Technical Translation

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TECHNICAL TRANSLATION

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SUMMARY

Translating business documentation and technical texts allows limited creative freedom. Precision in research and semantics is crucial, particularly when dealing with terms commonly used within a specific field. One such challenge is presented in the analysis of three translations: "Vodopravna dozvola za ispuštanje otpadnih voda" ("Water Rights Permit for Wastewater Discharge"), which posed challenges primarily regarding legal translation. It effectively conveys the legal rights associated with water usage and management. The second document, "Elaborat gospodarenja otpadom" ("Waste Management Study"), was the most challenging task for the translator. From translating the term "elaborat" all the way to the lack of expert dictionaries and the multifaceted use of the term in Croatian contexts further complicated translation in this field. The third technical text, "Izvješće o ispitivanju radnog okoliša" ("Examination Report on Work Environment"), presented fewer challenges. This report examines and evaluates the work environment of a specific workplace or location, providing an intricate overview of factors that may affect employee safety, well-being, and physical condition – all descriptive materials that were fairly easily conveyed into English.

Understanding the purpose and target audience of technical documents is vital for accurate translation. Given the field of translation is often overlooked in Croatia, leading to a scarcity of specialized dictionaries, particularly in waste management and bureaucratic documentation (being two themes presented in the source texts), descriptive approaches are sometimes employed to ensure accurate translation of document titles and purposes.

Keywords: business documentation, technical documentation, translation from Croatian to English, the "Skopos" theory, clarity and accuracy of technical translations

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1. INTRODUCTION

As far as creative freedom in translating is concerned, not much of it is allowed especially when it comes to business documentation and technical texts. Extensive research and semantic precision are essential, especially when translating terms that are taken for granted due to their usage in everyday communication.

When it comes to the first selected document, "Vodopravna dozvola za ispuštanje otpadnih voda", the technical part of the translation proved to be moderately challenging; however, the legal translation was a part where additional research and methodology was needed. The term "vodopravna dozvola" has been translated as "Water Rights Permit". The term "vodopravna dozvola" is a legal concept used in Croatian legislation related to water management and resource usage. It refers to a permit or authorization granted by the competent authority that regulates the rights and conditions for the use and management of water resources. This includes activities such as water extraction, diversion, discharge, construction of water-related infrastructure, and other activities that require official permission (prema Bujas, 2019). The translation "Water Rights Permit" effectively conveys the meaning of the original term. It highlights the notion of legal rights associated with water usage and management, and it also signifies that individuals or entities must obtain a permit that grants them the legal authority to engage in specific water-related activities within the scope defined by the permit.

During the translation of the title of the second subject document, "Elaborat gospodarenja otpadom", the challenges began. According to the online page of the central Croatian lexicographic institution, the Miroslav Krleža Institute of Lexicography, an "elaborat" is defined as a text that contains a detailed analysis of a particular subject. Additionally, the website suggests that the word in question has its origins in the Latin language but was likely borrowed from the German language during a period when Croatia was governed by the House of Habsburg. The famous Croatian-English dictionary written by Željo Bujas lists "survey, study, report, analysis, project book", and "plan" as possible translations (Bujas, 2019: 291). The

Croatian word “elaborat” is used in various contexts, making it challenging to opt for a single solution. Given that translation is still a developing discipline in Croatia, the lack of expert dictionaries regarding waste management and bureaucratic documentation further complicates the translator's job. Often, the translator needs to resort to description in order to accurately translate the title and purpose of a document. Determining the text's purpose and its target audience is crucial in translating technical documentation.

The third technical text, “Izvješće o ispitivanju radnog okoliša” (“Examination Report on Work Environment”) has been the least challenging in terms of its translation into English. It is a document compiled to scrutinize and evaluate the operational surroundings of a particular workplace or location. This comprehensive report offers an intricate synopsis of the circumstances and elements that can potentially impact the security, well-being, and physical condition of employees within that setting. One interesting ‘feature’ regarding the translation of this document is the translation of technical abbreviations to English, a matter to which special attention has been given within this paper.

