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Research paper



Analytical Nominations Structural-Semantic Features in the Engineering Technology Field

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Abstract

Nominating special concepts method by means of analytical terminology belongs to the most active and most productive in the field of engineering technologies, taking into account the specificity of scientific knowledge, which is constantly expanding and replenishing. Analytical terms are subject to internal language laws and general-language influences, reflecting the general tendencies in modern Ukrainian literary language development. Analytical terms by structure type are divided into simple and complex. The highest productivity is marked by two-part analytical terms. In the analyzed constructions, the onomassiological basis is a nuclear component expressed by a noun in the nominal case. Onomasiological sign specifies and detailies the nuclear component meaning. Terminological constructions, having three or more components, are formed by expanding and specifying base component values. Analytic term grammatical and semantic structures are closely interrelated. Terminology unit semantic unity degree depends on the presence or absence of words that are not scientific and technical terms in its composition. Semantic unity increases if one or more analytic term components are formed by narrowing their meaning, metaphorical or metonymic rethinking of non-special words.

Keywords: *analytical, analytical terms, semantic structure, technological processes terminology.*

1. Introduction

Any knowledge field development necessitates scientific activity special objects nomination. It reflects the direct connection with scientific concepts and discoveries and is a means of new knowledge results and consolidation accumulation. At each stage of science and technology various branches development there is a need to revise the qualitative and quantitative composition of their terminology for the purpose of normalization, systematization and codification, as well as the necessity of systematic lexicographic representation of its terminology, which will ensure accessibility and adequate perception of the corresponding theory.

In modern conditions, scientific and technical terminology is the main source of obtaining, preserving and transmitting information, an important tool for mastering special knowledge and a means of accelerating scientific and technological progress [1]. The terminologysphere became domestic linguists investigation subject – S. Doroshenko, N. Knyshenko, L. Kozak, L. Malevich, T. Mikhailova, N. Misnik, A. Nikolaeva, N. Nikulina, A. Romanova, N. Tsymbal, N. Yatsenko and others. Despite significant progress in the study of Ukrainian scientific and technical terminology, a number of linguistic problems remain inadequately explored. First of all, it is about clarifying the specifics of two different structural types of nominative units – synthetic and analytical. Most researchers focus on one-word terms (O. Krymets, N. Ktytarova, Z. Kunch, O. Kucherenko, O. Lytvyn, I. Protsyk, O. Tour, O. Yuzhakova, etc.). Much less attention is paid to the analytical terms (works by O. Ivaschyshyn, T. Machay, B. Mykhailyshin, V. Ovcharenko, Yu. Teglivets, O. Chueshkova, O. Chumak, T. Shcheglova). Especially the issue of the cognitive-onomasiological basis analytical terms creation remains little studied. The cognitive-onomasiological approach to the study of complex terms makes it possible to consider all the analyzed phenomena and processes in their connection with other cognitive processes – perception and human memory, imagination, emotions and thinking.

The continuous growth of science and technology role in the life of modern society, the rapid all knowledge branches development, the regular appearance of their integration and international cooperation processes leads to high terminological vocabulary of modern Ukrainian literary language informativeness, which differs from the general literary language on several grounds: semantic (the terms are unique in their content, since they are called only special objects or concepts); functional (the terms perform not only a nominative, but also a definitive function, by means it is possible to more accurately reflect the content of the concept, to allocate such signs, which will allow to differentiate one concept from another and put it in a certain classification series); by analytical nominations presence (terminological phrases). Today the study of issues related to the analytical terms linguistic status defenition, as well as terminology categorical peculiarities analysis, is relevant and fundamental to solving terminological problems.

2. Problem search

In linguistics, there are several views on the status of analyticism as being due to its existence at the level of grammar (grammatical form) and at the level of vocabulary (a combination of full-length lexical units). For the most part, analyticism is understood as the dismemberment of lexical and grammatical significance. As

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A. Zagnitko observes, "analytical forms setting and development, constructions associated with the process of grammatical word combinations. The latter is due to the weakening or loss of the phrase lexical value components" [2, p. 227]. I. Melchuk notes that analyticism is generally viewed as the regularity of the expression of two or more syntactically related word forms where it would be logical to have only one word form [3, p 334]. The scientist believes that in strictly terminological terms, the term "analytical" is possible only in the phrase "analytical form", the use of it in other expressions is metaphorical, inaccurate [3, p. 335]. However, regarding to the name "analytical term" it should be emphasized that in this case one concept can be expressed by two or three lexemes, as well as two forms – one grammeme.

