

MODERN ELECTRIC POWER TERMINOLOGY: STRUCTURAL AND SEMANTIC ASPECTS

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СОВРЕМЕННАЯ ЭЛЕКТРОЭНЕРГЕТИЧЕСКАЯ ТЕРМИНОЛОГИЯ: СТРУКТУРНЫЙ И СЕМАНТИЧЕСКИЙ АСПЕКТЫ

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Abstract. The article under discussion is devoted to the study of general issues of terminology and terminological activity in the field of electric power on the material of English, Russian and Uzbek languages. The development of electric power industry affects the state of different industries and everyday life of people all over the world. This industry concerns energy production, transmission, distribution and sale. Accordingly, all countries of the world pay due attention to it, and states carry out obligatory regulation in this sphere. The author of the article examines semantic, morphological and syntactic features of renewable energy terminology in order to determine the most productive way of terminology in this scientific field.

Аннотация. Настоящая работа посвящена исследованию общих вопросов терминологии и терминологической деятельности в электроэнергетической области на материале английского и русского языков. Развитие электроэнергетики влияет на состояние разных отраслей промышленности и ежедневную жизнь людей во всем мире. Данная отрасль затрагивает производство энергии, ее передачу, распределение и продажу. Соответственно все страны мира уделяют ей должное внимание, и государства осуществляют обязательное регулирование в этой сфере. Автор статьи рассматривает семантические, морфологические и синтаксические особенности терминологии возобновляемой энергетики с целью определения наиболее продуктивного способа терминообразования в данной научной области.

Keywords: terminology, energy, industry, semantic, morphological, syntactic features, productive way of term formation, lexical units.

Ключевые слова: терминология, энергетика, промышленность, семантические, морфологические, синтаксические особенности, продуктивный способ терминообразования, лексические единицы.

Discussion

Electric power is one of the knowledge-intensive and advanced fields in the modern world and covers all spheres of human life and activity in the XXI century. It deals with the production and transmission of electricity, the need for which is constantly increasing in both industrial and

social spheres. Due to the development of science and technology, the energy industry has to face new challenges, such as the development of unconventional energy sources, increasing the reliability of energy systems, increasing the amount of data from different measurements, etc. At present, international cooperation in science and economics continues to strengthen, which requires an acceleration of work on harmonization of terminology in national languages.

At the same time, it is necessary to expand the boundaries of the existing terminological system in order to replenish its composition with new concepts, terms and definitions. At the same time it is necessary to take into account that these new concepts, terms and definitions should be uniform for all energy systems to exclude their ambiguous interpretation by specialists of different energy branches.

Many researchers in different periods of time addressed the issues of terminology and terminological activity [1].

Particular attention to the semantics of terms, including the phenomena of polysemy, synonymy, and terminological variation [2].

In this article the author set a goal to analyze the semantic, syntactic and morphological features of the modern electric power terminology and to identify the most productive way of term formation in this field on the basis of the results obtained. As the material of the study the author used the corpus of terms presented in the above normative documents and in the dictionary of D. S. Strebkov. The total number of Russian-language terms was 500 and English-language terms was 500.

At the semantic level, modern electric power terms are words taken from the general literary language and adapted for the naming of special concepts. V. P. Danilenko notes that such words, as a rule, are multivalued by their semantic nature [2]. And in special areas they are used to express one of their inherent meanings, which are distinguished contextually. Thus, they do not lose connection with the general language, remaining its belonging. For example, the terms “wind”, “wastes”, “vegetable oil”, “fork”, “connector”, “fatigue”, etc. Semantic way of term formation is also realized by metaphorical and metonymic transfers, which are usually considered at the level of a compound term [3]. Metaphor — the transfer of the name on the basis of similarity, the coincidence of those or other objectively significant features of two objects. Metonymy — transfer based on the association on the proximity of objects, phenomena or features of objects [4]. Composite terms of modern electric power, formed by means of metaphorical transfer, are few and represent the result of metaphORIZATION of the entire terminological word combination as a whole: “роза ветров” / “wind rose”, “черное тело” / “black body”, “закон идеального газа” / “ideal gas law”, “берлинская лазурь” / “Prussian blue” and others.

Quite often in modern electric power terminology there is a nest of terms that are word combinations in which the adjective is formed by metaphORIZATION: “плавучая МГЭС” / “floated small hydroelectric power plant”, “погружная МГЭС” / “submerged small hydroelectric power plant”, “рукавная МГЭС” / “string small hydroelectric power plant”, “гириандная МГЭС” / “network small hydroelectric power plant”.

