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Product Name :
Wind Power Drive Train

Product Code :
LBNY-0005-10300014



Description :

The experimental unit contains a typical wind power drive train at laboratory scale, which is driven by an electric motor. The motor enables low speeds with high torque. This simulates a typical slowly rotating wind rotor. The speed can be adjusted. Modern wind turbines should be optimally adapted to the wind available at their location and allow efficient operating conditions. In addition to the wind rotor itself, components of the drive train such as the transmission and the electric generator are crucial. The drive train consists of the slow-rotating drive side, the fast-rotating generator side and a three-stage spur gear between the drive and the generator. The electrical load of the generator can be varied. This makes it possible to approximate operating points of a typical torque characteristic. The generator speed and the torques of the drive side and generator are captured by sensors and displayed digitally on the measuring amplifier. The calculated characteristic results from the mechanical power of a wind rotor for a given wind speed. The experiments with simulate typical operating conditions of a drive train. To do this, the electrical load of the generator and the speed of the drive motor are varied.

Features:

Generator with adjustable electrical load
Electric motor simulates wind rotor at low speed
Torque measurements on drive and generator.

Technical Specification :

DC generator with connections for electrical load
Adjustable load with switchable display for current or voltage
Experimental unit for measurements on a wind power drive train

Low-speed drive motor with adjustable speed simulates wind rotor
Simulation of typical torque characteristics
Drive train with spur gear and DC generator
Sensors for generator speed and torques of the drive side and of the generator.



Laboratory Instrument India