

**Цель.** Проанализировать на материале новеллы Стефана Цвейга «Письмо незнакомки», с помощью каких переводческих трансформаций и их комбинаций переводчику удастся воссоздать художественными средствами украинского языка первоначальный текст.

**Методы.** Научные результаты получены благодаря переводческому и компаративному анализу.

**Результаты.** Рассмотрены лексико-семантические и стилистические переводческие трансформации. Проанализирован комплексный характер переводческих трансформаций в процессе перевода с немецкого языка на украинский.

**Ключевые слова:** Стефан Цвейг, немецкая литература, новелла, переводческий анализ, переводческие трансформации.

**Objective.** To analyze on the material of novel by Stefan Zweig's «Letter from an unknown woman» translation transformations and their combinations with the help of which the translator renders the original text with feature means of the Ukrainian language.

**Methods.** Scientific results are obtained through translation and comparative analysis.

**Results.** The lexical-semantic and stylistic translation transformations are considered. The complex character of translational transformations in the process of translation from German into Ukrainian is analyzed.

**Key words:** Stefan Zweig, German literature, novel, translation analysis, translation transformations.

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## OVERCOMING MACHINE BUILDING TERMS TRANSLATION DIFFICULTIES

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## ПОДОЛАННЯ ТРУДНОЩІВ ПЕРЕКЛАДУ ТЕРМІНІВ СФЕРИ ГАЛУЗЕВОГО МАШИНОБУДУВАННЯ

**Objective.** The objective of the article is to clarify and resolve the linguistic problems of the translation of English technical terminology in the field of machine building.

**Methods.** Methodological basis of the present research presupposes the following kinds of analysis: comparative, descriptive and analytical; analysis and synthesis of scientific, popular scientific, methodical and educational literature on the problems of terms

*translation and ways to overcome the problems in the translation of industrial machine-building sphere terms.*

**Results.** *The article analyses general problems of translating industrial machine-building sphere terms while translating them from English into Ukrainian. The author points out the main ways of rendering English terms into Ukrainian, defines factors influencing the choice of the method of translation and gives practical recommendations as for overcoming machine building terms translation difficulties.*

**Key words:** *machine building term, translation method, grammatical and lexical problems, component analysis, conscious approach.*

**Problem statement.** Scientific and technological progress in the modern world is impossible without the exchange of information between specialists from different countries speaking different languages. Experts of various branches of industry watch everything new that appears in the field of science and technology.

Technical texts are full of terminology. Therefore, in the process of translation of technical literature terms play a priority role. The term is a main characteristic of professional communication. Incorrect translation of terminology can lead to serious consequences, to a violation of the technological process, to affect the market position of the trademark, to cause delays in the implementation of important projects, etc.

The above mentioned circumstances determined the need to consider linguistic problems of the translation of scientific and technical terminology and to find the methods of adequate translation of vocabulary in the field of machine-building industry.

**Analysis of recent research and publications.** The interest to the translation of terms in the scientific world is steadily increasing. Such scientists as L. Borisov, V. Gak, V. Komissarov, Ya. Retsker, A. Schweitzer and others in their works examined various aspects of scientific and technical translation, creating a solid theoretical basis for further research in this field. Various issues of the specifics of the terms and problems of their translation are devoted to a large number of scientific works of domestic and foreign linguists such as L. Barhudarov, D. Lotte, O. Akhmanov, V. Vinogradov, R. Minyar-Belarochev, Y. Marchuk, A. Supersanskaya, L. Latishev The research work in the field of solving problems of the translation of scientific and technical texts at the present stage is conducted by M. Dikhovichna, G. Ziborova, T. Korsakova, M. Mironova, S. Sahnevich, O. Dovbysh and others.

**The objective of the article** is to clarify and resolve the linguistic problems of the translation of English technical terminology in the field of machine building.

**Tick tock.** Modern terminology is a lexical layer which, despite the requirements of uniqueness, accuracy, systemicity, lack of expression, modality, independence from the context applicable to the terminology units, actively develops, modifies, while losing the above mentioned properties as a result of the terminology embrace of common lexis. This phenomenon has become possible due to the interest of people in the world of events, the active use of terms in the media, and enhancing education of the population.

The term is a unit of language used to define special concepts and phenomena. For this reason, there is a need for an active study of the technical translation, its features and scope, the improvement of the theoretical basis and the introduction of research results into the practice of translation.

Like no other, the technical translation aims for the maximum accurate and complete rendering of information behind the original. Any mistake made during the translation may lead to distortion of meaning and complete misunderstanding of the reported information. Since the terms are the basis of the technical text it is necessary to exclude their incorrect translation.

