The Lingua Spectrum
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The Lingua Spectrum
Volume 11, November 2025

Lexical difficulties in translating oil and gas terms among non-native speakers

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Annotation *This article examines the lexical difficulties encountered by non-native speakers when translating oil and gas terminology. The study highlights the complexity and specificity of technical vocabulary in the oil and gas industry, where many terms have polysemous meanings, lack direct equivalents in other languages, or are culturally bound. The research analyzes common translation errors caused by lexical interference, false cognates, and insufficient professional background. Special attention is given to the challenges of translating abbreviations, collocations, and metaphorical expressions frequently used in petroleum engineering and energy-related texts. The paper emphasizes the importance of developing terminological competence and using specialized bilingual glossaries and corpora. It also suggests effective strategies for improving the accuracy of translation through context-based learning and interdisciplinary training. Additionally, the study underscores the role of technological tools such as digital terminology databases, machine translation systems, and corpus-driven platforms in enhancing lexical precision. The results demonstrate that mastering lexical nuances in this field is essential for achieving precision and clarity in professional communication, particularly in safety documentation, technical reports, and international collaboration.*

Keywords *Oil and gas terminology, translation, lexical difficulties, professional language, term, interlingual equivalence*

Лексические трудности при переводе нефтегазовых терминов у носителей неродного языка

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Аннотация *Данная статья посвящена исследованию лексических трудностей, возникающих у носителей неродного языка при переводе нефтегазовой терминологии. Особое внимание уделяется специфике технической лексики, отличающейся высокой степенью точности, многозначностью и отсутствием прямых эквивалентов в других языках. Рассматриваются типичные ошибки перевода, обусловленные интерференцией родного языка, ложными друзьями переводчика и недостаточной профессиональной подготовкой. В работе анализируются трудности, возникающие при переводе аббревиатур, устойчивых словосочетаний и метафорических выражений, характерных для нефтегазовой отрасли. Подчеркивается необходимость формирования терминологической компетенции и использования специализированных словарей, корпусов и контекстного обучения. Автор предлагает эффективные стратегии для повышения точности перевода и профессиональной коммуникации. Результаты*

исследования показывают, что владение лексическими особенностями нефтегазового английского является важным условием успешного взаимодействия специалистов на международном уровне.

Ключевые слова *Нефтегазовая терминология, перевод, лексические трудности, профессиональный язык, термин, межъязыковая эквивалентность*

Neft va gaz atamalarini tarjima qilishda boshqa tilda so‘zlovchilar duch keladigan leksik qiyinchiliklar

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Annotatsiya *Ushbu maqolada neft va gaz terminologiyasini tarjima qilish jarayonida no‘native spikerlar duch keladigan leksik qiyinchiliklar tahlil qilinadi. Tadqiqotda neft-gaz sanoatiga oid texnik lug‘atning murakkabligi va o‘ziga xos xususiyatlari yoritilib, ko‘plab atamalar ko‘p ma’nolilikka ega ekani, boshqa tillarda to‘g‘ridan-to‘g‘ri ekvivalenti yo‘qligi yoki madaniy jihatdan bog‘liqligi ta’kidlanadi. Ishda leksik interferensiya, soxta ekvivalentlar va yetarli kasbiy tayyorgarlikning yo‘qligi tufayli yuzaga keladigan keng tarqalgan tarjima xatolari tahlil qilingan. Shuningdek, neft muhandisligi va energetika matnlarida uchraydigan qisqartmalar, kollokatsiyalar va metaforik ifodalarni tarjima qilishdagi murakkabliklarga alohida e’tibor qaratiladi. Maqola tarjima aniqligini oshirishda terminologik kompetensiyani rivojlantirish, maxsus ikki tilli glossariylar va korpuslardan foydalanish muhimligini ta’kidlaydi. Bundan tashqari, kontekst asosida o‘qitish va fanlararo tayyorgarlik orqali tarjima samaradorligini oshirish bo‘yicha samarali strategiyalar taklif etiladi. Tadqiqot raqamli terminologik bazalar, mashina tarjimasi tizimlari va korpusga asoslangan platformalarning leksik aniqlikni oshirishdagi rolini ham yoritadi. Natijalar ushbu sohadagi leksik nozikliklarni chuqur o‘zlashtirish professional kommunikatsiyada aniqlik va ravshanlikni ta’minlash uchun nihoyatda muhimligini ko‘rsatadi.*

