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Technology of spin modification of oil in processes processing *

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The technology is based on the method of transferring oil into a coherent state carried out by generating spin waves at the resonant frequency of oil, or frequency of one of its harmonics, with the same phase or the same phase difference. When this, with the aim of resonant amplification of the technological process, the frequency the coherent state of oil is synchronous with the frequency of the thermal field of the influencing for oil in the technological process.

Coherence is determined by the occurrence of correlations (interconnections and interdependencies) between the elements of the system. The stronger the correlation between events, the higher the degree of order in the system. Huge number chaotically elements moving at the micro level are detected at the macro level consistent behavior. The system behaves as if each of its elements was informed about the state of the system. The system acquires new properties, not inherent in the objects included in it (emergence). The system responds to external influence as a whole. System elements begin to operate consistently, revealing properties that are not inherent in a single particle. For coherent systems are characterized by a nonlinear response to external impact: with a small value of the external signal, the reaction energy is very significant.

It is known that for the implementation of the process of rectification, rupture or formation valence bonds of CH-molecules, it is necessary to continuously supply a certain the amount of energy to overcome an energy barrier called energy activation.

At the same time, the coherent state of oil causes a decrease in energy activation, as a result of which the amount of energy required to implement oil refining processes decrease and this unused part, is directed directly into the process as additional useful energy.

So, for example, for CH molecules, the rate of breaking or formation of valence bonds is is determined based on the following formula

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where **N** is the number of valence bonds, **t** is time, E_a is the activation energy, **k** is Boltzmann's constant, **T** - temperature.

The device for converting oil into a coherent state (Fig. 1) contains a generator spin field **1** , connected to the resonator of spin states **2,** chip-translator **3** , which is connected to the chip-inductor **4** , placed in the tank with oil **5** .

Fig. 1.1 **-** generator of spin waves, **2 -** resonator of spin states, **3 -** chip translator, **4** - chip inductor, **5** - oil tank.

As an alternative example, studies of energy change activation of brown coal in equilibrium and coherent states, which were carried out at the Czestochowa Polytechnic Institute (Poland). As a result the introduction of coal into a coherent state, a decrease in the activation energy was obtained by 56.7% relative to the equilibrium state (Table 1). This indicates reducing the energy barrier that must be overcome in the event burning coal in a coherent state.

Table 1

condition coal	Energy activation	Decrease activation energy,%
Equilibrium state	378 kJ / mol	0%
Coherent state number 1	260 kJ / mol	31.2%
Coherent state number 2	164 kJ / mol	56.6%

Studies of the influence of the spin coherent state of oil on the efficiency of its rectification was carried out using the Engler apparatus (Fig. 2), according to GOST 2177-82, “Petroleum products. Methods for determining fractional composition ”.

Fig. 2. Scheme of the experiment. **1 -** spin field generator, **2 -** spin resonator states of oil, **3 -** chip translator, **4** - chip inductor, **5** - flask with heated oil, **6** - heater, **7** - cooler, **8** - container.

After turning on the spin field generator **1** , spin saturation occurs oil in the resonator of spin states **2** to the required coherent level. Simultaneously with the excitation of the resonator, the chip was excited. translator **3** , which due to the effect of entangled quantum states translated the spin excitation to the chip inductor **4** . Chip inductor produced spin saturation of oil in flask **5** .

The experiments were carried out in 2 stages:

Stage 1 - oil spin saturation, with exposure times of 97 and 127 sec, sec subsequent distillation at temperatures up to 180 ABOUT C (Appendix 1).
Stage 2 - spin saturation of oil to a coherent state No. 1 and 12, with subsequent distillation at temperatures of 180 - 300 ABOUT C (Appendix 2).

Statistically significant number of experiments - 3.

After cooling the rectification products in the refrigerator, their volume was measured, samples were taken, and on the chromatograph HEWLETT PACKARD 5890 their structure.

The experimental results are shown in Tables 2 and 3.

table 2

No. p / p	Hydrocarbons	Hydrocarbon yield (%) after oil distillation up to 180 ◦ C depending on the exposure time of the spin saturation		
		Equilibrium state	97 sec	127 sec
1.	Butane, isopentane, n-pentane, 2-methylpentane, 3-methylpentane, n-hexane -	19.0	9.2	10.7
	Others -	2,3	0,4	0.2
2.	2,4-dimethylpentane, benzene, methylhexane, 3-methylhexane, n-heptane, dimethylhexanes -	16.7	20.0	19.1
	Others -	2.9	3.8	3.8
3.	Toluene, methylheptane, n-octane,	17.8	25.1	20,7
	Others -	4.4	5.8	7.6
4.	Trimethylhexane, dimethylheptane,	23.0	24.0	26.1
	xylene, 3-methyloctane, n-nonane	3.7	3.2	4.2

Others -

5. Others below n-nonan -	10.2	11.5	7.6

Table 3

No. p / p	Hydrocarbons	Hydrocarbon yield (%) after oil distillation at 180-300 $_0$ C depending on its spin state		
		Equilibrium (original)	Coherent (resonance number 1)	Coherent (resonance number 12)
one.	$C_8 + C_9$	8.5	11.5	17.8
2.	$C_8 + C_9 + C_{10}$	18.4	22.7	31.5
3.	$C_8 + ... + C_{11}$	30.6	35.2	44.8
four.	$C_8 + ... + C_{12}$	43.5	48	57.3
five.	$C_8 + ... + C_{13}$	59.1	59.1	70.4
6.	$C_8 + ... + C_{14}$	72.8	75.4	78.8
7.	$C_8 + ... + C_{15}$	84	86.3	86.3
eight.	$C_8 + ... + C_{16}$	90.5	92.1	92.1
nine.	$C_8 + ... + C_{17}$	95	96.4	96.4
10.	$C_8 + ... + C_{18}$	96.44	97.5	97.5
eleven.	$C_8 + ... + C_{19}$	98.1	98.3	98.3

In order to determine the catalytic properties of spin saturation (spin catalysis), an experiment was carried out with gasoline A-76, in which spin saturation of oil, with exposure times of 60, 97 and 127 sec and sec subsequent determination of the carbon composition on a HEWLETT chromatograph PACKARD 5890.

Statistically significant number of experiments - 3.

In fig. 3 shows the dependence of the change in the content of hydrocarbons in gasoline A-76 depending on the spin saturation time.

Fig. 3.

In fig. 4 shows the generalized composition of hydrocarbon fractions of A-76 gasoline obtained as a result of the experiment at a spin saturation time of 60 - 90 sec compared to gasoline at equilibrium.

Fig. 4. Type of fractions: I - butane ... n-hexane, II - 2,4-dimethylpentane ... benzene, III - methylhexane ... methylpentane, IV - below methylheptane ... n-octane, V - below n-actane ... dimethylheptane, VI - below dimethylheptane ... n-nonane

Analysis of the data obtained as a result of experiments shows that the spin saturation and coherent state of oil and its products cause a change their hydrocarbon composition.

In addition, the coherent state of oil products reduces energy consumption when they rectification, which can be seen from the laboratory results below research.

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Attachment 1.

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Appendix 2.

Gasoline Spin Saturation Nuclear Resonance Spectrometry
(relaxation time spin-lattice of non-activated and activated gasoline)

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