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**LEXICAL and STRUCTURAL PECULIARITIES of MARINE
POWER PLANTS TERMINOLOGY**
**(ЛЕКСИКО-СТРУКТУРНІ ОСОБЛИВОСТІ
ТЕРМІНОЛОГІЇ МОРСЬКИХ ЕЛЕКТРОСТАНЦІЙ)**

035 – Philology

035.04 Germanic Languages and Literatures

(Translation included) – English

Master's Thesis
SUMMARY

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Master's thesis

English Philology Department
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Master's thesis defense will take place on February 9 at 2 p.m. at the meeting of the certification committee of Petro Mohyla Black Sea National University, 10, 68 Desantnykiv St, Mykolaiv, 54003.

General Characteristics of the Master's Thesis

Achievements of science and technology, the development of society, new scientific information cause the emergence of new notions that require nominations of new objects, processes and ideas. It takes place on the basis of the lexical fund and existing terminology of any language. Such new words are often created by experts spontaneously due to the necessity of nominating new realia, phenomena of the environment or become the result of elaborated linguistic analysis of nomenclature units for new notions. Creation of such new words leads to language enrichment and vocabulary enhancement.

Our work is devoted to the study of the systemic character of the branch terminological field, both in English and accompanying parallel equivalents in Russian, on the example of Marine Power Plant terminology, as well as their functioning in the terminology systems of both languages.

The topicality of the present work is caused by the necessity to trace the origine, use, development, as well as the present state of the shipbuilding terminology, investigate the ways of borrowing the English language terms and their assimilation in the receipient language. The great array of the borrowings from English shipbuilding terms (with minor additions of Dutch, German and Norwegian terms) is one of the main aspects of formation of the branch terminology in Russian and many other languages. The investigation of terminology formation process of this field of knowledge can be useful for other present-day terminology systems. The study of the process of term emergence itself and the ways of its assimilation in the receipient languages is a significant aspect of our research. Its importance is also caused by the fact that at the present state of development of the English and Russian terminology of marine power plants, the processes and ways of how borrowings influence the word-building pattern are to be thoroughly studied.

The aim of this research is to determine the terminological branch of the shipbuilding, namely that of Marine Power Plants. The objective of the research defines the following particular **tasks of the work**:

- to study the notion of the term and the existing definitions comprehensively;
- to investigate different approaches to the classification of terminology;
- to describe the ways and means of terminology borrowings from English;
- to carry out a brief review of the existing maritime dictionaries;
- to analyse the peculiarities of terminological lexis assimilation in the field of marine machine-construction;
- to investigate the character of terminology formation and making up the Marine Power Plant terminological system;
- to define and assess the approaches to systemic description of a terminological field.

Some minor tasks were also dealt with in order to confirm or reject the assumed hypothesis in the course of solving the main tasks above.

The object of the study is technical literature, standard-based documents and terminological dictionaries, vocabularies and glossaries as the varieties of linguistic dictionaries, branch and international standards on the terms and definitions on Marine Power Plants and their components.

The subject of the study is terminological nucleus of Marine Power Plant branch terminology. Today we can observe direct natural language contacts among the bearers of English and Russian languages. This process facilitates the interaction of experts on the terminological level and results in borrowings of terms from one language into another with further assimilation. Therefore, the analysis of borrowings and their harmonization is of great importance not only from the linguistic viewpoint but also from the social aspect of terminology functioning.

Scientific novelty of the study lies in the fact that an attempt was made to provide the description of the branch terminology of marine machine-building on the

broad factual material of technical language manifestations. The existing English defining dictionaries and English-Russian translation dictionaries of marine terminology were investigated. Special attention was paid to the study of the ways of compiling terms and arrangement of terminological information within separate dictionaries, as well as the ways and means of representing lexicographic and terminological information.

Theoretical significance deals with the assessment of data concerning the future development of the branch terminological fields. It will assist to formulate the features and principles of formation of not only shipbuilding terminology, but also technological and scientific terminology.

The results of linguistic analysis of English terminology field of Marine Power Plants can be of **practical importance** for lexicographers, linguists, ESP teachers and learners, engineers, designers and translators in their work with other technical terminology systems, in systemic description of various technological subjects and documentation.

Methods and techniques of research. The aim and tasks of this study stipulated the application of various general scientific and linguistic methods.

Descriptive method was used in overall systemic approach to the problem of selection and description of the branch terminological database of Marine Power Plants. Systematizing the subject terms was carried out with its assistance.

Method of Analysis, envisaging division of the whole into its parts and defining each of them separately, allowed to state the notion of the 'terminological system' itself and demonstrate its importance in the contemporary world. This method was also used for describing terms as the basic units of the terminological quantitative and statistical analysis of shipbuilding.

Comparative method was used in defining the character of borrowings from English and the ways of their assimilation in the recipient language. The methods of

quantitative and **statistical analyses** of factual material were applied to define specific characteristics of English language terms.

