

Abstract:

In a process for the thermal cracking of hydrocarbons in the presence of steam, the charge mixture is passed through externally heated tubes with helical inner fins, and to make the temperature in the tube wall and over the tube cross section more uniform, as well as to reduce the deposition of pyrolysis coke on the tube inner wall, a swirling flow is generated in the gas mixture and is gradually merged into a core zone with a predominantly axial flow at increasing radial distance from the fins.