II-O-17. MATHEMATICAL MODELING OF NOISE LEVEL IN THE WIND PARK AREA

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Abstract

In the actual period the environmental protection is a major problem to humanity. In most countries of the world are set to impose measures to limit pollution. International conventions were signed harmonizing these measures. Economic development entails environmental concerns in general and in particular the noise. In this paper are analyzed in terms of noise emission three wind parks in the county of Constanta. Wind energy has been used since ancient times earning a good tradition. In particular, a broader and widespread use of wind energy has many advantages for both technical nature (safe energy source to natural ecosystems, with a possible high overall efficiency, simplicity of construction and during installation) and economic (financial investment reduced operating costs and relatively low maintenance). Turbines for producing electricity are installed in areas with air currents present almost throughout the year. Also nearby wind parks are rural villages with a potential impact in terms of noise. Measurements were performed on each turbine noise wind parks belonging and the data obtained was performed mathematical modeling and drafting papers on noise dispersion in the areas studied.

Keywords: *dispersion, mathematical modeling, noise map, turbine, wind park.*