

## STRUCTURAL DESCRIPTION OF GAS INDUSTRY TERMINOLOGY IN ENGLISH AND UZBEK

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**Abstract:** The rapid development of the gas industry has led to the formation of a complex and well-organized system of professional terminology. Accurate terminology is essential for ensuring effective communication among engineers, researchers, and specialists working in this field. This article provides a detailed structural analysis of gas industry terminology in English and Uzbek. The study examines simple, derived, compound, and multi-component terms, as well as abbreviations and borrowed terms. A comparative approach is used to identify similarities and differences in term formation in both languages. The results of the research may be useful for linguists, translators, and professionals involved in the gas industry.

**Keywords:** Gas industry terminology, term structure, compound terms, English language, Uzbek language, technical vocabulary, linguistic analysis.

Terminology is a key component of any specialized field, as it ensures precision and consistency in professional communication. The gas industry, as a major branch of the energy sector, relies heavily on a clearly structured terminological system to describe technological processes, equipment, safety measures, and economic activities.

English serves as the primary language of international technical documentation and scientific research. Uzbek gas industry terminology has been developing dynamically, influenced by internal linguistic resources and external borrowing. A structural comparison of gas industry terms in English and Uzbek allows us to better understand the linguistic mechanisms involved in term formation and adaptation.

In linguistics, a term is defined as a lexical unit that denotes a specific concept within a particular field of knowledge. Unlike general vocabulary, terms are characterized by monosemy, accuracy, and stylistic neutrality.

Structural analysis focuses on the internal organization of terms, including the number of components, word-formation methods, and grammatical relationships. In the gas industry, terms often reflect technological complexity, which leads to the creation of multi-component structures.

Gas industry terminology in English and Uzbek demonstrates a complex and systematic structure shaped by linguistic, technological, and communicative needs. From a structural point of view, gas industry terms in both languages can be classified into several major groups, including simple terms, derived terms, compound terms, multi-component terminological units, and abbreviations. Each type plays a specific role in representing professional concepts accurately.

Simple or one-word terms constitute the core of gas industry terminology. These terms usually denote basic notions related to gas production, transportation, and usage. Examples such as gas, fuel, pressure, pipeline, valve, and compressor in English correspond directly to gaz, yoqilg'i, bosim, quvur, klapan, and kompressor in Uzbek. Many of these terms are international in character and are widely used across different languages with minimal phonetic changes. Their semantic equivalence facilitates professional communication and serves as a foundation for the formation of more complex terminological units.

Derived terms form another important structural group and reflect processes, actions, and technical characteristics within the gas industry. In English, derivation is frequently achieved through suffixes such as -tion, -ment, -er, and -or, resulting in terms like compression, purification, transmission, and regulation. Uzbek, as an agglutinative language, mainly employs suffixes such as -ish, -lash, and -uvchi, producing terms like siqilish, tozalash, uzatish, and rostlash. Although Uzbek derived terms may appear longer, they are often semantically transparent, clearly indicating the function or process involved. This structural difference reflects the typological distinctions between the two languages.

Compound terms are particularly widespread in gas industry terminology, as they allow specialists to express more specific meanings by combining two lexical units. English compound terms typically follow the noun + noun pattern, as seen in gas pipeline, gas storage, pressure regulator, and safety valve. Uzbek equivalents, such as gaz quvuri, gaz ombori, bosim rostlagichi, and xavfsizlik klapani, are usually formed through possessive constructions or adjective–noun combinations. While English compounds are structurally compact, Uzbek compounds emphasize grammatical clarity and explicit relationships between components.

Multi-component terminological units represent the most complex structural type and are used to denote sophisticated systems, technologies, and industrial processes. Examples include natural gas processing plant, gas transportation network, and gas pressure control system in English, which correspond to tabiiy gazni qayta ishlash zavodi, gaz tashish tarmog‘i, and gaz bosimini nazorat qilish tizimi in Uzbek. These terms are commonly found in scientific articles, technical standards, and official documentation. Their structure must remain stable, as any modification may lead to ambiguity or misinterpretation.

Abbreviations and acronyms occupy a special place in modern gas industry discourse, particularly in English, where linguistic economy is highly valued. Widely used abbreviations such as LNG (Liquefied Natural Gas) and CNG (Compressed Natural Gas) significantly reduce repetition in technical texts. In Uzbek, these abbreviations are generally borrowed directly from English, while their full forms are translated and explained as suyultirilgan tabiiy gaz and siqilgan tabiiy gaz. This practice ensures both international compatibility and local comprehensibility.

