Stratification Technology of the English Shipbuilding Sublanguage Lexical Units

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Abstract: ***The study of shipbuilding sublanguage, development and systematic description of its vocabulary are not only of great theoretical, but also of practical importance. The sublanguage of shipbuilding consists of complex terminological systems to be studied and unified by the joint efforts of linguists, sociolinguists and naval architects. The aims of the present research are the following: a) to study classification of ships and their systems from various aspects of shipbuilding science, b) to consider principles of building a terminological shipbuilding dictionary, including multicomponent terms and models they are formed of, c) to analyse processes of terminalisation or reterminalisation of lexical units d) to analyse how lexical units belonging to the so-called general scientific usage and special vocabulary function in this branch of science, i.e. to stratify lexemes according to the degree of their terminalisation, and to create a lexical minimum for students specialising in this field of knowledge. The research was carried out on the basis of structural-probability analysis, using the concept of distribution vocabulary, developed by prof. N.D. Andreev.***

Index Terms: ***lexeme, lexical composition, multi-component term combinations sublanguage, terminological dictionary.***

I. INTRODUCTION

Modern English, along with some other national languages, consists of not only commonly used colloquial vocabulary, but also of many terminological systems which make up its richness and beauty.

The art of shipbuilding dates back to approximately the 2nd -1st centuries B.C. The marine terminology holds a special place in the system of the English language. In marine terminology, connection between the history of a language and the history of society is clearly seen. The history of development of special maritime vocabulary reflects the history of navigation, culture and traditions of the English people. The English marine terminology is an integral part of the international marine language. The study of shipbuilding sublanguage, development and systematic description of its vocabulary are not only of great theoretical, but also of practical importance. For linguistics, the sublanguage of shipbuilding is of interest in terms of sociolinguistic coverage of the following problems:

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1. Over its centuries-old history, shipbuilding has developed not only in the direction of construction and operation of various types of ships as such (passenger, cargo, military, etc.), but also ship machinery, navigation instruments, ships' power plants, various types of port facilities, docks, equipment etc.The sublanguage of shipbuilding consists of complex terminological systems to be studied and unified by the joint efforts of linguists, sociolinguists and naval architects. Since any shift in the language system is necessarily preceded by a change in speech, we have chosen the speech system as one of the objects of study of the semantics of language. Going into the social sphere and being realized in it, the lexical units of the language can acquire new functional and semantic qualities. Thus, the vocabulary system of any language is influenced by various extra linguistic factors caused by development of both the social sphere itself and the language in it. Speaking about the impact of the social sphere on the language, it should be emphasized that this effect manifests itself in changes related to functioning, development and interaction of vocabulary in various sublanguages, and the process of their identifying is rapidly increasing in connection with the processes of differentiation in science, technology and other spheres of social activity.

2. The English sublanguage of shipbuilding as a whole is a complex composition of sublanguages and lexical units functioning in them, including not only native English names (ship, bow, fleet, forecastle, stem, stern, harbour, hull, etc), but also borrowings, mainly from the Dutch, Norwegian, as well as Greek, Latin and other languages, due to the long evolutionary development of the English language. For example, in the studied sublanguages we could notice such well-known borrowings from Dutch as cruiser, keel, deck; from Greek - chart, anchor; from Latin- vessel, mess, cargo, from Spanish- breeze, hurricane, from Old-Norwegian- storm etc. The vocabulary of the shipbuilding sublanguage includes both general scientific and special terms. General scientific vocabulary is the basis on which the special vocabulary of the sublanguage of science is functioning. This register of speech, combining scientific concepts common to many sciences, serves as a background for special terminology. As was shown by the research, the terminological system of shipbuilding sublanguage is multi-dimensional. On the one hand, there is a general classification of ships that considers various types of ships: passenger, transport, military, special purpose ships, etc.

(see Table I). On the other hand, ships can be classified according to the type of power plant (or without it): non-self-propelled and self-propelled; according to the type of propellers: paddle wheels, water jets, wing propellers, etc.; according to the hydro-dynamic characteristics: on wings and on an air cushion, gliders, etc (see Table II).

