

НЕФТЬ И КАПИТАЛ

АНАЛИТИЧЕСКИЙ ЖУРНАЛ

ИЗДАЕТСЯ С 1994 ГОДА



Первому — 15! 28

В ноябре 2006 года «ЛУКОЙЛ» отмечает свое пятнадцатилетие

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ИЗДАЕТСЯ С 1994 ГОДА

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Экстракты	105	8,48
Метан	104,2	8,54
Полипропилен	93,9	5,73
Нефть	74,3	3,2
Томский	53	
Великий	30	14
Томский	34	13
Великий	30	12
		24
		24

Reducing deficit

«Nizhnekamskneftekhim» has launched polypropylene production

In October, «Nizhnekamskneftekhim» has launched the largest in Russia polypropylene production with the annual capacity of 180 thousand tons. Thus one of the three polypropylene projects announced by the Russian companies several years ago has been realized. If the other two, which are nowadays forced by «LUKOIL-Neftekhim» and «Titan» group in cooperation with «NOVATEK», are launched on the target dates (in 2006 and 2007 correspondingly), then the all-Russia production of this highly demanded polymer will increase by 1.6 times and exceed 700 thousand tons a year. This will allow satisfying the present-day demand to the fullest extent and will promote the development of small- and medium scale businesses which specialize in plastic processing.

At the same time the date of new polypropylene facilities launching depends not only on the pace of construction but to a large extent on the ability to supply the new facilities with raw materials: propylene is a great deficit in Russia. However, «Nizhnekamskneftekhim» – one of the largest propylene producers in our country – does not have such a problem. Moreover, the enterprise has definite prospects to significantly increase its production in the nearest future.

According to JSC «NIITEKHIM» (Technology and Economics Science and Research Institute), Russia produced 301.4 thousand tons of polypropylene in 2005, which is 2.4% more than in 2004. This growth was ensured by one of the three producers, of approximately equal capacity (100 thousand tons a year) – Moscow Oil Processing Plant, which increased its capacity by 13.1%. At the same time «Tomskneftekhim» Ltd and CJSC«Polypropylene» in Ufa reduced their production by 2.7% and 1.8% correspondingly (see also «There is no overproduction of polypropylene» in «OaC» («Oil and capital») #11, 2005.)

Such tempos of growth are definitely not enough for meeting the demand which is nowadays estimated as 450 thousand tons a year and has a strong tendency for growth: by different estimations, from 7-8% to 10-12% a year. Besides, none of these producers have started to realize the

The largest propylene producers in Russia

Enterprise	Production in 2005, thousand tons	Share in the total production, %
Nizhnekamskneftekhim	203.1	18.49
Stavrolen	146.9	13.37
Ufaorgsyntez	145.9	13.28
Salavatnefteorgsintez	124.7	11.35
Tomskneftekhim	105.0	9.56
Angarskiy polymer plant	104.2	9.48
SIBUR-Neftekhim	93.9	8.54
Omskiy kauchuk	74.5	6.78
SIBUR-Khimprom	63.0	5.73
Kazanorgsintez	36.0	3.20

Source: «Nizhnekamskneftekhim»

Polypropylene production in Russia, %

Producer	2005	2008 (forecast)
Tomskneftekhim	36	14
Polipropilen	34	13
Moskovskiy Oil Processing Plant	30	12
Nizhnekamskneftekhim	–	24
Titan	–	24
Stavrolen	–	13

Source: «Nizhnekamskneftekhim»

modernization and development projects which could ensure the capacity growth and introduction of the new modern assortment. At the same time the «niche» is filled by import. If in 2004, according to «Nizhnekamskneftekhim», there were 65 thousand tons of polypropylene imported to Russia, 146 thousand tons are expected in 2006.

The basic product

The absence of the functioning polypropylene enterprises development in Russia is first of all connected with the deficit of the raw material, which is propylene, a side product in ethylene production by straight-run gasoline pyrolysis. The plants mainly use propylene in their own technological schemes. There are surpluses, but they do not go to the open market, as propylene is delivered by long-term contracts.

In our country propylene is produced by a little over ten enterprises. In 2005 its total production was 1.1 mln tons (see «The largest producers...»), and the internal demand is not satisfied by these volumes. According to the experts' estimations, by 2009 the volume of propylene consumption will grow by 530 thousand tons a year compared to 2005 (due to the launching of new polypropylene productions), while its deficit, even with the full loading of the existing units, will amount to 450 thousand tons a year. Propylene will be in short supply until new olefin facilities are built in Russia.