1.1. SUBJECT MATTER AND OBJECTIVE

The subject matter of this paper revolves around the challenges and considerations involved in translating business documentation with a special regard to technical texts, when it comes to Croatian to English translation.

The objective of the text is to highlight the importance of extensive research, semantic precision, and understanding of legal and technical concepts in achieving accurate translations.

1.2. RESEARCH METHODOLOGY

Upon conducting this research focusing on a specific technical translation from English to Croatian, it has proved paramount to follow an almost classical, scholarly research methodology in order of ensuring a systematic and scientifically supported study.

Primarily, the research objectives were clearly stated, such as examining specific translation challenges, analyzing translation strategies, or evaluating the quality of translated texts. This helped guide the research and provided focus to the study.

Secondly, a comprehensive review of existing literature on translation studies was conducted: key theories, methodologies, and previous studies relevant to the research topic were identified. This helped build a theoretical framework and identified research gaps.

Thirdly, the appropriate research for the study was determined. It involved qualitative methods such as case studies, comparative analysis, or textual analysis, or quantitative methods like surveys or corpus analysis. The most suitable approach was selected based on the research objectives and available resources.

All available relevant data for the study was identified and collected. This included translated texts, bilingual corpora, professional translators' feedback, or user surveys.

The collected data was then analyzed using appropriate analytical techniques. Strengths and limitations have been highlighted as to give way to a conclusion. The research findings were then summarized, highlighting their significance and contributions to the field of translation studies. Suggestions for further research or practical applications were offered in the Bibliography of the paper.

Throughout the research, a rigorous and ethical approach was maintained, including proper acknowledgment of sources, maintaining data confidentiality, and adhering to ethical guidelines.

1.3. RESEARCH HYPOTHESIS

A comprehensive understanding of legal and technical concepts, combined with extensive research and semantic precision, is essential for achieving accurate translations of specialized documents.

By conducting thorough research and employing precise linguistic techniques, translators can effectively overcome challenges encountered during the translation process, particularly in the translation of legal terms and technical terminology. The lack of expert dictionaries in specific domains poses an additional challenge that translators must address through careful analysis and contextual interpretation.

Moreover, accurate translations that capture the intended meaning of the original texts rely on a deep understanding of the purpose and target audience of technical documents. Translators must consider the specific requirements and expectations of the readership, ensuring that the translated documents convey the appropriate information and maintain their intended functionality.

The hypothesis suggests that successful translation of business and technical documents necessitates a combination of expertise in both the source and target languages, as well as a comprehensive understanding of the subject matter. Through targeted research, linguistic precision, and an awareness of the cultural and contextual nuances, translators can achieve accurate and effective translations, facilitating clear communication and ensuring that the intended message is conveyed to the target audience and ready to be carried out by those workers whose native language is not Croatian and who in fact have no understanding of either Croatian nor the subject matter, except the probable mandatory training they have had to undergo in order of performing the tasks mentioned in these documents.

2. TECHNICAL TRANSLATION: BRIDGING LANGUAGE AND SPECIALIZED KNOWLEDGE

Technical translation plays a vital role in our interconnected global world where information needs to be shared across language barriers. It involves the translation of specialized texts that belong to various technical fields, such as engineering, IT, medicine, manufacturing, and many others. The purpose of technical translation is to accurately convey complex technical information from the source language to the target language while ensuring clarity and precision. One of the fundamental challenges in technical translation is the intricate nature of technical texts as they often contain domain-specific terminology, abbreviations, acronyms, and intricate concepts that require in-depth knowledge of the subject matter. Therefore, technical translators must possess not only excellent language skills but also a solid understanding of the specialized field they are translating.

