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To cite this article: N G Sivtseva et al 2019 IOP Conf. Ser.: Mater. Sci. Eng. 483 012031

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Timber industry terminology translation: case study

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Abstract. This paper is an attempt to reveal and analyse potential challenges a translator can face when translating technical texts connected with the timber industry. In modern linguistics there are several approaches to the definition of technical translation based on characteristic features of translated texts. As there is some difference between technical and scientific types of translation there are various requirements put to these types of translation. However, the terminology is an integral part of both types of texts and sometimes it can be difficult to translate it. Though there is no one generally accepted definition of the notion “term” linguists mention its unambiguous nature, lack of synonyms, precise meaning. The analysis of timber industry texts showed that these qualities of the terms can be lost when it involves translation. It is conditioned by different meanings of the term in different spheres of knowledge, its belonging both to terminology and spoken language, different scopes of the concept in different languages, influence of linguistic and situational contexts, lack of equivalents and usage of the shortened forms.

Introduction

As a new discipline and a separate field, technical translation has been identified, examined, and developed since the 1960s [1], [2]. Currently, technical translation takes an important place in the world’s total translation output. It accounts for more than 90% of all professionally translated work [3]. It is not surprising given the variety and abundance of technical information written in different languages, the companies’ international cooperation in scientific, technological and industrial activities, their focus on exporting manufacturing equipment, the laws and regulations of international trade organizations requiring accurate and comprehensive technical documentation in the languages of collaborating countries and the necessity of the effective use of translated information. The listed facts emphasize the significance of the field of technical translation, the importance of highly qualified professional technical translators and well-done translations of technical texts.

The trend of the increased necessity for technical translation is furthered by the issues of legal requirements. In the European context, for example, Annex I section 1.7.4 of the Directive 2006/42/EC regulating the health and safety requirements relating to the use of machinery contains the requirement that “all the machinery must be accompanied by instructions in the official Community language or languages of the Member State in which it is placed on the market and/or put into service” [4].

Thus, the practical approach to this process outlines the serious problems the Russian technical translators face. The matter is that during the Soviet period of time the translation of technical texts was done by specially educated state translators, particularly from all-USSR Translation Center. Besides, special methodical recommendations for technical translators were worked out [5]. A new trend in the technical translation theory appeared after the breakup of the Soviet Union when private agencies and freelancers were involved into the translation process. Only several editions of Recommendations to technical translators have been issued since then [6]. The main aim of these works is to unify demands towards the translation on the basis of Soviet Union translators’ experience [6]. The absence of the legal requirements could not affect the quality of technical translation.
One of the most difficult issues in the field of technical translation is translation of terminology. It may seem that terms translation has indisputable character as they have exact meanings, non-complicated nature, etc. However, the research and translation practice show that a translator meets certain difficulties while translating terms; as they are of multi-aspect character and can have various meanings and define various objects in different industries. Besides, some linguists believe that terms are ordinary words having some special function, namely, they are means of designating a special concept. Thus, the translator’s task becomes even more complicated; he/she should find out the function of a word, recognize it as a term and interpret it within the context of a definite industry. Translation of the timber industry terminology sets similar problems. These terms can define different objects, moreover, the timber industry loans terms from chemistry, mechanic engineering, machine tools usage, etc. Consequently, in the given research the multi-aspect nature of timber terms and issues of their translation are revealed and analyzed.

1. Theoretical framework

Nowadays, there are various factors that lead to an unprecedented demand for scientific and technical translation: increased information exchange volume, intensified knowledge transfer due to increasingly international character of science and technology, globalization and diversification of commercial activities and the ever greater industrial products sophistication. Not to have any misconceptions it is essential to cast light on the term ‘technical translation’ and to distinguish among scientific, technical and scientific and technical translations. In the works of Russian and non-Russian academics there are different approaches to defining this term. J. Byrne, the British author of a number of translation books, stresses the difference between these types of translation. Moreover, he believes that one of the greatest fallacies when discussing technical translation is to somehow lump it together with scientific translation, or worse still, to use the two terms interchangeably. Byrne explains that technical translation deals with technological texts and more precisely with texts on the subjects based on applied knowledge from natural sciences, scientific translation relates to pure science in all of its theoretical, esoteric glory and scientific and technical translation is a generic term which is used to refer to pure sciences, applied scientific research and technology [7].

Two American translation scholars Sue Ellen and Leland Wright define technical translation as translation of special language texts, i.e. texts written using Languages for Specific Purposes. In their point of view technical translation includes not only translation of texts in engineering or medicine, but also such disciplines as economics, psychology and law [8]. Maeve Olohan, a contemporary British scientist, states that the term “technical translation” is often used to refer to translation of texts outside the fields of science and technology and that some scholars see technical translation as a synonym for specialized translation [9].