In engineering technology field, terminological constructions abundance is created in an analytical way, and this way, according to linguists, is one of the main ones, along with semantic and morphological ones. The reasons for the creation type activity and productivity of terms and their occurrence in the terminology of certain knowledge branches lie in the fact that, unlike the terms-words, analytical terms reveal greater ability to specify the values due to their ability to provide additional refinement industry characteristics to commonly used words.

Analytical term, like every language unit, has its own construction structure and concrete semantic content. While analytical terms relating to the terminology of technological processes, is observed a significant advantage of two-component structures over multi-component ones. Two-component analytic terms, depending on the part-language affiliation of the nuclear component, are represented by the following groups: substantive-subjective, substantive-adjective, substantive-adverbial, verbally-substantive and verbal-adverb terminology units.

The conducted analysis displays that the most frequent among the two-component designs are substantive-adjective nominations, constructed according to the model **A + N**. The type of syntactic connection is a reconciliation. Onomasiological basis and onomasiological grounds in such nominations are as general scientific (*high-voltage circuit, iterative formula, reactive substance, technological regime*) and general technical terms (*sinter plant, atomic engine, buffer unit, vibration damping mechanism*), and commonly used words (*internal voltage, downstream barrel, dry grinding, current sensitivity*). Note that main concepts subcategory in engineering technology field is carried out due to the termelement, expressed mostly by adjectives, to a lesser extent – by adjectives. In the terminology names, the prepositional attributive component can be represented as a single-principal adjective (*screw elevator, console part, droplet corrosion, mine hatch*), and an adjective with a complex creature base (*reciprocating motion, an oxygen-acetylene burner, a midrange condenser, a fast-rotating engine*). Adjectives with a complex creature basis, precisely due to their structural semantic capacity, have a significant creative potential, since they can replace the excessively formally complicated attributive components in analytical terms. Adjectives that are part of the analytic terms are heterogeneous in semantics. More often, the attributive component in special names is a relative adjective formed from terms or multivalued nouns, where is a special name for their values: *a diamond drum, a sleeve bearing, a shaving roller, a cardan joint, a pile shoe*, and others. Qualitative adjectives in the investigated field function is solitary, for example: *hot stamping, dull clutch, flexible shaft, massive concrete, cold vulcanization*, etc. Adjectives change their nature by terminologizing, losing the comparative creative properties.

Attributes in analytical terms may also be adjectives, often passive, used to create mechanisms and details names, names of properties and qualities objects, states, substances and materials names used in engineering technology field, for example: *built-in hydraulic equipment, driven shaft, bent bender, short-circuited engine, liquefied gas*, etc. All passive adjectives in the term combinations undergo adjectition, losing the need to form a structure with the semantic subject of action. Examples of using as active attributes are separate entities, for example: *free-standing beam, melting discharge, fading oscillations, boiling steel*, etc. It is explained by such adjectives functioning general limitation in modern Ukrainian literary language. They are perceived as artificial entities, which are recognized by most linguists as non-normative units. Almost all active adjectives in the analytical terms are the corresponding Russian words loan translation.

