

## **TRANSLATION METHODS OF SIMPLE AND COMPLEX GAS INDUSTRY TERMS ACROSS LANGUAGES**

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**Abstract:** In the context of globalization and rapid technological advancement, the gas industry has become one of the most internationally integrated sectors of the global economy. This integration requires accurate and standardized translation of gas industry terminology to ensure effective communication among engineers, researchers, and policymakers. Gas industry terms differ significantly in structure and complexity, ranging from simple one-word units to complex multi-component terminological expressions. This article provides a comprehensive analysis of the main methods used in translating simple and complex gas industry terms across languages, with particular emphasis on English and Uzbek. The study examines literal translation, borrowing, calque, descriptive translation, and functional equivalence as the most frequently applied strategies. The research highlights structural and semantic challenges in technical translation and emphasizes the importance of selecting appropriate translation methods to preserve terminological accuracy, conceptual clarity, and professional reliability.

**Keywords:** Gas industry terminology; technical translation; simple terms; complex terms; terminological equivalence; borrowing; calque; descriptive translation; functional equivalence; English language; Uzbek language; translation strategies; technical communication; terminology standardization; linguistic analysis.

The gas industry plays a crucial role in meeting global energy demands and ensuring economic stability. Due to extensive international cooperation, joint ventures, and the exchange of technical documentation, gas industry specialists increasingly rely on multilingual communication. In this context, accurate translation of gas industry terminology becomes a key factor in maintaining safety, efficiency, and technological consistency.

Gas industry terminology is characterized by precision, stability, and a high level of specialization. However, translating such terminology from one language to another is a complex process, especially when dealing with differences in grammatical structure, word formation, and terminological traditions. English dominates as the main language of international technical discourse, while Uzbek gas industry terminology continues to develop through both internal linguistic resources and external borrowing.

This article aims to explore the translation methods used for simple and complex gas industry terms across languages. By analyzing various translation strategies and their applicability, the study seeks to identify effective approaches that ensure conceptual equivalence and terminological consistency.

In translation studies, a term is understood as a lexical unit that denotes a specific concept within a specialized field. Unlike general vocabulary, technical terms are expected to be unambiguous, stylistically neutral, and context-independent. The primary objective of term translation is to transfer the underlying concept accurately rather than to reproduce the formal structure of the source language.

The choice of translation method depends on several factors, including the structure of the term, the availability of established equivalents, and the level of standardization within the target language. In gas industry discourse, adherence to international standards is particularly important, as terminological inconsistency may result in technical misunderstandings or operational risks.

Gas industry terminology includes both simple and complex terms, each of which requires specific translation approaches depending on its structural and semantic characteristics. Simple gas industry terms usually consist of a single lexical unit and denote fundamental objects, materials, physical properties, or basic processes related to gas production, transportation, and utilization. Due to their relatively stable meanings and high level of standardization, such terms are generally easier to translate than multi-component terminological units.

One of the most frequently applied methods in translating simple gas industry terms is literal translation. This method is used when a direct and well-established equivalent exists in the target language and both the source and target terms refer to the same technical concept. For example, English terms such as gas, pressure, and fuel are translated into Uzbek as gaz, bosim, and yoqilg'i. Literal translation is considered the most reliable strategy in technical translation, as it ensures maximum semantic equivalence and maintains terminological consistency across languages. This method is especially effective for internationally recognized and commonly used terms that have already been standardized in technical documentation.

However, not all simple gas industry terms have direct equivalents in the target language. In such cases, borrowing and transliteration become the preferred translation methods. Borrowing is widely used in gas industry discourse to preserve international uniformity and facilitate professional communication. Terms such as compressor, separator, and generator are borrowed into Uzbek as kompressor, separator, and generator. These borrowed units undergo phonetic and morphological adaptation in accordance with the norms of the target language, yet their original technical meaning remains unchanged. The use of borrowed terms is particularly common for equipment names and technological devices that are globally standardized and widely used in international projects.

In contrast to simple terms, complex gas industry terms consist of two or more components and are used to describe advanced systems, technological processes, and functional mechanisms. The translation of such terms presents greater challenges due to differences in grammatical structure and word-formation patterns between languages. One of the most effective methods for translating complex terms is calque (loan translation), which involves the literal translation of each component of the source term. For instance, gas pipeline is translated as gaz quvuri, and pressure regulator as bosim rostlagichi. This method preserves the internal structure of the term and is particularly effective when the syntactic models of the source and target languages are compatible.

When calque is not sufficient to convey the full meaning of a complex term, translators often resort to descriptive translation. This method is applied when no concise equivalent exists in the target language or when a literal translation may cause ambiguity. Examples include gas dehydration unit, translated as gazni quritish qurilmasi, and flare gas recovery system, rendered as mash'al gazini qayta tiklash tizimi. Although descriptive translations tend to be longer and structurally more complex, they ensure semantic clarity and accurately represent the underlying technical concept, which is crucial in safety-critical industrial contexts.

Another important strategy in translating complex gas industry terms is functional equivalence, which prioritizes the functional role of the concept over its formal linguistic structure. For example, control unit is translated as boshqaruv bloki, and regulator as rostlagich. This approach is especially useful when the source language employs compact noun–noun constructions, while the target language requires more explicit grammatical markers. Functional equivalence allows translators to adapt terminology to the linguistic norms of the target language without compromising technical accuracy.

Overall, the translation of simple and complex gas industry terms requires a flexible and systematic approach. While literal translation and borrowing are most effective for simple terms, complex terminological units often demand a combination of calque, descriptive translation, and functional equivalence. The correct choice of translation method ensures terminological precision, conceptual clarity, and effective professional communication in the gas industry.

The translation of gas industry terminology presents several challenges, including structural mismatch, lack of standardized equivalents, excessive borrowing, and ambiguity in multi-component terms. These challenges require translators to possess not only linguistic competence but also subject-matter expertise.

### **Conclusion**

The translation of simple and complex gas industry terms across languages is a multifaceted process that requires a systematic and context-sensitive approach. Simple terms are often translated through literal translation or borrowing, while complex terms require more flexible strategies such as calque, descriptive translation, and functional equivalence. Selecting the appropriate translation method is essential for preserving terminological accuracy, ensuring effective professional communication, and maintaining safety standards in the gas industry. This study contributes to the understanding of technical translation practices and highlights the importance of terminology standardization in an increasingly globalized industrial environment.

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