The induction method as a technique for generalizing individual observations was utilized in systemic description of marine power plant's terminology.

The works of the well-known lexicographers and linguists were widely used and quoted in the course of our research. They are Carolus Linnaeus (*Systema Naturae*), and Lavoisier (*Elements of Chemistry in a New Systematic Order*), who were the first who initiated systemic approach to terms compilation. One and a half century passed and a new branch of science dealing with terminological systems emerged due to the fruitful efforts of Eugen Wüster, Eduard Benes, Vilém Mathesius, Josef Vachek, Nikolai Trubetzkoy, D.S. Lotte, S.A. Čaplygin, their later followers, Alfred Schlomann, Reformatskiy, Benveniste, our contemporaries M.T.Cabre, Lauren, Myking and Picht, Wright and Budin, Grinev, Leichik, Nuopponen, etc.

Approbation of the results of this diploma study have been lately presented as an addendum to the specifications issued by the "Seahead" design institute (located in Zhoushan, China). Practically it is a terminological English-Russian-Chinese dictionary of the subject field of Marine Power Plant.

Main Principles of the Master's Thesis

The principal changes, that occur in any subject field of science and technology, refer primarily to the branch technology. According to statistical data not less than 90% of the new words are found in the branch terminological field. And this is caused by a continuous development of science and engineering.

Recently the problems dealing with branch terminology and its lexical borrowings from other languages have attained great importance and topicality due to globalization of various spheres of life and growing intensity of integration processes.

Despite the efforts undertaken by Chinese language development policy aimed at preservation of national identity (which is natural to any nations' cultures in the

process of nominating new notions and objects), the expansion of vocabularies of branch terminology at the expense of foreign lexis borrowings is an indisputable fact. Even for such an isolating language as is Chinese. It is even more vivid in the languages of Indo-European group, where a number of similar sources are involved in the formation of science and technology terminology, such as roots of Latin and Greek origin, universal prefixation and affixation, etc.

Here we have to make a brief digression concerning the choice of languages, i.e. English and Russian, since the author of the (master's thesis) was involved in preparation of specifications and documentation of a power plant, developed for and installed on a number of fishing vessels at the Zhoushan shipyards (China, Zhejiang province) on the order of Kamchatka and Vladivostok Shipping companies (Russian Federation) within the period of 2014-2016.

All the documents were to accompany newly-built vessels in two languages: English and Russian. This work was completed by a team of Russian and Chinese technologists and Russian-English and Chinese-English translators. The author of the master's thesis was responsible for marine power plant documentation. Therefore, we found it feasible to analyse both English and Russian terminology of the 'Marine Power Plant' branch.

Today, the shipbuilding terminology on the whole is developing dynamically together with all the science and technology progress. And therefore the terminological system of shipbuilding in both English and Russian languages is of great interest. Particularly, the most significant factors reflecting the degree of mature terminology subject field can be found in the study and analysis of term structure, ways of branch nomenclature units borrowing, classification of terms.

As is known, shipbuilding is one of the most ancient skill of professional human activities. Its terminology is rich and versatile, it occupies an important place among other science and technology subject branch fields.

It is obvious now that on the background of information exchange among experts speaking different languages, a new component of terminology, - terminography, - is of significance as a part of lexicographic techniques of

compilation of special terminological dictionaries, vocabularies and glossaries. Including bilingual and multilingual ones. One of the main tasks of terminography is systematization and unification of engineering terminology. It is difficult to overestimate the importance of this field in linguistics as the existing branch terms are constantly added or substituted with the new ones that require continuous updating in the specialized dictionaries.

At the same time, more attention is paid to overcoming language barriers in the contemporary society. And the success of this process depends on terminography. It is suffice to note that despite high tempo of terminography theory development at present, a number of theoretical and practical issues are falling out of the visual field.

We differentiate three approaches that were proposed and supported by various terminological schools in Europe.

The first approach that considers terminology to be an interdisciplinary but autonomous subject at the service of scientific and technical disciplines.

The second approach focuses on philosophy, which is primarily interested in the logical classification of concept systems and the organization of knowledge.

The third approach deals with linguistics, which considers terminology a subcomponent of a language's lexicon and special languages as subsystems of general language.

The terminological system of marine power plants can be considered self-dependent since it has nominated all the notions of the existing field and is able to nominate prospective concepts of the general marine machine-construction area. Moreover, its evidence is also proved by the fact that approximately 54.84% of the whole terminological array of the MPP is grouped around only 16 nest-forming terms.

The main content of the third chapter is focused on the analysis of contemporary approaches towards the development and elaboration of terminological glossaries, vocabularies and dictionaries from the point of view of their lexical completeness, subject field awareness and software databases. We have made an attempt to demonstrate the advantages and drawbacks of existing techniques and

methodological foundations concerning the design, compilation and support of lexicographic DB. The comparative study and description of the so called ‘paper’ dictionaries and e-dictionaries on shipbuilding, in general, and marine power plants, in particular, were traditionally preceded by a brief historic digression into the emergence of the first terms in the field of the MPP.