A key aspect of technical translation is maintaining function of the text. Technical texts rely heavily on precise terminology and specific terminology conventions. Translators must diligently research and understand the terminology used in the source text and then select appropriate equivalents in the target language. In addition to terminology, translators must also consider the context and purpose of the text, ensuring that the translated content is suitable for the target audience.

Consistency is another crucial factor in technical translation. Consistency ensures that the same technical terms and concepts are consistently translated throughout a document or a series of related documents. This is particularly important for user manuals, technical specifications, or product documentation where consistency enhances clarity and reduces the risk of misinterpretation. Translators often use glossaries, style guides, and translation memories to maintain consistency and adhere to the established conventions.

Moreover, technical translation requires an understanding of cultural nuances and localization. Translators must consider the target audience's cultural and linguistic preferences, adapting the

translated text accordingly. This includes formatting, units of measurement, date formats, and any other cultural elements that may impact the readability and usability of the translated document.

In recent years, advancements in translation technology have significantly influenced the field of technical translation. Computer-assisted translation (CAT) tools (House, 2015; Zokić, 2018), such as translation memory systems and terminology management software, have streamlined the translation process and improved efficiency. These tools enable translators to store and reuse previously translated segments, ensuring consistency and saving time.

Collaboration and communication between technical translators and subject matter experts (SMEs) are essential for achieving high-quality technical translations (Zokić, 2018). SMEs provide valuable insights into the subject matter, clarify doubts, and help resolve any ambiguities that may arise during the translation process. This collaborative approach ensures that the final translation accurately reflects the intended meaning and meets the requirements of the target audience.

Quality assurance is a critical component of technical translation. Translations often undergo a thorough review process, involving proofreading, editing, and revision to ensure accuracy, clarity, and adherence to industry standards. Quality assurance also involves checking for any linguistic or technical errors and verifying the consistency of the translated content (Kučiš, 2010).

All of these basic theoretical facts make technical translation a specialized field that requires a combination of linguistic proficiency, subject matter expertise, and attention to detail. Translators must possess in-depth knowledge of the subject matter, stay updated with the latest industry trends, and continually refine their translation skills. By bridging language and specialized knowledge, technical translation facilitates effective communication, enables the transfer of valuable information, and contributes to the success of various industries worldwide.

2.1. TECHNICAL TRANSLATION FROM CROATIAN TO ENGLISH

When it comes to making a technical translation from Croatian to English, there are certain theoretical aspects that guide the translation process. Some key points for a translator to consider are focused primarily on terminology. Given that technical fields often have specialized terminology, it is crucial to have a thorough understanding of the specific terminology used in the subject matter being translated. This includes knowledge of technical terms, industry jargon, and acronyms commonly used in the field. Also, technical translations require a high level of accuracy. It is important to convey the precise meaning of the source text while maintaining the technical integrity of the content. When it comes to clarity and readability, while technical translations require precision, it is equally important to ensure that the translated text is clear and easily understandable to the target audience[1]. This involves using appropriate sentence structures, organizing information effectively, and adapting the text to the linguistic and cultural conventions of the target language. Consistency is key in technical translations, especially within the same document (as is the case here) or across a series of related documents. Consistent terminology, style, and formatting help maintain coherence and facilitate comprehension. Translators should make use of glossaries, style guides, and translation memories to ensure consistency throughout the translation (Kučiš, 2010; House, 2015).

Technical translations often deal with complex and specialized subject matters. Translators with expertise or background knowledge in the specific field can provide a deeper understanding of the content, ensuring accurate and contextually appropriate translations. They are however considered an asset, and rarely a necessity. The reason for the later is to be found in the research and reference materials that precede the process of translation. Technical translators may quite often need to conduct research and refer to various reference materials, such as technical dictionaries, industry-specific publications, and online resources, to ensure accurate translation of technical terms and concepts.

