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**OPERATIONAL CONTROL OF THE PROCESS OF PRIMARY PROCESSING OF HYDROCARBONS**

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*The article considers the ways to solve the problem that arises during the primary processing of hydrocarbon (oil, gas condensate, etc.) raw materials and in the technical literature is called: "the fraction superposition effect". This problem is related to the use of technological equipment, including distillation columns, and can be solved by operational control and regulation of technological parameters (temperature, pressure, amount of fusion, etc.) of the process of separation of hydrocarbons into fractions.*

*Operational control of the raw material division into fractions should be based on a system that includes a unit of operational control of technological parameters (quality indicators of distillate fractions) and a correction unit that allows immediate adjustment of parameters to the required level to ensure a certain quality of products.*

*Primary information on the qualitative characteristics of the obtained fractions, in particular the content of impurities ( $X$ , %) of lower-boiling components of another fraction, should come from sensors located on the pipelines of the main material flows coming from the distillation column.*

*As controllable indicators for determining ( $X$ , %), it has been proposed to use the indicator of relative permittivity – a measure of electrical properties of both raw materials and obtained fractions, supplemented by values of physicochemical parameters such as density and kinematic viscosity.*

*It has been experimentally established that the increasing of the content of impurities in the studied fractions of adjacent fractions with lower boiling points leads to a decrease in the values of all mentioned indicators. Based on these data, a multiple regression equations were obtained, which adequately ( $R^2 = 0.9847 \div 0.9969$ ) with an error of 0.5-1.3 % can determine the values of  $X$  in adjacent fractions.*

*The obtained equations, in turn, allow to quickly determine the effect of the imposition of compatible fractions, which can be used in the implementation of the system of operational control of the rectification process at the hydrocarbons primary processing plants.*

**Keywords:** hydrocarbon raw materials, rectification, fractions, superposition, low-boiling impurities, operational control, dielectric constant.

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