

TERMINOLOGICAL NOMINATION IN THE FIELD OF MARINE ENGINEERING – MORPHOLOGICAL METHODS (AFFIXATION)

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Abstract: *The present article examines affixation (prefixation and suffixation) as one of the morphological methods for term nomination in the field of marine engineering. The analysis is based on a comparative Bulgarian – English study and provides a possibility for the processes to be analysed simultaneously in both languages. For the purpose, a corpus derived from a variety of specialized written sources is composed and analysed. A large variety of affixational derivatives is described and the most productive patterns are outlined.*

Key words: *term formation, affixation, marine engineering*

<https://doi.org/10.46687/NJZA2618>

Terminological Nomination and Term Formation

Terms are the building blocks of communication in any professional field and as such are indivisible from the content matter and the subject knowledge of the corresponding scientific branches. Still, they are lexical units and as such come into the focus of linguistics. These two approaches determine the two basic stands when it comes to naming new entities, processes, or features in a certain specialised field of human activity. A distinction between two metaterms – *term formation* and *terminological nomination* – in the process of constructing new names has to be made in the first place. When the process is regarded as corresponding to the processes of word formation and the term is considered from its formal perspective, we talk about *term nomination*. A supporter of this approach is Danilenko who arguments her views by pointing out that the most productive methods of term nomination are the same as and based on those in general, non-specialized languages. Language of science has its own word formation sub-system, elaborated to meet the specific functions and requirements of terminology. The act of creating a new term is not viewed as a spontaneous act, but rather as a purposeful and thought-out process. As such, it mainly aims at providing semantic and structural transparency which facilitates professional communication and knowledge transmission. This transparency can be most efficiently achieved by using standard and easy to decipher word formation methods. (Danilenko 1977). Another author who shares this opinion is Manolova (1984), who dedicates her research to the linguistic aspect of terms and accordingly specifies three methods of terminological nomination – lexicomorphological, lexicosemantic, and lexicosyntactic. Defining the ‘grammatical characteristics of terms’, Manolova claims that terms do not possess their own morphological system and the process of their formation follows the morphological and syntactic rules and patterns of the language they belong to. However, the author acknowledges that some deviations from the word formation standards and norms do exist (as for example when it comes to the categories of gender and number) and that the process of term formation is a more complex one, compared to word formation, mainly because a term does not only name a concept but also aims to reveal its content. Alternatively, when the process of constructing new names is not limited only to its linguistic aspects, we talk about *term formation*. Popova (1990) highlights that term designation is not confined to creating new words from other words by using word formation affixes, but primarily involves analysing and defining the term conceptual structures. The author describes the process of term formation as a

conscious onomasiological act, taking place in three stages – 1) the concept is created within a given scientific field and its content is specified; 2) the designation and the definition of the concept are formulated 3) the linguistic stage – a logical selection of the concept nomination features, which following the linguistic rules and practices of the given language, will finally lead to the term formal representation. Popova employs the metaterm *terminological nomination* to describe this third stage of the process which includes the conceptual-semantic, the onomasiological, and the formal structure of a term. (Popova 2012) Another author who sees term creation in its complexity is Sager who describes it as a conscious act which takes into account the referent, the designation given to the referent, or how both the referent and the designation are used. Respectively, three dimensions of term formation are identified: a cognitive dimension, a linguistic dimension, and a communicative dimension. The linguistic dimension, in this case, is correlated to the definition of term nomination, while when the whole process is concerned, we rather talk about term formation. Sager defines three major approaches to creating new designations – when existing sources are used, when the existing sources are modified, and when new linguistic entities are created. The method of term nomination, including derivation or affixation, compounding, conversion, and compression is part of the modification of existing sources approach. (Sager, 1990)

The present article aims at analysing the terminological nomination (affixation) in the field of marine engineering. For this purpose, the definition of Popova (2012), concerning the linguistic stage of the process, is taken into consideration. The analysis is based on a corpus-derived material and provides a synchronic view on the term nomination models in the field of marine engineering. Consequently, the onomasiological term structure is analysed and evaluated through the lexical, syntactic, and morphological patterns which have shaped its formal outer structure. Thus, the purpose is to reveal whether the term linguistic form corresponds to and best represents the inner structure of the concept. Another purpose of the research is to identify and analyse the possible cases of deviation from the word formation norms and standards, thus obtaining a more accurate idea of the terminological field and outline the related tendencies. Additionally, a comparative study provides a possibility for the processes to be analysed simultaneously in the English and the Bulgarian languages.

