

GAPOU "College of Petrochemistry and Oil Refining named after NV Lemayev"

The students of group 121-A17 completed:

Akhmetov Timur, Bakhtiozin Ruslan, Safiullina Karina, Gubaidullin Ramil.

ОАО «Танеко» Нижнекамск



* **How correctly to do advertising?**

- * The first stage: determine the target audience.
- * The second stage: we create an advertising message.
- * The third stage: select the advertising channel.





TANECO created 13 years ago

The goal is to improve the quality of domestic refining and the formation of advanced capacities for the production of petroleum products in demand.

TANECO is the first large-scale investment and industrial facility built in the post-Soviet space from scratch over the past 30 years.

The main achievement of 2017 in the economy of Tatarstan is the production of diesel fuel, aviation kerosene and base oils at the TANECO refinery.

The technological opportunity for new products is provided by the combined hydrocracking unit, which for the first time in domestic refining was built in four years.

For Tatneft, the implementation of this important stage in the development of the oil refining complex in Nizhnekamsk means a transition to a fundamentally new level associated with an increase in the yield of light oil products to 69 percent and the achievement of the goal of saturating the domestic market with diesel fuel, aviation kerosene and base oils



Processes of deep processing of hydrocarbon raw materials, developed by INKS RAS.

1. GAS PROCESSING

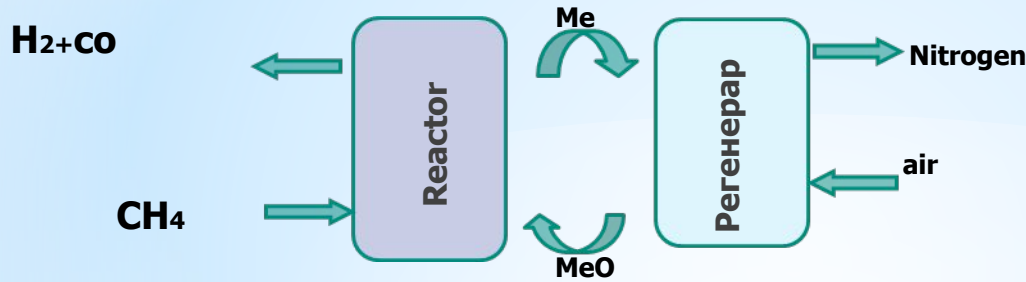
- A new technology for producing synthesis gas from natural or associated petroleum gas
- Processes for the production of olefins from natural gas (INChS RAS, IPCP RAS)
- Deep processing of natural gas
- Conversion of natural gas through synthesis gas into high-octane gasoline or light oil
- Chemical processing of associated gas in the analog of light gas condensate (INChS RAS and IPCP RAS)

2. PROCESSING OF HEAVY OIL RAW MATERIAL.

- The state of development, design and construction of a pilot plant
OAO TATNEFT for hydroconversion of heavy residues and natural



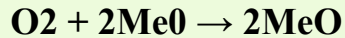
A new technology for producing synthesis gas from natural or associated petroleum gas



Conversion of hydrocarbon feedstock into synthesis gas:

$$\text{C}_n\text{H}_m + n\text{MeO} \rightarrow n\text{CO} + 1/2m \text{H}_2 + n\text{Me}$$

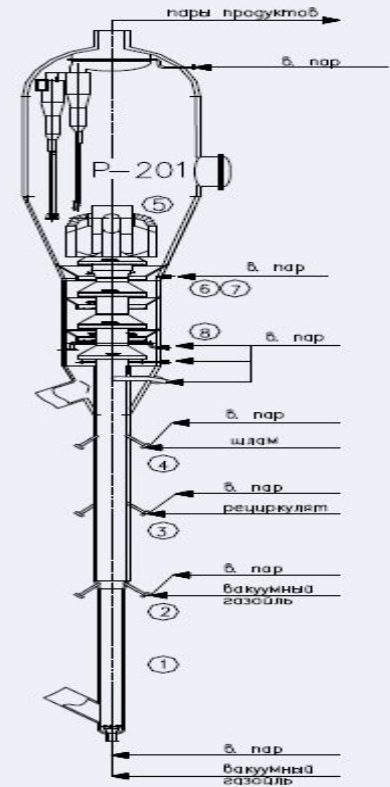
Catalyst regeneration:



Catalyst with content
 active oxygen not less than 10% by
 weight.

Technology advantages

1. relatively low level of capital expenditures
2. energy saving
3. use of air as an oxidizing agent without dilution of synthesis gas with nitrogen
4. Exclusion of formation of explosive mixtures hydrocarbons - oxygen
5. prevention of deactivation of the catalyst as a result of removal of coke during the regeneration stage
6. obtaining significant amounts of pure nitrogen



Processing of the associated gas burned on crafts (from 20 billion cubic meters a year), will allow to receive in addition 10 million tons of straight-run gasoline

Advantages of process:

- use of block configuration;**
- the fullest use associated gas;**
- receiving an analog of light gas condensate with low contents;**
- aromatic connections and paraffin;**
- suitability of a product for mixture and transportation with oil;**



TECHNOLOGY OF HYDROCONVERSION

Катализ наночастицами, синтезированными в углеводородной среде

Традиционный катализ

Носитель катализатора

Прекурсор
активного
катализатора

Новая область гетерогенного катализа—
наногетерогенный катализ

Микроэмульсия Терморазложение

Сларри (кипящий
слой) системы
Размеры частиц 1-20
мкм

Стационарный слой
(размеры частиц 3-5
мм)

Движущийся слой
(размеры частиц 10—
100 мкм)

Нанесенный
катализатор



Process is carried out in the environment of hydrogen:

- with a pressure in a zone of reaction of 7,0-14,0 Мpas
- the consumption of hydrogen makes about 1,5-3,5% of masses. on raw materials.
- Volume feed rate of raw materials 0,5-2 hour⁻¹.
- Conversion not less than 90-97% of an IAU. raw materials in easy fractions (gas, gasoline, diesel фп. and vacuum distillate).

Production of a concentrate of the valuable metals which are contained in initial raw materials (V, Ni) and thermal energy is at the same time carried out. Hydroconversion process effectively is entered in any schemes of oil refinery and allows to maximize production of fuels, petrochemical products and base oils.

At Institute of petrochemical synthesis of A.V. Topchiyev of the Russian Academy of Sciences (INHS RAS) the unique ultradisperse catalyst is created and the technology of hydroconversion of heavy oil residues which basis was formed by results of the researches and technological developments in the field of hydrocracking of heavy raw materials which were carried out within more than 30 years in CLG and INHS of RAS is developed together with the Chevron Lummus Global (CLG) company.

Conclusion



1. ESSENTIALLY NEW TECHNOLOGY BASED ON USE OF THE UNIQUE NANODIMENSIONAL CATALYST. DEVELOPER – INSTITUTE OF PETROCHEMICAL SYNTHESIS OF A.V. TOPCHIIYEV OF THE RUSSIAN ACADEMY OF SCIENCES (INHS OF RAS).
2. Test of various options and schemes of the reactor platform will allow to define an optimal variant of a design of the reactor.
3. An operating time of sufficient volume of experimental data for design the hydroconversion plant – a problem of trial tests.
4. The highest aiming at creation of innovative technologies and realization in record time of strategic tasks of JSC Tatneft holds deserved high international authority and investor confidence.
5. Thanks to these qualities the company stands at the origins of the first trial test and industrial introduction of essentially new process of hydroprocessing of the remains, it instills confidence in successful realization of this process, important for oil processing.