STUDENT SECTION

The Impact of Large Thermal Electric Power Plants on Air Quality in Craiova Area

Mihaela Cosmina Tița
Faculty of Electrical Engineering, Craiova, Romania, mtita@em.ucv.ro

Abstract— The activity of obtaining electricity using fossil fuels has produced a wide category of emission. The main pollutant released into the atmosphere from fossil combustion in order to obtain electricity and heat is sulfur dioxide. Taking account of this fact, there is a need of an environ-mental factors monitoring in nearby the energy complex. This paper contains an evaluation of air quality in vicinity of a large thermal electric power plant and the environmental effects. For this purpose we analyzed sulfur dioxide concentrations in Craiova city using measured values by the automatic stations. According to the obtained graphs, sulfur dioxide daily concentration in the city air is often below the upper specification limits stipulated by the legislation. The amount of sulfur dioxide released in 2011 into the atmosphere trough coal combustion by Isalnita power plant was 26969 tones. In order to demonstrate the influence of Isalnita large power plant on air quality in Craiova it was realized a correlation between the most important monitoring stations. The purpose of this paper is to highlight how chimney concentrations are found in the environment, at ground level. The harmful effect of sulfur dioxide pollution on human health, plants and the environment is represented by acid rain and other combination of pollutants.