[1] As a rule, when it comes to the target audience of a certain technical translation, it will be small or limited to a few experts in a specific field. However, as is the case with one of the texts that serves as the subject matter of this paper (namely the "Operational Procedures for Waste Management"), a technical translation can be intended for executive personnel who may not necessarily be educated workers. Therefore, in addition to the accuracy and comprehensibility of the technical translation, it is advisable to educate those individuals who will need to read and follow through with the directions from within the text, all in order of understanding the context of/and the work process that lies ahead of them.

Overall, technical translation requires a combination of linguistic skills, subject matter expertise, and attention to detail. It is important for translators to stay updated with the latest developments in the field and continuously improve their knowledge and skills to provide accurate and effective technical translations.

2.2. THE “SKOPOS” THEORY

The “Skopos” theory, also known as the Skopos approach or Skopos theory of translation, is a concept within translation studies that focuses on the purpose or function of a translation. Developed by the German linguist Hans J. Vermeer in the late 1970s and early 1980s, the Skopos theory revolutionized the field by shifting the emphasis from a source-oriented approach to a target-oriented approach in translation.

“Skopos” comes from Greek and means “purpose”, and according to Vermeer, “the highest rule of a theory of translational action is the 'skopos rule': any action is determined by its purpose, i.e., it is a function of its purpose or skopos” (Reis, Nord and Vermeer, 2014: 90). In simple terms, Vermeer meant to say that “the end justifies the means” (Reis, Nord and Vermeer, 2014: 90). The translator (or the translator's employer since translation is also a commercial activity and the text is a commodity) must first determine the function of a particular text in the source language and culture. This gives the translator the opportunity to modify certain elements of the text to achieve the original intended effect in a foreign culture and language, as long as the translator remains faithful to the purpose of the text, i.e., the author's intention. To determine the purpose of a text, the translator must also know the intended audience for the product (the text) in question.

The Skopos theory recognizes that each translation has its own specific purpose and target audience, and the translator's task is to create a translation that is appropriate and effective for that purpose and audience. This means that the translator may need to make certain adaptations, adjustments, or even departures from the source text in order to meet the requirements of the target context.

The Skopos theory highlights the importance of understanding the communicative situation, the needs of the target audience, and the intended function of the translation. It emphasizes that the translator's choices and decisions should be determined by the intended purpose of the translation rather than slavishly adhering to the source text.

Overall, the Skopos theory recognizes the dynamic and purposeful nature of translation, where the translator plays an active role in mediating between different cultures and languages to achieve effective communication in the target context.

3. ANALYSIS OF SOURCE TEXT "WATER RIGHTS PERMIT FOR WASTEWATER DISCHARGE"

English (target) text

HRVATSKE VODE 17 -05- 2022
VODNOGOSPODARSKI ODJEL
ZA MURU I GORNJU DRAVU
42000 Varaždin, Međimurska 26b

Telephone 042 / 40 70 00
Fax: 042 / 40 70 03

This became an executive order on the date of
18.05.2022.
notarized by:
Valentina Tuk

CLASS: U P/I-325-04/22-07/0000027
REG.NO: 374-26-3-22-9
DATE: 13.05.2022

Hrvatske vode (OIB: 28921 383001), Water Management Department for the Mura and Upper Drava, on the basis of Article 164, Paragraph 2 of the Water Act ("Official Gazette", number: 66/19, 84/21; further in text: Water Law), in connection with the request of Lotus 91 d.o.o., Varazdin, Jalkovec, Braće Radića 103/a (OIB: 15331545057), represented by the board member Dejan Cvrk, S tefanec, Ludbreška 11 (OI8: 67816901759), for the purpose of issuing a water rights permit for discharge of wastewater, for the location Lotus 91- Ludbreg Plant, Ludbreg, Frankopanska 68, the permit is issued for a:

WATER RIGTHS PERMIT FOR WASTEWATER DISCHARGE

WATER RIGHTS PERMIT is issued

BENEFICIARY: LOTUS 91 d.o.o.
Varaždin, Jalkovec, Braće Radića 103 /a
OIB 15331545057

FOR LOCATION: LOTUS 91 d.o.o. - Ludbreg Plant
Ludbreg, Frankopanska 68
C.P.No. 519/1, C.O. Ludbreg
ID: 7269

for the discharge of industrial wastewater from the internal drainage system from the location of the polluter into the mixed public drainage system in the area of the Ludbreg agglomeration.

