

Speed (TON) is the number of acts of catalytic transformation at one active center of the catalyst during the catalytic reaction. The number of transformations characterizes the total activity of the catalyst during its entire service life. In photocatalysis, this is the ratio of the number of acts of photoinduced transformations over a certain period of time to the number of active centers or photocatalytic centers in the main state.

Spray drying is a method for formation of particles by dispersion of suspension or solution in hot air. Such way allows to replace with one operation stages of filtering, drying and formation, however demands big expenses of energy. Spray drying is used, for example, in the manufacture of a microsphere catalyst.

Stabilization of condensate is a technological process for the processing of gas condensate, consisting in the isolation of light gases (methane, ethane and a wide fraction of light hydrocarbons) from it to obtain a stable condensate and a number of other products.

Stable natural gasoline is a product of gas condensate stabilization. A mixture of liquid hydrocarbons of different structures, which are gasoline-kerosene fractions of petroleum.

The stationary mode of catalysis is a method for carrying out a catalytic reaction, in which the properties of the system remain constant in time at each point of the reaction space. Such unchanged properties can be, for example, the composition of the reaction mixture, the reaction rate, the surface state of the catalyst. Typically, in a stationary mode, flow reactors operate. In contrast, the pulsed and static reactors operate in a non-stationary mode.

Steam conversion of carbon monoxide is the CO reaction with steam, which products are hydrogen and carbon dioxide are used for increase in amount of hydrogen in synthesis - gas. The reaction is thermodynamically reversible, so the final stage of the reaction is attempted at a minimum temperature to increase the yield of hydrogen. In a number of cases, the reverse reaction of the reduction of CO₂ by hydrogen is used to reduce the H₂/CO ratio in the synthesis gas.

Steam conversion of hydrocarbons is a catalytic process of synthesis gas production from hydrocarbons (methane, propane-butane fraction, etc.) and water vapor. The process is carried out on the modified nickel catalysts at temperatures of 600 - 800°C and characterized by a strong endothermic effect. Steam conversion of hydrocarbons is the main way to produce hydrogen for ammonia production.

Stripping is the removal (by steam-induced vaporization or flash evaporation) of the more volatile components from a cut or fraction.

The structure of the catalyst is the chemical structure of the substances constituting the catalyst. For solid phase catalysts, this term implies, in particular, the features of the chemical structure of the surface of a solid.

Sublimation is the transition of a solid into a vapor state and back (from vapor to solid), bypassing the liquid phase. Sublimation is peculiar only to such solid "volatile" bodies, the vapors of which have significant pressure even at a temperature below the boiling point of these bodies. In technology, sublimation is used to clean solids from impurities and contaminants.

Subsoil protection envisages a complex of measures aimed to preventing loss of oil in the ground due to the low quality of sinking wells, violations of the technology of development of oil deposits and operation of wells, leading to premature flooding or layer degassing, fluid exchange between the productive and the adjacent horizons, destruction of oil-containing rocks, the upsetting columns and cement behind it.

Substitute natural gas is a high calorific value gas, manufactured by chemical conversion of a hydrocarbon fossil fuel. It is chemically and physically interchangeable with natural gas and is usually distributed through the natural gas grid. The main raw materials for manufacture of substitute natural gas are: coal, oil and oil shales. Substitute natural gas is distinguished from other manufactured gases by its high heat value (above 8,000 kcal/m³) and by its high methane content (above 85%). Substitute natural gas produced by synthesis from fuels other than coal-based should also come from other sources.