Substantive-substantive analytic terms are constructed according to the model **N + N**, where the basic semantic load is transmitted by the reference component, expressed by the noun in the nominative singular case. Among these terms, it is isolated the nonprepositions and prepositions. Unpredictive terminology names are constructed according to the following models: 1) **Nn + Ngen**. The analytical terms formed on this model represent the logical-conceptual structure of "part – integer": *insulator fittings, stamp inserts, bearing bushings, locking clips*, and others; "property – object": *the activity of the metal, the flexibility of the rod, the capacitance of the capacitor, the stiffness of the spring, the speed of the machine*; "subject – action / process": *automatic feeding, incandescent battery, beat meter, guiding mechanism*; "property – effect": *absorption capacity, intensity of radiation, smoothness of braking, accuracy of calibration* [4], etc. Analytical terms special type constructed on this model were constructions, onomasiological based on nouns-derivatives of verbal origin with consistently expressed object relations. Such constructions represent the logical-conceptual structure of "process – object", for example: *depreciation of equipment, gasification of fuel, deposit disclosure, current saturation*. It is clear that, with the help of verbal nouns, the category of processes and the abovementioned actions is expressed; 2) **Nn + Ninstr**: *switching resistance, blow-off blow, galvanizing touch, pressure-processing*. In such terminological phrases, the object-instrumental semantic-syntactic relation is realized, when it is a logical sign denoting an instrument of action (*binding with pins*) or a method of action (*galvanization by submersion, granulation by maceration*). The phrase dependent component is associated with a core weak syntactic subcontract in the form of control; 3) **Nn + Ndat**, for example: *resistance to wear, resistance to slip, resistance to friction*. Such designs represent the logical-conceptual structure of "the ability to counteract something – an action"; 4) **Nn + Nn** (termic combinations of the type). The syntactic connection in these constructions is correlation. Such terminological nominations are characterized by close convergence in two components semantics. In variety special names, the dependent component acts as a main semantic concretizer and is formally assimilated to it by the principle of generic relations, for example: *a machine-tool-rocker, a mixer-tank, a manipulator-spinner, a gear-reverser*, and others. The reason for considering them as a phrase, and not the derivatives of juxtaposites, is the presence of nuclear and dependent (elemental) components that are capable of being disconnected. To juxtaposites include special names, where one of the components does not change: *block generator, vacuum centrifuge, tandem-calender, triplex process*, etc.

Prefix terminology constructions are not common. Subordinate adverbial connection syntactic form in such terminological phrases is a formal adjectival, and semantically indirect case of the noun with the preposition expresses the attributive relation. The prefix constructions are expressed by the following models: 1) **Nn + prep + Nacc**: *wear test, loading over norm, welding for lifting, compressive strength*; 2) **Nn + prep + Ninstr**: *coated diamond, cooling cooled, cylinder with damper, pressure lubrication*; 3) **Nn + prep + Ngen**: *illumination of the earth, wear in the case of jamming, slipping without friction, breakage for impact, tongue for keypads* [4]. In this case, semantics has a syncretic character: combining attributive, causal relationships, as well as the relation of purpose; 4) **Nn + prep + Nlok**: *quenching in water, clamping voltage, relocation in the drift*. The semantics of the sign in the above constructs is combined with the semantics of the locality.

Verbal substantive names are based on the model **V + N**. In such nominations, the type of syntactic connection is control, for example: *remove the gas, give a crack, cut the forehead, deepen the bottom*, etc. By the nature of the relations between components,

verbal terminological phrases are predominantly object-oriented, where they are based on the body, which denotes an action, a process, and it is a psychological feature – a direct object of action (*bending the flush, twisting the rope*) or an instrument of action (*dry polished*).

Subjective and adverbial names, constructed according to the model **Nn + Adv**, constitute a small group. The syntactic form of the subordinate proverbial connection in such terminations is adjoining, for example: *hanging in the overrun*, *welding the wroscid*, *close connection*, *cluttering*, etc.

In technical terminology processes, a few verbal-adverb terminology constructs, built on the model **V + Adv**. The peculiarity of this model lies in the fact that the onmasiological basis denotes an action or process, and this is an emotional sign – the circumstances of the action course or state expression, for example: *clog up*, *build up close*, *grind dry*, etc. Note that in the engineering technology field, the concept base consists mainly of the processes names, objects, substances, states, properties, and the action sign is on the periphery of the subject-semantic terminology basis.

According to done analysis, in modern terminology dictionaries scientific and technical terminology verbal-substantive and verbal-adverbial compounds are practically not represented, with few exceptions. Typically, the verb component in such terms replaces the verb noun as a vocabulary word. According to some researchers, verbs can not be considered as independent terminological units because of their inability to express generic-specific relations, as well as f restrictions on word-formation opportunities [5], [6]. It is reasonable to disagree with the position of these scholars and as other terminological parts of the language, including verbs, adjectives and adverbs, may be terminologically capable, if they substitute the notion of a certain knowledge field.

Consequently, according to the grammatical reference word morphological expression, two-component analytical terms of scientific and technical terminology are predominantly substantive. The most common among two-component designs are substantively-adjective and substantively-substantive terminology units.

