





Limpet® L5 vs Service Lifts inside Wind Turbines





# LIMPET® BEATS LIFTS ACROSS 4 KEY CATEGORIES

SAFETY

COST

**VALUE** 

**HEALTH** 

- Integrated safety systems e.g. fall arrest, rescue, evacuation functions, back up battery
- Low capital and operating costs
- 25+ year working life
- Remote diagnostics and system monitoring via SCADA
- Can be used by workers during turbine construction phase
- Faster ascent/ descent of turbines
- Lowers Occupational health risks including Musculoskeletal Disorder



## Limpet® - NEXT GENERATION ACCESS SYSTEMS

### A Better Alternative to Service Lifts in New or Old Turbines



**Limpet® L5 in REpower MM82** 



Limpet® L5 in GE XLE 1.6



Limpet® L5 in Siemens SWT-2.3-93

### **Limpet Advantage**

Increases safety by avoiding obstruction hazard in emergency

Better value through multifunctionality

Lower capital cost

Lower operating cost

Adds value through use during construction phase

Adds value through diagnostic and data recording functions with SCADA compatibility

Safer with UPS Battery back-up

Faster time to ascend/ descend turbine

Keeps work force healthy while reducing occupational health risks

#### **Details**

Ladder guided service lifts can be an obstruction to rescue or evacuation and are unusable in the event of a fire inside the turbine

The Limpet L5 combines the functions of 5 access and safety systems into one system (climb assist, fall prevention, rescue, evacuation and work positioning. A lift only provides a method of access

Limpet has a significantly lower upfront cost than a service lift. Capital investment is made still more attractive if it is used as a substitute for traditional fall arrest, rescue & evacuation equipment

Limpet is easier, quicker and cheaper to inspect and maintain than a service lift. OPEX is made still more attractive if Limpet is used as a substitute for traditional fall arrest, rescue and evacuation equipment

The Limpet can be used during the construction phase of a new turbine (for access and fall-prevention inside the tower sections during erection) and then installed in its final position for the uses indicated above for the duration of the turbine's operational life

Limpet diagnostic and activity software allows the system to be monitored, with the last 1200 events on the safety line being recorded on the hard drive. By linking to a SCADA system this data can be relayed in real time to a remote supervisor. The system can be identified as working before teams arrive and access to and from the nacelle can be analysed.

In the event of a power failure, the Limpet has a UPS battery back up which allows the system to be used for up to 40 minutes

Turbine lifts typically operate at circa 18 metres per minute i.e. 0.3m per second. The Limpet adapts to the speed of the climber and can operate at a current max speed of 1 metre per second. This means that a team of 2 technicians can ascend and descend an 80 metre turbine faster using a Limpet than if they used the 2 man service lift

Limpet 90% climb assist removes almost all exertion from ladder climbs and removes risk of musculoskeletal disorders while still providing workers with an activity that induces a healthy physical response



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