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# ВЛИЯНИЕ ОБРАЗНОЙ СОСТАВЛЯЮЩЕЙ НА ОБРАЗОВАНИЕ АНГЛИЙСКИХ ТЕРМИНОВ ТРАНСПОРТИРОВКИ И ХРАНЕНИЯ УГЛЕВОДОРОДОВ

В данной статье рассматривается проблема терминологической метафоры в специальной литературе, а именно в научно-технических текстах. Автор представляет различные точки зрения лингвистов на данное явление. Определены группы терминологических метафор в терминосистеме транспортировки и хранения углеводородов. Рассматриваются особенности перевода метафор с английского языка на русский. Автор дает заключение относительно роли и места метафоры в подъязыке транспортировки и хранения нефти и газа.

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### LEXICAL UNITS EXPRESSING WATER SPACE IN THE KHAKASS LANGUAGE

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The article analyzes lexical units that serve to express category of space in the Khakass language. The mentioned category, along with the category of time, belongs to the basic ones. The author focuses on the lexemes representing water space. Continuous sampling from the Khakass literary and folkloric texts served as the research material. Linguistic analysis shows that identified lexical units play an important role in representing the Khakass language worldview.

Key words and phrases: the Khakass language; water space; noun суг "river"; кöл "lake"; талай "big river"; тиңіс "great river"; тиңіс талай "sea-ocean".

## УДК 811.111.81.373

The article dwells on the problem of a terminological metaphor in special literature such as scientific and technical texts. The author presents various linguists' view points to this phenomenon. The groups of terminological metaphors in terminological system of transportation and storage of hydrocarbons are defined. Specific features of a metaphor translation from English into Russian are considered in the terminology under study. The author proposes the conclusion regarding the role and place of a metaphor in the sublanguage of transportation and storage of oil and gas.

Key words and phrases: term formation; metaphor as a linguistic phenomenon; formation of terminological metaphors; metaphorical transfer; types of metaphors.

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## FIGURATIVE COMPONENT CONTRIBUTION IN FORMATION OF ENGLISH TERMS OF HYDROCARBONS STORAGE AND TRANSPORTATION

Metaphorization of common-literary words and terms from various fields of knowledge and industries is one of the ways in term formation in the sublanguage of transportation and storage of liquid and gaseous hydrocarbons in English. The word metaphor comes from the Greek *metaphora*, which stands for a transfer. According to A. A. Reformatsky the name transfer in the process of metaphorization is based on a similarity of things in color, form, nature of motion, etc. [10, c. 83]. The view points of terminologists upon a metaphor are controversial. A. A. Reformatsky [10], V. M. Leychik [7] believe that concepts such as a term and a metaphor are incompatible, bearing in mind that a scientific term should not have evaluative, emotional and expressive connotation. According to English philosopher Thomas Hobbes "the light of human minds is perspicuous words, metaphors and senseless and ambiguous words are like ignes fatui; and reasoning upon them is wandering amongst innumerable absurdities" [4].

Nevertheless, many researchers are interested in such phenomenon as a scientific metaphor. N. D. Arutyunova [2], L. M. Alekseeva [1], M. Black [13], M. V. Nikitin [9], S. S. Gusev [5], and many others explored the problems of terminological metaphors. According to O. A. Fomina metaphor is a certain tool enabling the process of knowledge in a surrounding reality, it is a way of creation and enrichment of language means, an opportunity to connect the sphere of natural language and the language of science [12, c. 1].

Metaphor appeals to a creative perception of scientific concepts by the researcher, it gives the chance to use ready-made language patterns which enable essentially to save language means that is a great advantage under current conditions of dynamic development in science and technology. Metaphors perform not only an emotional and expressive function, but a nominative one, representing a new concept, capturing its essence, relying on available means of language familiar to a concept bearer.

According to A. S. Smagulova any language adapts to modern conditions of communication, retaining at the same time a relative stability therefore many words and terms undergoing from time to time certain changes at the level of semantics do not affect the development processes of the language [11, c. 8].

In terminology of oil, oil products and gas transportation and storage there are specific models of metaphorical transfer, i.e. certain groups of terms form certain metaphors. For example, the groups of terminological metaphors are combined on the basis of existing realities and concepts. Let us consider groups of terminological metaphors defined in the course of our research:

10.02.00 Языкознание 199

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1. Anthropomorphous metaphors (reflecting a human being activity, appearance etc.):
thief (thief) – a reservoir sampler;
phase behavior (behavior, manners) – phase permeability;
shoulder (shoulder) – a clutch ledge (over a surface of pipes);
bend (to bend, a body flexion) – a curve, a piping elbow;
leg (leg) – a leg (of a derrick), a basis support.
2. Everyday life metaphors (concerning household items used in everyday life):
collar (collar) – a borehole opening; a drill pipe;
basket (basket) – an instrument (for extraction of small objects remained in a well);
shoe (shoe, boot) – a slide bearing, a special type of a pipe;
sleeve (sleeve) – a coupling (choke);
concrete jacket (jacket) – a concrete coating of a sea pipeline.
3. Zoomorphic metaphors (associated with image of animals, birds, insects):
butterfly valve (butterfly) –a two-fold valve, a rotary valve;
spider (spider) – a fishing tool; a catcher (for pulling or holding of pipe strings or stems);
dog-leg (dog paw) – a sharp bend of a pipe.
4. Botanic metaphors (regarding to plants):
Christmas tree (Christmas tree) –wellhead equipment;
dry tree (dry tree) – an isolated Christmas tree (wellhead equipment);
branch (branch) – a leadaway.
5. Military metaphors (types of weapon, military equipment):
Big Bertha ("Big Berta" (a German cannon)) – a big size perforator (to shoot openings in pipes);
gun (gun, firearms) – a perforator;
arrow plot (arrow) – a chart of layers inclination;
bunker (bunker, shelter) – a bunker fuel.
6. Architectural metaphors:
vacuum tower (tower, pylon) – a vacuum distillation unit;
column (column, pole) – a drill pipe string;
walking beam (beam)— a balance beam of a sucker-rod pump [3].
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The most numerous in the terminology under consideration are the first four groups of metaphors, military and architectural metaphors are less productive, it confirms the idea that a metaphor is the means of expression and nomination of a special notion, based on a well-known and common phenomena.

