



### Abstract

## TRANSLATION PROBLEMS OF TECHNICAL TEXTS: A LINGUISTIC AND PRACTICAL ANALYSIS

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Technical translation is an essential activity in the global dissemination of scientific and technological knowledge. However, translating technical texts poses significant linguistic, terminological, and cultural challenges that differ from general translation practices. This article examines the primary problems encountered in technical translation, including terminological inconsistency, syntactic complexity, lack of contextual information, cultural differences, and the dynamic nature of technical documentation. It also explores strategies to mitigate these issues, emphasizing the importance of subject matter expertise and the integration of translation technologies.

**Key words:** Technical translation, terminology, context, localization, syntactic complexity, translation challenges, abbreviation, homonyms.

### Introduction

In the age of globalization, the translation of technical texts has become increasingly vital for industries such as engineering, information technology, medicine, and manufacturing. Technical documents—including manuals, technical specifications, patents, and scientific research papers—require a high degree of precision and clarity. Unlike literary translation, technical translation is constrained by specialized terminology and the need for functional accuracy. The objective of this article is to identify the common challenges in translating technical texts and to provide linguistically and practically grounded solutions.

### Terminological Challenges

The most prominent problem in technical translation is terminology. Technical texts rely heavily on discipline-specific vocabulary, which may be newly coined, abbreviated, or lack a direct equivalent in the target language. Terminological inconsistency can compromise the clarity and safety of a translated document, particularly in fields such as medicine or aviation. Some technical terms have no direct equivalents in the target language. Translators may struggle to maintain accuracy, often resorting to explanations or borrowing terms. A term may have multiple meanings depending on the context or discipline. Incorrect interpretation can lead to mistranslation and potential functional or safety issues. Professional translators should consult standardized glossaries, create customized termbases, and collaborate with subject matter experts. Using tools such as IATE and translation memory (TM) software helps maintain consistency and accuracy.

### Syntactic and Stylistic Complexity

Technical texts often contain long, complex sentences, passive constructions, and dense informational structures. These features, while acceptable in the source language, can reduce readability and increase ambiguity in translation. Technical texts often employ a wide range of syntactic structures, including complex clauses, embedded sentences, and specialized

terminology, which can be challenging to render accurately in another language. Apart from this, technical writing prioritizes precision and clarity, requiring translators to maintain the same level of accuracy in the translated texts. This can involve carefully choosing synonyms, clarifying ambiguous phrases, and ensuring the correct usage of technical terms. Translators should aim for syntactic simplification where appropriate, ensuring that meaning remains intact. Sentence segmentation, restructuring, and the use of active voice can enhance readability without sacrificing technical content.

### Contextual Limitations

Technical texts often assume a certain level of background knowledge. Non-expert readers may find the material inaccessible, while experts may find it overly simplistic. Many technical translators receive isolated text segments or files with minimal background information. This lack of context increases the risk of semantic errors, especially when dealing with homonyms, abbreviations, or non-standard usage. Whenever possible, translators should obtain reference materials or contextual clarifications from clients. Participating in pre-translation briefings and reviewing product documentation can also improve accuracy.

### Abbreviations and Acronyms

Technical documents often include a variety of abbreviations and acronyms, which may be ambiguous or have different meanings in different fields or languages. Translating abbreviations presents significant challenges due to their inconsistent usage, potential ambiguity, and the removal of context that could aid in understanding the intended meaning. Finding equivalent abbreviations in the target language, maintaining consistency throughout the text and understanding the meaning when an abbreviation is used without being spelled out first are all difficulties. Translators must determine the intended meaning through research or consultation and decide whether to translate the acronym, retain the original, or explain it in parentheses or a glossary.

### Cultural and Regional Variations

As everyone knows, cultural differences can influence the style and tone of technical texts. Cultural nuances and regional preferences can affect the interpretation of units, symbols, formats (e.g., date/time), and even colors or warning signs. Failure to adapt these elements may lead to miscommunication or non-compliance with local standards. Localization is critical. Translators must adjust units of measurement, regulatory references, and conventions to align with the target culture, ensuring the document's relevance and usability. Technical documentation is frequently revised, especially in software development and engineering. Keeping translations aligned with the latest versions can be challenging. Solution: The use of CAT tools, translation memory systems, and version control software enables efficient updates and consistency across iterations. Modern translation relies heavily on technology. Tools such as machine translation (MT), terminology management systems, and quality assurance (QA) software can support but not replace the translator's expertise. MT is particularly useful for draft translations or internal documents, but post-editing by a qualified translator remains essential for publication-quality texts.

### Conclusion

Technical translation is a specialized field that demands not only linguistic competence but also deep subject matter knowledge, cultural awareness, and technological fluency. The translation problems outlined in this article—ranging from terminology to contextual

ambiguity—highlight the complexity of the task. By adopting best practices, utilizing advanced translation tools, and engaging in continuous professional development, translators can significantly improve the accuracy and effectiveness of technical communication across languages.

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