Morphological method of term nomination consists of creating new term forms, following the morphological word formation models in the general and non-specialized languages. This is considered the most productive method and involves **affixation and compounding** as forms of derivation. The present article will only deal with affixation as a subtype of the morphological method of term nomination. The morphologically-formed terms are usually semantically transparent, and their motivation is recognizable and analysable. In the process of term nomination, the selected morphological element should be the one that most directly leads to, and best describes, the term content. As Danilenko (1977) states, this is especially true when there is a morphological variation for the expression of a given concept. In this case, the morpheme plays the role of a key to the inner structure of a term, placing it among other similar terms in a classification system and providing for its transparency. Consequently, the current analysis of the morphological patterns in the context of marine engineering provides valuable information as to whether the term form corresponds in the most accurate way to its content.

Affixation is traditionally described as the act of adding suffixes after the base and prefixes preceding it. Here, base is understood by the definition of Haspelmath: 'The base of a morphologically complex word is the element to which a morphological operation applies.' (Haspelmath 2002) The difference between prefixes and suffixes lies not only in their position but also in the fact that a prefix, as a rule, changes only the meaning of a word, while a suffix, creating a new word, assigns it to a certain part of speech category. Compounding is the act of combining two, or less commonly three, bases functioning as a whole and standing out in the composition of a phrase or a sentence as a separate lexical unit due to its integral form. (Arnold 2012)

The current morphological investigation employs morpheme segmentation of corpus-derived terms in order to outline the most productive patterns of term formation. The organisation of the most common affixational derivatives in the terminological system of marine engineering is designed using Quirk's (1985), Bauer, Lieber and Plag's (2013) and Sager's (1990) classification with some adjustments relative to the specificities in the field. The compounding process is regarded from two perspectives. First, compounds are organized and characterized according to the type and the categorial determination (form class) of their constituents. Then, a second classification is provided, based on the grammatical relations between the compound elements.

Prefixation in the English Terminological System of Marine Engineering

a. Negative prefixes – expressing the idea of 'lacking in', 'lack of', 'the converse of', 'not' etc. The prefixes found in the corpus materials are: *in-* (**in**dependently driven pumps – **автономни** помпи); *un-* (**un**attended machinery space (UMS) – **автономно/безвахтено** машинно отделение); *dis-* (**dis**connect (pipelines) – **разединявам**); *anti-* (**anti**vibration mountings – **противовибрационна** арматура)

b. Privative prefixes – expressing the idea of 'reversing the action', 'depriving of' – *de-* (**de**-aerator – **обезвъздушител/деаератор**); *dis-* (**dis**charge chamber – **нагнетателна** камера);

c. Prefixes of degree, size and simultaneity – expressing the idea of 'supreme', 'most', 'extreme', 'little', 'surpassing', 'excessive', 'too little, insufficient', 'equality, simultaneity and togetherness' – *com-*; *co-*; *con-*; *col-*; *cor-* (**con**necting rod shank – **стъбло на мотовилката**; **comb**ustion chamber – **горивна** камера); *over-* (engine **over**speed trip – **ограничител** на скоростта/ оборотен **ограничител**); *under-* (**under**cooling – **преохлаждане**); *over-* (**over**load trip – **ограничител** на натоварването); *super-* (**super**heater – **паропрегревател**)

d. Locative prefixes

- **position** – *in-* (**in**serts – **вложки**); *out-* (engine **out**put – **мощност** на двигателя); *centr-* (**centr**ipetal turbocharger – **центростремителна** турбина); *over-* (valve **over**lap - **застъпване** на фазите на газоразпределение); *under-* (**under**piston space – **подбутално** пространство); *inter-* (**inter**cooler – **междинен** охладител) –*after-* (**after**cooler – **допълнителен** охладител)