The study of practical aspects of the translation of technical terminology in the field of machines building has made it possible to identify the difficulties that arise in the process of terms rendering from one language into another one.

Among the grammatical difficulties the following ones can be mentioned: functional words; predominance of simple sentences; the plural of mass nouns; numerous attributive groups and absolute participial constructions introduced by the preposition *with*; absence of full-verbs finite forms; widespread use of passive constructions.

The linguistic problems of translating machine building texts are determined by the following factors: polysemy, polysemy of the term depending on the industry; heterogeneity of the system of terms, its saturation with terms borrowed from other terminological systems, and also commonly used words; replacement of adverbs with prepositional-nominal combinations; the presence of abbreviations or reductions in the texts; the problem of “false friends”; internationalisms; replacement of complex lexical combinations, mostly of functional words, with more simple ones.

1. A lot of difficulties in translating technical documentation arise when a word has several meanings. The skills of an interpreter are to choose the one that does not distort not only the meaning of the translation, but also gives the correct interpretation of the term for a particular technical case.

It should be emphasized that the same term can be completely differently translated depending on the industry. For example, while in the engineering industry the term *clearance* is usually translated as «ззор» or «допуск», in aviation it usually means «дозвіл диспетчера».

2. Another important problem is abbreviations or reductions that are not always clear even to technical specialists. In some branches there are international abbreviations that are understandable all over the world, which do not require translation, but since it is often necessary to translate them, you should be proficient in product designation and the principle of its operation. A lot of difficulties arise with the translation of new technical words, which in our country officially have not caught on yet. In this case, the specialist has to find and choose a variety of suitable thematic Ukrainian words that fully correspond to the original source.

3. The problem of “false friends” as applied to the machine building technical texts translating takes on characteristic features. It can be noted that “false friends” in technical texts are characterized by a certain specificity. This specificity manifests itself both in the numerical composition of “false friends” and in their qualitative characteristics. A large percentage of words belonging to the category of “false friends” are internationalisms. Speaking about the quantitative specifics of “false friends” in technical texts, we can give an example of the “false friends” — the word *accurate*. In special texts this adjective is used in situations in which the use of its Ukrainian parallel “акуратний” is virtually eliminated, for example, *accurate results* — “точні результати”.

In technical translations mistakes constantly occur in the rendering of international terms. Let’s consider some examples from technical texts of the machine building industry where internationalisms act as “false friends”:

- *components* — компоненти (деталі);
- *general* — генеральний (універсальний);
- *strength, stiffness and stability* — сила, міцність та стабільність (міцність, твердість і тривкість);
- *operation and production* — операціонування та виробництво (функціонування та продуктивність);
- *silicon* — силікон (кремній);

- *deposit* — депозит (осад);
- *integral work* — інтегральна робота (несуча конструкція);
- *mechanical stresses* — механічні стреси (механічні навантаження).

Thus, the language of technical literature, and of the machine building industry, must be clear and precise, without unnecessary words and complicated sentences. It is in the process of technical literature translating from one language to another that those unnecessary elements are revealed that make it difficult to understand the author's thought clearly. The translator should communicate the idea to another language as precisely and concisely as possible.

The main ways to translate terms of the machine building industry are as follows: the equivalent of the original language; giving the word in the target language a new meaning; calque; untranslatable borrowings; descriptive translation.

1. The optimal way to translate terms is to identify the equivalent of the term in the language of translation. The application of this method is possible in those cases when the countries have reached the same scientific, technical or social level or have passed this level at some point in their history. Thus, the following words are equivalents: *iron* — «залізо», *gear drives* — «зубчасті передачі», *shafts and axles* — «вали і вісі», *bearings* — «підшипники», *pistons* — «поршні», *valves* — «клапани», *alloy* — «сплав», *carbon* — «вуглець». These units are terms that arise on the basis of commonly used words. Another feature of these terms is that usually the equivalent terms of different languages already existed in both languages at the time of translation; they are identified, found, and not created, as is the case of new terms, neologisms. The translator and the editor should do their best to try to find an equivalent term in the language of translation before applying other means of translation.

2. A new term in the process of translation can be created by giving a word or word combination existing in this language a new meaning under the influence of the term of the source language. Since in this process the meanings of lexical units of different languages and different terminology systems converge, this method of translation can be called semantic convergence. For example, the term *freeze* is «заморожування» (ядерного озброєння).

This method of translating technical terms has been used for a long time, but it has received new impulses at the present in cases when the «invasion» of foreign words is being combated. This method can be recommended to an interpreter, since it does not lead to an increase in number of new terms, including borrowed ones, and is convenient for mastering by specialists.

