АНАЛИЗ МЕСТ РИТИФИКАЦИОННОЙ КАЛЛОНЫ В ОА «FARG'ONAAZOT».

Асқаров Хасанжон Абдуқахорович[1]

Ассистент Ферганского политехнического института кафедра «Технологические машины и оборудование»

Исомиддинов Азизбек Саломидинович[2]

PhD по т.н. старший преподаватель. Ферганского политехнического института кафедра «Технологические машины и оборудование»

Аннотация: В стате рассматриваются экологически чистые методы теплообмена ненужных добавок из фазы уксусной кислоты в ректификационной каллонне.Приведена конструкция паровой ректификационной калонны,принцип действия. Изучена конструкция тарелок, которая позовляет отделить уксусную кислоту без потерь при непрерывной работе ректификационной калонны.

Ключевые слова: Ректификация,Калонна,Тарелка, Теплообмен, этилацетат, пар, кантактная поверхность

ANALYSIS OF REGIFICATION COLUMN PLATES IN "FERGANAAZOT JSC"

Askarov Hasanjon Abdukakhorovich[1]

Fergana Polytechnic Institute, Department of "Technological machines and equipment", Assistant

Isomiddinov Azizbek Salomidinovich[2]

Fergana Polytechnic Institute, Department of "Technological machines and equipment", Senior Lecturer

Annotation: The article examines ecologically clean methods of heat exchange of unnecessary additives from the acetic acid phase in the rectification column. The design of the steam-separated rectification column, the principle of operation is given. The design of the plates, which allows the separation of acetic

acid without losses in the continuous operation of the rectification column, has been studied.

Keywords: Rectification, column, plate, heat exchange, ethyl acetate, steam, contact surface.

Nowadays, the renewal and modernization of techniques and technologies in the world community, These technologies are the fruit of human intellectual activity, and developed countries have always used such innovations on a large scale. Distillation column apparatus plates 10X17N13M3T. XN65NV is made of steel and the plates are placed at an angle of 300 or 400, with a circumference of 20.25 or 30 mm. The implementation of heat exchange inside the rectification column apparatus and the active movement of steam, ethyl acetate, the process in the process with the surface of the plates serve to separate unnecessary additives and other substances from the acetic acid phase.

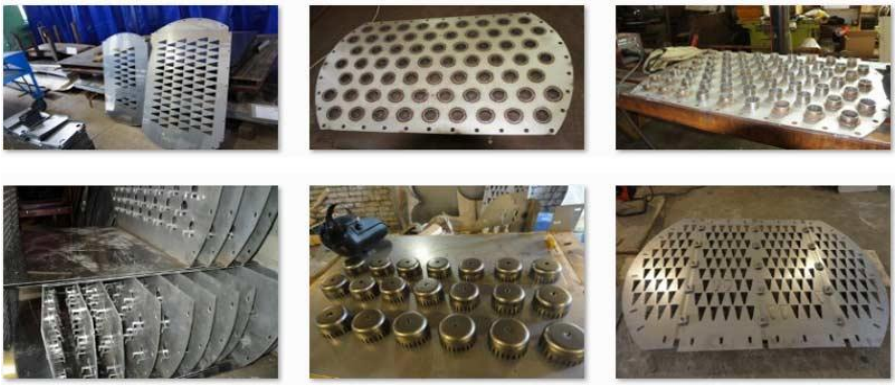

Figure 1. Structure of rectification columnar structures.

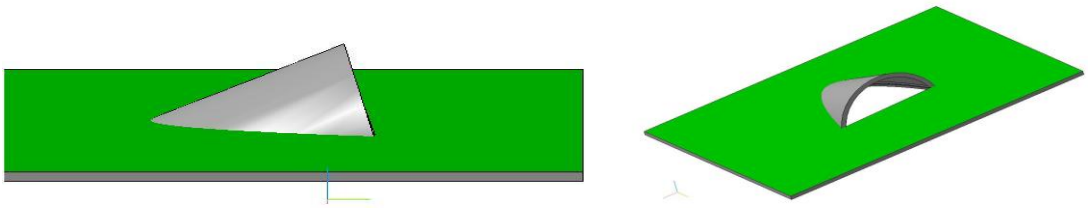

Figure 2. The structure of the proposed plate construction

Types used in industry (Figure 1) are shown. The new plate we recommend differs in that it not only increases the contact surfaces and increases the strength, but also consists of a simple construction. The plates have the specified dimensions of the old plate, found without changing the angle of inclination, the plate has a size of

120x11.5mm mounted on 300 slopes. The design serves to increase the surface area by changing the design appearance of the plates, improve the quality of acetic acid and prevent the plates from cracking at hydraulic pressures in the process, ensuring the set temperature in each layer.

As shown in the proposed new plate (Fig. 2), the advantage of the new plate over the old plate is that the production of the plates does not require complex technological processes and has a solid simple construction. Theoretically, the heat transfer of the new plate surface is improved, and the regeneration of acetic acid is increased by 19%. Such plate construction can be used not only in the chemical industry, but also in the rectification column apparatus of primary oil refining processes in the oil refining industry.

The principle of operation of the experimental device. The raw material selected for the sample is collected in cube 1 and heated to evaporation temperature by means of a heater 8. The resulting product vapor enters the column through the tube. Using a distributor 5 located inside the column, it is evenly distributed along the diametrical surface of the apparatus.

