

Press Release
August 5, 2014

Brake module against squeaky Azimuth brakes

Dynamic residual brake pressure balances out uneven brake disks

The brake module from HAWE Hydraulik SE, Munich ensures silent operations of Azimuth brakes in wind turbines so that the occasional squeaking no longer disturbs those living nearby.

When the turbine's nacelle turns into the wind, the Azimuth drives work against a low residual brake pressure, which takes out the backlash from the drive and is adjusted in such a way that the Azimuth brakes squeak as little as possible. In practice though the disturbing squeaking still occurs as the brake's disk ring is not manufactured with an even thickness. Existing solutions work with fluctuating pressures in the brake system when the brake calipers move over such an uneven section as the nacelle turns and thereby generate noise disturbances at the brakes. HAWE Hydraulik has now optimized the hydraulic circuit so that this residual brake pressure is dynamically re-fed and kept constant, so that squeaking is a thing of the past.

Moreover, the functional module and the intermediate plate with the pressure reducing valve, which was previously mounted separately underneath, are now all integrated into one joint housing. This makes the brake module more compact and does away with one flange area, which in turn reduces assembly work and increases operating safety. The functional module includes valves for opening and closing the brake, setting the residual holding pressure to readjust and turn the nacelle into the wind, as well as for rinsing the brake circuit during maintenance intervals. It includes a zero-leakage 2-way pressure reducing valve to set the maximum brake pressure and to size the pressure accumulator of the power pack to an optimal dimension.

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HAWE Hydraulik at the WindEnergy
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Hall B7, Booth 428, at the Trade Fair Hamburg

Reader information and free documentation:

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Image:

Bremsmodul.pdf:

HAWE Hydraulik's new brake module enables quiet turning of the nacelle.

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