3. When searching for an equivalent and semantic convergence in the process of translation of terms, new lexical units are not created, but earlier ones are used. The application of the following method of translation leads to the formation of new words or phrases, and, what is more important, from the root morphemes, suffixes and prefixes of the words of the language of translation. This process is called calquing. Calquing is an element-by-element translation of structurally complex lexical units of the source language with the help of the language tools of the language of translation. There are two types of calquing:

— If the structure of the translated lexical unit in both languages coincides, we are dealing with a so-called semantic calque. Semantic calquing can be applied when the structure of word-combinations in source language and the language of translation is close or identical. In modern conditions of wide international and international exchange of technical information, the number of semantic calques is incalculable, they penetrate into technical texts, facilitating mutual understanding and accelerating scientific and technical progress. For example: *units and sets* — «агрегати і вузли», *brake bands* — «гальмові стрічки», *pin and cotter joints* — «шарнірні й клинові з'єднання», *start-up cycles* — «пускові цикли», *natural frequencies* — «власні частоти».

— If the structure of a complex lexical unit when translating is borrowed along with this unit, we are dealing with structural calque, or the proper calque. At the same time, a new model of a word or phrase that is alien to it appears in the language of translation. In the very fact of borrowing by the language a new for it model — both the advantage and the disadvantage of calquing. On the one hand, the emergence of successful models enriches the language and its terminology. On the basis of English attributive complexes such as *express method*, *cluster analysis*, «експрес-метод», «кластер-аналіз», constructions were developed in Ukrainian terminology, comp. option — *cluster analysis* — «кластерний аналіз», and then appeared their own formations *nabryzkbeton* or *nabryzk-concrete*, *chef-montage* — «набризкбетон» або «набризк-бетон», «шеф-монтаж». On the other hand, the introduction of models that contradict the systems of grammar and word formation of the language of translation leads to a violation of the elements of these systems.

Semantic and structural calquing has been used when translating into Ukrainian and other languages for several centuries. Since the composition of elements of a complex lexical unit can be very different, there is a classification of structural calques, which, in particular, include:

— morphological calques, they are the words with a similar prefix and root morpheme: *free-standing blades* — «вільностоячі лопаті», *intermittent* — «переривистий», *non-return* — «безповоротний»;

— syntactic calques, for example: *fissionable material* — «речовина, що розщеплюється», *outside stem* — «зовнішній шток»;

— calques of collocations — cliché, for example: *the tapping research* — «чорнове опрацювання», *straightway flow* — «прохідний потік», *operational point of view* — «експлуатаційна точка зору»;

— phraseological calques.

4. When the lexical unit with all its content and formal features transsubstantiates from one language into another in the process of translation, we are dealing with a borrowing. Borrowings are formed with direct contacts between two peoples or, at least, their languages and belong to different spheres of society: *gate valves* — «шибери», *throttling* — «дроселювання», *yoke* — «трійник».

5. In the sphere of terms, internationalisms are widespread. These internationalisms and their composite elements, most of which are known to representatives of science and technology of many countries, is the general lexical fund of the international auxiliary science language, and their use can be recommended when translating texts of a different nature, especially if there are no corresponding equivalents of the source language terms in the language of translation: *permanent joints* — «перманентні з'єднання», *operational joints* — «операційні з'єднання», *turbines* — «турбіни».

In some cases, the term should be translated descriptively. This method of translation is used, first of all, for untranslatables that reflect the realities of a particular country. Examples of descriptive translation are the following: *breezeway* is the «тимчасовий часовий інтервал між зрізом синхронізуючого імпульсу строк та фронтом кольорової синхронізації», *dismountability* — «демонтажні властивості», *overhauls* — «капітальні ремонти».

These are the main, most common ways of translating machine building terms.

It should be noted that the choice of the way to translate a term is determined by a number of factors.

1. *Logical-objective factor*. It is connected with the existing system of concepts of a certain field of science or technology in the country of the language of translation. In this case, there is a high probability of finding the equivalents of the terms.

2. *Terminological factor*, which is associated with the existing terminology in the

language of translation. In this case, one can also count on the fact that the terms of the source language have equivalents in the language of translation. There are usually dictionaries, reference books, encyclopedias at an interpreter's disposal.