CONCLUSIONS

The study of the MPP terminological subject field, submitted as a Master’s degree diploma work, implied the compilation of an electronic English dictionary supplied with Russian equivalents as its main aim and practical result. To carry out this complicated work we have attempted to solve a number of principal problems connected with the comprehensive study of an early and contemporary literature, concerning the concept of a term, analysis of the ways of and reasons for their emergence or borrowings, forming an interrelated terminological nucleus with overlapping adjacent area terms of scientific and technological nominations of new objects, ideas and processes.

The comprehensive and systemic analysis (morphological, syntactic, semantic, cognitive, logical ones), the consequential procedure of selection and defining the terms forming a subject field was demonstrated on the example of shipbuilding and MPP field, in particular.

The analysis of the structure and arrangement of the existing mono- and multilingual defining and translation dictionaries helped us to critically describe the technique of terminological compilation of the e-dictionary that can embrace as many subject terminological units as possible, on one hand, and, on the other, it can provide us with expertise assistance showing how to evade the inclusion of the terms that are relevant but don’t directly belong to the system.

A few minor problem solutions have been undertaken to prove the assumptions used in forming the main principles of a dictionary structure. They were:

- the description of term random selection from the dictionary to find out what terminological nuclei comprise connected terms, and what adjacent terminological arrays mean;

- brief comparison of 'paper' and e-dictionaries was carried out to show the advantages of the latter;

- the study of historical peculiarities of the term borrowings from a source language, the degree of their assimilation in a recipient one, was proved as another source of terminology augmentation.

The last chapter of the research was devoted to the step-by-step description of the procedure of compilation of an English e-dictionary of MPP subject field supplied with Russian equivalents, based on the well-known ABBYY Lingvovare, and ammended to the research in the form of an optical disc. Thus, all the tasks were fulfilled and the final aim of the diploma work achieved.

АНОТАЦІЯ

Чжанчжан Чень. Лексико-структурні особливості термінології морських електростанцій. – Миколаїв, 2020.

Дослідження присвячене визначенню лексико-структурних особливостей термінології морських електростанцій. У вступі визначено актуальність, мету, завдання, об'єкт, предмет, методологію дослідження, наукову новизну, теоретичну та практичну цінність. У теоретичній частині висвітлено підходи до визначення термінології, розкрито модель розробки термінології морських електростанцій, описано послідовність морфологічного, синтаксичного і когнітивного аналізу. У практичній частині виявлено лексичні та структурні особливості термінології морських електростанцій.

Ключові слова: термін, термінологія, класифікація, морські електростанції, когнітивний аналіз.

Summary

Chen Zhangzhang. Lexical and Structural Peculiarities of Marine Power Plants Terminology. – Mykolaiv, 2020.

The research work, submitted for the master's degree qualification, is devoted to the study of Marine Power Plants (MPP) terminology within a larger terminological field of shipbuilding. The author attempted to review the latest theoretical achievements of the world terminology and terminography and choose the approach for the efficient selection, analysis and systematizing the subject field of MPP and their functioning in the terminological fields of two languages: English and Russian. In the course of the study a few auxiliary problems were solved, i.e. a cognitive analysis of an MPP subject field terms, historic review of maritime dictionaries, compilation of an English e-dictionary with Russian equivalents, etThe work comprises an introduction, three chapters, conclusions, bibliography of quoted sources and an addendum: English terminological electronic dictionary of MPP with Russian equivalents.

The **Introduction** contains the substantiation of the study topicality, its novelty, theoretical and practical significance of the research results, the main aim and the tasks for its achievement are formulated. Besides, a brief description of terminography as a separate science field is also adduced.

Chapter 1 comprises theoretical concepts of various researchers for a term, its definitions, different approaches to the procedure of selection, analysis and description of a terminological field on the basis of different techniques existing in modern lexicography and terminography.

In **Chapter 2** the author shows how theoretical criteria are used for defining the indicated subject field of shipbuilding and, more detailed, the terminological nucleus of marine power plants. The model of MPP terminological formation is demonstrated on the basis of preceding comprehensive and systemic analysis (morphological, syntactic, semantic, cognitive, logical ones) finalizing the consequential procedure of selection and defining the terms forming an MPP subject field.

Chapter 3 is devoted to the review of existing maritime bilingual and multilingual dictionaries after a brief comparison among the so called ‘paper’ dictionaries and various electronic dictionaries. The author demonstrates the procedure of forming an MPP electronic dictionary on the basis of ABBY Lingvo platform with the help of DSL programming language, designed specially for an ordinary end-user.

Conclusions comprise the listing of the most important results of the diploma work. It is stated that the compilation of an electronic English dictionary supplied with Russian equivalents was its main aim and practical result. The **List of Cited Works** comprises 83 references.

Key words: term, terminology, subject field, classification, systemic approach, marine power plant, cognitive analysis, DSL programming language.