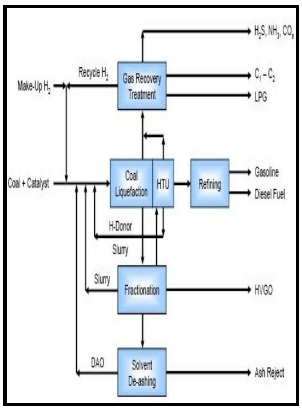
Reaction engineering in direct coal liquefaction

Addison-Wesley, Advanced Book Program - Indirect Liquefaction



Description: -
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Chemical reactions.
Coal liquefaction.Reaction engineering in direct coal liquefaction
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Energy science and technology ;Reaction engineering in direct coal liquefaction
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Direct Coal Liquefaction

Liquid yield for the H-Coal process, where the goal was to produce primarily fuel oil, was ~ 35%, while the liquid yield for the H-Coal process in syncrude mode was ~ 48%. In a commercial plant, the deasher underflow containing unreacted carbonaceous matter would be gasified to provide hydrogen to drive the process.

Reaction engineering in direct coal liquefaction, Yatish T. Shah, Editor, Addison-Wesley Publishing CO., Inc. (1981), 416 pages, $47.50, Aiche Journal

Also, legislation in the United States has restricted the military's use of alternative liquid fuels to only those demonstrated to have life-cycle less than or equal to those of their conventional petroleum-based equivalent, as required by Section 526 of the Energy Independence and Security Act EISA of 2007. Results from the use of the reactor system to probe the pyrolysis kinetics of an 11-component coal model compound mixture and the liquefaction of several coal samples in tetralin are reported. Accordingly, the product requires substantial upgrading to yield acceptable transportation fuels.

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For example, the pyrolysis of dibenzyl ether DEE was enhanced so long as the radical initiators benzyl phenyl ether BPE , benzyl phenyl sulfide BPS , and benzyl sulfide BS remained in the mixture.

Coal liquefaction

Shah, Editor, Addison-Wesley Publishing CO. The product is not an oil, but methanol. The ratio of the y-CH2 to the B-CH2 side protons provides an estimate of the length of the average side chain length for chains with a length greater than one.

Coal liquefaction technologies—Development in China and challenges in chemical reaction engineering

The of South Africa in the 1990s made Sasol search for products that could prove more competitive in the global marketplace; as of the new millennium the company was focusing primarily on its petrochemical business, as well as on efforts to convert natural gas into crude oil using its

expertise in Fischer—Tropsch synthesis. The COED Process, developed by , uses a for processing, in combination with increasing temperature, through four stages of pyrolysis. Edited by Linked existing covers to the edition.

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It is presently used in South Africa for coal conversion. One of the problems with the process is the wide variety of products formed, including olefins, alcohols and waxes.

Coal liquefaction technologies—Development in China and challenges in chemical reaction engineering

Kinetics; Initial Reactions; Flow Reactor; Direct Coal Liquefaction; Dibenzyl Ether; NMR INTRODUCTION The liquefaction of coal involves reaction of its mobile and rigid phases. Novice readers will benefit from the chapters covering the best known direct liquefaction processes and the origin and characteristics of coals.

Reaction Engineering of Direct Coal Liquefaction

The mean residence time was approximately 500 s. Speight PhD, DSc, in , 2014 3. The above instances of commercial plants based on indirect coal liquefaction processes, as well as many others not listed here including those in planning stages and under construction, are tabulated in the Gasification Technologies Council's World Gasification Database.

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