

Vardar A, Eker B (2006) Design of a Wind Turbine Working with the Continuity Principle, Energy Exploration & Exploitation, Vol.24, No.4+5: 349-360 (2006).

#### Abstract

In the study, the purpose is to take advantage of low wind potentials and obtain high power values with small rotor diameters. Wind speed is considered to be increased with the help of continuity principle. With this aim, two different wind tunnel inlet diameters were used, being 5 m and 10 m, while the outlet diameters of wind tunnels were chosen as 0,5 - 1 - 2 - 3 - 4 m. The most striking result obtained in this study was the formation of a power of 492352 kW at the outlet of wind tunnel when the inlet diameter of wind tunnel was 10 m, outlet diameter was 0,5 m and the inlet wind speed was 4 m/s. Under these conditions, the wind speed at the wind tunnel outlet reaches 1600 m/s. A new viewpoint to wind energy technology will be presented if the results obtained in this study are also obtained in empirical studies.