

Attn.: Oil and gas refineries

Dear sirs,

KNT Group company(www.kntgroup.ru) is the leading producer and supplier of sorbents and catalysts in Russia and includes two production centers: "Sterlitamak Catalysts Plant" (SCP) and "Ishimbay Specialized Chemical Plant of Catalysts" (ISCPC) that are located in Bashkortostan.

"Ishimbay Specialized Chemical Plant of Catalysts", Ltd is the leading manufacturer and supplier of sorbents in Russia. In 2010 at ISCPC there was built the newest production of microspherical cracking catalyst with capacity for 20 thousand tons/year, including 35,000 square meters of production space, 2100 pieces of equipment of best manufacturers (including the equipment of the Japanese company JGC). Production process of microspherical cracking catalyst was developed by the KNT group, combining the best achievements of Western manufacturers.

"Sterlitamak Catalysts Plant", Ltd is a new innovation company, equipped by Haldor Topsoe company (Denmark) and other leading European and Japanese companies, specialized in the production of catalysts for hydrogenation processes.

We suggest you to consider the direction of possible cooperation in sorbents and catalysts supplies.

1. FCC catalysts (microspherical cracking catalysts).

In May, 2012 Iranian Abadan Oil Refining CO. began purchasing cracking catalysts of our production that demonstrates a successful and quality work - gasoline yield increased from 38.05% (July, 2012) to 46.10% (January, 2013). Under the same conditions and the same raw materials consumption it will make possible to receive additional 190,000 tons of gasoline a year, for the sum of about 190 million dollars. Review is available.

The successful experience of the cracking catalyst "Octifine-480P" usage at the cracking unit in "Bashneft - Ufa Oil Refinery" allowed to increase the yield of gasoline from 44.91% to 54.98% in December, 2012. (54.26% in October 2012). According to MON increased from 82.8 to 83.5, according to the research method - from 94.1 to 94.4. Thus, the yield of gasoline per 1 ton of used raw material increased to 22.4%. Under the same conditions and the same raw materials consumption it will make possible to receive an additional 210,000 tons of gasoline a year, for the sum of about 210 million dollars. Review is available.

We want to note that there are no any risks in using cracking catalyst. Fresh catalyst loading is performed gradually and in the case of a slight deterioration in the process one can immediately stop the loading of new catalyst and resume loading of previously used catalyst.

2. Catalysts of hydrogenation processes.

KNTgroup offers a wide range of hydrotreating and hydrocracking catalysts of a new generation, manufactured with the help of advanced production techniques. Catalysts have a high catalytic activity and tailored to the needs of a particular customer. Catalysts of the company aren't inferior on quality to catalysts of leading global manufacturers, thus the price of catalysts of our production is much lower. Besides the Russian deliveries, some successful foreign supplies to a number of the Iran enterprises were carried out including Emam Khomeini Shazand Arak Oil Refining Company (AORC), where 260 MT of hydrocracking catalyst was delivered, and Tehran Oil Refining Company with hydrotreating catalyst of kerosene and diesel fractions deliveries. Supplied catalysts completely conform the stated specifications and demonstrate the successful operation.



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All catalysts deliveries accompanied by the appropriate technical service and maintenance, which includes a range of services for loading, unloading, sieving, activation, regeneration and passivation of the catalysts, the monitoring unit working at all operation stages of the catalytic system, the provision of qualified recommendations for improvement of hydrotreating units, the analysis of spent catalysts, and many other things.

3. Synthetic zeolites, adsorbents.

High quality of synthetic zeolite and adsorbents of our production has been repeatedly confirm by various comparative tests of the largest design institutes and by product consumers.

High values of the main operation parameters are reached in the conditions of commercial production with our zeolites. Thus, the largest processor of oil-dissolved gas in Russia, JSC "SIBUR" completely transferred all the gas-processing capacities for loading by adsorbents of the KNTgroup production. It is 7 largest gas refineries and 11 gas processing units with a total regular 2000 MT adsorbent loading.

Besides, adsorbents of our production are widely used in the drying and gas purification units of oil and gas refineries, petrochemical plants of JSC "Gasprom", JSC "Surgutneftegas", JSC "Lukoil", JSC"Rosneft", JSOC "Bashneft", and also on the plants of near and far abroad such as NHK "Uzbekneftegas"(Uzbekistan), "Turkmengas" State Concern (Turkmenistan), «SOCAR» (Azerbaijan), Lavan (Iran), «Belorusneft» State production association (Belarus), JSC «KazMunaiGas EP» (Kazakhstan) and so on.

It should be noted that the partnership with KNT Group provides technical service and product support by our specialists, analysis of unit working, analytical catalysts control, regular reports on the operation of catalysts and sorbents.

We ask you to include the KNTgroup company to the list of potential suppliers of catalyst products.

We want to be among the faithful suppliers of Oil and Gas refineries and we are ready for a fair fight with our Western competitors in the supply of catalyst products.

The list of products is presented in the appendix.

Regards, Director of KNTGroup Ltd

Usmanov I.F.

Appendix:

- 1. Information about catalyst working on Abadan Oil Refining Co
- 2. Information about catalyst working on Bashneft -Ufa Oil Refinery
- 3. Translation of information a bout catalyst working on Bashneft -Ufa Oil Refinery
- 4. Protocol № 111 dd.22.11.2012 of Management board of Oil refiners and petrochemists association.
- $5. \quad \textit{Translation of protocol $N$$} \ \textit{111 dd.22.11.2012 of Management board of Oil refiners and petrochemists association}$
- 6. List of products.



