

Steam-cracking of Algerian gas condensate compounded with Ethane

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The Algerian gas condensate may be valued as a raw matter to obtain maximum ethylene and propylene yields, the later are used as first materials to produce polyethylene and polypropylene. It is judged utile to substitute ethane as pyrolysis feedstock by the Algerian condensate compounded with ethane. Several dilutions (5%, 10% and 20%) of the gas condensate and its fractions with ethane have been prepared to be used as pyrolysis feed stocks.

The effect of temperature and residence-time on the yield of pyrolysis products have been studied well as their influence on the composition of gas and liquid pyrolyses.

Taking into account all the raw materials compounded with different dosages (5, 10, 20%) and the variation of these parameters, the experimental results obtained are:

- A maximum yield of ethylene for a dosage of 10 % of the condensate's light fraction. The process temperature is 820°C.
- A maximum yield of propylene using the average fraction with a dosage of 10%. The temperature is 720°C.
- Maximum yield of liquid pyrolysis using the average fraction with a dosage of 20 %. The temperature is 720°C.

Biography:

Ms Fahima BOUARAR is a Chair Professor at the Department of Processes Engineering, Laghouat University (Algeria). She obtained his Baccalaureat in Science of life and Nature from Polytechnic High School (Bouira, Algeria) in 2000, Studied Petrochemistry in Boumerdes University, and obtained his Engineer in 2006. She followed these studies at University of Hydrocarbons and Chimestry. She got her Magister in 2011. Currently she is preparing her Ph.D.

Her research focuses on the potential of using Algerian gas condensates and the effect of changes in Operating Conditions on the Pyrolysis products. She is Petrochemistry Unit Chief at Laghouat University since 2014.