Table I. General classification of ships

Transport ships	Catcher boats	Special purpose ships	Industrial ships	Service ships	Sport boats	War ships (Naval vessels)
Passenger vessels: Cargo-and-passenger Cruise~ Freight-passenger Holiday ~	Trawlers	Hydrographic (survey) shipsSpace service ships Mooring craft Floating docks	Dredgers= dredge ships: suction dredgers	Tugs: chain tugs	Pleasure boats	Submarines: Missile-firing submarines Multipurpose submarines Special-purpose submarines
Cargo ships	Drifters	Aid to navigation vessels	Drag boats	Ice breakers	Tourist boats	Aircraft carriers
Dry cargo ships: bulk cargo ships General-purpose ships, *general cargo ships*: container ~	Seiners Crabbers	Research ships Salvage vessels Fire-fighting vessels Cable-laying ships	Garbage scow Drags	Pilot vessels Running boats	Racing yachts: Sport sailing boats Boat racing	Battleships Destroyers Frigates Corvettes Fighting ships Minesweepers minelayers
Tankers: coastal ~ LNG ~ oil ~						
Refrigerator ships: reefer ~ refrigerated container~						
Liquefied gas carries: LNG~						
Ferries: river ~ roll-on/roll off						

Due to the multidimensionality of this classification, the tables present only the main sections and subsections reflecting the purpose of the vessels and etc.

Table II. Classification of ships according to the type of propulsion and hydrodynamic characteristics.

Classification of ships by the type of propulsion				
Dumb vessels			Self-propelled vessels	
Towed vessels	Sailing vessels		Steamships	
Barges			Turbo vessels	
Berth-connected ships			Diesel-propelled ships = motor ships	
			Electric ships	
			Diesel-electric ships	
			Diesel-gas –turbine ships	
			Turbo-electric ships	
			Atomic ships= nuclear-powered vessels	
Classification of ships by the type of propellers				
Screw propeller:	Paddle wheel	Jet propeller	Rotating blade propeller= vane propeller	Aerial propeller
Controllable-pitch propeller				
Fixed-pitch propeller				
Ducted propeller				

Coaxial contra-rotating propeller				
Classification of ships by hydrodynamic characteristics				
Displacement vessels: *Submarines* *catamarans*	Gliders	Hydrofoil craft	Air-cushion vessels: *amphibious hovercraft* *sidewall hovercraft*	Air-foil boat= Wing-in ground-effect craft

In addition, in each of the classifications presented above, individual subsystems can be considered as independent areas and sections of research, depending on the purpose. For example, catcher boats include trawlers, drifters, seiners, etc. Trawlers, in their turn are subdivided into catching and factory trawlers, fishery research trawlers, shrimp trawlers, etc; according to the place of navigation they may be considered as deep sea, inshore and near water trawlers.

If we consider ships from the point of view of their main purpose, for example the carriage of passengers and cargo, then they will be classified as cargo and passenger, cruise vessels; cargo ships, refrigerators, oil and gas carriers, ferry boats, etc. Each group can be further subdivided into smaller groups and subgroups. Service ships, for instance, include tugs, icebreakers, patrol vessels, etc. If we take for example, icebreakers for further consideration we will see that this group of vessels can be of interest from the point of view of their characteristic features, i.e. arctic patrol icebreakers, atomic icebreakers, cargo icebreakers, light icebreakers, nuclear powered icebreakers, river icebreakers etc.

If we consider self-propelled ships in accordance with the type of their propulsion machinery, then, in listed in Table 1 types: steamships, turbo vessels, electric ships, diesel-engined ships, diesel-electric ships, diesel-gas-turbine ships, turbo-electric ships, atomic ships etc, it is possible to describe certain types of power plants and engines, respectively.

For example, well-known power plants are CODAG plant, CODEAG plant, CODOG plant, COGOG plant, CONAG plant, COSAG plant, direct cycle reactor, electric plant, gas –reversible gas turbine plant, turbine plant, nuclear –power plant, etc. Diesel engines, occupying a special place in this classification, are subdivided into air-cooled diesel, air-injection diesel, airless-injection diesel, air-cell [air-chamber] diesel, blast-injection diesel, cross-head type diesel, cruising diesel, medium-speed diesel, etc. If we consider the term "plant" as a general one, then all plants can include a number of various engines, among them are air-injection engine, axial engine, augmented jet engine, electric steering engine, free-turbine engine, gas-turbine engine, heavy-fuel-burning engine, high-pressure steam engine, etc. In our study, we relied on the above classification, since it is well-known and generally accepted among specialists in this branch of science [1], [2].