The analysis of Russian linguists’ works shows the interchangeable use of the above-mentioned terms. The explanatory translation dictionary points out that the frequently used term ‘scientific translation’, as a rule, coincides in its meaning with the term ‘scientific and technical translation’ and the phrase ‘translation of technical texts’ has approximately the same meaning. The definition of technical translation given in this dictionary says that technical translation is a translation used to exchange special scientific and technical information between people speaking different languages. Scientific and technical translation is understood as one of the types of special translation serving the areas of communication on scientific and technical topics or translation of special texts (documents) of scientific and technical nature, carried out by specific methods different from fiction translation in compliance with such requirements as accuracy, conciseness, clarity, etc. [10].

Similarly, V.A. Usachev, a Russian contemporary scholar, uses the terms ‘scientific and technical translation’ and ‘technical translation’ interchangeably. Nevertheless, his definition of technical translation deserves attention and can be considered as accurate and complete. He states that technical translation is one of the most difficult types and it means translation of texts on technical subjects, in particular, documents of different specialties, all kinds of reference books, various dictionaries,
certificates of conformance, operating instructions, engineering plans, scientific and technical articles, business contracts and other commercial technical proposals [11].

One of the integral parts of translated technical texts is terminology usage. Currently, modern linguistics does not have a single definition of the word “term”. According to L.M. Alekseeva, the most difficult task is to determine the nature of the term, since it is a multidimensional and internally contradictory object of study [12]. Thus, in the modern linguistics there are several approaches to the definition of the notion of term. Traditionally, some scientists use a logical definition of the term, while another ones describe it within the context of its characteristic features. The others define the term by contrasting it with any other concept. Such a variety of definitions of the notion “term” is explained by the fact that it is an object of several sciences. The same term can be often included in different terminological systems of the given language. This fact leads to inter-scientific terminological homonymy [13]. Thus, V.M. Leichik believes that it is fundamentally and logically impossible to create a universal definition of the “term” because of its multi-aspect nature [14].

Consequently, there are several approaches to the definition of the term. O.S. Akhananova defines the term as “a word or a word combination of some special (scientific, technical, etc.) language created (accepted, borrowed, etc.) for the exact expression of special concepts and designation of special objects” [15]. Z.I. Komarova emphasizes the nominative nature of the term: “a term is an invariant (a word or a phrase) that designates a special object or a scientific concept limited to its definition and its place in the certain system of terms” [16].

According to the definition of B.N. Golovin, “a term is a single word or a subordinate noun phrase, denoting a professional concept and intended to meet the specific needs of communication in a particular profession (scientific, technical, industrial, managerial)” [17]. V.M. Leychik gives the following definition of the term: “a term is a lexical unit of a language for specific purposes, denoting a common (concrete or abstract) concept of the theory of a specific special field of knowledge or activity” [14]. This definition emphasizes the highly specialized nature of the term and represents it as an integral part of the natural language. According to A.N. Baranov, “terms can be defined as words (phrases) of the metalanguage of science and languages of scientific disciplines, as well as words denoting specific realities of the areas of practical human activity” [18]. S.V. Latysheva researches the terms in view of their belonging to different types of discourse: Discourse of Consensus and Discourse of Expert Community [19].

Therefore, it can be concluded that the term is a word or a phrase having a definition and denoting any special concept or subject of a certain area of knowledge or human activity. The problem of the relationship between a term and a word has long been one of the most important in terminology. S.V. Grinev-Grinevich writes that the term primarily refers to the general class of lexical units and its belonging to special vocabulary is secondary [20]. The author determines a number of term characteristics: specificity of use (the term is related to the special area of usage as it is used for naming concepts); substantial accuracy – clarity, limited meaning of the term (a special concept has precise boundaries established by a scientific definition); context independence; stylistic neutrality (the term should not give rise to any additional associations); conventionality (necessity for naming new concepts requires creation or careful selection of lexical meanings of existing terms); nominative character (terms are mostly nouns) [20].

Thus, within the context of the above-mentioned definitions it can be concluded, that a technical or scientific term is a symbolic unit and it must meet a number of criteria, namely, the requirements to the term meaning and form as well as pragmatic requirements (usage specificity, definition, unambiguity, full meaning, absence of synonyms, conformity to literary norms, stylistic neutrality, general acceptance, motivation).

V.M. Leichik expresses the idea that terms are not special words but words with a special function. Analyzing the roles that the term performs when defining a special concept, the author determines the following basic functions of the term: nominative, significative, communicative, learning, pragmatic, cognitive and heuristic [14]. A.A. Reformatski also writes about the reflective function of the term, as
terms are special words limited to their specific purpose, they tend to be unambiguous as exact lexical representations of concepts [13].