- **movement** – expressing the idea of orientation and direction – *ex-* (effective **ex**ansion ratio – **ефективно** съотношение на **разширението**); *in-* (**in**flow - **дебит, подаване, захранване, количество постъпващ** флуид); *im-* (**im**PELLER – **работно** колело); *out-* (**out**flow opening – **изпускателен** отвор); *by-* (**by**pass – **байпас**); *-gyro*

(gyroscope – жироскоп); *a-* (aboard – на борда (качване)); *de-* (decompression – понижаване на налягането); *off-* (offset – изместване); ; *back-* (backswept blades – лопатка с положителна стреловидност)

e. Prefixes of time, order and repetition – expressing ‘chronological order of events’, ‘succession’, ‘repetition’, ‘repetition in reverse order’, ‘change in the initial order, function or designation’ – *re-* (reassemble – сглобяване в **обратен ред**); *pre-* (**pre-chamber** – **предкамера**); *post-* (**post-treatment** – **последваща** обработка)

f. Prefixes of number – expressing numerical values – *bi-*; *di-*; *dual-*; *double-*(**bi-metallic aluminium tin bearings** – **биметални лагери** от алуминий и калай; **dual-fuel operation** – работа на **два** типа гориво); *uni-* (**uniflow scavenging** – **правотоково** продухване); *multi-* (**multi-row engine** – **многоредов** двигател); *mono-* (**monowall furnace** – **едностенна** пещ)

Prefixation in the Bulgarian Terminological System of Marine Engineering

Prefixation is considered part of the derivational process of word formation both in the Bulgarian and the English languages. Prefixes in Bulgarian are characterized with larger semantic weight and independence compared to suffixes and attach additional meaning to the new word. They are added to fully-formed lexemes and do not influence the categorial determinacy of the derivative, i.e. the derivatives formed by prefixation belong to the same word class as the lexemes they are formed from. (Boiadjiev 1999) According to Boiadjiev, prefixation is most productive with verbs, although not all verbs manifest equal prefix combinability. A characteristic feature of prefixed verbs is that they do not designate a different type of activity than the one expressed by the derivational base form but only specify the action in terms of time, location and quantity. Contrawise, Georgieva (2012) points out that over the last two decades, prefixation of nouns and adjectives has been one of the most active word-formation methods producing new derivatives in the Bulgarian language, with a slight prevalence of the substantive prefixation. Another tendency in the processes of prefixation is the increasing number of borrowed prepositive morphemes (prefixes and prefixoides), most of which international. (Popova 2012) As Murdarov (1983) observes, the competition between the native and the borrowed prefixes in Bulgarian is a result of the formation of synonymous coexisting groups of prefixes in which the Bulgarian element often gives way to the borrowed one. This is due to the fact that the international prefixes, especially in the field of science and technologies, are adopted from the ready-built terminological systems in the source language. The analysis reveals controversial results: on the one hand, the terminological system of marine engineering is not an exception of the rule and there is an abundance of borrowed affixes added both to native and foreign bases. On the other hand, the majority of the terms, especially those directly related to marine engines and the pertinent systems of operation, are formed using the resources of the Bulgarian linguistic system. A possible reason for this can be found in the fact that mechanical engineering, which marine engineering is a sub-branch of, has long-established traditions in Bulgaria. Consequently, both the professional practice and the underlying scientific theory have had the chance to develop their terminological system gradually and in parallel with the innovations in the field. Classifications of prefixes in the Bulgarian language are most commonly based on: a) their function – lexical and grammatical; b) their origin –

native and borrowed; c) their structure – simple and complex; and d) their semantic meaning. The prefixed terms in the excerpted corpus materials are here organized according to the semantic contribution the prefixes have to the meaning of the formed derivative with additional reference to their origin.

