AMI event to focus on turbine blade manufacturing

Processingtalk

The latest AMI global conference, scheduled to take place on 7-9 December 2010 in Dusseldorf, will focus on the increasing demands being placed on windmill blade manufacturers.

The event will start with a review by LM Wind Power of blade requirements for increasing energy output.

Win Wind Power Energy, a manufacturer in India, will outline the setup of new plant.

The global economic downturn has placed pressures on the industry to keep costs down and provide higher-performance blades in terms of durability and weather resistance.

The conference will focus on a range of well-documented cases of failure to help companies reduce, or even avoid, expensive shutdowns.

Vestas Wind Systems, which will also be present at the event, is moving to Six Sigma targets of 3.4 defects per million opportunities by 2015.

In North America, Clipper Windpower, another company that will attend the wind turbine blade manufacturing event, develops robust MW blades.

In terms of design, Knight and Carver Wind Group provides a sweep-twist adaptive rotor-passive load control, developed to meet current needs.

The intensive manual nature of production is under scrutiny as automation could reduce time and improve quality.

Efficient, low-energy, automated systems have been set up by Solent Composite Systems.

In Denmark, Fiberline Composites has researched more efficient methods for the production of blade subcomponents.

Eirecomposites Teo is involved in research using high-temperature tooling and VOC-free reactive polymer composites.

The larger blade size has resulted in design and manufacturing challenges related to cure times through to the choice of reinforcement.

The time for resin to infuse can be an issue in large blades and BASF has been addressing this with new epoxy systems.

Owens Corning, meanwhile, will describe the latest cost-reduction methods for using glass fibre.

Carbon fibre offers some benefits over glass fibre but comes at a higher price.

SGL Rotec and SGL Technologies will outline the use of carbon-fibre composites in blades from the combined perspectives of a blade maker and a carbon-fibre supplier.

Core materials are also under scrutiny and a cellular core is being developed by blade manufacturer Euros Entwicklungsgesellschaft fuer Windkraftanlagen.

As blades have increased in size, so has the potential for error in manufacturing; as a result, Vesper is looking at process monitoring and control in production.

Research centre Riso DTU has studied the permissible levels of defects during manufacturing.

Narec in the UK, where the wind market is expected to expand rapidly, is carrying out the fatigue and static testing of blades for 5MW-plus turbines to international standards.

There is also extensive work in blade maintenance worldwide.

CP Max Rotortechnik, for example, has reviewed the damage to turbine blades on wind farms and the causes.

There are global research projects on factors such as the icing of blades and the latest work will be highlighted at the AMI conference by Windren.

Lightning is another common problem in the field and international standards are in place for blades; this will be reviewed by Testinglabs of Denmark.

Specialists from wind turbine and blade manufacturing companies will be speaking at the event.

The conference offers a meeting point for the industry to debate business trends and improvements in materials and production.

It also provides an opportunity to network with the range of professionals who work with and produce wind turbine blades worldwide.

SOURCE [1]

Links:
[1] http://www.processingtalk.com/news/apm/apm150.html