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## **BASIC METHODS OF FORMING MARITIME TERMS IN ENGLISH**

*The article is devoted to the ways of forming compound maritime terms in English. The purpose of the article is to analyze the ways of forming such terms.*

*Terminological units occupy a special place in the structure of all developed languages, without losing touch with common in usage vocabulary. Maritime terminology is a system of linguistic units formed in a certain way, which has gone through various historical paths of formation and has its own set of lexical units, derivational methods and models, as well as means of their formation.*

*The relevance of this study is determined by:*

- the growing interest of linguists in the study of terminological vocabulary;*
- globalization processes in the world economy, technology, production, as well as the dynamic development of shipping;*
- the importance of further development of the problems of the formation of maritime terms, since the semantic processes underlying the formation of terminological meaning have not received sufficient theoretical understanding;*
- the lack of a comprehensive and systematic study of maritime terms from the point of view of their semantic and structural organization.*

*The object of the study is maritime terms. The subject of the study is the structure and semantics of these linguistic units in the English language.*

*A comprehensive analysis of the structure and semantics of maritime terms was carried out. Maritime terms are presented as a systemically organized set of words and phrases, united into a single whole based on their functional and semantic commonality.*

*The results obtained by the author showed the most typical methods of forming maritime terms in English: adding affixes or semi-affixes to words included in terminological phrases; adding present or past participles, numerals or adjectives, and abbreviations to phrases.*

*The novelty of this study lies in the systematization of the most typical ways of forming compound maritime terms.*

**Key words:** *maritime terminology, compound maritime terms, word formation, suffixation, prefixation.*

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## **БАЗОВІ МЕТОДИ УТВОРЕННЯ МОРСЬКИХ ТЕРМІНІВ В АНГЛІЙСЬКІЙ МОВІ**

*Стаття присвячена способам утворення складних морських термінів в англійській мові. Мета роботи – провести аналіз способів утворення таких термінів.*

*Термінологічні одиниці займають особливе місце у структурі всіх розвинених мов, не втрачаючи зв'язок із загальноживаною лексикою. Морська термінологія є певним чином сформованою системою мовних одиниць, що пройшла різні історичні шляхи становлення і має власний набір лексичних одиниць, дериваційних методів, моделей, а також засобів їх формування.*

*Актуальність цього дослідження обумовлюється:*

- зростаючим інтересом лінгвістів до досліджень термінологічної лексики;*
- глобалізаційними процесами у світовій економіці, технології, виробництві, а також динамічним розвитком судноплавства;*
- важливістю подальшої розробки проблем формування морських термінів, оскільки семантичні процеси, що лежать в основі формування термінологічного значення, не набули достатнього теоретичного осмислення;*
- відсутністю комплексного та системного вивчення морських термінів з точки зору їх семантичної та структурної організації.*

*Об'єктом дослідження є морські терміни. Предметом дослідження виступають структура та семантика даних мовних одиниць в англійській мові.*

*Проведено комплексний аналіз структури та семантики морських термінів. Морські терміни представлені як системно-організована сукупність слів та словосполучень, об'єднана в єдине ціле на основі їхньої функціональної та семантичної спільності.*

*Отримані автором результати показали найбільш типові способи формування морських термінів в англійській мові: додавання до слів, що входять до термінологічних словосполучень, афіксів або напівафіксів; приєднання до словосполучень дієприкметників цього або минулого часу, чисельників або прикметників та скорочень.*

*Новизна даного дослідження полягає в систематизації найбільш типових способів утворення складних морських термінів.*

**Ключові слова:** морська термінологія, складні морські терміни, словотвір, суфіксація, префіксація.

**Problem statement.** Scientific and technological progress has given rise to the emergence of new special terminology in various fields of science and technology including maritime. The word «term» means a word or phrase denoting the concept of a special field of knowledge or activity. Accordingly, a maritime term is a word or phrase used to designate a certain special concept related to a particular section of maritime science or maritime equipment. Terms are the most rapidly growing part of the vocabulary. The terms are unambiguous and precise. This allows us to consider them the highest category of names. Maritime terms reflect concepts that are related to each other and represent a specific system. The system of terms that unite the concepts with which this system operates can be called terminology (Nikulina, 2019).