a. Negative prefixes

- **Native** – *без-* (**без**опасна експлоатация – **safe** operation); *не-* (**невъзвратен** клапан – **non**-return valve); *против(о)-* (**противо**налягане – **back** pressure);
- **Borrowed** – *анти-* (**анти**фрикционно покритие – **antif**rication layer); *контра-* (**контра**пара – **back** steam); *дис-* (**дис**пергирани вещества – **disp**ersed materials)

b. Privative prefixes

- **Native** – *раз-* (**раз**товарващ клапан – **relief** valve); *от-* (**от**душна тръба – **vent** pipe);
- **Borrowed** – *де-* (**де**компресия – **de**compression); *ре-* (**ре**активна турбина – **re**action turbine)

c. Prefixes of degree, size, simultaneity and togetherness

- **Native** – *пре-* (**пре**грята пара – **super**heated steam); *над-* (**над**хвърлям – **ex**ceed); *свръх-* (**свръх**мощни компресори – **heavy-duty** compressors); *под-* (**под**налягане – **negative** pressure); *у-* (**у**течка – **leakage**); *по-* (клапанен **пов**дигач – **push**rod); *при-* (**при**тягане – **tight**ening); *полу-* (**полу**пръстен – thrust washer (thrust bearing)); *о-*; *об-* (**об**растване – fouling); *с-*; *съ-* (спомагателен – auxiliary)
- **Borrowed** – *кон-*; *ком-*; *ко-* (затворен **контур** – closed loop; **ком**пресионно пространство – **compression** space); *микро-* (**микро**пореста структура – **micro**porous structure); *ултра-* (**ултра**звук – **ultra**sound); *хипо-* (**хипо**идно зъбно колело – **hyp**oid gear)

d. Locative prefixes

• Native

Position – *под-* (**под**бутално пространство – **under**piston space); *пред-* (**пред**камера – **pre**chamber); *зад-* (**зад**бордна вода – sea water); *около-* (околовръстен канал – **by**-pass channel); *на-* (нагар – carbon **de**posit); *пре-* (**пре**града – baffle)

Movement and direction – *при-* (**при**съединяване (на двигателя към помпата напр.)); *на-* (**на**бита втулка – shrunk liner); *под* – (**под**веждане на задбордна вода – sea water **supply**); *об-* (**об**тичащ – **circum**fluent); *въз-* (**въз**вратна пружина – **re**turn spring); *низ-* (**низ**ходящ ход на буталото – piston **de**scending); *про-* (**про**мушвам – poke **thro**ugh); *раз-* (**раз**прашаване – atomization); *из-* (**из**пускане (въздух) – air **dis**charge); *от-* (маслени **от**лагания – oil **de**posits); *в-* (**в**смукателен ход – suction stroke)

• Borrowed

- **Position and direction** – *центр-* (**цент**ровка – alignment); *екс-* (**екс**центрик – **ecc**entric); *ин-* (**ин**хибитор – **in**hibitor); *им-* (**им**пулсна турбина – **imp**ulse turbine); *цирк-* (**цирк**уляционна помпа – **circ**ulation pump); *интер-* (вискозен **интер**вал – viscosity **inter**val); *жиро-* (**жиро**скоп – **gyro**scope); *ката-* (**ката**литичен реактор – **cat**alytic reactor)

e. Prefixes of time, order, succession and repetition – expressing ‘chronological order of events’, ‘starting and ending’, ‘single events’, ‘temporary actions’

‘succession’, ‘repetition’, ‘repetition in reverse order’, ‘change in the initial order, function or designation’

- **Native** – *пред-* (**предварение** на впръскване – fuel injection timing); *пре-* (вало-**превъртащо** устройство – turning gear); *при-* (двигател с **принудително** пълнене – pressure-charged engine); *след-* (**следварение** – delayed fuel injection timing); *за-* (**завъртащо** се бутало – rotating piston); *но-* (гориво-**подаване** – fuel supply)
- **Borrowed** – *ре-* (**ресивер** – receiver); *пре-* (**превенция** – prevention)

f. Prefixes of number

- **Native** – *едно-* (**едноблокова** чугунена конструкция – **monobloc** cast iron construction); *две-* (**двустепенна** турбина – **two-stage** turbine)
- **Borrowed**

No examples of borrowed prefixes expressing numerals were found in the excerpted corpus materials.