In the operation proces, the terminological phrase can be transformed from generic-type denomination in the generic with respect to other concepts, which leads to complex phrases the emergence. Such nominations are easily disassociated and have a clear motivation. In their structure, they are free syntactic constructions, formed by a combination of full-fledged and official words. Each of the multicomponent terms determinants indicates the property of the subject or process, an important feature, as much as possible reveals the special concept in various spheres of human activity.

In engineering technology field, high activity among complex terminological phrases reveals three-component designs. Various relationships can be found between the structural organization and the morphological expression of analytic nominations component. For the three-component nominations, the following term-matched models were found to be productive:

1. **N + A + N**. In terms of the quantitative index, the three-component structures formed by this model are in the first place. Onomassiological evidence in such nominations is two-component substantive-adjective phrasing in the form of indirect cases, for example: a) **[Nn] + (Agen + Ngen)**: *[drum] (steam boiler)*, *[lock] (switchgear)*, *[accelerator] (charged particles)*; b) **[Nn] + (Ainstr + Ninstr)**, including preposition: *[drilling] (continuous turning)*, *[proofing] (abrasive bars)*, *[electric welding] (open arc)*; c) **[Nn] + (prep + A + Nlok)**: *[beam] (on an elastic basis)*, *[test] (in the heated state)*, *[a compactor] (on magnetic disks)*; d) **[Nn] + (prep + A + Nacc)**: *[tolerance] (for machining)*, *[loading] (through the tail)*, *[correction] (for phase shift)* [4].

2. **A + A + N**, all components which are in the nominal case. Onomasiological basis in this model is expressed by a two-component term: *(ring) [gear key]*, *(hollow) [ceramic blocks]*, *(rotary) [printing machine]*, *(shock) [dynamic testing]* [4]. Such nominations arise as a result of the formal complication e two-component substantive-adjective terms through further specification, which occurs by joining the definition to the intended word for indicating the kind of concept termed by the phrase. In such syntactic constructions, the first adjective (participle) performs a refinement function.

3. **A + N + N**. Nominations of this type form a specific notions about the generic, expressed by a two-component substantive-substantive term. A characteristic feature of this model is the fact that itsomassiological basis can be expressed both as a noun and a two-component term. Terminological constructs constructed on this model, respectively, have a double motivation. Depending on what the expressed onomasiological basis, it follows, as indicated by on the masiological trait. In this group, the following models coincide: a) **An + Nn + Ngen**: *mixed [block] load]*, *control [power relay]*, *fast-rotated [parts] of machines]*; b) **An + Nn + Ninstr**, incl. with the preposition: *diffusion [coating] aluminum]*, *lubricating [hydraulic system]*, *digital [control] equipment]*; c) **An + Nn + prep + Nacc**: *spent on work bending]*; d) **An + Nn + prep + Nlok**: *traction [load] on the hook]* [4]. Analytical nominations of this type are object-oriented or attributive, complicated by adjectives or adjectives, which specify and detail the two-component terms.

4. **N + N + N**. In this group, following structures are isolated: a) **Nn + Ngen + Ngen**, including the preposition: *[automatic] (fuel discharge)*, *[limiter] (at the moment of torsion)*, *[the devotee] (for knocking out pipes)*. In such nominations onomassiological basis serves as a reference component, which expands substantive construction, which may indicate the actions, objects, affiliation or purpose of the object; b) **Nn + Ngen + prep + Nacc**: *[centering of the openings] under the propeller*, *[tensile strength] on the stretching*, *[tensile strength]* on the shear. An expression of the onomasiological basis serves as a two-component term, the meaning specifies on the masiological trait; c) **Nn + Ngen + prep + Nlok**: *[moment of resistance] when torsion*, *[coordinate system] in space*, *[circulation of water] in a boiler*. Onomasiological basis is a two-component term, and onomasiological sign may contain instructions to the place of action, as well as actions in which the ability of objects to withstand certain influences arises; d) **Nn + Ninstr + prep + Ninstr**: *[pouring] with crystallization] (under pressure)*, *[welding] by heating] (under flux)*. In such nominations, the onomasio logical basis is represented by a two-component term, the meaning of which specifies the ona-physiological sign indicating the accompanying action or the accompanying substance; e) **Nn + Ninstr + Ngen**, including the preposition: *[rivet] (with cervical extension)*, *[fastening] (by welding method)*. Onomasiological basis in such nominations is represented by a noun, the onomasiological feature may indicate the features f the structure or mode of action; f) **Nn + prep + Ninstr + prep + Nlok**: [cooling with cooling] in water, *[cooling with cooling] in the air*. In such nominations, onomasiological basis is a two-component phrase, and this is an emotional sign pointing to the place of action; g) **Nn + Ndat + Ngen**: *[prevention] impregnation] of water*. Expression of onomasiological basis is a two-component term, and it is an logical sign denoting an object.