3. *Linguistic proper factors*. Depending on the structure of the the language of translation and on the attitude to borrowing and internationalism, preference is given to one or another way of translation. In modern Ukrainian, the search for the equivalent, borrowing and syntactic form of structural calculating prevail. The linguistic proper factors also include the dependence of the way of translation of terms on the structure of the term itself. It is clear that the method of translation is determined, in particular, by whether the term is a simple, derivative or complex word, a collocation, phraseology in particular. In order to translate the term correctly, it is necessary to carry out a structural and semantic analysis of the term of the source language.

4. *Normality factor*. It is associated with the availability of documents in which terms that are core or recommended for use are fixed: terminology standards, textbooks and teaching aids, normative dictionaries. Having such documents, it is possible to find "legalized" equivalents of terms of the source language in the language of translation. This is especially important for the translation of texts such as descriptions of inventions. If there are international standards for terms that include terms in a number of languages and have mandatory status, then the translator must follow them when translating terms of particular areas.

5. *Stylistic factor*. The choice of this or that variant of translation of a term is determined, in particular, by the style and genre of the text under translation. In terminological proper works preference is given to such ways of translation of terms as the choice of an equivalent, semantic convergence.

In addition, one should also take into account the difference in stylistic features of texts of the source language and the language of translation. Thus, in recent years, the use of synonymy of terms is permitted in technical proper texts in English. At the same time, for the Ukrainian language this 'freedom' is less characteristic.

Translation of technical terms can be fully justified as a creative process. The choice of the way to translate a particular term can be compared with the methods of creating terms in the language of translation, and the problem of "translation of terms as a process of terminology" is currently under discussion.

**Summary.** To overcome the problems in the translation of industrial machine-building sphere terms the following recommendations should be taken into account:

— It is important to exclude mechanical translation when the translator tries to find the equivalent in the dictionary without the analysis of the term.

First of all, such a search often does not lead to the desirable result because the term may not be in the dictionary or, conversely, has several meanings.

Secondly, without the analysis of the components and context it is impossible to define the core of phrases, the word by word translation can lead to serious distortion of the essence and misunderstanding.

Thirdly, competently conducted word-formation, component, contextual analysis facilitates understanding of the meaning of the term and reduces the number of addressing for help to the dictionary.

— It is necessary to pay attention to the meaning and scope of the use of word and form-forming affixes, cooperatively do the analysis of derivatives, complex words, phrasal verbs, and terms-abbreviations.

— It is equally important to analyze terminological combinations of machine-building vocabulary since the success of the translation of such terms unrecorded in special sources of information depends on the correct definition of a core of a phrase, knowledge of the

sequence of translation of the components.

— It is necessary to find out how dictionaries are arranged, which symbols are used when they are created, explain the rules of effective work with a dictionary.

Practice shows that the conscious approach to the translation of terms reduces most of the difficulties, promotes better comprehension of the material, faster pace of translation of special texts, increases motivation and interest of the translator in the work.

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**Мета.** *Визначення та вирішення лінгвістичних проблем перекладу англійської технічної термінології в галузі машинобудування.*

**Методи.** *Методологічна основа дослідження передбачає такі види аналізу: порівняльний, описовий та аналітичний; аналіз та синтез наукової, науково-популярної, методичної та навчальної літератури з проблем перекладу термінів і способів подолання проблем перекладу термінів сфери галузевого машинобудування.*

**Результати.** *У статті аналізуються загальні проблеми перекладу термінів сфери галузевого машинобудування під час їхнього перекладу з англійської на українську. Автори вказують на основні способи відтворення англійської термінології українською мовою, визначають чинники, що впливають на вибір методу перекладу, і дають практичні рекомендації щодо подолання труднощів перекладу термінів галузевого машинобудування.*

**Ключові слова:** *термін галузі машинобудування, метод перекладу, граматичні та лексичні проблеми, аналіз компонентів, свідомий підхід.*

**Цель.** *Определение и решение лингвистических проблем перевода английской технической терминологии в области машиностроения.*

**Методы.** *Методологическая основа исследования предусматривает следующие виды анализа: сравнительный, описательный и аналитический; анализ и синтез научной, научно-популярной, методической и учебной литературы по проблемам перевода терминов и способов преодоления трудностей перевода терминов сферы отраслевого машиностроения.*

**Результаты.** *В статье анализируются общие проблемы перевода терминов сферы отраслевого машиностроения при их переводе с английского на украинский язык. Авторы указывают на основные способы передачи английской терминологии на украинском языке, определяют факторы, влияющие на выбор метода перевода, и дают практические рекомендации по преодолению трудностей перевода терминов отраслевого машиностроения.*

**Ключевые слова:** *термин отрасли машиностроения, метод перевода, грамматические и лексические проблемы, анализ компонентов, сознательный подход.*