Suffixation in the English Terminological System of Marine Engineering

Suffixation is the other productive and active source of terminological nomination. The classification of prefixes was based on their semantic properties since the main function of a prefix is to determine the semantic characteristics of the newly formed lexical item. The most commonly used English suffixes in the terminological system of marine engineering are organized according to the word category change they induce. In the majority of cases, the word category change is accompanied by some type of meaning determination thus, the suffixes are also described in terms of their semantic characteristics.

a. Nouns

- **denominal nouns** – aggregate mostly uncountable nouns by means of the following suffixes:

-age – with the meaning of ‘measure of’ or ‘collection of’ as in: small general cargo **tonnage** – малък **тонаж** генерални товари; retrofit **package** – **комплект устройства** за модернизация и преустройство; **leverage** – лостов **механизъм**.

-ing – with the meaning of ‘collection of’ with reference to the material or the elements from which the new concept is constructed, as in: **pipng, tubing** – тръбопровод, **система** от тръби, especially when opposed to a single pipe or a single tube. A similar idea, with an even more generalized notion, is often expressed by the suffixes *-work*, as in **pipework** – **система** от **тръбопроводи**, and *-ery*, as in **machinery room** – машинно отделение.

- *-eer* – with the meaning of ‘skilled in’, ‘engaged in’ as in: marine **engineer** – корабен инженер;

- **deverbal nouns** – aggregate mostly countable nouns with personal or non-personal reference by means of the following suffixes:

- *-er (co-spelling -or)* – adding personal or non-personal agentival meaning. The specificities of the technical context determine the predominant use of non-personal agents – **cooler** - охладител; **separator** – сепаратор; **propeller** - пропелер; **propulsor** – движител; **enginebuilder** – проектант (на двигатели); **centripetal turbocharger** – центростремителен компресор.

- *-ant* – another agentival suffix mostly occurring with non-personal reference. Special attention needs to be paid to the characteristic feature ‘medium through which the action is accomplished’, denoted by the suffix. The frequent co-existence of the two suffixes (*-er/-or* and *-ant*) allows for the formation of correlative patterns such as: **lubricator** – **lubricant** (лубрикатор – лубрикант), **cooler** – **coolant** (охладител – охлаждащ агент), **refrigerator-refrigerant**, where the former refers to the actual impersonal performer of the action (machine, device, etc.), and the latter to the required working medium. In fact, the analysis shows that in the terminological system of marine engineering, *-ant* is productive only if there is a correlated deverbial noun, formed by *-er/-or*.

- *-age* – expressing the idea of ‘the action of’, ‘the instance of’, such as: **drainage** – дренране, **leakage** – теч, изтичане, **storage tank** – резервоар за съхранение, запасна цистерна, **breakage** – скъсване, счупване. There are cases which the etymology may refer to the category of denominal nouns, but the semasiological analysis of the term content reveals their deverbial character. These are the cases in which the suffix *-age* is added to a verb, formed by zero derivation from a noun. Examples: **windage** – налягане на въздуха върху движещ се предмет, хлабина, луфт; **pumpage** – производителност на помпа (изпомпване). In some cases, there is a shift in meaning and the semantic role of the noun formed by the suffix *-age* is that of the patient or the instrument of the action denoted by the verb base. Examples: **chemical sewage treatment** – химична обработка на отпадните води, **appendages** – запасен уред или принадлежност, издадена навън от корпуса част (patient); **spring loaded return linkage** – пружинен обратен механизъм (instrument).

- *-ing* – expressing the idea of ‘specific process associated with a more general verbal action’, such as: **boiler loading** – натоварване (паропроизводителност) на котел, **low-grade fuel-burning capability** – възможност за работа на нискокачествени горива; ‘the entity (most commonly result) associated with the process’, such as: **opening** – отвор, **readings** – показания, **coupling(s)** – съединително тяло, връзка. In the last case, the plural forms of the nouns are usually preferred, although there are not few examples where the singular and the plural forms co-exist with identical meanings.