Unproductive word-building models include: **Adv + A + Nn**: *(absolutely rigid) [body]*, *(statically uncertain) [beam]*, *(curved curved) [drilling]*; **Nn + A + Ngen**: *[friction] (first kind)*; **V + Nacc + Ngen**: *[dial] the turbine wheel*. In these models, the onaasiological sign is expressed by two-component phrases and may indicate the properties, characteristics of objects, phenomena, processes, state of objects, etc. The quantitative limitation of such structures can be explained by the fact that they include serial numerals, adverbs and verbs that are on modern term creation lexical means periphery.

In literal terms consisting of four or more components, an insignificant amount is found in the studied field. Definitions in terminological works confirm these terminology and other multicomponent designs. Such nominations are formed as a result of the detailed name of the scientific and technical concepts and contain elements of the narrative, resulting in a complete interpretation of the concept, but at the same time they do not lose semantic integri-

ty, for example: *a hydraulic drive with a closed circulation system*, *cascade connections of electric machines*, *self-excitation of generators of a constant current*, *cyanation of the surface of machine parts*, *specific capacity of the chemical current source*, *bended closed non-weld profile of rolled*, and others. It should be noted that the increase in the number of components in the structure of the special name causes the models quantity growth analytical terms creation, but their productivity decreases. The process of creating multicomponent terms occurs in stages, for example: *the line of engagement* (base phrase) + *active* (onomasiological sign contains indication of quality) → *active linking line* + *gear* (additional component points to the object of action) → *active gear line engagemen*t.

Consequently, multicomponent terms basis is a simple binary term, and each new component, expressed by a noun or adjective in the preposition or posposition, contributes to the specification of many lexeme terms. Despite the fact that they are inconvenient in use, they have the maximum accuracy special concept nomination is one of the main features of the term.

In modern terminology, the semantic structure of analytic terms has been studied less extent. Domestic scholars are limited to the statement that the components of analytical terms may belong to both the actual terminology and to other layers of vocabulary, without linking it with the question of the components semantic collusion within the term.

Analytical nominations semantic structure investigations concerning the terminology of technological processes can not be based on the analysis of a single term alone, since the history of the meaning of a well-known word can only be understood if it is studied in conjunction with other words. The semantic structure of the term contains "content (proper meaning) and internal form (meaning, motivation, that is, the way in which the meaning, meaning is represented)" [7, p. 165]. Term meaning analysis makes it possible to identify in it a set of semes that combine the essential features of a special concept. Each meaning component reflects in the minds of the carriers distinctive features that are objectively peculiar to denotate or attributed to it by this linguistic environment.

Analitic term semantic structure certainly depends on the significance nature components that are part of the compound, as well as on functioning components peculiarities. As the analysis displays technological processes terminology analytical terms components may belong both to the actual terminological vocabulary and to other layers of vocabulary. It leads to a different degree of semantic unity of the design. According to O. Chueshkova [8] analytic terms semantics specifies from the perspective of the term / non term.

Analytic terms significant signs are revealed in connection with their structural-semantic typology. By the degree of analytical terms components valency of the investigated branch, it is destinguished constructions three type. The first includes terminological units with a low degree of semantic unity, where theiromassiological basis and onomasiological sign have terminological significance in a certain terminology system. Such nominations are characterized by formal decomposition, their components can function independently and be components of other terminology units. Externally they resemble free phrases that do not call the complex object of reality as a single structural-semantic whole, but characterize it, correlating the meaning of the words that are part of it, with subject of reality structure. In terminological constructions of this type, each component denotes the essential features of the special concept, which together determine the semantic unity. The subjective-adjective analytical terms are represented by the following nominative units: *a damping transformer*, *a cadmium-nickel battery*, *an electrolytic capacitor*, *a reduction valve*, and the like. Among substantive-substantive terminological constructions, it is distinguished the following nominations: *the dynamics of mechanisms*, *the diffraction of radio waves*, *the interference of wells*, *the bearing of the bracket*, etc.