In this article, the author discusses methods of forming compound maritime terms that are most often used in the English language. Modern compound maritime terms were selected for the study.

**Analysis of recent research and publications.** A number of scientists devoted their scientific research to the issue of the formation of maritime terminology including S. Ia Rozana, B. L. Bohorodskyi, N. A. Smirnov, I. K. Smorhonskyi. Maritime terminology of individual periods was studied in the works of A. I. Hensorskyi, P. K. Kovaliv, H. I. Khalymonenko, V. I. Horobets, M. L. Khudash, M. S. Rohal, A. M. Varynska, N. M. Kornodudova, etc. T. D. Mykhailenko worked in the field of formation and functioning of the maritime terminology system, etc. The periodization of maritime terminology was studied by L. V. Turovska. Linguist O. Ia. Andriianova studied the stages of formation and semantics of maritime terminology.

**The purpose of the article** is to analyze the methods of formation of compound maritime terms in the English language. To achieve this goal, it is necessary to solve the following tasks:

- 1) to highlight the concept of «compound term» in English;
- 2) to study the structure of compound terms related to maritime topics;
- 3) to identify methods for the formation of compound maritime terms;

4) to systematize the most typical methods for the formation of compound maritime terms.

In this study, the scientific method of component analysis was used to solve the problems.

**Presenting main material.** The development of science and technology, which arose along with a large number of new terms and concepts, significantly expanded maritime terminology. The use of terms related to nuclear energy and radio electronics has become common. At the same time, many terms that are characterize the sailing fleet began to gradually fall out of use.

Terminological and common vocabulary are inextricably linked (Nikulina, 2019). Maritime terminology is a special part of the commonly used vocabulary of the English language. The relationship between maritime and common vocabulary is expressed in the fact that maritime vocabulary borrows most of its vocabulary from common vocabulary giving these words new meanings. For example, «escape trunk» (submarine rescue shaft). The word «escape» came into English from Latin, and means «an act of breaking free from confinement or control».

The general patterns of morphological word formation are the same for the entire English language, therefore the formation of terms, including maritime ones, from other words occurs in the same way as the formation of commonly used vocabulary (Varynska, Kornodudova, 2019: 554).

As a rule, the productive basis of maritime terms in English are simple, derivative and compound words or terms. Simple words consist of only one stem, for example: «fish», noun (n.); «freight», noun (n.); «install», verb (v.). Derived words contain a stem and affixes – suffixes and prefixes. So, «fishing», adj. (of, or pertaining to fishing) consists of the stem fish and the suffix -ing; «freighter», n. (a large ship designed to carry goods in bulk) has the stem freight and the suffix -er; «installation», n. (naval base) consists of the stem ship and the suffix – ation (Onions, 1996).

A significant number of maritime terms come from compound words. A compound word is a word consisting of two or more stems. For example, «ice-breaker», n. (a ship designed for breaking a channel through ice) consists of the basics ice (frozen water)

and breaker (a person or thing that breaks something); «landmark», n. (an object or feature of a landscape that is easily seen and recognized from a distance) contains the basics of land (the part of the earth's surface that is not covered by water) and mark (a line, figure, or symbol made as an indication or record of something); «lifebelt», n. (a ring of buoyant or inflatable material used to help a person who has fallen into water to stay afloat) consists of the basics life (the existence of an individual human being or animal) and belt (a strip of leather or other material worn, typically round the waist, to support or hold in clothes or to carry weapon) (Onions, 1996).

A special place in the formation of maritime terms is occupied by expanded phrases, which are also compound formations. If compound words consist of stems, then the components of phrases are words. For example, the components of the phrase «lighter aboard ship» (the practice of loading barges (lighters) aboard a bigger vessel for transport) are the words «lighter», n. (barge), «aboard», adv. (on board) and «ship», n. (a vessel); the phrase «naval research vessel» (highly advanced mobile research station providing stable platforms from which explorers can deploy equipment, divers, and submersibles) consists of the words «naval», adj. (relating to a navy), «research», n. (investigation) and «vessel», n. (ship); components of the phrase «oxygen gas helmet» (a mask that provides a method to transfer breathing oxygen gas from a storage tank to the lungs) are the words «oxygen», n. (a reactive element), «gas», n. (a substance), «helmet», n. (a hard or padded protective hat) (Cutler, 2005).

