**Reaction speed** is the number of acts of chemical transformation for a unit of time carried to unit of volume of reactionary mixture (in case of homogeneous reaction) or to surface unit of area (in case of heterogeneous reaction).

**Reactor** is the vessel in which chemical reactions take place during a chemical conversion type of process, usually defined by the nature of the catalyst bed, e.g., fixed-bed reactor, fluid-bed reactor and by the direction of the flow of feedstock, e.g., upflow, downflow.

**The reactor of periodic action** is a hermetically closed capacity where reactionary mixture and the catalyst are placed. After certain time process is stopped for extraction of products. As during process the reactor remains hermetically closed, partial pressure of substances in the reactor can change considerably at course of reactions.

**The reactor productivity** is the quantity of the obtained product in unit of time referred to volume (sometimes to weight) of the reactor.

**The reactor with the ascending stream of particles of the catalyst** is the reactor representing a vertical strut in which from below the two-phase stream from gaseous reagents and solid particles of the catalyst moves up. Usually use a stream with the increased relation of solid substance to gas as gas rises up quicker, than catalyst particles. Reactors of this kind apply, for example, in processes of cracking of hydrocarbons on the zeolite catalysts, while the time of contact of reagents with the catalyst makes 5-7 sec.

**Receiver** is a vessel for accumulating gas or steam entering it and consumed through pipes of a smaller cross-section, and also for smoothing pressure fluctuations caused by pulsating feed and intermittent flow. In the compression unit, the receiver is also intended for cooling the gas and separating the droplets of oil and moisture.

**Recycle gas** is a high hydrogen-content gas returned to a unit for reprocessing.

**Recycle stock** is the portion of a feedstock that has passed through a refining process and is recirculated through the process.

**Recycling** is the use or reuse of chemical waste as an effective substitute for commercial products or as an ingredient or feedstock in an industrial process.

**Reduced crude** is a residual product remaining after the removal by distillation of an appreciable quantity of the more volatile components of crude oil.

**The refinery** is an oil processing plant. It is an enterprise for production, based on the transformation of oil and its fractions, and petroleum gases into marketable petroleum products and raw materials for the petrochemical industry. This production represents set of the physical and chemical and technological processes and operations including raw materials preparation, its primary and (or) secondary processing. The main function of the refinery is petroleum refining into gasoline, aviation kerosene, fuel oil, solar oil, lubricating oils. In addition at the modern oil refineries produce from petroleum approx. 12 - 16 more principal components.

**Refinery feedstocks** are the processed oil destined for further processing (e.g. straight run fuel oil or vacuum gas oil) excluding blending. With further processing, it will be transformed into one or more components and/or finished products. This definition also covers returns from the petrochemical industry to the refining industry (e.g. pyrolysis gasoline, $C_4$ fractions, gasoil and fuel oil fractions).

**Refinery gas** (not liquefied) includes a mixture of non-condensable gases mainly consisting of hydrogen, methane, ethane and olefins obtained during distillation of crude oil or treatment of oil products (e.g. cracking) in refineries. It also includes gases which are returned from the petrochemical industry.

**Refining** is the process(es) by which petroleum is distilled and/or converted by application of a physical and chemical process to form a variety of products.

**Reflux** is the portion of the distillate returned to the fractionating column to assist in attaining better separation into desired fractions.

**Reformate** is an upgraded naphtha resulting from catalytic or thermal reforming.

**Reformed gasoline** is gasoline made by a reforming process.