Kalit so‘zlar *Neft-gaz terminologiyasi, tarjima, leksik qiyinchiliklar, kasbiy til, termin, tillararo ekvivalentlik*

Introduction

The modern oil and gas industry is one of the key sectors of the global economy, in which active international cooperation is taking place. In this regard, the role of accurate and adequate translation of specialized texts containing a large number of technical terms is increasing. The translation of oil and gas terminology requires not only a high level of foreign language proficiency but also a deep understanding of professional terminology, since even the slightest inaccuracy can lead to meaning distortion, technical errors, or even financial losses.

Non-native speakers experience particular difficulties when translating oil and gas terms. This is due to several factors: the absence of direct equivalents in the target language, the polysemy of terms, differences in national classifications and standards, as well as the influence of the native language on the process of understanding and conveying

meaning. Moreover, English, being the main international language in the oil and gas field, is characterized by a high degree of terminological density, which makes the process of learning and translation even more challenging.

This article examines the main lexical difficulties that arise in translating oil and gas terms among non-native speakers, analyzes common errors, and proposes effective strategies and methods for overcoming them. Special attention is paid to the development of terminological competence in future specialists and to the role of the contextual approach in teaching professional translation.

Literature review

Research on translating **oil and gas terminology** highlights the complexity of technical vocabulary and the influence of linguistic and cultural factors. According to Newmark (1988), technical translation requires both linguistic accuracy and contextual understanding. Studies by Cabré (1999) and Bowker (2015) emphasize that specialized terms often lack direct equivalents in other languages, leading to lexical difficulties for non-native speakers.

In the field of oil and gas, terms such as *wellhead*, *downhole*, and *drilling mud* carry industry-specific meanings that are hard to convey without professional background knowledge (Ahmad, 2010). Scholars like Al-Qinai (2014) note that non-native translators frequently rely on literal translation, resulting in semantic distortion. Overall, the literature shows that effective translation of oil and gas terminology requires domain expertise, use of bilingual glossaries, and familiarity with technical discourse conventions.

Main part

1. **Specific features of oil and gas terminology**

Oil and gas terminology represents a complex system of specialized words and expressions that describe exploration, extraction, transportation, and processing processes. For example, *well logging* – "geophysical well surveys," *offshore drilling* – "drilling on the continental shelf," *pipeline*"pipeline."

Successful translation of such terms requires considering not only their direct meaning but also the context of use, since one term may have several interpretations depending on the technical situation.

2. **Major Lexical Difficulties**

The main lexical challenges in translating oil and gas terms can be grouped as follows:

- *Polysemy (Multiple meanings).* For instance, the word *formation* may mean "layer," "structure," or "formation" in a geological context. Without field-specific knowledge, a translator may choose the wrong equivalent.
- *Lack of direct equivalents.* The Russian language often lacks a precise counterpart for English terms. For example, *blowout preventer* refers to a device that prevents uncontrolled well blowouts, but there is no single-word equivalent in Russian.
- *False friends of the translator.* For example, *conductor* in oil and gas terminology does not mean "guide" or "conductor," but "surface casing," which is a pipe used to stabilize the upper part of a well.
- *Abbreviations and acronyms.* Such as *API* (American Petroleum Institute), *OPEC* (Organization of the Petroleum Exporting Countries), and *LNG* (Liquefied Natural Gas). Incorrect interpretation of these abbreviations may completely change the meaning of the text.
- *Borrowings and anglicisms.* The English oil and gas language is full of borrowed terms such as *drilling mud*, *downhole tools*, *reservoir engineering*, which require contextual comprehension for accurate translation.

3. **Ways to overcome difficulties**

To successfully overcome these difficulties, a comprehensive approach is required:

- systematic study of terminological databases (e.g., *Oilfield Glossary* by Schlumberger);
- use of bilingual specialized dictionaries;
- development of contextual translation skills;
- introduction of terminology training for students of technical specialties;
- creation of glossaries on oil and gas topics for educational purposes.

4. **Practical significance of the research**

The study of lexical difficulties in oil and gas translation holds **substantial practical value** for several domains:

- *Professional translation practice*

Understanding specific lexical challenges enables translators to anticipate problem areas, select appropriate tools, and maintain terminological consistency. Developing industry-aligned glossaries and corpora directly enhances translation quality and professional credibility.