So the structural diversity of gas industry terminology in English and Uzbek reflects the need for precision, clarity, and efficiency in professional communication. Each structural type contributes to the systematic organization of terminology and highlights the linguistic characteristics of the two languages.

Borrowing is one of the most productive ways of enriching gas industry terminology, especially in the Uzbek language. Due to rapid technological development and close international cooperation in the energy sector, many new concepts and technical innovations first appear in English. As a result, English serves as the main source of borrowed gas industry terms, while Russian often functions as an intermediary language.

A significant number of Uzbek gas industry terms are borrowed directly from English, including words such as compressor, separator, regulator, and generator. In Uzbek, these terms are adapted phonologically and morphologically to fit the norms of the language, resulting in forms like kompressor, separator, and generator. Despite these formal changes, the borrowed terms fully preserve their original technical meanings, which ensures terminological accuracy and international compatibility.

Structural adaptation of borrowed terms in Uzbek usually involves the addition of native suffixes to form new derivatives. For example, the borrowed base kompressor can produce terms such as kompressor qurilmasi or kompressor stansiyasi. In some cases, borrowed terms

coexist with Uzbek equivalents, as seen in the use of regulator alongside the native term rostlagich. This parallel usage reflects an ongoing process of terminology standardization and linguistic competition between borrowed and native elements.

Borrowed terminology also contributes to structural similarity between English and Uzbek gas industry vocabularies. Since many borrowed terms retain their original root structure, specialists working in multilingual environments can easily recognize and understand them. This is particularly important in technical documentation, international projects, and professional training, where unified terminology reduces misunderstanding.

At the same time, excessive borrowing may create challenges, such as reduced transparency for non-specialists or inconsistency in term usage. Therefore, linguists and industry experts emphasize the importance of balancing borrowed terms with well-formed native equivalents. Nevertheless, borrowing remains an essential mechanism for the development of modern Uzbek gas industry terminology, reflecting both technological progress and global integration.

A comparative analysis of gas industry terminology in English and Uzbek reveals both common features and significant structural differences caused by the typological nature of the two languages.

One of the main differences lies in the degree of conciseness. English gas industry terminology is generally more compact and economical. This is primarily due to the extensive use of compound nouns and abbreviations. For example, terms such as gas pipeline, pressure regulator, gas storage facility convey complex technical concepts through short noun–noun constructions. English allows several nouns to be placed together without additional grammatical markers, which results in shorter and structurally dense terms.

In contrast, Uzbek gas industry terminology tends to be more descriptive and grammatically explicit. Uzbek terms often require possessive suffixes, postpositions, or verbal nouns to clearly express relationships between components. For instance, the English term gas pressure control system corresponds to the Uzbek gaz bosimini nazorat qilish tizimi, which contains more words and grammatical elements. This reflects the agglutinative nature of the Uzbek language, where grammatical relations are expressed through suffixes rather than word order alone.

Another important aspect of comparison is word-formation methods. English widely uses derivational suffixes such as -tion, -er, -or, and -ing to form technical terms (compression, transmission, separator). Uzbek, on the other hand, primarily employs suffixes like -ish, -uvchi, -lash, which result in structurally longer but semantically transparent terms (siqilish, uzatuvchi, tozalash). This transparency helps Uzbek specialists easily understand the functional meaning of terms.

Borrowing also plays a crucial role in shaping the terminological systems of both languages. Many Uzbek gas industry terms are borrowed from English either directly or through Russian. While borrowed terms such as kompressor, separator, and regulyator retain their original technical meaning, they are adapted to Uzbek phonetic and morphological norms. This process leads to partial structural convergence between the two languages.

Despite structural differences, there are notable similarities. Both English and Uzbek gas industry terminologies rely on common international scientific concepts, which ensures semantic equivalence. Moreover, globalization, international cooperation, and technological exchange contribute to the continuous interaction between the two terminological systems. As a result, English increasingly influences Uzbek gas industry terminology, especially in the fields of innovation, digital control systems, and liquefied gas technologies.

In summary, while English gas industry terminology is characterized by structural compactness and syntactic flexibility, Uzbek terminology emphasizes clarity and grammatical completeness.

These differences must be carefully considered in translation, terminology standardization, and professional communication to avoid ambiguity and ensure accuracy.

### **Conclusion**

The structural description of gas industry terminology in English and Uzbek demonstrates that both languages employ similar methods of term formation, including simple, derived, compound, and multi-component terms. However, the structural realization of these terms is determined by the grammatical and typological characteristics of each language. A thorough understanding of these features is essential for effective translation, terminology standardization, and professional communication in the gas industry.

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