To the second type refer terminological constructs with a higher degree of semantic unity. A characteristic feature of such nominations is that one component is represented by a term related to technological processes termilogy, and the other has a zero terminological valency, that is expressed by a commonly used word. Such designs are indicated by a more stable order of components, restrictions on the their parts replacemen, as well as semantic integrity, due to the object unity in the whole set of its features. Among the substantively-adjective analytical terms, is distinguished between nominative units, where: 1) the onomasiological basis is expressed by the term generic notion terminology system expression of document science and related knowledge branche, and this is an empirical sign – a commonly used word that substantially clarifies the semantics of the term, for example: *internal inhibition*, *hot vulcanization*, *ripe iron*, *ferrous metallurgy*, etc.; 2) onomasiological sign has a terminological meaning, and onomassiological basis is expressed by a commonly used word, which in one of its values is the term, for example: *reinforced sleeve*, *throttling coil*, *thermoelectric pillar*, *hinged scissors*, etc. In these phrases, an adjective and a noun with terminology, combining, form a new, concretized concept. Grammatically, the basic in such nominations are nouns, and semantically loaded – adjectives. Substantive-substantive designs of this type are represented by nominations, in which: 1) onomasiological sign is expressed by the term, and the basic component is a commonly used word: *the input of the mechanism*, *the accumulation of deposits*, *the hypothermia of the engine*, *the crossing of the rails*, etc.; 2) onomasiohological sign is expressed by a commonly used word, and the basic component – the term: *the location of compression*, *humidity indicator*, *spar guard*, *flame stabilizer*, etc.

The maximum semantic integrity is characterized by constructions with the highest degree of semantic unity whose values do not equal the sum of their components values, but is based on metaphorical comprehension of certain concepts. Analytic terms type creation o occurs as a result of rethinking commonly used words by metaphorization, for example: *swallowtail*, *jaw bone*, *ribbed cheek*, *tail cranberry*, etc. Such special names value is not motivated (in whole or in part) by the semantics of their components, but hinted entirely by the whole structure of the term.

In engineering technology field there is a significant number of multi-component terms, the derivative base are two-component phrases or individual words. By the components valency degree analytic terms in the investigated branch two groups of constructions are distinguished . The first group includes nominations with a low degree of semantic unity, which have terminological significance. In the framework of this group, it is distinguished the constructions where: 1) the onomasiological basis is expressed by two-component terminological phrase: *(logging) [borehole lifting device]*, *(welding) [injection burner]*, *(mechanized) [pneumatic fastening]*; 2) the onomasiological basis is expressed by the term-lexeme: *[injector] (welding torch)*, *[detonation] (motor fuel)*, *[valence] (cardan hinge)*, and others. It is noted that such terminological constructions are characterized by formal decomposition; each of their elements denotes important features of the concept, which together determine the semantic unity. The second group consists of structures with a higher degree of semantic unity, where one or two components do not belong to the terminology of technological processes. Among the three-component terms of this group, it is distinguished nominations where: 1) the onomasiological basis is expressed by the term-lexeme: [*automatic] (decrease of rotation)*, *[relay] (return current)*, *[welding] (inclined electrode)*, etc.; 2) onomasiological basis is expressed by two-component terminology: *(open) [towing cluster]*, *(suspension) [electromagnetic separator]*, etc.; 3) onomasiological basis is expressed by the commonly used word: *[head] (fastener)*, *[spray] (cement dye)*, *[neck] (crankshaft)*, and others.

As selected actual material proves, the three-component phrase is formed by narrowing (specification) of the values of two-component terms, metaphorical or metonymic transfer of one or two components of terminological constructs, for example: repro-

duction sensitivity head – "characteristic of the reproduction head, which determines the ability of the head to perceive signal signals of the recorded and reproduced under the given conditions" [9]. The term sensitivity is a "sensitivity-sensitive property" – which feels something good (about sensory organs), the term "is able to respond to the slightest movements, to oscillate from something, etc." [10, p. 1609]) was formed as a result of the analogy of the qualitative, which reflects the human traits of the character. The metaphorical sign of the head (the unit is "spherical or oblong inflorescences or spherical fruit of individual plants at the end of the stem", term "rounded thickening of the end part of something (a tooth, rod, etc.)" [10, p. 250]) It is based on the visual alignment of the device element or part to a part of the plant.

