

Abstract

A process and apparatuses for producing low-molecular olefins by pyrolysis of hydrocarbons comprising preheating and evaporating a starting feedstock, mixing the same with steam-diluent, thermal cracking a resulting mixture in a blading rotary reactor by heat
5 generated inside the volume of reacting mixture due to hydrodynamic drag of the rotor blades rotating therein, quenching cracked gas and subsequent separation of it. The heating reacting mixture to pyrolysis temperature is performed by mixing with hot pyrolyzed gas being circulated in a working cavity of the blading rotary reactor for a negligible time in comparison with a duration of pyrolysis reactions. The process enables to increase the low-molecular
10 olefins yield.