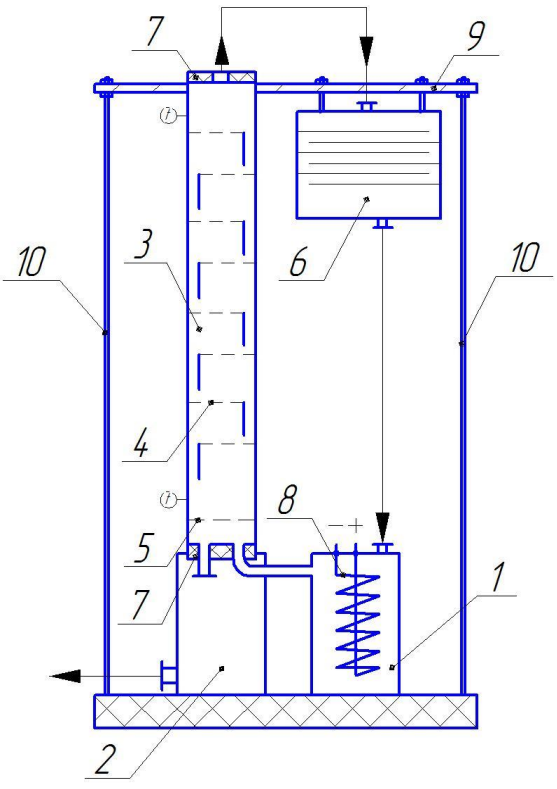

Figure 3. Schematic of the experimental device

During the experiments, the scale readings on the selected anemometer were taken into account when connecting to a computer, taking into account the complexity of measuring the pair velocities in the working factors of the column. The gas velocity supplied to the column was carried out at different parameters and within the following limits. To control the steam velocity, a jig was installed in the column connecting the column and the cube, and the velocities of the gas in the open position of the jig at 30, 60, 90 degrees were determined experimentally. To do this, the inlet and outlet velocities of the pair to the column were determined experimentally. Table 1 shows the experimental results.

Table-1

Types of plate constructions	**Jumrak degree**	**$\omega_{кир}$**	**$\omega_{чиқ}$**	**$\omega_{йт}$**
On a plate with a rectangular hole	30^0	2.4	1.1	1.3
	60^0	3.25	1.58	1.67
	90^0	6.25	2.16	4.09
On a plate with a round hole	30^0	2.4	1.12	1.28
	60^0	3.25	1.29	1.96
	90^0	6.25	3.16	3.09
On the recommended plate	30^0	2.4	1.68	0.72
	60^0	3.25	2.16	1.09
	90^0	6.25	3.84	2.41

Based on the gas velocity determined experimentally, the hydraulic loss of the steam flowing from one plate of the column was determined Figure 4.

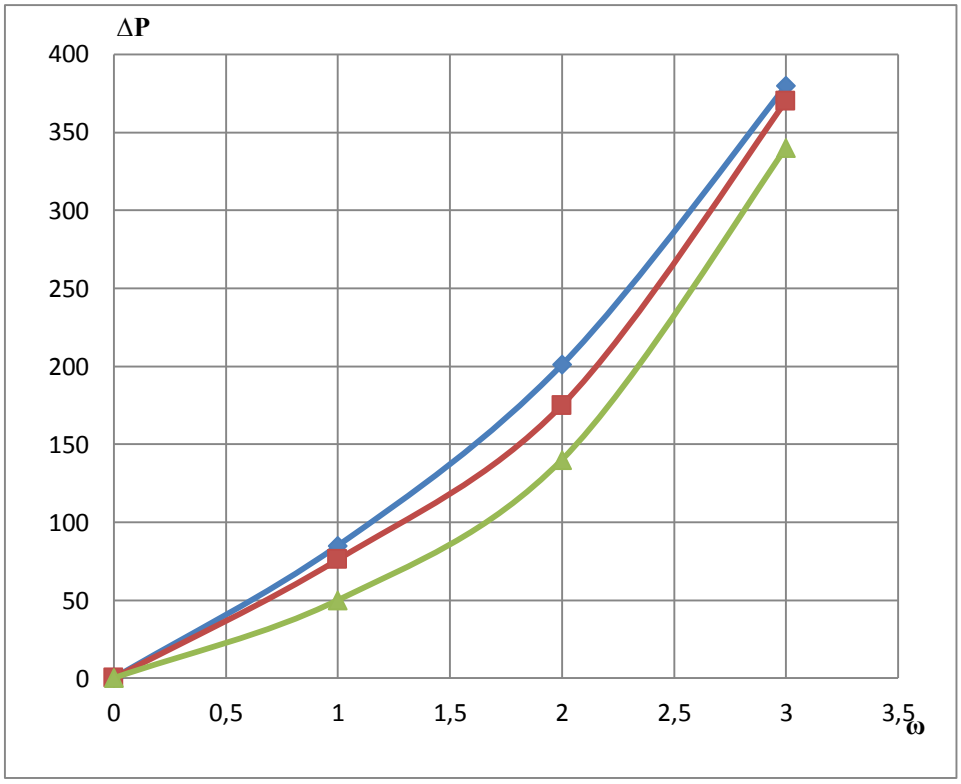

Figure 4. The graph of the change in hydraulic pressure loss depending on the steam velocity supplied to the column

From the results obtained, it became clear that the maximum hydraulic loss in the plate designed by us was 340Pa. This means that the result obtained is significantly lower than similar constructions known to date.

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