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**WIND TUNNEL PERFORMANCE DATA FOR THE
DARIEUS WIND TURBINE WITH NACA 0012 BLADES**

Bennie F. Blackwell, Robert E. Sheldahl, Louis V. Feltz
Sandia National Laboratories; Albuquerque, NM 87185

ABSTRACT

Five blade configurations of a 2-metre-diameter Darrieus wind turbine have been tested in the LTV Aerospace Corporation 4.6- x 6.1-m (15- x 20-ft) Low Speed Wind Tunnel. Rotor solidity, Reynolds number, and free stream velocities tested were in the following ranges:

Solidity: 13%-30%
Reynolds number: $1-3 \times 10^5$
Freestream velocity: 7-11 m/s

The airfoil section for all configurations was NACA 0012.

The parameters measured were torque, rotational speed, and tunnel conditions. Data are presented in the form of power coefficient as a function of tip-speed ratio for the various solidities, Reynolds number, and freestream velocities tested.

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