- *-ment* – expressing the idea of ‘the result of’, ‘the entity of’, such as: **arrangement** – подреждане, разполагане, конфигурация, механизъм; **displacement** – изместване, водоизместване; **refitment** – ремонт, поправка, подновяване на оборудването.

- *-tion* – expressing the idea of ‘the process or state of’, ‘the product of’, such as: **combustion chamber** – горивна камера, **ignition pressure** – налягане при запалване, **deflection** – разкеп, **monoblock cast iron construction** – монолитна чугунена конструкция. Compared to the above mentioned suffixes *-age*, *-ing* and *-tion* which can also denote deverbial nouns with the meaning of ‘action’ or ‘process’, *-tion* rather refers to the action as a whole event, including its completion.

• **dejectival nouns** –

- *-ity* – expressing the idea of ‘qualities’, ‘states’ or ‘properties’, such as: **capability** – способност, **capacity**; **malleability** – ковкост, **ductility** – пластичност.

- *-ness* – quality noun forming suffix and perhaps the most productive one in the English language, due to the lack of restrictions concerning its addition. (Plag,

2003) The research shows this is not exactly the case in the field of marine engineering and only few examples were excerpted, most probably due to its abstract and generalizing character. Examples: surface rough**ness** – повърхостна грапави**на**; temporary hard**ness** – временна твърдо**ст**; wall thick**ness** – дебел**ина** на стената.

b. Adjectives

• denominal adjectives

Adjectival forms in the terminological system of marine engineering are most commonly produced by adding the participial suffix *-ed* added to a denominal verbal base, formed by means of zero derivation. The *-ed* suffix can also be added to the rightmost member of a nominal phrase or a compound. The acquired meaning is that of ‘having, possessing as an inherent characteristic feature’. Examples: three-bladed propeller – пропелер с три лопатки; turbocharged engine – двигател с турбина, thick-walled furnace – пещ с дебели стени.

• deverbal adjectives

The most productive deverbal adjectival suffixes are *-able/-ible* and they are mostly used in a passive sense, expressing the idea of ‘able to be’, ‘capable of or suitable to’, ‘in accordance with’. Examples: controllable pitch propeller – пропелер регулируема стъпака, variable-speed type governor – регулатор на променлива скорост.

c. Verbs

The analysis results show that the most common verb-forming suffixes in the field of marine engineering are *-ate*, *-en*, and *-ize*, all of them having causative meaning. Examples: evaporate – изпарявам, deactivate – деактивирам, widen – разширявам, lengthen – удължавам, pressurize – нагнетявам, galvanize – поцинковавам.

Suffixation in the Bulgarian Terminological System of Marine Engineering

Suffixation is also a productive and active source of terminological nomination in the Bulgarian language. An investigation on the word building tendencies in the Bulgarian language shows that 500 out of 4000 neologisms were formed by suffixation, which makes it the most preferred method of word formation. (Balkanski 1999) The most commonly used Bulgarian suffixes in the terminological system of marine engineering are organized according to the word category change they induce. In the majority of cases, the word category change is accompanied by some type of meaning determination. Thus, the suffixes are also described in terms of their onomasiological characteristics, following the categorization of Radeva (2007) and Stoyanov (1999) with some adjustments as per the specificities of the terminological field.

a. Nouns

Bulgarian nouns, formed through suffixation, can have nominal, adjectival or verbal bases, which to a great extent determine their semantic characteristics. The derived nouns can also have different degrees of abstractness or concreteness. (Stoyanov 1999) In some cases, diminutive suffixes are employed which unlike their general language use do not have emotive function but serve to denote constructional (usually related to size) or functional (related to purpose) variations, e.g. бутал**це** – plunger; лопатк**а** –

vane. The most productive suffixes in the terminological system of marine engineering are those denoting:

- **instrument or agent formed from either a nominal or a verbal base**

- *тел-*: движител; подгревател; охладител;
- *ач-*: разпръсквач; водач; носач;
- *ник-*: топлообменник; механик; салник;
- *атор-*: лубрикатор; сепаратор; парогенератор;
- *лка-*: мотовилка; горелка;
- *чик-*: датчик; бункеровчик;
- *ант-/ент-*: лубрикант; агент;
- *ало-*: бутало; турбинно стъпало;

The category also includes some compound structures which are produced by zero suffixation and include an interfix e.g. тръбопровод, паропровод, соленомер, дебитомер, etc.