If the words that are part of the phrases are combined with some word-forming suffixes and prefixes, then new maritime terms are formed. So, if the prefix anti- is added to the word «rolling» in the phrase «rolling tank», then maritime term «antirolling tank», is obtained. If the suffix proof is added to the word «weather» in the phrase «weather radar», the maritime term «weatherproof radar» is obtained. Such word formations can be classified as compound derivative terms.

Based on structural and semantic characteristics, such compound maritime terms can be divided into compound suffix and compound prefix terms.

Among the highly productive suffixes that participate in the formation of compound suffix maritime terms is the suffix -ed. This suffix is attached to a noun in a phrase and forms compound adjectives with the meaning «having what the producing stem indicates». For example, the compound suffix term «qualified sailor» includes the word «qualified», adjective (adj.) (officially recognized as being trained to perform a

particular job), derived from «qualify», v. (become officially recognized as a practitioner of a particular profession or activity). The compound suffix term «unchanged course» includes the word «unchanged», adj. (not changed), derived from «unchange», v. (to not change). The compound suffix term «Combined transport Bill of lading» includes the word «combined», adj. (joined or merged to form a single unit), derived from «combine», v. (join or merge to form a single unit) (Cutler, 2005).

Maritime compound terms, the last element of which is a noun with the suffix -er, denoting a device that produces the action expressed by the verb from which the noun is derived, refer to maritime equipment. For example, in the compound term «large tonnage tanker» (a ship for carrying liquids in bulk with large tonnage) the word «tanker», n. (a ship for carrying liquids in bulk) is derived from «tank», n. (a usually large receptacle for holding, transporting, or storing liquids). The compound term «aircraft carrier» (a large warship with a deck from which aircraft can take off and land) includes the word «carrier», n. (a thing that carries, holds, or conveys something), derived from «carry», v. (support and move from one place to another). The compound term «chain locker» (a compartment located under the windlass where the anchor chains are stowed) includes the word «locker», n. (a small lockable cupboard or compartment), derived from «lock», n. (a mechanism for keeping a door, window, lid, or container fastened) (Cutler, 2005).

Suffixes that interact with phrases include the suffix -al, which, when attached to a noun, forms an adjective indicating a relationship to an inanimate object, and gives the compound maritime term the meaning of «relating to, associated with something». For example, in the compound term «naval forces» (troops, vessels, and weaponry deployed at sea) the word «naval», adj. (relating to a navy) is derived from «navy», n. (the branch of the armed services of a state, which conducts military operations at sea). The compound term «professional diving» (underwater diving where the divers are paid for their work) includes the word «professional», adj. (relating to or belonging to a profession), derived from «profession», n. (a paid occupation). The compound term «vertical spar» (a mast) includes the word «vertical», adj. (at right angles to a horizontal plane), which is derived from «vertex», n. (the highest point) (Cutler, 2005).

Compound maritime terms can be created on the basis of terminological phrases using prefixes anti-, ex-, super-, and sub-.

The highly productive prefix anti-, combined with phrases, is involved in the formation of a large number

of compound maritime terms. Thus, with the help of the prefix anti- the following compound maritime terms were formed: «anti-clutter gain control» (is used to adjust the sensitivity of the receiver and thereby regulating the intensity of the returns displayed on the screen) from «sea clutter control» (offsets the problem of rough weather bouncing radar signals off the sea around a ship); «anti-crepuscular rays» (extensions of crepuscular rays, converging toward a point 180° from the sun) from «crepuscular rays» (are created when sunlight shines through gaps in clouds and continues through an atmosphere that contains dust and/or haze); «anticyclonic winds» (winds associated with a high pressure area and constituting part of an anticyclone) from «cyclonic winds» (winds moving in a circle, whirling round their central clear eye, with their surface winds blowing counterclockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere) (Cutler, 2005).

The prefix ex-, joining a phrase denoting a position or rank, a type of equipment, creates a new compound term with the meaning «former». The prefix ex- in a compound maritime term is separated from another morpheme by a hyphen, for example: «ex-admiral» (converted from an admiral- the commander in chief of a navy); «ex-boatswain» (the one who was a petty officer on a merchant ship having charge of hull maintenance and related work); «ex-coast guard cutter» (former Coast Guard vessel 65 feet in length or greater, with accommodations for a crew to live aboard.) (Cutler, 2005).

