

catalytic reaction. The hydrolysis of amides of carboxylic acids should be considered as a pseudo-catalytic reaction, since it is also accelerated in the presence of an acid, but at the end of the catalytic cycle, an ammonium ion is formed instead of H^+ .

Activator is a substance which interacts with the catalyst and causes an increase in the speed of the catalytic reaction, but itself isn't spent. For example, the rate of polymerization of α -olefins on metallocene catalysts increases significantly when methylaluminoxane is added to the system.

Active phase - this term has the same meaning as **the active component**. It is used in those cases when it is required to specify the phase composition of the active component under catalytic process conditions. Example: the melt of potassium pyrosulfonadate is the active phase in the vanadium catalyst for the oxidation of SO_2 into SO_3 .

Active component is the substance which is a component of the multicomponent catalyst and direct catalytic transformation. Other components of the catalyst perform support functions, for example, are the carrier or the promotor. Example: for the put (deposited) catalyst of hydrogenation Ni/SiO_2 , an active component is metal nickel, while silicon oxide is the carrier.

Additives are chemicals added to petroleum products in small amounts to improve quality or add special characteristics. They are non-hydrocarbon compounds added to or blended with a product to modify fuel properties (octane, cetane, cold properties, etc.).

Examples: oxygenates: alcohols (methanol, ethanol), ethers such as MTBE (methyl tertiary butyl ether), ETBE (ethyl tertiary butyl ether), TAME (tertiary amyl methyl ether); esters (for example, rapeseed or dimethyl ether, etc.); chemical compounds (tetramethyl lead, tetraethyl lead and detergents). It must be remembered that the quantities of ethanol listed in this category should refer to amounts intended for fuel use.

Adhesion coefficient is the ratio of the number of adsorbed molecules per a unit of time to the frequency of concussions of molecules with the surface of adsorbent. The coefficient of adhesion depends on the filling factor of the surface, temperature, structure of the surface of the adsorbent and other parameters.

Adhesive lubricants are lubricants with components that improve adhesion, which do not break from the surfaces by centrifugal forces.

Agglomerates are particles of matter obtained by combining smaller particles, for example, associates from primary particles.

The aggregate state of a substance is a state of a substance characterized by certain qualitative properties: the ability or inability to maintain volume and shape, and the presence or absence of a far and near order. Changes in the aggregate state can be accompanied by abrupt changes in free energy, entropy, density, and other basic physical properties. In terrestrial conditions, a substance can be in four aggregate states: solid, liquid, gas, and plasma.

Aging of the catalyst is a slow and irreversible decrease in the catalytic activity as a result of changes in the structure of the catalyst.

Afterburn is the combustion of carbon monoxide (CO) to carbon dioxide (CO_2); usually in the cyclones of a catalyst regenerator.

Aftertreatment system is a system that treats post-combustion exhaust gases prior to tailpipe emission. It differs from emission reduction techniques in the combustion process and allows for greater power from the engine without worrying about increasing emissions.

Air is a physical mixture of gases that make up the atmosphere of the Earth, the most important ecological product. From the air plants draw carbon dioxide for photosynthesis, the vast majority of organisms - oxygen for breathing, biological nitrogen fixers - nitrogen. At the surface of the earth, dry and clean air contains 78.9% of nitrogen, 20.95% of oxygen, and 0.03% of carbon dioxide. Other gases account for less than 0.01%. Due to intensive mixing, the air composition in the horizontal and vertical direction up to a height of 80-100 km is constant.

Air fin coolers is a radiator-like device used to cool or condense hot hydrocarbons.

Air emissions are any substances (gases and particulate matter) emitted into the air from industrial processes or from households, such as carbon monoxide, nitrogen oxide, nitrogen