

Intelligent Actuator - The next generation in Individual Pitch Control.

The Intelligent Actuator is MLS' patented approach to Individual Pitch Control. With the IA, intelligence is embedded locally into each blade.

The IA uses innovative control algorithms designed to regulate fatigue related dynamic loads. The IA, is best suited for today's bigger machines in both onshore and offshore applications.

Rotor imbalances and loads are minimized by adjusting each blade's pitch angle individually in response to the local optical fiber measurement of its loads.

Loads Alleviation

- Blades flap lifetime fatigue loads reduction
- Overturning and yawing lifetime fatigue hub loads reduction
- Mean overturning and yawing hub loads reduced to almost zero
- Rotationally induced loads reduction (1P, 2P, 3p...)

Intelligent Actuator Features

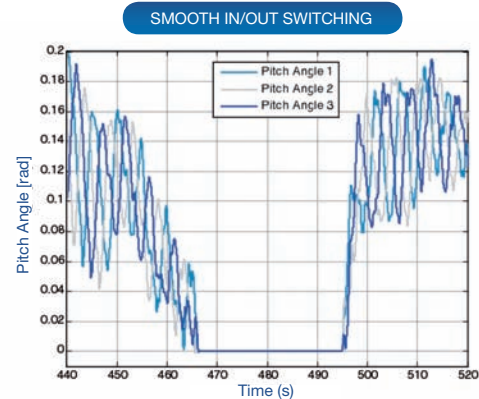
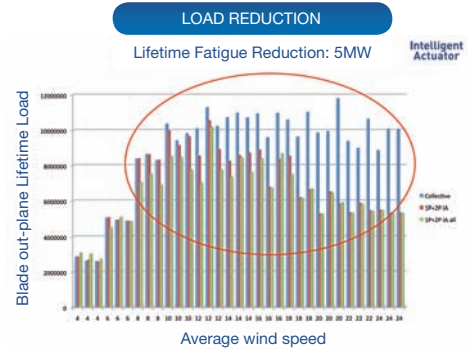
- Central controller independent - the controller is collocated to each blade and actuator.
- Pitch demand from the central controller is adjusted by the local controller.
- Structurally simple, easily implemented and tuned.
- Easy to retrofit into existing designs and models.
- Safety defaults to collective pitch.
- No impact on central controller performance and tuning.
- No dependence on azimuth angle.
- Local processing avoids communication delays.
- Designed to operate within the existing pitch actuator constraints.
- Suitable for electric and hydraulic actuators.

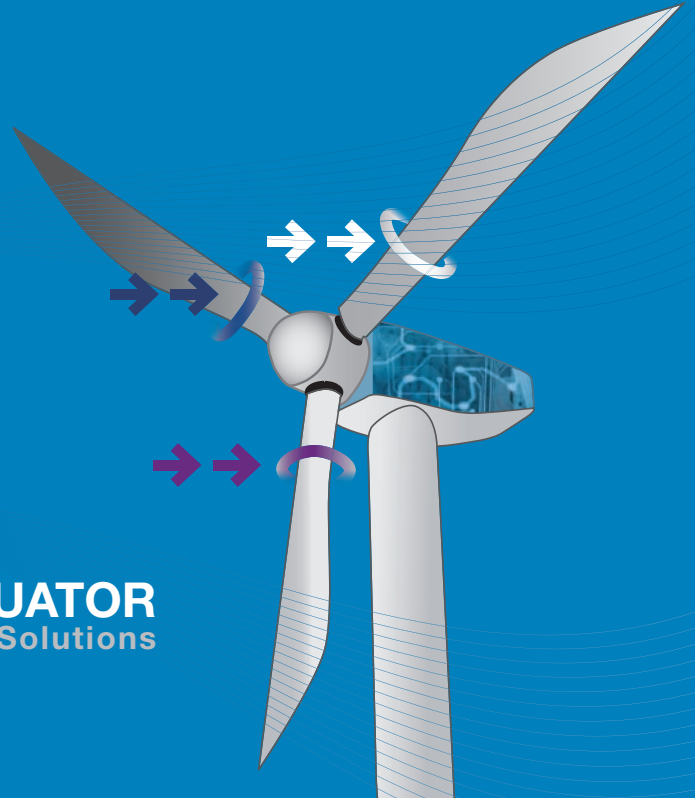
Key performance benefits

Load reduction translates to less maintenance costs and an extended life expectancy. Improved energy output is made possible by allowing for **use of bigger blades**.

Contact

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INTELLIGENT ACTUATOR

Next Generation Control Solutions

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