## Ematec rotor blade lifters in the wind tunnel - Manufacturer expects top values

Ematec rotor blade lifters in the wind tunnel - Manufacturer expects top values<br /><br />Manufacturer expects top values and approval for higher wind speeds for their innovative wind turbine installation system<br />Ematec AG, a special machine manufacturer with their headquarters in the Allgäu, Bavaria, have their RBT Rotor Blade Lifter currently tested in a wind tunnel. Manfred Eberhard, the Ematec CEO and his team will present the scientific test and research results at this years WindEnergy exhibition in Hamburg (23rd to 26th September, Hall 1, Stand 104).<br />"So far, there are only calculations to support the assumption that with our new technology we have developed a system that can operate in higher wind speeds than other systems used in the past. We now want to deliver scientific proof", says Eberhard. The research and test results are expected to be available in time for the WindEnergy exhibition, the world-leading trade fair, where Ematec will present them to the interested public.<br />Currently, the Ematec rotor blade lifter is approved by turbine manufacturers for assemblies in wind speeds of up to 9 m/s. "This is an enormous limitation, because winds on construction sites are often much stronger. We expect the wind tunnel tests to result in an approval for wind speeds of 13 m/s or more. That would be a sensation in the industry", says Eberhard, hoping for positive results of the large-scale scientific research.<br />Already now the RBT from the South-German engineers is deemed the benchmark for highest safety in wind turbine installations. The highlight of the innovation: In order to keep the wind attack surface as small as possible, the rotor blades may be pitched at angles between -10 and +95. For certain rotor blade types, the wind attack surface is thereby reduced by as much as 50 per cent offering the fitters high work and project safety because they can work with the Ematec beam even in wind speeds and gusts in which other systems can no longer be used.<br />An approval for higher wind speeds would be a quantum leap for the Ematec beam also with regards to the installation of offshore wind farms. "It is not uncommon for construction sites to be at a standstill for days or even weeks on end because it is simply too windy to pull up rotor blades. Such a standstill costs enormous amounts of money considering hat jacking vessels and container ships alone cost several hundred thousand Euros per day. The faster the rotor blades can be installed, the better for everyone involved", explains Eberhard.<br />For this reason, especially in offshore installations, the single blade installation becomes ever more popular compared to the conventional star assembly. Due to its large wind attack surface a pre-assembled star can be installed in weak wind conditions only, and is therefore only rarely economical. Another benefit of the single blade installation over the still widely used star installation is its significantly lower space requirement. "For onshore installations, a significantly lower amount of wood has to be cleared, and if a blade needs to be dismounted and replaced later on, it will not even be necessary to cut down trees. This is not only an enormous handling benefit, but also a big cost advantage", says Eberhard.<br />The Ematec rotor blade lifters on the job<br />With the Ematec beam, rotor blades may be gripped in any possible orientation. Blades may be lifted with only one crane, directly off the ground or off the trailer. The RBT grips the blade with multi-joint gripper arms and large rubber-coated pressure plates. A wrap-around holding claw provides a safe form-fitting grip.<br />The Ematec Rotor Blade Lifters have a unique characteristic that distinguishes them from similar systems: With the new "bunny design" that the Ematec engineers have now developed, the blade may be tilted 35 degrees along its longitudinal axis, which is the prerequisite for an assembly in a bunny-ear configuration. Already the standard version of the RBT provides a tilting angle of 6 degrees, so that a blade that is gripped slightly off centre may be easily balanced and so does not require to be released and re-gripped. In addition, the rotor blade may at all times be transported in a horizontal position.