



TECHNOLOGIES AND ATMOSPHERICAL POLLUTANTS IN SAVINEȘTI CHEMICAL PLATFORM

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Abstract

Savinești Chemical Platform is located in the Eastern part of Romania, about 12 km S-W far from the city of Piatra Neamt, on the middle stream of Bistrita river and includes 6 companies belonging to the chemical industry sector.

Among these, two companies are more important in relation with the air pollution: FIBREXNYLON – producing caprolactum, PA6 fibers/yarns, adipic acid, sulphuric acid, ammonium sulphate – and AZOCHIM – producing ammonia, nitric acid, ammonium nitrate, calcium-ammonium nitrate and pelletized urea. Both companies have their own facilities for steam and, partly, power production: boiler plants and thermal power plant supplied with natural gases.

The main technologies are described and – related to this – the main stationary emission sources and the most important air pollutants are evaluated. There are 9 important emission sources; the main noxes emitted are: NO_x, SO₂, NH₃, dust containing ammonium sulphate (AS), ammonium nitrate (AN), calcium-ammonium nitrate (CAN), aerosols with SO₄²⁻.

The emission heights are very different, from 28m up to 106m and so is the situation regarding the temperature of the tail gases (3^oC – 140^oC) and the flows (9 000 Nm³/h – 60 000 Nm³/h). The emission evaluation is done based on the emission measurements data, collected from the Environmental Protection Inspectorate Piatra Neamt and from the self-monitoring activity developed by the companies. The first conclusion is that the most of the emissions are strongly exceeding maximum allowable limits (MAC).

The level, the frequency and the specificity of MAC exceedings is analysed and described in connection with the meteorological and climate specific conditions too. One of the final conclusions of this study leads to the necessity to set-up additional and more precise assessment methods, in order to define as clearly as possible the dimensions of the polluting impact of Savinești companies upon the areas around. In this respect, one of the evaluation tools is proposed to be a well chosen dispersion model.

Keywords: chemical industry, atmospheric pollutants, measurements

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