Language is inextricably linked to the process of knowledge and thinking, results of this activity are inevitably reflected in the language, including a term formation presented by metaphorical terms. Metaphors are inherent to any language, however, various nations have their own peculiarities in perception of the environment they live in. Differences in perception of the surrounding world for different nations can be significant. Thus there can arise problems in translation of terminological metaphors.

In the identified corpus of metaphors there are many examples (23%) which exhibit a complete coincidence in translation from English into Russian, this pattern can be called "metaphor-metaphor". There are no problems in translation of this type of metaphors. N. A. Mishankina calls such terminological metaphors symmetric [8, c. 34]. It means a metaphorical image is completely identical both in Russian and in English languages. For example:

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branch (branch) – branch (of a pipeline);
column (column) – a column (of drill pipes);
leg (leg) – a leg (of a derrick);
shoe (shoe) – shoe [3].
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There is another group of metaphors in the sampling, which can be called partially symmetric terminological metaphors (10%) in which the initial conceptual sphere is similar, but different images or notions become a basis for the term formation as they are natural to representatives of a particular language and culture. A metaphor origin in such terms is the same, but there are some differences in details:

sieve (sieve) – a lattice filter (difference in perception of an object as a piece of kitchen utensils and as a technical article);

gun (firearms, gun) – a perforator (a military equipment – a building instrument) [Там же].

We have also identified the group of metaphorical terms in which there is no matching of metaphorical images since their initial conceptual source has no coincidence. According to N. A. Mishankina and [8] such metaphorical terms can be called asymmetric:

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Christmas tree (Christmas tree) – wellhead equipment; dry tree (dry tree) – isolated wellhead equipment [3].
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Terminological metaphors of this type are represented by 5%.

Metaphors called "metaphor – direct nomination" [2] are the most numerous in the sampling of terminological metaphors regarding to the sphere of transportation and storage of hydrocarbons. It means that an English term is a metaphor, and a Russian one is presented as a direct nomination or a descriptive translation that proves the existence of cultural, national peculiarities in various languages, for instance:

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crowfoot (buttercup) – a fishing tool for drill stems; rabbit (rabbit) – a scraper to clean a pipeline; wildcat (cat) – an exploratory well in a new location;
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knockouts (strong knocking down blow) – traps (on low sites of gas lines for collecting of gas and gasoline condensate);

boom-cat (rolling cat) – a tractor with an arrow, a pipe layer [3].

It should be noted that this sampling contains a considerable share of dead metaphors according to P. Newmark's definition [15, p. 106]. The dictionary of linguistic terms by T. V. Zherebilo defines such metaphors in the following way – a kind of a metaphor, which lost its semantically motivated connections of meanings [6, c. 208]. These are metaphors, which lost a figurative component and are perceived as something common, ordinary. Very often, these are metaphors formed on the basis of anthropomorphous model according to similarity with parts of a human body or objects used by a person in everyday life i.e. household metaphors, zoological metaphors, for example:

bottle-neck (bottle neck) – a narrow place;

pin-and-eye connection (pin + eye + link) – swivel joint;

blind (blind person) – a plug, a stopper;

sleeve (sleeve) – a coupling, a choke;

crowfoot (buttercup) – a fishing tool for drill stems;

spider (spider) – a spider, a fishing tool [3].

The research conducted means that the most productive groups of terminological metaphors in the analyzed term system are:

- 1. Anthropomorphous metaphors including notions, referred to a human being, his (her) appearance, work, everyday life etc. (39%).
  - 2. Zoomorphic metaphors characterizing faunal forms (23%).
  - 3. Botanic metaphors describing all that belongs to flora (12%).

It should be noted that the quantity of symmetric metaphors in our research is only 23%, the amount of partially symmetric metaphors is 10%. It can be explained by differences in mentality, world view, culture of native English speakers and Russian people. G. Lakoff and M. Johnson believe that metaphors penetrate our everyday life in such a natural way that people often are not aware of it, using this phenomenon as a tool in processes of cognition and understanding of the world [14].

The obtained results imply that metaphorization in terminology of oil and gas transportation and storage is an essential phenomenon peculiar to the language in general and to the science and technical language in particular, reflecting development processes in a specific technical field.

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В данной статье рассматривается проблема терминологической метафоры в специальной литературе, а именно в научнотехнических текстах. Автор представляет различные точки зрения лингвистов на данное явление. Определены группы терминологических метафор в терминосистеме транспортировки и хранения углеводородов. Рассматриваются особенности перевода метафор с английского языка на русский. Автор дает заключение относительно роли и места метафоры в подъязыке транспортировки и хранения нефти и газа.

Ключевые слова и фразы: образование терминов; метафора как лингвистическое явление; образование терминологических метафор; метафорический перенос; типы метафор.