2. Research methods

The issues of timber terminology translation were researched and analyzed on the basis of technical texts (as understood by J. Byrne). When researching the material, the following methods and approaches were used: definitional analysis approach (it allows determining conceptually conditioned relations between English and Russian terms); contextual analysis method (it allows getting the idea about the complete notion of the term in case of the definition lack); continuous sampling method; contrastive analysis approach (target and original texts are compared to define the necessity and validity of translation transformations).

3. Results and discussion

When translating a term, a translator should perform several acts: to recognize the given original word as a term, to understand it correctly, to find the appropriate equivalent or analogue in the target language. There are some reasons making it difficult for a translator to perform one or all of the above mentioned acts: interference of the native language, intralingual homonymy, heterogeneous form of a term, complicated structure of a term.

As it was already mentioned when discussing the theoretical framework of the research there are some requirements to the notion of term; among them there is unambiguity and absence of synonyms. These requirements are sometimes not met when it involves translation.

The most obvious reason of this inconsistency is different meanings of the same term in the different spheres of knowledge. For example, the word pocket can have the following special meanings: «воздушная яма» (in the aviation), «окружение» (in the military business), «мертвая зона» (in the radio-electronics), «гнездо месторождения» (in the geology), «коробка» (in the timber industry). Moreover, in this case a translator should decide if this word is used in its terminological or ordinary meaning («карман»). Sometimes this task is rather difficult, a translator should have some extra-linguistic knowledge to understand the terminological nature of the meaning. For example, in view of the timber terminology the word combination secondary colour that consists of non-terminological units can be translated only as «смешанный цвет»; this aspect often leads to the mistakes in translation and misunderstanding.

One more reason of this deviation involves different scopes of the definite concept in the source and target languages, besides, the concept scope is always wider than the range of lexical means of its representing. Thus, more detailed description of the same object in the target language can cause the variety of equivalents. For instance, the scope of the Russian concept «лес» is rather wide and it includes the aspects that can be represented in English with the following lexemes: timber, lumber, wood, forest. Among these words only the word forest is not used in the meaning «древесина», it always means «лес» (forestry, forestland, woodland). The word lumber has the meanings «лес (материал), пиломатериал, древесина», timber has the meanings «дюроматериал, пиломатериал, доски, древесина», wood can also be used in these meanings but in special word combinations, such as phenol-impregnated modified wood «дельта-древесина». However, the word tree having the meaning «дерево» is almost never used in technical literature to define the material used for building or wooden works.

Another case of different scopes of the concept and its asymmetry can be exemplified by English pulp and Russian «древесина». In English there are many terms derived from the word pulp the translation and meaning of which depend on the attributes. Two groups can be classified among them: pulp having the meaning or translated as «целлюлоза» (bleached pulp «белая целлюлоза», pulp lap «лист влажной целлюлозы», semichemical pulp «полуцеллюлоза», sulfite pulp «сульфит-целлюлоза», undercooked pulp «непровар», pulpability «непровариваемость», pulpmaker «целлюлозник (рабочий)»); pulp having the meaning or translated as «древесина» (pulp density meter «пультомер», pulp handsheets «отливка», pulp line «пультовод», pulp machine «пресспат»,
The second reason of arising difficulties is caused by the existence of two types of contexts: linguistic and situational. Linguistic context is made up by source language units in a source text while situational context includes temporal, spatial and other circumstances under which a source text was produced as well as all the facts that a receptor is expected to know to interpret the message adequately. Having assessed the meanings of the source language units against linguistic and situational contexts a translator can discover what they mean in the particular case and what equivalents should be chosen as their substitutes.

Within the framework of the given conception the following examples can be analyzed. One of the characteristic features of technical texts is the usage of special words (regarded here as terms) for the objects that are named in the spoken language in a different way. Timber industry terminology contains a lot of names of different species of trees. The concepts represented by these names can belong to two pictures of the world simultaneously: to the scientific one and to the naïve one. And the translator’s task here is to define the situational context, to recognize the type of the world picture and to find the adequate variant of translation. When the Russian lexeme «ель» belongs to the situational context of Christmas it is translated in English as fir (-tree). However, if it is used in the linguistic and situational context of the timber industry it must be translated terminologically as spruce. The similar situation is with the Russian word «кедр»; it can be translated as cedar and pine. However, the lead in explaining the translation adequacy in this case is taken by the linguistic context. The translation depends on the attributes (cedar of Lebanon – «ливанский кедр»; Cembran (Arolla) pine – «европейский кедр»); if the trees of this species grow in Siberia the word pine is used to represent the notion of «сибирский кедр».