According to the information of «OaC», such construction is planned, in particular, by «Nizhnekamskneftekhim». It currently elaborates the enterprise development strategy up to 2015, which will rest on (in one of the discussed variants) the new olefin complex, producing basic monomers.

At the same time unlike its competitors «Nizhnekamskneftekhim» does not suffer from

On the agenda of «Nizhnekamskneftekhim»

In two years the company plans to launch polyethylene production with the capacity of 230 thousand tons a year. The contracts or license transition, providing services in projecting, equipment delivery and assembly were signed with Basell and Technimont last September. In addition to the existing productions of general purpose polystyrene and shockproof polystyrene (total capacity of 100 thousand tons a year), there will be launched the productions of foam polystyrene (50 thousand tons a year) and ABC-plastics (65 thousand tons a year) at the polystyrene plant.

There are no plans to increase the polypropylene production at «Nizhnekamskneftekhim» in the nearest future. The development of this direction depends on the decision to build a new olefin complex.

propylene deficit and even possesses surpluses of this product. Until now the company has used up to two thirds of the produced propylene for their own needs. A part of these volumes was meant for production of propylene oxide which, in its turn, is a raw material for polyether production. The later are delivered, in particular, to JSC «Elastokam». This joint venture,

established in 2000 on parity basis by «Nizhnekamskneftekhim» and the German «Elastogran» (joins the BASF group), produces polyurethane systems (about 80 thousand tons a year).

Until recently the rest volumes of propylene have been sold by «Nizhnekamskneftekhim» to off-site companies. Now they will be oriented to the domestic pro-



Tatarstan President Mintimer Shaimiyev is satisfied with the results of «chemical reaction» in the republican Fuel and Energy Complex.

duction of propylene, which has been launched in October. Thus, we can predict that other Russian polypropylene producers' problems with raw materials will increase.

In 2006, «Nizhnekamskneftekhim» is to produce 210 thousand tons of propylene. Upon the completion of the ethylene plant updating in 2008 the propylene production volume will increase up to 230-250 thousand tons a year.

It should be also noted that the propylene production in Nizhnekamsk is a part of technological cycle of several companies controlled by «TAIF»: raw material for pyrolysis – straight-run gasoline – is produced from Tatarstan oil at Nizhnekamsk Oil Processing Plant. In 2006 the volume of naphtha production at Nizhnekamsk Oil Processing Plant will amount to no less than 1.1 mln tons. Besides, another 500 thousand tons of straight-run gasoline will be given by gas condensate plant launched by «TAIF» this year (for details see «TAIF» solves raw material problem» in «OaC» #6, 2006).

At present the demand of «Nizhnekamskneftekhim» in straight-run gasoline is about 1 mln tons a year. The extra volumes are sold in the market. But if necessary they can be forwarded to the domestic production. For example, to the

new olefin complex, if it is constructed there.

Polypropylene «dot» at the end of the chain

The solid raw material base has allowed «Nizhnekamskneftekhim» to launch the largest polypropylene production in Russia. It is based on «Spheripol» technology of Basell Company, from which a license was purchased according to the agreement signed in July 2003. It was then that we signed a three-sided memorandum of cooperation between «Nizhnekamskneftekhim», Basell and Tecnimont Company. The latter was obliged to prepare the fundamental project for the plant and to ensure the supply of equipment.

The construction began in 2004 and was finished in due time. «Nizhnekamskneftekhim» used its own means as well as long-term credit resources of \$132 mln for its financing. The loan acquisition was arranged by Citibank, and \$65 mln were obtained for 10 years under the guarantee of SACE, the Italian insurance agency. The project cost recovery will be in about 5 years. Up to the end of this year the enterprise will have achieved its project capacity.

Thus, «Nizhnekamskneftekhim» has enlarged one more technological chain in its production and increased its product added cost.

The polypropylene market price is usually by at least 30 % (and at certain periods by 100%) higher than propylene price.

The main volume of the new «Nizhnekamskneftekhim» product is planned to be sold in the domestic market.

There is still spare space

According to the «Nizhnekamskneftekhim» specialists, in 2008 the share of the new polypropylene production in the total volume of Russian capacities (taking into account the future launching of «LUKOIL» and «Titan» productions) will be approximately 24% (see «Polypropylene production...»).

At the same time, according to some estimation, even after launching of all announced polypropylene enterprises, the demand in polypropylene which will be formed in Russia by 2010-2012, is not to be satisfied. That is why the import volume will still be about 70-130 thousand tons a year. This prognosis should stimulate the creation of new capacities, and such projects already exist. Among others we can mark «SIBUR» project which is going to build the largest in Russia polypropylene plant with the capacity of 500 thousand tons a year in the Tyumen region.