- **result, patient or argument of the action denoted by the verbal base**

- *-ие/-ние*: предварение, сечение, отделение
- *-ба*: уредба; загуба на налягането; общокорабна употреба;
- *-ка*: изковка; отливка; втулка; сглобка; добавка;
- *-ък*: коефициент на излишък; пламък; тласък;
- *-а*: подмяна; преграда;
- *-иво*: гориво;
- *-ор*: отвор; воден затвор (при пурификация);
- *-ство*: устройство;

- **location and containers**

The suffixes typical for this category are: *-ище*; *-арня*; *-илня*; *-ник*; *-ница*; *-ина* which prove to be not very productive for the terminological field of marine engineering and only one example was found.

- *-ник*: утайник; преливник;

- **activities and processes**

- *-е*: сепариране; засмукване;
- *-аж*: монтаж; помпаж;
- *-ация*: пурификация, циркулация;

- **properties**

- *-ина*: хлабина; топлина; здравина;
- *-ост*: мощност; надеждност; дълговечност; ковкост;

- **collective nouns**

- *-ура*: апаратура; арматура;

b. Adjectives

- **qualitative adjectives**

- *-ък*: ковък; крехък;
- *-ест*: микропорест; дребнозърнест чугун;

- *-ен*: невъзвратен клапан; маслен филтър;
- *-ив*: пропусклив; променлив;
- *-телен*: нагнетателен; изпускателен;
- *-озен*: визкозен;
- *-ичен*: полуавтоматичен; механичен;
- **relational adjectives**
- *-ски*: технически; морски;
- *-ен*: сачмен лагер; соленоиден клапан;
- *-ови*: планови ремонт; бордови кингстон;
- *-ов*: винтова помпа; брегова вода; дюзов апарат;
- *-ален*: централен охладител; бутален болт;
- *-ителен*: двигателно-движителен комплекс; кондензаторен датчик;
- *-ателен*: газоизпускателен; нагнетателен;
- *-шен*: въздушен филтър; вътрешна повърхност;

c. Verbs

Verbs in the Bulgarian language, formed by suffixation, are mainly derived from nominal, adjectival and verbal bases. The deverbal suffixes such as *-на*; *-не*; *-а*; *-я*; *-ва*; etc. are mainly used to change the verb aspectuality, or as in the case of *-ка*, to add diminishing meaning to the base. These suffixes are not considered to influence the terminological system of marine engineering and thus will not be further dealt with. The most frequent verbal suffixes added to nominal and adjectival bases are *-ува* – кокувам; *-ва* – изпомпвам, завинтвам; and *-ира* (which is a borrowed suffix) – сепарирам, дроселирам.

Conclusions:

- The comparative analysis proved that affixation is a more productive method of term formation in the English language than in the Bulgarian language. A possible explanation is that the English language has a tendency to a greater degree of compression of expressions (e.g. zero derivation) compared to the Bulgarian language whose terminological designations are rendered in a more descriptive and definition-like manner.
- Contrary to the expectation that the borrowed affixes would prevail in the Bulgarian terminological system, the analysis proved that the terms with native origin, formed by the word formation rules of the Bulgarian language, are the most frequent ones. A possible explanation lies in the long lasting history of the Bulgarian maritime industry which has led to a more advanced stages of terms formation, adoption and standardization in the language.
- Most of the affixes in the terminological system of marine engineering, both in the English and the Bulgarian languages, are not univocally represented. They prove to take part in more than one categories, exhibiting a large degree of variability.
- The affixes, stated to be the most productive ones, especially in the Bulgarian language, proved to be less frequent and even often absent in the field of marine engineering. A possible explanation can be found in the comparatively restricted subject matter of a specialized language, compared to non-specialized languages.
- The fact that some affixes of high frequency in the general, non-specialized languages are not so common in the field of marine engineering does not mean that they cannot take part in the formation of new terms, since the construction of a

specialized language is primarily based on the resources provided by a general language.