The translation of timber terms in view of two context types may also pose another difficulty. For example, the term larch has two meanings «лиственница» (the tree itself) and «древесина лиственницы» (the wood of this tree), so its translation fully depends on the context:

The larch in this forest sector is especially strong and conditioned – «Лиственница в этом лесном секторе является особенно крепкой и кондиционной» (the tree itself);

The larch is used in the building production extensively – «Древесина лиственницы широко используется в строительной промышленности» (the wood of this tree).

The same problem arises with the term pocket that has already been discussed. Despite the fact that it has different meanings in different technological descriptions and sciences it may be translated differently within the context of the timber industry: «паз», «смоляной кармашек», «приемное устройство, коробка». In this case the analysis of the linguistic and situational contexts may be helpful as well.

The fact that a source language unit corresponds to a number of regular equivalents does not necessarily mean that one of them will be used in each particular translation. In the analyzed translations the translator’s skill to make a good choice among such equivalents is often well demonstrated. But sometimes the situational context does not allow a translator to choose any of the regular equivalents. In timber industry technical texts, it would be a mistake to translate the terms degree and uppers not as «сорт древесины» and «высшие сорта древесины» consequently. Besides, in a particular context even singular and plural numbers of the same noun can have semantically distinguishing meaning: the term chip means «щепа» in the timber industry, whereas its plural form chips means «варочная щепа».

Another reason that cause problematic issues in translation is the lack of equivalents or non-equivalent words. It is obvious, that in manufacturing processes of the timber industry the number of equivalent-lacking terms is not so great. However, there are some “ordinary” words for which the target language may have no equivalent lexical units: fluid, conservationist and so on. Such words appear in the language due to the emergence of new advanced technologies or techniques. Lack of regular equivalents does not imply that the meaning of an equivalent-lacking source language unit cannot be rendered in translation or that its translation may be less accurate.
Coming across an equivalent-lacking word a translator often uses different types of occasional equivalents, which can be later used as terms if these contextual substitutes turned out to be successful and adopted by the members of the target language community. To that end, different ways of translation can be used:
1) loan-words imitating the source language form (feeder «фидер» – machine attachment transferring the wood; trawler-drifter «дрифтер-траулер»);
2) approximate substitutes, that is target language words with similar meaning which is logically developed to convey additional information (thermoreponsive switch «термовыключатель; термо-предохранитель»);
3) descriptive translation explaining the meaning of the source language unit; in the timber industry this method turns out to be rather productive: combustion furnace «печь для органического анализа»; “green” chain «сортировочная цепь на лесозаводе», craft specialties «специальные сорта бумаги из жесткой сульфатной целлюлозы», post colour number «число изменений цвета после отбелики», test digester “now down” «анализ варочного цикла в период снижения давления в конце варки», digester blow test «конечный анализ варочного щелока». This method is sometimes used in conjunction with the first one when the introduction of a loan-word is followed by a foot-note explaining the meaning of an equivalent-lacking word in the source text.

The problem of equivalents lack is often associated with the usage of shortened widely-spread terms (abbreviations or acronyms). It is obvious that adequate translation presupposes decoding of shortened forms and their replacement with the Russian corresponding ones. But the problem is that there are often no corresponding analogues in the target language and creation of new terminological abbreviations is not encouraged. In such cases translators often decode the abbreviation meaning and loan it directly in its native form, after that they are free to use this newly-created substitute. It may really be helpful when it involves the inscriptions on machine-tools, mechanisms, chemical substances containers: ALK (alkali) «щелочь», dft (draft) «набросок, схема, чертеж», ga. (gauge) «калибр, масштаб», pbd (paperboard) «картон», P.P. (paper pulp) «целлюлоза», b.o. (back order) «в обратном порядке», dw (dead weight) «вес конструкции, мертвый вес», etc.

4. Conclusion
The goal of the given research was to find out ways of translating timber terminology in technical texts that allow creating adequate and equivalent translation.

Even if a source language unit has a regular equivalent in the target language, this equivalent cannot be used in the target text whenever this unit is met in the source text. An equivalent is but a potential substitute, as the translator’s choice is, to a large extent, dependent on the context in which the source language unit is met in the source text. Having assessed linguistic and situational contexts and used all the background knowledge and available information on the timber industry a translator can make the adequate choice of one of the substitutes, that can be regular equivalents, contextual substitutes or analogues.

As terminology and special lexis pose a lot of difficulties in translation, the method of explication or descriptive translation is frequently applied; it is often accompanied by the appearance of a new term created on the basis of transcription, transliteration or loan translation. It is conditioned by the fact, that mechanisms of categorization of the world and creation of new terms are not alike in different countries, the progress is going forward, so newly created terms, abbreviations and special words need to be explained properly before putting them into practice.

The study and analysis of mechanisms of recognizing, understanding and translating the timber industry terms conditioned by different types of the contexts and their semantic nature will make the work of industry-specific translators more efficient and competent.

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