II. THE METHODS AND DOMAINS OF THE RESEARCH

Since the sublanguage of shipbuilding consists of many sublanguages, the vocabulary of which is to be studied and systematized, we limited ourselves to the study of the following sublanguages: 1. classification of transport ships, including classification of (a) passenger vessels and (b) cargo ships.

The research was carried out in two steps. The first and the main step was to analyse how different types of lexical units belonging to the so-called general scientific usage and special vocabulary function in this branch of science, i.e. to stratify lexemes according to the degree of their terminalisation, all of this resulting in creating a terminological dictionary consisting of single and many-component terms.

The second was aimed at describing the synonymic group of terms denoting a ship as they are given in the shipbuilding terminological dictionary [3], with special attention being paid to passenger ships vs cargo vessels. The basic terms in our study are ship, boat, vessel, craft, liner, cruiser, carrier, catamaran, ferry and vehicle.

The investigation was carried out using the method of structural probability developed by professor N.D. Andreev [4], applying the concept of distribution dictionary [4]-[6]. In our work, we also used a descriptive method for analysing many component term structures. The research material was mainly Anglo-American periodicals, as well as articles by shipbuilding scientists from many other countries published during the past two decades.

The method of structural probability consists in that the qualitative characteristics of lexical units are inseparably connected with their quantitative distribution in speech and there is a direct interdependence between structural oppositions in a language and probability correlations in speech. All sublanguages differ from each other by "probability spectra of their lexical groups" [4]. Applied to the lexical system of a language this method allows to judge about the qualities of the system studying the texts belonging to special branches of science. The concept of distribution dictionary could be successfully applied for identification of a) absolutely specific lexical units, found only in a given sublanguage, b) relatively specific ones – found in two or several sublanguages and c) nonspecific, - belonging equally to all the sublanguages [4], [5]. Thus, we can objectively find out the boundaries between the words in general use and those belonging to the language of science and technology as whole and special lexemes of closely-related or individual sublanguages.

III. RESEARCH ALGORITHM

The sample text consisted of 2000 lexical units, each word or its semantic variant being written on a separate card, in a matrix form consisting of ten cells. In the course of examining the texts, the matrix cells, numbered from 1 to 10, are filled with (+) marks as the lexeme appears in the analysed sample. Besides, if there are any word combinations they are also written in this or a separate card. Each word is marked in its connection to this or that part of speech: verbs (in

their infinitives), nouns, adjectives, adverbs. Participles I and II and Gerund were reduced to the Infinitive forms. Figures and symbols as well as proper names, names of companies, etc were neglected.

The matrix in question looks the following:

Cabin (n)	1	2	3	4	5	6	7	8	9	10
Passenger ships	+	+	+	+	+	+	+	+		+
Cargo ships	+				+				+	

withstand (v)	1	2	3	4	5	6	7	8	9	10
Passenger ships		+				+	+			
Cargo ships	+	+			+				+	+

The main numerical characteristics in the distribution dictionary are the following: relative occurrence (RO), average occurrence (AO), correlative function (CF) and specific function (SF). All of them can show either the lexeme belongs to the so called neutral vocabulary, general scientific usage or to a specific term group. (For more detailed information see references 1, 2, 3).

Having analyzed the word stock amounting to 160000-word usage we obtained a specialized vocabulary consisting of about three thousand lexical units represented in the two above-mentioned domains.

