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## Modern borrowings in the sphere of construction engineering in Russian

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### Abstract

The field of construction engineering, one of the fast-developing spheres, is being constantly enriched with foreign words denoting advanced technologies. The purpose of this paper is to discover terminological units used in the Russian language to describe modern technologies in the sphere of construction engineering. This knowledge will help future specialists be competitive in the labour market. The sources of borrowing are discovered and described and the examples of lexical borrowing, lexical calques and partial-calques are given. The material for the analysis is the newest borrowings in the sphere of construction engineering appearing in the Russian language in the 21<sup>st</sup> century. The research is based on the analysis of terminological units found on the professional and informational web-sites for construction engineers.

*Keywords:* Construction terminology, borrowings, loanwords, calques;

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### 1. Introduction

Thanks to cross-cultural and interlingual contacts, as well as professional activity internationalization, it is rather difficult in the modern world to find a language without any foreign words. The appearance of new words of foreign origin in Russian is closely connected with the development of science and new technology in different spheres of human activity.

### 2. Theoretical Framework

Linguistic borrowings reflect all spheres of human activity; however, they are widely represented in English for Specific Purposes (ESP). This usually refers to teaching English to university students or people already in employment, with a focus on the particular vocabulary and skills they need [6]. As a result, a new trend in linguistics, terminology studies, has developed.

Borrowing is the process of importing linguistic items from one linguistic system into another, a process that occurs any time two cultures are in contact over a period of time. Einar Haugen's 1950 article on borrowing marks the beginning of the current interest in the topic [5].

In Russia, the founder of the terminological study was D.S. Lotte. He considered loanwords to be a type of borrowings. He called them “translation borrowings” and divided them into literal borrowings and variable ones. He also distinguishes variable loanwords where either affixes or root may change [7]. Russian linguist S.V. Grinev-Grinevich distinguished lexical, formal and morphological borrowings [3]. O.G. Shchitova points out the following types of lexical borrowings: structural borrowings (morphological, syntactic and hybrid borrowings), calques, partial-calques as well as semantic calques [9].

### 3. Materials and Methods

English is considered to be the language of science today, and therefore most words of English origin are borrowed by the Russian language. Borrowings are a source of terminology enrichment.

The material for the analysis is the newest borrowings in the professional sphere of construction engineering, appearing in the language in the 21<sup>st</sup> century. All the terms have been found on the websites for construction professionals. The framework for the methodology is represented by descriptive research and comparative analysis.

### 4. Results

As a result, in the terminological field of construction the following types of borrowings were found:

1. Lexical borrowings, when both the form and the semantics of the word is borrowed, e.g.:
  - *сайдинг* ‘protective material attached to the exterior wall of a building’ < En. siding;
  - *ламинат* ‘a multi-layer synthetic flooring product’ [10] < En. laminate;
  - *чиллер* ‘a type of cooling equipment’ < En. chiller;
  - *микрораттис* <En. microlattice ‘the lightest material in the world, consisting of ultra-light metal foam [10];
  - *стрингер* ‘a long horizontal timber to connect uprights in a frame or to support a floor’ [8] <En. stringer.

As can be seen, the word is borrowed in the same form as it exists in the source language.

2. Loan translation (or calque) is a complex lexical unit (either a single word or a fixed phrasal expression) that was created by an item-by-item translation of the (complex) source unit [4, p. 39]. Calques are subdivided into syntactic and morphological ones.

a) Syntactic calques are fixed word combinations resulting from the literal translation of a terminological unit, e.g.:

- *пропускаемый бетон* < En. porous concrete;
- *светопроводящий бетон* < En. light-transmitting concrete;
- *поперечно-клееная древесина* < En. cross-laminated timber.

As we can see, the terms are formed by literal word-for-word translation of a terminological phrase.

b) Hybrid calques are borrowings where one of the components is a morphological calque but on the whole, it is a phraseological unit, e.g.:

- *самодостаточный дом* ‘a building designed to work independently from the infrastructural services’ < En. **self**-sufficient house;
- *самоуплотняющийся бетон* ‘a special type of concrete which can be placed and consolidated under its weight [1]’ < En. **self**-compacting concrete.

c) Partial calques are the words which are partially translated into the recipient language that is the word contains a translated part and non-translated one:

– *смарт-стекло* ‘a glass or glaze whose light transmission properties are altered when voltage, light, or heat is applied’ < En. smart-glass [10];

– *ВІМ-технологии* < En. BIM-technology/Building Information Modelling ‘информационное моделирование зданий’.

However, despite the existing Russian equivalent of *ВІМ* (информационное моделирование зданий), the loaned acronymic variant is mostly used in modern Russian.

– *3D-печать* ‘a process of making three dimensional solid objects from a digital file’ [10] < En. 3D-print.

Syntactic calque is one more widely used type of borrowing in Russian, where there are both translated and borrowed words:

– *аддитивное производство* < En. additive manufacturing ‘a group of technological methods based on layer-by-layer creating a 3D model of an object’;

– *компьютерная осевая литография* < En. computed axial lithography ‘a method for 3D printing based on computerized tomography scans to create objects from photocurable resin’ [10]. In this example, the word *литография* is borrowed.

– *контурное моделирование* < En. contour crafting ‘a building printing technology that uses controlled crane to build edifices rapidly with less manual labor’ [10]. The word *контурное* is borrowed from English (contour) and the word *моделирование* is translated into Russian.

As we can see, with the development of advanced technologies new words appear in Russian. Most of them entered Russian being unassimilated. While analyzing new terminological units the word *plyscrapper* ‘a high multi-story building made of timber’ was discovered. This word does not have a Russian equivalent and is considered to be a *lexical gap*, a term used in linguistics to refer to the absence of a linguistic unit at a place in a pattern of relationships where one might have been expected [2].

## 5. Conclusions

In conclusion, specialized terminology for advanced technologies in the field of construction is represented mostly by borrowed professional lexical units. The terminological field of the construction sphere contains foreign borrowings – anglicisms, naming modern technologies, among which lexical borrowings, calques, and partial calques are prevalent.

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