## CONSIDERATION OF POSSIBLE MODES OF OPERATION OF THE GARBAGE RECYCLING PLANT BY PYROLYSIS

Institute of Engineering Thermophysics of the National Academy of Sciences of Ukraine, str. M. Kapnist 2a, Kiev, 03680, Ukraine

Garbage combustion Pyrolysis Plants should have the function of changing the costs of raw materials, adjusting the temperature and pressure in the chamber where the solid oxidation reaction takes place. A change in these parameters must be ensured that the gases leaving such an installation contain as little harmful to the environment components. This is in front of all dioxins (NO<sub>2</sub>, CO<sub>2</sub>, SO<sub>2</sub> and some others), as well as aromatic carbohydrates. It is also necessary to pre-sort the garbage containing plastics, because not all plastics can and sufficiently processed by pyrolysis.

Next, for each such installation, taking into account the peculiarities of its structure and functioning, it is necessary to have diagrams of its modes of operation, depending on the above parameters. Depending on the data obtained with their help, choose the optimal modes of operation on one or another type of garbage to be disposed of. Such diagrams are calculated theoretically and verified experimentally before starting the installation. These calculations are devoted to this article.

For such calculations there is a list of basic reactions, which will mainly be conducted in the chamber, taking into account the constants of their velocities. Then the concentrations of the main components are calculated, depending on the pressure in the chamber and its changes in the pyrolysis process. On the basis of these data, and possible diagrams of processes that are verified experimentally for each particular installation. The choice of the optimal mode of pyrolysis of solid waste, this is already the result of the skill of the staff.