The list of basic, general scientific vocabulary includes such lexical units as system, method, technique, motion, force, structure, property, theory, experiment ,energy, analysis, aim, automation ,aspect, assumption, acceleration, order, purpose, ratio ,coefficient, design, machine, ship, vessel, space, speed, requirement, result, range, pressure, process, problem, procedure, part, product, unit, vibration, etc; **verbs** arrange, apply, contain, carry out, divide, design, develop, derive, classify, increase, use, lift, form, order, obtain, minimize, provide, reduce, require, support, supply, etc; **adjectives** : actual, adequate, available, automatic, effective, efficient, difficult, important, specific, universal, possible, principal, main, general, usual, vertical etc. This group is rather numerous and forms the basis of the so-called "international vocabulary", serving the sublanguage of science and technology in several languages. The listed lexemes are found exclusively in all studied sublanguages, showing also the highest frequency of usage. This is not surprising, since, due to frequent usage, many of these terms have long since passed (or are moving) into the category of general scientific vocabulary [4, pp. 214-215]. General scientific vocabulary combining scientific concepts common to many sciences, serves as a background for special terminology.

The entire specialized vocabulary is represented by separate terms, and two, three, and many-component term-combinations, the number of the latter being rather limited. In addition to the basic, general scientific vocabulary, the dictionary contains both special and highly specialized ship terms. The **first group** includes such terms as anchor, bow, bottom, bridge, boiler, cargo, cabin, equipment, funnel, crane, constraint, depth, deck, displacement, load, harbour, mast, marine, navigation, fuel, engine, engine room, diesel, diesel engine, shipyard, stability, waterline, winch, port, propeller, propeller shaft, plating, pump, loading/ unloading, rudder, side, tank, tonnage, turbine, etc; **the second** - bulkhead, buoyancy, hatch coaming, hawse, forecastle, forepeak, afterpeak, frame, framing, cofferdam, box girder, galley, deadweight, davit, hold, hull, helmstock, propulsion, poop, rigging, stern, stem, stack, starboard, sheerstrake, stanchion, stringer, slamming, mooring, superstructure, tank top, tweendeck, wheelhouse, etc. Almost all of them form two, three and many-component term combinations.

For example, **two component** structures are formed according to the following models: NN, AN, NofN,PII+N, PI+N: cargo ship, navigation area, hull systems, gravity davit, fuel tank, marine vessel, electric propulsion, hydrostatic pressure, dirty tanker, angle of heel, angle of trim, centre of buoyancy, discharge of sewage, towed vessel, cooling capacity, priming chamber, etc.

Three component structures are composed of the following models: NNN, ANN, ANof N, NofNofN, N'NofN, N'NN, AAN, PIINN: bulk cargo carrier, dry cargo ship, deep sea vessel, controllable pitch propeller, waste heat boiler, longitudinal framing system, propulsive quality of ship, height of center of buoyancy, ship's center of gravity,ship's power plant, high tensile steel, liquefied gas carrier, etc.

Four component structures include such compounds as: PINNN –limited navigation area ships, ANNN – variable displacement piston pump, medium speed diesel engine, NNNN – aircraft type gas turbine, Adv+PII+Adj+N vertically corrugated transverse bulkhead; Adj+PII+Adj+N long-crested irregular wave, etc.

Five component structures consist of complex word clusters: NNNNN exhaust gas boiler condition indicators; Adv+PII+NNNN hydraulically started aircraft type gas turbine; ANNNN low maintenance gas turbine propulsion; N+PII+Adj+NN bridge-controlled variable- pitch propeller; NN+PII+NN glass-fibre reinforced plastics life boat; Adv+PII+NUM+NN naturally aspirated three cylinder engines, etc.

Six component structures are formed of the following models: N+PII+N+Adj+NN air-actuated friction dental type clutch; NN+PII+PI+NN natural gas fuelled reciprocating piston engine, etc.

Seven component structures are made according to the formula N+PII+PII+PII+PI+NN diesel-fuelled nonpremixed-charged reciprocating piston engine; Abbr+PII+PII+N+PI+NN LPG gas fuelled premixed charge reciprocating piston engine; NN+Adj+NNNofN twin screw open shaft Fantasy class of ships, etc.

The analysis has shown that two and three component structures are more frequently used in any of the domains presented. In the theory of nomination this is explained by the substantive nature of nouns (in our case terms) created for nominating some object or phenomena in real life.