Using the prefix super-, nouns and adjectives are formed that express the highest degree of capabilities, as well as exceeding the norm of what is indicated by the stem of the word. For example, with the help of the prefix super- such compound derivative terms were formed as «under-water supersonic echo-ranging equipment» (sonar) – from «sonic navigation and ranging» (a technique that uses sound propagation to navigate, measure distances, communicate with or detect objects on or under the surface of the water, such as other vessels); «forward superstructure» (the parts of the ship or a boat, including sailboats, fishing boats, passenger ships, and submarines, that project above her main deck) from «forward structure» (bow); «the superyacht directory» (superyacht database) from «the yacht directory» (directory of the global yacht fleet) (Cutler, 2005).

Compound derived maritime terms, created on the basis of two- and three-component phrases and formed using the prefix sub-, mean subordination to what is indicated by the stem, or have the meaning «in size or volume less than what is indicated in the stem». Thus, the prefix sub- is involved in the formation

of the following compound terms: «submarine crewmember» (crewmember of the underwater ship) from «marine crewmember» (seafarer); «subdivision of a fleet» (naval division) from «division of a fleet» (squadron); «submarine chaser» (a small naval vessel designed for antisubmarine warfare) from «marine chaser» (a guard with a prisoner) (Cutler, 2005).

A special place among compound maritime terms is occupied by phrases formed with the help of semi-affixes, particles that perform the same service functions as genuine affixes but unlike them, semi-affixes have independent words with the same meanings that are used parallel to them. The semi-affixes all-, mini-, -free, -man, -proof are most often involved in the formation of compound maritime terms.

The semi-prefix all-, when attached to a noun or participle, forms an adjective meaning «encompassing everything» or «consisting entirely of what is indicated by the stem of the word that is part of a compound maritime term». Derived terms with the semi-prefix all- are written with a hyphen. For example, «all-purpose ship» (a seagoing ship that is built for the carriage of a wide range of cargoes); «all-water transportation» (transportation by water transport only); «all-hull power boat» (catamarans with two hulls) (Cutler, 2005).

The semi-prefix mini- is a shortened form of the adjective «miniature», which means «reduced, small-sized». This semi-prefix forms compound maritime terms from nouns and abbreviations that are part of phrases. For example, «mini-ECDIS» (a UK specification for electronic navigation equipment on board fishing vessels and vessels under 24 meters); «mini wave buoy» (a sort of buoy, which is designed for ocean monitoring); «mini-crane» (a type of compact lifting equipment) (Cutler, 2005).

The semi-suffix -free, participating in the formation of compound maritime terms, forms adjectives from nouns and adjectives, indicating the absence of a feature indicated by the base of the word. For example, «anchor-free SAR ship detection algorithm» (algorithm based on brain-inspired attention mechanism, which efficiently focuses on target information ignoring the interference of complex background); «ballast-free ship» (ship that does not require ballast water for her stability when at sea); «vessel load-free out» (the carrier arranges to pay for loading the cargo on the ship, and the consignee/recipient of the cargo arranges to pay and is responsible for the unloading of cargo from the ship to wharf/quay) (Cutler, 2005).

The semi-suffix -man, when attached to a noun, forms a compound term indicating membership. For

example, «marine engineman» (operates, services and repairs internal combustion engines used to power ships); «motorboat launchman» (operates small motor-driven boats); «gangway watchman» (controls access to the ship) (Cutler, 2005).

The semi-suffix *-proof* means «protected, impenetrable from what the stem of the word means». This semi-suffix can be added to the stems of simple, compound and derived words, which can form compound terms. For example, «leakproof seal» (seal, which is closely sealed or fitted to prevent leaks); «waterproof first aid kit» (first aid kit, which does not let water through); «weatherproof boat cover» (boat cover, which is resistant to the effects of bad weather) (Cutler, 2005).

