

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In this, the third of four articles, we will examine the rope access, work positioning and enclosed space entry capabilities of ActSafe Powered winches.

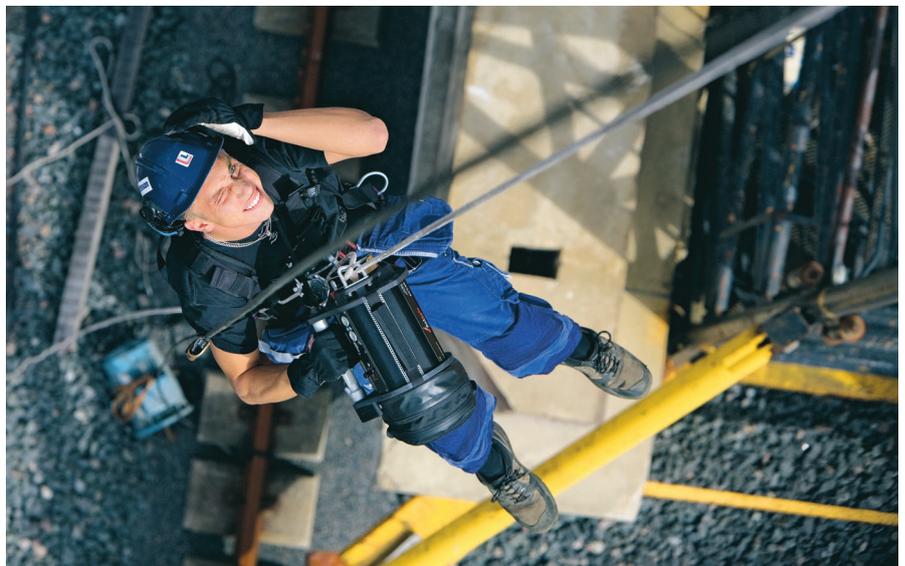
In wind energy, it is imperative that maintenance and construction personnel can reach their place of work and perform tasks as efficiently as possible to reduce work time and get tasks completed during available weather windows.

Powered ascenders allow easy, quick and efficient access to all areas of a wind turbine that have previously proven difficult to access. Although many tasks can be performed by alternate access methods such as access platforms, most areas of

a wind turbine are more easily reached using a powered winch.

Rope access

ActSafe Powered Ascenders have become the go to product for rope access technicians contracting to the wind energy industry. Powered Ascenders augment traditional rope access techniques to allow workers to reach areas of the wind turbine for blade inspection, repair and tower cleaning tasks.



Once ropes are established, it is equally viable to work from 'bottom up' as 'top down' which doubles the efficiency and speed of work. The reduction of physical effort means more actual work can be performed and the risk of accidents reduced with a subsequent reduction in fatigue. Technicians can descend to ground for welfare breaks and be back into position working within minutes saving crucial and costly down time.

Even where blade repair platforms are used, powered ascenders are being used as a primary means of access to the suspended platform, massively reducing down-time during welfare breaks. For work on the spinner the ability to descend to the place of inspection or repair and easily ascend back to the roof of the nacelle rather than continuing to descend to ground and climb back up via the tower represents an enormous saving in time,

effort and reduction of fatigue, ultimately ensuring a better result.

The bottom line is more work done, in less time!

Work positioning

Powered ascenders are also being used for a wide range of work positioning tasks. With correct control measures, supervision and training, they also allow access to difficult places for employees who have a valuable trade skill but may not be qualified in rope access. Getting the right skills to the right place on the job site is a key to success.

Due to the interoperability between work positioning and load lifting operations, it is a simple task to ensure that less skilled workers are trained and competent to use the winches, as the rigging and work method is similar for both applications.

Workers are proving to be highly competent in using the winches through a combination of initial training and daily use in a variety of tasks and applications. Likewise, rigging to carry out a rescue is identical and these procedures can be built directly into the work method policies for work tasks. Technicians, having already attained the skills and experience to conduct rescues, whilst doing normal work, have the confidence to perform well in an emergency.

The outcome of a risk assessment for work methods that rely on the use of a power ascender is also significantly better than for traditional access techniques. The control measures in the event of an accident are higher up the hierarchy of hazard control.

The remote-control functionality of the winch allows a casualty to simply be lowered to ground, or recovered upwards, without exposing another person to risk of



attempting a rescue. If powered ascenders are rigged for rescue; where the working rope and backup rope are rigged onto traditional descenders, so the whole system can simply be lowered to ground, then there are effectively three layers of rescue planning before there is a need to expose a second person to the risk of attempting a rescue.

The ability of both the worker and the work supervisor to control the ascender adds a level of redundancy not available with other work methods.

Powered ascenders are a powerful, versatile tool that can be adapted to fulfill a wide variety of work positioning tasks and solve access problems. For example; should the access elevator be out of service, the winch can be used as a climb assist tool on the ladder system.

Once access has been achieved it can be re-rigged to provide work positioning for tasks such as tower cleaning or tower component inspection. The same winch can also be used to lift tools and equipment into place.

For all the difficult to access areas in the interior of the turbine, such as; tower cabling; elevator cabling, light fixtures and transformers powered winches provide an ideal access solution.

Where a lot of hauling is required the

battery can be replaced with a permanent power supply and the winch will happily work all day. Being 'plug & play', the battery is still available as a redundancy should there be an interruption in power supply.

Enclosed or confined spaces

Access to enclosed or confined spaces is where ActSafe winches really shine. The ability to combine the access and the rescue method, into a single solution, makes meeting requirements for entry to enclosed spaces significantly easier.

On offshore wind turbines, much of this work involves access to the monopile or transition piece. In these situations, it is obviously no longer possible to work from ground and all operations involve lowering a person into the space and retrieving them back up to the transition piece.

ActSafe ascenders are built for this task and reduce not only the amount of equipment that would traditionally be required to enter these spaces, but also the number of personnel needed to help in manual hauling and standby rescue functions.

This reduction in personnel is not only a cost consideration, but increasingly, as offshore turbines become bigger and more complex, difficult enclosed spaces are also being found in the nacelle.

These larger turbines require lifting and lowering people over multiple decks inside the nacelle. Nacelle spaces are generally not large enough to allow enough personnel into them at the same time to perform manual lifting. From a risk assessment perspective, managing the access into an enclosed space, which is itself 100m above the likely emergency assembly point, is a difficult task to manage.

ActSafe powered ascenders really are the only viable solution that allow these tasks to be performed in a safe and efficient manner. The winches allow the necessary reductions in personnel to perform the access tasks flawlessly and allow the rescue planning to be built into the access procedure.

In summary, ActSafe winches have become an essential tool for rope access, work positioning enclosed space entry within the wind energy industry. The savings in time and energy make investment in this technology an easy business decision.

The benefits in terms of employee welfare, reduction in fatigue, increased efficiency and improved safety make it the must have work tool for every wind turbine technician during construction, commissioning and operation of the wind turbine.

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