<br />The user also greatly benefits from the perfect combination of pitching and tilting functions when joining the blade to the hub, because the blade can be joined to the bore holes of the fastening screws accurately to the millimetre.<br />Due to flexible round slings the RBT may be attached to all types of crane hooks.<br />The Rotor Blade Lifter optimally protects the rotor blade from damage. The gripper plates are gimballed and automatically adapt to the shape of the blade. The rubber-coated pressure plates safely hold the blades, even in wet weather. They are resistant to UV light and ageing, do not leave any gripping traces and may be replaced without requiring any tools. As an option, an additional special gripper set is available for disassembly work in winter allowing the safe gripping of iced-over blades.<br />The redundancy of all technical resources including the energy supply guarantees the highest possible work safety and functional safety. If necessary, an additional stand-by engine may be started not only via the remote controller but also by hand. The work lights on the Rotor Blade Lifter illuminating the work area have also proven to be a useful feature.<br />Specifications:<br />Gripping range:<br />Individually adaptable to blade family<br />Transport dimensions:<br />11.7 x 3 x 3 m (L x W x H); economic road transport with only one trailer possible. Weight: ca. 18 tons<br />Energy supply:<br />Independent redundant energy supply from two Diesel-powered hydraulic units with generator.<br />Gripper drives:<br />Redundant<br />Operation:<br />Remote control with two transmitters including signover function from ground to nacelle staff. With display of operating modes.<br />Additional lighting<br />2 large floodlights illuminate the work area. Can be activated via remote control.<br />Accessibility:<br />Open design for easy access to all components.<br />Certification:<br />The Rotor Blade Lifter was type tested by the TÜV-Süd, including a load test with twice the nominal load.<br />Info:<br />Ematec AG<br />Am Ziegelstadel 3, 87766 Memmingerberg, Phone ++49 (0) 8331/9487-0, Fax ++49 (0) 8331/9487-40, info@ematec.de, www.ematec.de <br />Press contact:<br />CEO Manfred Eberhard<br />Captions:<br />ematec_rbt_01.jpg and ematec_rbt_02.jpg<br />The RBT safely grips the rotor blade and allows a particularly safe and efficient rotor blade installation and disassembly. Photo: Ematec<br />ematec_rbt_03.jpg and ematec_rbt_04.jpg<br />With the Ematec Rotor Blade Lifter, only one crane is needed for the installation and disassembly of rotor blades. Photo: Ematec<br />ematec_rbt_05.jpg und ematec_rbt_06.jpg<br />Perfect grip: The gripper plates are gimballed and automatically adapt to the shape of the blade. Photo: Ematec<br />ematec_rbt_07.jpg and ematec_rbt_08.jpg<br />The Ematec Rotor Blade Lifter is immediately ready for operation<br />Photo: Ematec<br />ematec_rbt_09.jpg<br />During transport and non-usage, the upper beam is placed inside the lower beam. Photo: Ematec<br />Word download:<br />http://www.jensen-media.de/download/ematec/windkanal.doc <br />Picture download paths:<br />ematec_rbt_01.jpg to ematec_rbt_09.jpg<br />http://www.jensen-media.de/download/ematec/ematec_rbt_01.jpg <br /> http://www.jensen-media.de/download/ematec/ematec_rbt_02.jpg <br /> http://www.jensen-media.de/download/ematec/ematec_rbt_03.jpg <br /> http://www.jensen-media.de/download/ematec/ematec_rbt_04.jpg <br /> http://www.jensen-media.de/download/ematec/ematec_rbt_05.jpg <br /> http://www.jensen-media.de/download/ematec/ematec_rbt_06.jpg <br /> http://www.jensen-media.de/download/ematec/ematec_rbt_07.jpg <br /> http://www.jensen-media.de/download/ematec/ematec_rbt_08.jpg <br /> http://www.jensen-media.de/download/ematec/ematec_rbt_09.jpg <br />Zip-file with all related images:<br /> http://www.jensen-media.de/download/ematec/ematec_rbt.zip <br /><br />Press contact (not to be published) <br />Jensen media GmbH <br />Agentur für Unternehmensnachrichten <br />Hemmerlestraße 4 <br />87700 Memmingen <br />Phone ++49 (0) 8331/99188-0 <br />Fax ++49 (0) 08331/99188-10 <br /> info@jensen-media.de <br /> www.jensen-media.de <br /><img src="http://www.pressrelations.de/new/pmcounter.cfm?n_pinr_=573102" width="1" height="1">

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