There is also a layer of semi-specific lexical units which occupy a position between general scientific and special vocabulary. This group is not so numerous as the general scientific vocabulary is and includes such **verbs** as for example *to carry, to conform, to adapt, to alleviate, to attain, to deploy, to govern, to utilize, to employ, to transport, to handle, to enable, to exempt, to expand, to ensure, to specify, to fit, to install, to maintain, to modify, to outfit, to verify,to withstand,* etc; **nouns** *access, alteration, capacity, compliance, capability, conversion, curvature, damage, impact, failure, integrity, layout, extent, performance, passage, sequence, tier,* etc. This testifies to the probability character of the vocabulary structure, including realisation of lexico-semantic variants of the word in the analysed sublanguages.

Terminalisation and reterminalisation of lexical units. Such meanings of the term as unambiguity, accuracy and strict differentiation of the transmitted concepts distinguishes terms from other words and allows to consider them as the highest category of names, which is consciously supported by specialists using them in speech. Since the language is a mobile, dynamic system that constantly develops, it is not surprising that in the lexical system there are processes of terminalisation (terminological specialization) and determinalisation of vocabulary. Along with terminalisation which is often based on a metaphor, there can also exist reterminalisation i.e. transfer of the finished term from one discipline to another with full or partial rethinking. A vivid illustration of all these processes is the word "antenna". The origin of this term dates back to deep antiquity: long before Christianity, shipbuilders developed sophisticated tackles (rigging) for sailing ships, and the Greeks introduced a system of sails, hanging from horizontal crossbars or sailyards. Such sailyards were called in Latin “antennae”’, when the Romans borrowed the equipment from the Greeks. In zoological terminology, it was used metaphorically - the so-called antennae-tentacles of insects. In the twentieth century, in radio terminology, antenna wires suspended from masts to trap radio waves, were also called antennas, and now any device similar in the form used for the same purpose, according to the principle of functional semantics, is called an antenna [6].

Another example of a metaphorical use of the term is the word “anchor”. It is worth noting that the concept of “anchor” was introduced by the Chinese in 2000 BC, but the term was borrowed from the Greek “ankos”, i.e. “hook”: OE anchor <L *ancora* < Gk *ankyra* (ankos), i.e. bent, hooked. In the course of terminalisation it has acquired new shades of meaning, for example;1. a source of stability nor security; 2. the rear person in a tug-of-war team. Besides it is now used in such compound nouns as anchorman and anchorwoman, meaning in *sports*.: the last person in a team to compete, esp. in a relay race; (in broadcasting) a person in a central studio who contacts with various units, reporters, etc.

With the development of shipbuilding during the industrial revolution of the nineteenth and twentieth centuries, lexical units, originally belonging to the general vocabulary, were subsequently transferred to the category of terms: funnel (originally a hollow utensil for pouring liquids) and in shipbuilding: a smokestack for smoke or exhaust gases, as on a steamship; gallows: originally a wooden structure usually consisting of two upright posts with a crossbeam from which a rope is suspended used for hanging criminals; in shipbuilding: the trawling arc; tank: a large container or reservoir for the storage of liquids or gases (originally a pond).

Some common lexical units in the course of their historical development from unambiguous ones moved into the category of polysemantic units and the development of their semantic structure can be to a certain degree “transparent”, as well as the meanings of the lexical-semantic variants that bring them together. The process of terminalisation have undergone such lexemes as **depth** - 1. depth, 2. middle, 3. thickness 4. geol. reservoir capacity 5. **naut**. board height; **displacement** - 1. displacement, permutation, 2. replacement, 3. dismissal, displacement, 4. geol. shear (seams), 5. **naut**. displacement (ship displacement). The greatest number of lexico-semantic variants is found in the noun **side**. We will list only some of them, marked with the number I in BARS: 1. wall, 2. surface, side, 3. **naut**. board (ship, boat), 4. slope, 5. shore, 6. field, edge, 7. geol. side, wing (relief), 8. horn, chest (face); etc, see II and III. [7]. As a result of the disintegration of the polysemy, the semantic variants of the noun **port** are so dispersed that independent terms are formed: port (1) - 1. harbour, 2. port city, 3. airport; port (2) - 1. hole, window, passage; port (3) I - 1. posture, demeanour, 2. social status, 3. meaning, content, 4. milit. to carry a rifle with both hands in a slanting direction across the front of the body, (5) I –**naut**. left side, (6) – portwine, (7) - scotch pleasant motive, live melody [8].