Compound maritime terms also include phrases that are formed by adding a present or past participle to them (Kornodudova, Baranova, 2015: 26). For example, the compound term «diving support vessel» (a ship that is used as a floating base for professional diving projects) is formed by adding the present participle «diving» (plunging into the water) to the phrase «support vessel» (specialized ship, which provides support and auxiliary functions); the compound term «floating sea base» was formed by adding the present participle «floating» (staying or moving easily on or over the surface of a liquid) to the phrase «sea base» (a collection of support and supply ships supporting operations elsewhere, that can function as a floating barracks, hospital and base); the compound term «mooring pilot service boat» (a type of boat used to transport maritime pilots between land and the inbound or outbound ships that they are piloting as well as securing a ship to a fixed object) is formed by adding the present participle «mooring» (making fast with or as if with cables, lines, or anchors) to the phrase «pilot service boat» (a type of boat used to transport maritime pilots between land and the inbound or outbound ships that they are piloting). The compound term «iron-hulled sailing ship» (the largest of merchant sailing ships, with three to five masts and square sails) is formed by adding the past participle «iron-hulled» (hull made of iron) to the phrase «sailing ship» (a sea-going vessel that uses sails mounted on masts to harness the power of wind and propel the vessel); the compound term «prohibited anchorage area» (an area or berth where anchoring is not permitted) is formed by adding the past participle «prohibited» (forbidden) to the phrase «anchorage area» (a location at sea where ships can lower anchors); the compound term «uncharted yellow buoy» is formed by adding the past participle «uncharted» (not mapped or surveyed) to the phrase «yellow buoy» (indicates a left-hand turn).

Often, to denote accuracy and specificity, the first element of compound maritime term is a numeral or an adjective with the meaning of the quantitative content of something. (Diakov et. al, 2000: 92). For example, in the compound term «single-masted ship» (a sloop) the first element is the adjective «single» (only one); in the compound term «double bottom tank» (the space in between the two bottoms of the ship's hull used as storage tanks for fresh water or ballast water), the first element is the adjective «double» (consisting of two equal, identical, or similar parts or things); in the compound term «two-decked sailing ship» (a sail warship which carried her guns on two fully armed decks), the first element is the numeral «two» (equivalent to the sum of one and one).

Abbreviations can also serve as elements of compound maritime terms. (Diakov et. al, 2000). Thus, the abbreviation «A. B.», which stands for «able-bodied» (fit and healthy), is part of the compound term «able-bodied seaman» (a seaman and member of the deck department of a merchant ship with more than two years' experience at sea and considered well acquainted with his duty); the abbreviation «ADF», which means «automatic direction finder» (marine aircraft radio-navigation instrument that automatically and continuously displays the relative bearing from the ship or aircraft to a suitable radio station), is part of the compound term «ADF antenna» (loop or sense antenna of ADF); the abbreviation «VHF», meaning «very high frequency», (the ITU designation for the range of radio frequency electromagnetic waves from 30 to 300 megahertz, with corresponding wavelengths of ten meters to one meter.), is part of the complex term «VHF radio» (a worldwide system of two way radio transceivers on ships and watercraft used for bidirectional voice communication from ship-to-ship, ship-to-shore).

Compound maritime terms may consist of simple words and several phrases (Kornodudova, Baranova, 2015). Thus, the compound term «certificate of free pratique» consists of a simple word «certificate» (an official document attesting a fact), a preposition «of» (expressing the relationship between a part and a whole) and the phrase «free pratique» (permission given by a port for a vessel to enter once it has been certified free of infectious disease by the competent health authorities); the compound term «deep ocean trough» (an elongate depression in the seafloor) includes the phrase «deep ocean» (the depth at which light begins to dwindle) and the simple word «trough» (a long and narrow or shallow channel or depression); the compound term «fishery research vessel» (a ship that requires platforms capable of towing different types of fishing nets, collecting plankton or water

samples from a range of depths, and carrying acoustic fish-finding equipment) consists of the simple word «fishery» (a place where fish are reared for commercial purposes) and the phrase «research vessel» (a ship or boat designed, modified, or equipped to carry out research at sea).

**Conclusions.** Thus, having considered the methods of formation of compound maritime terms in English language, we can conclude that these terms have a wide production base. The study conducted by the

author showed that complex maritime terms are created by adding suffixes, prefixes, and semi-affixes to words included in terminological phrases. Compound maritime terms also include phrases formed by adding a present or past participle to them, and phrases the first element of which is a numeral or an adjective meaning the quantitative content of something. Abbreviations may also be involved in the formation of compound maritime terms. Simple words combined with several phrases can also form them.

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