Analytical terms, which consist of four or more components, are also divided into two groups: 1) terminological constructs with a low degree of semantic unity, which are terms related to the of technical terminology processes: *[automatic [phasing] (facsimile machines), [controller] power] (condenser installation), (fractional) [diffusion vacuum [pump]*, etc. Note that the meaning such analytic terms is motivated by the value of the components that are part of the structure; 2) terminological constructions with a higher degree of semantic unity, one or more components are not actually terms: *(electric) [alternator] of alternating current], [electric welding] (arc of indirect action), [strength] of rubber mounting] (to metal)* etc.

Multicomponent terms structure with a higher degree of semantic unity, non-special units formed by narrowing the value of metaphorical and metonymic transfer function, for example: *a two-sided screw pipe of a hydrodynamic coupling, electric welding with forced seam formation, a Maltese mechanism with a jerk toothed drum and others like that.*

3. Conclusions

Based on analyzed material, it can be concluded that the grammatical and semantic structure of the analytic term, formed on the designation of special concepts in the field of engineering technologies, is closely interrelated. The highest productivity is marked by two-part analytical terms. In the analyzed constructions, the onomassiological basis is a nuclear component expressed by a noun in the nominal case. Onomasiological sign specifies and clarifies the semantics of the whole terminology. Terminological constructions semantic unity degree depends on lexical subsystems nomination component, as well as its member's quantity. The most productive were the analytical terms, which structure components has a null terminological valency, that is expressed by a commonly used word, and the rest able to enter into other terminological compounds. Multicomponent analytic terms are characterized by semantic unity lower degree than two-component terms.

References

[1] Doroshenko, S., Lysenko A., Tievikova O. (2018). Ukrainian Scientific and Technical Terminology Formation and Development Peculiarities. *International Journal of Engineering & Technology, 7 (3,2),* pp. 539–544, http://dx.doi.org/10.14419/ijet.v7i3.2.14585

[2] Zahnitko, A. P. (2008). Teoriia suchasnoho syntaksysu. Donetsk: DonNU, 294 p.

[3] Melchuk, Y. A. (1997). Kurs obshchei morfolohyy. Moskva–Vena: "Iazyky russkoi kultury", Wiener Slavistischer Almanach, pp. 334–335.", http://dx.doi.org/10.1109/MMM.2013.2248651

[4] Rosiisko-ukrainskyi slovnyk z inzhenernykh tekhnolohii (2004). Uklad.: Hanitkevych M. & Kinash B. *Terminohrafichna seriia SlovoSvit, № 9*. Lviv: LIHA-PRES, SD.

[5] Koval, A. P. (1970). Naukovyi styl suchasnoi ukrainskoi literaturnoi movy. Struktura naukovoho tekstu. Kyiv, 306 p.

[6] Ovcharenko, V. M. (1968). Struktura i semantyka naukovo-tekhnichnoho termina. Kharkiv: Vyd-vo Kharkiv. un-ty, 71 p.

[7] Leichyk, V. M. (1994). Iskhodnye poniatyia, osnovnye polozhenyia, opredelenyia sovremennoho termynovedenyia y termynohrafyy. *Vestnyk Kharkovskoho polytekhnycheskoho unyversyteta, № 19*(1), pp. 147–180.

[8] Chuieshkova, O. (2006). Semantychna struktura terminospoluk ekonomichnoi terminosystemy. *Visnyk Natsionalnoho universytetu "Lvivska politekhnika". Seriia "Problemy ukrainskoi terminolohii", № 559*, pp. 156–160.

[9] Natsionalnyi bank standartyzovanykh naukovo-tekhnichnykh terminiv. *DP «Ukrainskyi naukovo-doslidnyi i navchalnyi tsentr problem standartyzatsii, sertyfikatsii ta yakosti»*, available online: http://www.ukrndnc.org.ua.

[10] Velykyi tlumachnyi slovnyk suchasnoi ukrainskoi movy (2005). Uklad. i holov. red. V. T. Busel. Kyiv; Irpin : VTF «Perun», 1728 p.