REFERENCES

- Arnold 2017:** Arnold, I.V. Leksikologiq savremonnovo anglijskovo yazika: uchebnoe posobie. Moskva: FLINTA. [Арнольд, И. В. Лексикология современного английского языка : учебное пособие, 4-е изд., перераб. – Москва: ФЛИНТА]
- Balkanski 1999:** Balkanski, T. Za nyakoi tendencii v nay-novoto balgarsko slovoobrazuvane. V: Aktualni problem na balgarskoto slovoobrazuvane. Sofia: UI „Sv. Kliment Ohridski“ [Балкански, Т. „За някои тенденции в най-новото българско словообразуване“. В Актуални проблеми на българското словообразуване. София: УИ „Св. Климент Охридски“.]
- Boyazhiev 1999:** Boyadzhiiev, T., Kutzarov, Iv., Penchev, Y. Savremeninen balgarski ezik.Sofia: IK Petar Beron [Бояджиев, Т., Куцаров, Ив., Пенчев, Й. Съвременен български език. София: ИК Петър Берон]
- Danilenko 1977:** Danilenko, V.P. Ruskaya terminologiya: opit lingvistichestskovo opisaniya. Moskva: Nauka. [Даниленко, В.П. Русская терминология: опыт лингвистического описания. Москва: Наука.]
- Georgieva 2012:** Georgieva, Tsv. Vidove klasifikacii na aktivnite prepozitivni formanti v bylgarskoto imenno slovoobrazuvane. [Георгиева, Цв. Видове класификации на активните препозитивни форманти в българското именно словообразуване] <<https://ispan.waw.pl/ireteslaw/bitstream/handle/20.500.12528/332/Georgieva.pdf?sequence=1&isAllowed=y>>
- Haspelmath 2002:** Haspelmath, M. Understanding morphology. London: Arnold
- Manolova 1984:** Manolova, L. Balgarska terminologiya. Sofia [Манолова, Л. Българска терминология. София]
- Murdarov 1983:** Murdarov, Vl. Syvremenni slovoobrazuvatelni procesi. Oчерk wyrhu bylgarskoto slovoobrazuvane. Sofia: Nauka I izkustvo. [Мурдаров, Вл. Съвременни словообразователни процеси. Очерк върху българското словообразуване. София: Наука и изкуство]
- Plag 2003:** Plag, I. Word-formation in English. Cambridge: Cambridge University Press.
- Plag 2013:** Bauer, L., Lieber, R., & Plag, I. The Oxford reference guide to English morphology. Oxford: Oxford University Press.
- Popova 1990:** Popova, M. Tipologiya na terminologichnata nominatsiya. Sofia [Попова, М. Типология на терминологичната номинация. София]
- Popova 2012:** Popova, M. Teoriya na terminologiyata. Veliko Tarnovo:IK „Znak’94“ [Попова, М. Теория на терминологията. ИК „Знак’94“, Велико Търново]
- Quirk et al. 1985:** Quirk. A comprehensive grammar of the English language. London: Pearson Longman.
- Radeva 2007:** Radeva, V. V sveta na dumite. Struktura i znachenie na proizvodnite dumi. Sofia: UI „Sv. Kliment Ohridski“ [Радева, В. В света на думите. Структура и значение на производните думи. София: УИ „Св. Климент Охридски“]
- Sager 1990:** Sager, J. C., & Nkwenti-Azeh, B. A practical course in terminology processing. Amsterdam: J. Benjamins Pub. Co.
- Stoyanov 1999:** Stoyanov, St. Gramatika na balgarskiya knivoven ezik. Fonetika i morfologiya. Veliko Tarnovo: Abagar. [Стоянов, Ст. Граматика на българския книжовен език. Фонетика и морфология. Велико Търново: Абагар]