The second step of research was aimed at describing the synonymic group of terms denoting a ship as they are given in the shipbuilding terminological dictionary [3], with special attention being paid to passenger ships vs cargo vessels, their origin and term structures. The basic terms in our study are ship, boat, vessel, craft, liner, cruiser, carrier, catamaran, tanker, ferry and vehicle.

In modern English there are a number of words denoting the concept “ship”. These include ship, boat, liner, cruiser, vessel, craft, carrier, ferry, catamaran, and vehicle. The most common is ship. It is interesting to note that a modern term **“ship”** comes from O.E. scip, its meaning is traced in the word sceadan- “to divide”. It is also worth noticing that the Russian word «корабль», meaning a "ship" comes from Greek korabos, meaning first “a crab”, later on in vulgar Latin “carabus” - "cane covered in leather"; (a vessel); Words of the same root can be found in Italian “caravella”, French caravelle, Portuguese caravela, Spanish carabela and Arabic qarib [9].

Lexeme “**ship”** occupies a dominant position in this synonymic group that is why it has the largest number of many compound word-combinations in any special marine dictionary. For example, in the English-Russian Maritime Technical Dictionary there are 582 multi-component term combinations with this word, however only 16 of them denote passenger ships. They include: 1. cabin (-class) ship 2. cargo-and-passenger ship, 3. combination cargo-passenger ship 4.

combination ferryboat-trailer ship 5. cruise ship 6. express line ship 7. freight-passenger ship 8. holiday ship, 9. hotel class ship 10. lido ship 11. multiclass ship, 12.one-class ship, 13. passenger ship 14. passenger-cargo ship, 15. recreation ship, 16. European passenger ship etc. The most common of these are 2, 5, 13, and 14 term combinations. The specialized two-component and three-component term combinations listed above can be either with an allied link or a union type, and are formed from the following derivational models: N + N, N + conj + N, N + N + N. Despite the fact that the dictionary contains 325 multi-component term combinations with the **"boat"** lexeme, we identified only 12 items related to passenger ships. They are mainly two and three-component terms formed according to the formula: N + N, N + N + N, Ger + N, Adj + Ger + N:

1. commuter boat
2. excursion boat
3. family boat,
4. lake boat,
5. line boat,
6. passenger boat,
7. pleasure boat,
8. pleasure cruise boat
9. pulling boat
10. recreational sailing boat,
11. sailing boat,
12. tourist boat, etc.

It is interesting to note that because of its narrow referential meaning "small ship, boat or motor-boat" (< OE bät akin to ON beit –a small ship), the more common word "ship" is preferred in the special literature.

Along with "ship", the term **"vessel"** borrowed from Latin (<OF *vaisse*l<L *vascellum*-urn) is also widely used for the designation of various types of ships. A set of two, three, four component terms are found in the dictionary, formed according to various derivational models Adj +N, Adj+ NN, N+N+N, PII+ N+N+N, N+ conj +N: arctic vessel, black products vessel, closed shelter deck vessel etc. Of 304 term combinations, only 9 belong to passenger ships:

1.cargo-and-passenger vessel,
2. cross-channel vessel,
3. cruise-ferry vessel,
4. excursion vessel,
5. ferry vessel,
6. intermediate vessel,
7. passenger vessel,
8. passenger and cargovessel,
9. steamvessel.

One of the ancient lexemes "**craft"** existed in Old English along with the word ship, however its meaning was *skill* (**craft**< OE *cræft* -skill, strength, rel. to ON *kraptr* -power, skill, OHG *kraft*), ME strength, skill.). In modern dictionaries it has the same basic meaning and among others we can also find that of a ship. In one of its meanings it is used as a collective noun, functioning as plural and denoting ships, boats, aircraft or spacecraft collectively.

