Coursework on discipline
«Mathematical models of chemical reactors»
specialty 8.05020202
Computer-integrated technological processes and production
O.Matsibura group HA-51M
Subject: "Modeling butane dehydrogenation reactor "

The course work was characterized by methods of dehydrogenation of butane. There are ways of applying heat and catalyst regeneration. Certain methods of registration process of dehydrogenation of n-butane.

Next it was defined physicochemical foundations of the dehydrogenation process, his equations, the speed of the process and the residence time of the mixture in the reactor. At the end of the first chapter described industrial processes dehydrogenation of butane, shown in flow charts.

In the second part of the course work developed a mathematical model of the dehydrogenation of butane. The simulation of the reactor with a moving ball catalyst in MathCad environment and developed a software module in the Visual Basic 2013, verified the calculations and loyalty imposed conclusions from the work done.