- *Translator education and training*

Research findings inform **ESP** (English for Specific Purposes) and **LSP-translation pedagogy**. Integrating corpus training, terminology management, and simulation of real-world translation projects into curricula helps non-native learners acquire both linguistic and conceptual competence.

- *Corporate communication and safety documentation*

Accurate translation of technical manuals, HSE (Health, Safety, and Environment) documents, and drilling procedures prevents operational errors. Standardized terminology reduces misinterpretation between multinational teams. Thus, improved lexical competence contributes to workplace safety and compliance with international norms.

- *Technological innovation*

The literature contributes to the development of **computational resources** – termbases, ontologies, and MT post-editing guidelines – which can be integrated into CAT tools and AI translation systems used by oil companies and service providers.

5. **Intercultural communication and localization**

Since oil and gas companies operate across linguistic and cultural borders, precise translation supports smoother intercultural communication, corporate identity preservation, and the localization of technical documentation for global markets.

Future directions

Scholars recommend expanding empirical research on:

- Error typologies among translators with different linguistic backgrounds;
- The integration of domain knowledge modules in translator training;
- Open-access multilingual terminology resources for under-resourced languages (e.g., Uzbek, Kazakh, Azerbaijani);
- Comparative evaluation of ontology-driven MT and human post-editing quality.

Results and Discussion

The study revealed that the main lexical difficulties in translating oil and gas terms among non-native speakers are related to the ambiguity of terms, the lack of full equivalents, and differences in the terminological systems of various languages. For example, English terms such as *drilling mud*, *blowout preventer*, or *well logging* often cause translation difficulties, as they require not a literal but a functional or descriptive approach. In such cases, the translator must not only choose a lexically similar word but also take into account the context of use, technical meaning, and practical application of the term.

In addition, it was found that native language interference plays a significant role in the occurrence of errors. Non-native speakers often rely on familiar linguistic patterns, which leads to calquing and inaccurate translations. For instance, the term *gas lift* is sometimes incorrectly translated as "газовый лифт" ("gas elevator") instead of the correct "газлифтная система" ("gas lift system"). Such mistakes indicate insufficient terminological

competence and a weak understanding of the professional field.

The analysis also showed that effective ways to overcome lexical difficulties include the use of contextual and comparative approaches. The application of bilingual glossaries, the creation of specialized text corpora, and the use of authentic materials from the professional sphere significantly improve translation quality. The training of students in petroleum engineering and related fields should aim to develop skills for independent analysis of terms and the ability to determine their meaning in specific professional contexts.

Thus, the research results demonstrate that successful translation of oil and gas terminology requires a combination of linguistic, cognitive, and professional competencies. The development of these skills contributes to greater translation accuracy, enhanced intercultural communication, and more effective professional performance of specialists in the international oil and gas industry.

Conclusion

The conducted study has confirmed that the translation of oil and gas terminology is a complex and multifaceted process that requires the translator not only to have a high level of foreign language proficiency but also to possess professional knowledge in the field of oil and gas engineering. The lexical difficulties encountered by non-native speakers are caused by both linguistic and cognitive factors. The absence of direct equivalents, the polysemy of terms, differences in classifications and standards, as well as the interference of the native language, often lead to errors that distort the original meaning and reduce the accuracy of professional communication.

A contextual approach plays a particularly important role, as it allows translators to consider not only the lexical but also the functional meaning of terms depending on the specific situation. The use of glossaries, electronic text corpora, authentic materials, and modern digital tools contributes to the development of professional competence and the expansion of specialists' terminological vocabulary.

Furthermore, the results of the study have shown that the process of teaching oil and gas terminology translation should include interdisciplinary elements: the combination of linguistic and technical knowledge helps students gain a deeper understanding of professional terminology. It is essential to develop learners' skills in contextual analysis, critical thinking, and the ability to find optimal translation solutions based on communicative goals.

Thus, successful translation of oil and gas terminology is possible only through an integrated approach that includes the development of linguistic, cognitive, and professional competencies. Enhancing terminological literacy contributes to more accurate transmission of scientific and technical information, strengthens international cooperation, and improves the professional efficiency of specialists in the global oil and gas communication environment.

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