There can be found **126** term blocks in the dictionary with this word including *aerostatic (ground-effect) craft, air-cushion craft, commercial craft, hydrofoil-supported craft,* etc, however only four of them are used to denote passenger ships: 1. ferrycraft, 2. passenger-carrying craft, 3. pleasure craft, and 4. recreational craft. This is explained, apparently, by the fact that, in the course of historical development of its semantics, the lexeme craft acquired a fairly wide referential meaning. Multi-component term combinations are formed by the formulae: Adj+PII+adj+N: atomic-powered under water craft, N+N+N+Adj+N: drone aircraft catapult control craft, N+conj+N+N+N wing-in-ground effect craft.

The lexeme **ferry** originally existed in the complex nouns ferryboat and ferrycraft and only later began to be used independently with the meaning "ferry", that is "a vessel for the carriage of passengers and vehicles». Its origin goes back to the OE verb *ferian* – to carry, related to Old Norse *feria* – to transport, and Gothic *farian*. The most common term combinations of 8 registered in the dictionary are:

1. car-and-passenger ferry
2. passenger ferry,

3.passenger-and-freight ferry. Two and three component term combinations here are formed according to the aforementioned models, with the exception of only one term - roll-on \ roll-off-ferry - formed by the formula V + V + N.

Along with ship and vessel lexemes, **"liner"** is a widely used term too and is used mainly in the meaning "to carry passengers" i.e. a passenger ship. We have found 13-word combinations with this term, however the most commonly used are cruise liner, passenger liner, passenger-and-car liner etc. Other term combinations refer to special purpose vessels. For example: cargo liner, container liner, general cargo liner, etc. It should be noted that in the special literature, preference is given to their synonyms: cargo ship, container ship, general cargo ship. Terminological phrases are formed using the same models as the above multi-component terms.

The term liner has other meanings that have nothing to do with the original meaning, denoting something else: bearing liner, *continuous solid lining (propeller shaft),* tapered wedge-shaped gasket, rudderstock liner - *rudder tailpiece*, and so on. Most likely these two words have appeared as a result of disintegration of polysemy and are now functioning as independent terms.

The term **carrier** (like the verb to carry) was borrowed from Latin and meant "to move with the help of a vehicle, wagon ". In shipbuilding, this term has become widespread, meaning some kind of transport vessel, however this lexeme as a single unit is not used at all. We have not registered a single case of separate use of this term. Of the 132 term combinations analyzed, only two relate to passenger ships: passenger carrier, and passenger-cargo carrier; the others, consisting of two, three or more term combinations, denote different types of military and transport ships: aircraft carrier, container carrier, oil carrier, bulk-and-general cargo carrier, etc. In addition to the above, the following derivational models should be added to the above-mentioned: N + N + N + N + N - product-oil-bulk-ore carrier, "a combined vessel for the transport of petroleum products, crude oil, bulk cargo and ore, a combined vessel of the PROBO type"; abrv + N : OBO carrier- "a combined ship for the transport of oil and bulk cargoes, including ore"; LPG

"Vessel for the transport of liquefied petroleum gases; LNG" is a vessel for the transport of liquefied natural gases.

The terms **cruiser** and **catamaran** belonging to the special register were borrowed from the Dutch and Tamil languages respectively. The first noun was formed from the verb *to cruise* which comes from Dutch – *cruisen* – to cross, fr.*cruis* - to cross. It can also be traced in modern Indo-European languages: French *croiser* to cross, cruise, Spanish *cruzar*, and German *kreusen.* For a few centuries this term was used in the meaning *a long-range war ship of medium displacement*, and even nowadays most of the term blocks registered in the dictionary denote navy ships.

The term **cruiser** was borrowed by the British from the Dutch at the end of the 17th century. This term commenced to be used when Dutch ships began to engage in piracy, crossing sea lanes on ships in search of victims. This zigzag sailing was designated by the word "cruisen", which meant "to cross". The British modified the word in "cruise" (cruiser). For several centuries, this term was used to designate, for example, such cross-navigation as that of a warship, chasing the enemy ships, but owners of pleasure craft used this word to designate any voyage that did not adhere to a clear timetable. Gradually, any type of pleasure travel became known as a cruise. This term is now used for denoting passenger ships. During the study, only five phrases were recorded with this term: cabin cruiser, motor cruiser, ocean-going cruiser, tourist cruiser. This is not surprising, since for several centuries and to the present, this term is mainly used in relation to naval vessels: antiaircraft cruiser, antisubmarine cruiser, battle cruiser, missile cruiser etc.