A more productive semantic way of terminization in the field of modern electric power is metonymic transfer. The metonymic transfer model’s characteristic of terminology are built on the same grounds as the general literary ones. Here are some illustrative examples of RE terms formed by metonymic transfer: “активность электрода” / “electrode activity” (качество, присущее человеку, переносится на вещество), “биоэнергетическая архитектура” / “bioenergetic architecture” (абстрактное понятие переходит в конкретное), “введение дефектов” / “defect introduction” (название действия переходит в результат действия), “ветроустановка” /

“windmill” (название действия переходит на конкретный предмет), “лошадиная сила-час” / “horsepower hour”.

Among other terms, we can often find terms — words borrowed from other national languages and derivatives, which are formed by means of the word-formation system of the national language on the basis of the international terminological stock: “denaturation”, “bioconversion”, “effluent”, “sludge”, “fugate”, “metantank”, “schlam”, “heliostat”, “barium”, “dynamo”.

So, renewable energy as a scientific discipline quite actively uses the semantic method of term formation, through which the ever-increasing need for new terms is met by transforming existing words in the language. Morphological method of word formation, as a rule, includes two types: word formation and affixation. Terms are formed mostly by the same word-formation models and with the same word-forming affixes as words in general literary language are formed. Both methods should not be considered in isolation from each other, since a significant number of terms combine the two word-formation methods: “wind energy”, “heat supply”, “biocatalyst”, “biomethanol”, “hydroelectric”, “biostabilizer” and others. A significant discrepancy is observed, according to the results of the analysis, in the number of terms formed by word formation.

The process of prefixation in the terminological system of the subject area is generally less active than the process of suffixation. This is due to the fact that prefixes, combined with the most semantically and phonetically weighty initial part of the derivative bases, do not change the affiliation of the word to the grammatical word class and retain relative autonomy in the word. In addition, a peculiarity of the prefixation process in this terminological system is the spread of prefixes of Greek and Latin origin: anti- (antiskid ‘нескользкий’) to express the meaning of opposition, compensation; di-, dis- (to displace ‘перемещать’) to mean separation, elimination, movement; super- (superconductivity ‘сверхпроводимость’) to denote the highest degree of quality, etc.

Among the morphological ways of term formation in the field of modern electric power industry we can also highlight abbreviation, which has high productivity. Abbreviations are a very convenient way of naming, characterized by brevity and structural economy. Articles on renewable energy sources, normative documents, and dictionaries often include lists of the most common abbreviations with their deciphering. Another distinctive feature of renewable energy terminology is the use of acronyms as a form of abbreviation. Acronyms are initial abbreviation of letters for compression of complex terminological phrases (grapheme part), which contain main notions (key words or phrases) and are followed by numerical designation of basic technical characteristics of model, which allow to identify the model and distinguish it from the set of similar models: “PT-RB-0773”, “CYZL561”, “EMFM50170” and many others [2].

The formation of terminological units of the studied terminological sphere by abbreviation is usually reduced to the use of initial abbreviation, where the abbreviated form is formed only by the initial letters of the components of terminological phrases or terms: DC (direct current ‘direct current’). The abbreviation is also commonly used as an abbreviation, in which a number of consonantal letters are retained, for example: bldg (buiding ‘building, structure’), sc (‘scale’), etc.

The most productive way of term formation of the subject area of power engineering is the syntactic way of term production. The presence of a large number of terminological word combinations (WC) and their predominance over one-word terms is due to the desire of this, as well as any other technical terminology, to accuracy, to give a specific characteristic of mechanisms, structures, processes, connections. Depending on the number of components included in the WC, they are divided into two-word and multiword terms consisting of three or more words (from 3 to 7 components), which is based on the objective laws of human memory [5]. As a rule, binary WC

with left-handed modifying components prevail in the studied terminology. The greatest number of WCs are formed according to the scheme: noun + noun: power system 'energy system'. The least used TCs are those formed by the scheme: verb (-ing, or -ed) + noun: controlling system 'control system', managed system 'management system'. The following model is also productive: noun + preposition + noun: part of a motor 'part of an engine'. The most common preposition used in the formation of WC is the preposition of: 'time of operation'. The prepositions for, by, on and with are also widely used.

Conclusion

In conclusion, it should be emphasized that the terms of the subject area of energy are not given in the English language by themselves; they are created as they are realized. This is because all terms belong to the secondary modeling level. Coding terminological information, they have a special informational and communicative significance, contributing to communication in the professional sphere of human activity. The study of word-formation processes on the material of a particular terminological system allows us to differentiate the features of the word-formation system of this terminology and the integral features, which make it possible to talk about the trends inherent in term-formation in general.

Summarizing the above, we can conclude that the most productive way of term formation in the field of renewable energy sources is syntactic, as the vast majority of terms are multicomponent word combinations.

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