662.71; 662.74-76; 662.63

ABOUT DEVELOPMENT OF BIOFUEL TECHNOLOGIES

• • • , • •
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Key words: *destructive hydrogenation of coals; gasification of coals; biofuel technologies; biofuel; biodiesel; biodimethyl ether*

No 6, 2015

9–13 %

450–470 °C ,

(432 кДж/моль).

20–70

C – C (298 кДж/моль)

50-

[2]

(-CH₂-)_n (CO – H₂)

1926 .

Ruhrchemie

1938 . 1945 .

44-21,5

Co – Th – Mg,

46 23 %.

(Kellog – Synthol)

33,4 % C₁₂ – C₂₀.

(320–330 °C), (2,2)

H₂ : CO (3:1).

4 24 200

1 °C - . 2007

( ) [3]. 150 °C

35 ,

2. ( ).

50-

CO_2 и H_2O (CO_2 и H_2O)
 35–40 %. (2 000 °C).
 41 %, 52,6 %.
 : CO – 64 %; H_2 – 29 %; N_2 – 1 % .
 Koppers-Totzek [4],
 (0,1),
 $CO + H_2$
 560–660 1 000 50 000
 80–95 % . — 1 300–1 700 °C.
 GTL (Gas-to-Liquid)
 « »
 (Hub)
 (1 BTU,
 0,238 , 1 = 4,2 BTU)
 20–25 .
 75–80 .
 4–5 . 1 BTU. 1 BTU, 15–17 ( ) JCC
 GTL-
 (4 15–17
)
 :
 $(CH_4 + H_2O = CO + 3H_2)$;
 $(2CH_4 + O_2 = 2CO + 4H_2)$; конверси
 $(CO + H_2O = CO_2 + H_2)$; $(2H_2 + CO = CH_3OH)$
 (, Mobil,)
 $(2CH_3OH = H_3C - O - CH_3 + H_2O)$
 ZSM-5,
 80%-

No 6, 2015

( ) — 0,24 .

, , -

, , -

1999 .

(35 % — , 32 % — ; 4 % — 11 % —)

14 % [10].

2002 . 86 . ч (70

), 44 % 1999 5-6

(- ,),

39 % — [10] :

; 24 % — -

; 23 % — .

:

39 %); (30-160 %)

, -

, -

, -

, -

( )

: — 56-65 %;

— 30 %; (

) — 5-7 %.

,

( ) ;

,

(, FAME)

100 % 5 %-

( )

(-13-)

$C_{21}H_{41}COOH$,

65 %.

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