The term **catamaran** was borrowed from the Tamil language of Sri Lanka. (Tamil Nady language of Sri Lanka (Dravidinian family: (tied timber; a sailing vessel with twin hulls held parallel by a rigid framework).

Two-body ships (catamarans) became widespread in the 1950s and 1960s.

Nowadays catamaran is a small pleasure boat used to transport passengers. We can find only a few terms with this word in the dictionary [3]: low-water-plane catamaran, race-cruising catamaran, research catamaran, sailing catamaran and sea-going catamaran.

The lexeme **vehicle** borrowed from Latin *vehiculum*, from *vehere* to carry, has never been used in reference to passenger ships. This is explained by the fact that it, having a wide referential meaning, can be used in relation to various vehicles: cars, submarines, airplanes. Many term combinations that include this term consist of several stems denoting in general special purpose vessels: deep-ocean survey vehicle, nuclear propulsion submersible research vehicle, twin cushion surface effect vehicle, etc.

Invented in the late 60s of the last century by R.E. Alekseev, a special vessel that could move not only through water, but also above water, land or marshland, forming the so-called air cushion between them and the vessel itself, gave the name to the new concept of "ecranoplan" , known in special literature as wing-in-ground effect craft. In English, the familiar lexemes : "craft", "boat", "vessel" and "vehicle" were used to denote the new term, which formed a number of complex term combinations consisting of several stems, for instance **craft**: aerodynamic (ground effect) craft, near-surface craft, ram-wing (ground effect) craft, wing-in-ground effect craft; **boat**: airfoil boat, ram wing, surface effect boat, ground effect **vessel**, ram wing surface effect vessel; **vehicle:** surface interface vehicle, surface effect vehicle. The above phrases are united by one, common meaning: apparatus, moving near the surface (water, land), a ship with dynamic support. Despite the variety of terms with the aforementioned supporting words, multi-component term combinations with the "vehicle and craft" lexemes are most often found in the special literature, formed according to the models Adj+N+Adj+N+N+N+N and Num+N+N+N+Adj+N. For example: 1. AWIG craft is a high-speed 'dynamic hovercraft' surface marine vehicle. 2. This is a military variant of the 20-seat passenger/freight civil craft, having a useful load of 2.5 tonnes [10].

IV. CONCLUSIONS

The results obtained show that classification of ships and their systems is multidimensional. The terminological dictionary consists of both single terms and multicomponent lexical units constructed according to different grammatical models. Among them, the most commonly used are NN, NNN, N + N + N + N, Adj + N, Adj + PII + adj + N, Adj + N + Adj + N + N + N + N, Num + N + N + N + Adj + N, ADV+PII+NUM+NN, N+PII+PII+PII+PI+NN and others.

The modern sublanguage of shipbuilding has come a long way in the formation and development of its specialized vocabulary, which is reflected in the variety of models that form special terminology systems. Like any other sublanguage, it continues its further development and evidence of this is the emergence of new sub-systems, new lexical units, and their terminalisation or reterminalisation.

The method of structural-probability analysis, using the concept of distribution vocabulary, allowed to stratify lexemes according to the degree of their terminalisation. And the main theoretical conclusion following the distribution analysis of various lexical groups is the probability character of the vocabulary structure, including realisation of lexico-semantic variants of the word in the analysed sublanguages. This conclusion was confirmed by the linguistic facts found in the functional matrices. There are no distinct demarcation lines or impermeable boundaries between various groups of lexical units. This testifies to the dialectic character of the lexical system being in constant motion and development.

The presented classification can serve as a basis, both in theory and in practice of objective lexicography, for creating branch lexical minima required for teaching ESP to students, specialists and non-specialists in the field of shipbuilding. The origin of words in the given synonymic group may be of interest to students and those who are interested in the history of shipbuilding. And, what is also of prime importance for the theory and practice of translation, especially for creating electronic translators, the word-building models can form the basis of algorithms used in machine translation programs.

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