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Product list of KNT Group

	Molecular Sieves		
Nº	Name of product	Purpose	
1	Molecular Sieve 4A	-drying of natural and oil gases;	
	TU 2163-003-15285215-2006	-drying of reforming and cracking gas;	
		-drying and regeneration of transformer oil;	
2	Molecular Sieve 3A	- drying of natural and oil gases;	
	TU 2163-006-15285215-2006	- drying of easily polymerizing hydrocarbon flows, in particular	
		drying of pyrolysis gases in Ethylene manufacturing;	
		concentrating of alcoholic solutions;	
		drying of organic liquids (Kerosene, Hexane, Benzene,	
3	Molecular Sieve 5A	Cyclohexane, Methanol, Ethanol, Isopropanol and so on) -natural and oil gas purification from Sulphurous compounds,	
3	TU 2163-004-05766557-97	Carbon Dioxide and Mercaptans;	
	10 2163-004-05766557-97	-purification of brazing atmospheres and generation of protective	
		atmosphere in metallurgy;	
		-extraction and purification of normal Paraffins which are feed for	
		manufacturing detergents and Protein-Vitamin components;	
		-separation of mixtures of Olefin and Paraffin Hydrocarbons;	
		gas purification of rubbish recycling plants from toxic agents.	
		gao parmoanon or rassion recycling plante from toxic agente.	
4	Molecular Sieve NaX (13X)	- natural gas treating from water, sulphurous compounds and	
	TU 38.10281-88	Mercaptans;	
		-purification of air and Nitrogen from Hydrocarbons, Oxides and	
		oils;	
		-treating of oil gas from sulphurous compounds, Carbon Dioxide	
		and Mercaptans; -separation of aromatic Hydrocarbon mixtures;	
		-removal of oxidizers before polymerization in purifying olefins.	
5	Molecular Sieve 13X -K	- purification and drying air from water, Carbon Dioxide,	
	TU 2163-009-05766557-2000	Acetylene in oxygen installations, fractionation;	
		-purification of air from Carbon Dioxide prior to its separation into	
		Oxygen and Nitrogen;	
		-production of Oxygen from air by a short-cycle adsorption	
	M. I. O. N. V. O. D. (1919)	technique.	
6	Molecular Sieve NaX GDO (13X)	- fine gas and liquids purification from hydrogen sulfide,	
	TU 2163-017-94262278-2011	mercaptans and other sulfur compounds as well as deep	
		dehydration and fine purification from carbon dioxide.	
	Catalyst		
1	OCTIFINE Microspherical catalyst of	- cracking of oil fractions at the units with catalyst fluidized bed	
	cracking	(FCC)	
	TU 2177-012-94262278-2008		
2	Catalysts of hydrogenation processes	- hydrotreating and hydrocracking of different oil fractions	
2.1	Catalyst KNT 222M	- hydroforming of middle-distillate fractions, prehydrotreating of	
۲.۱	Catalyst INVI ZZZIVI	reforming feed, hydroforming of paraffin waxes	
2.2	Catalyst KNT 231M	KNT 231MNi - hydrodesulfurization, hydrodenitrogenation,	
	Catalyot 1811 ZOTW	hydrogenation of unsaturated and polynuclear aromatics	
		hydrocarbons of the gasoline and middle-distillate fractions	
		KNT 231MCo – deep hydrotreating of middle-distillate fractions,	
		hydrotreating of the isomerization and reforming feed,	
2.3	Catalyst KNT 242M	- hydrotreating of the fractions of secondary origin, residual	
	, 	fractions and hard waxes	
2.4	Catalyst KNT 442M	KNT 442MNi – mild hydrocracking of VGO	
		KNT 442MCo – hydrotreating of catalytic cracking feed	
2.5	Catalyst KNT 438M	- hydrotreating of middle-distillate fractions and refined oil	
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2.6	Catalyst KNT 720M	- hydrotreating of middle-distilate fractions to get components of	
	,	dieel fuel and jet fuel with improved low-temperature properties	
2.7	Catalyst KNT 442Y	- hydrocracking of VGO	
3	Catalysts KU-2FPP и KU-2FKK	- in the process of Olefins' hydration;	
	TU 2174-013-94262278-2009	- in the process of alcohols' dehydration;	
		- in the process of Isobutyl, Methyl-tret-butil ether Aldehyde,	
		Pyridine production and other processes catalyzed by acid	
		catalysts.	
4	Alumina Catalyst for Sulphur	- is used for the processes which are based on Clause reaction, in	
	production	Clause and Sulfren units.	
	TU 2163-016-94262278-2009		
5	Catalyst KNT-NiC-8	- conversion of gas hydrocarbons	
	Adsorbents		
1	Adsorbent A-4M (microspherical)	-purification of aromatic hydrocarbons from unsaturated, resinous	
	ТУ 2163-002-05766557-95	and dye-stuff substances;	
		-purification of paraffin hydrocarbons from unsaturated compounds.	
2	Activated Alumina- Gas Dryer	- as a as a protective layer preventing exposure of condensed	
	TU 2163-015-94262278-2009	moisture, chloride, surfactants and others on molecular sieve	
		- drying of gases used in the processes of oil refining	
3	Hydrogen Chloride Adsorbent KNT-	- is intended to dry hydrogen-containing gases and remove	
	HCA-02M	hydrogen chloride and other hydrogen halide impurities from	
	TU 2163-003-73770384-2010	hydrogen-containing gases during reforming, isomerization and	
		hydrogenation processes	
4	Adsorbent of sulphur compound	- refining of process gas streams from sulfur compounds	
	KNT-SR		
	TU 2165-018-94262278-2012		