Source: Water Rights Permit for Wastewater Discharge, 2022: 1.

The term “vodopravna dozvola” refers to a legal concept in Croatian legislation governing water management and resource utilization. It denotes an official authorization or permit issued by the competent authority, regulating the rights and conditions pertaining to the utilization and administration of water resources. Such permissions encompass activities like water extraction, diversion, discharge, construction of water-related infrastructure, and other endeavors necessitating official consent. The translation “Water Rights Permit” effectively underlines the essence of the original term by emphasizing the legal entitlements associated with water usage and management. It signifies that individuals or entities must obtain official permission granting them the legal authority to engage in specific activities involving water within the defined parameters of the permit.

3.1. TRANSLATING LEGAL TEXT FROM CROATIAN TO ENGLISH

One of the fundamental challenges in legal translation is the inherent differences between legal systems. Each legal system has its unique legal principles, concepts, and terminology that may not have direct equivalents in the target language. Legal translators must possess a comprehensive knowledge of the legal systems involved and be able to accurately convey the intended meaning of the source text while considering the legal framework of the target language.

English Source Text

Statement of reasons

The company Lotus 91 d.o.o., Varaždin, Jalkovec, Braće Radića 103/a (OIB:15331545057), requested in a submission dated January 25, 2022, the issuance of a water permit for the discharge of waste water from the location Lotus 91- Ludbreg Plant, Ludbreg, Frankopanska 68 in public drainage system in the Ludbreg agglomeration area.

The following documentation is attached to the request:

- Questionnaire for creating a cadastre of wastewater emissions;
- Description of activities at the location;
- Extract from the court register of the date: 20.07.2020
- Notice on the classification of a business entity according to the NCEA 2007, CLASS: 951-03/ l 0-01 /03, REG.NO: 555-10-03-01-10-2, dating from 20.04.2010;

077529985

- extract from the cadastral plan from 28.05.2020
- extract from the land register from 18.05.2020
- An overview of the location of the wider area with a marked boundary of locations of purifiers, with a presentation of the existing drainage solution to the point of discharge into the receiver;
- Inspection report on testing the watertightness of the sewage system, report number: 1815-472-1-20-K, test conducted by Eko-monitoring d.o.o., Varaždin, test conducted on July 3, 2020;
- Test report on testing the watertightness of the water storage system, report number: 1815-472-2-20-K, test conducted by Eko-monitoring d.o.o., Varaždin, test conducted on July 3, 2020;
- Examination report on the examination of the composition of wastewater V 01340/20 (examination conducted on July 2, 2020);
- Decision on the derived state, CLASS: UP/I-361-07 /l 3-01 /209, REG.NO: 2186/1- 06-3/ 1-13-9-DP, dated 13.05.2013
- Plan of work and maintenance of water structures for drainage and wastewater purification devices on the date of 21.01.2022

Source: Water Rights Permit for Wastewater Discharge, 2022: 5-6.

Legal texts are known for their complexity and formal language. As such, legal translation is a specialized field that demands a deep understanding of both legal and linguistic concepts. Legal translators act as bridges between different legal systems, ensuring accurate and clear communication across languages. Their expertise in legal terminology, research skills, and knowledge of legal systems contribute to the accuracy, integrity, and effectiveness of legal translations. By upholding the principles of accuracy, clarity, confidentiality, and ethical conduct, legal translators play a vital role in facilitating cross-border legal communication and promoting justice in an increasingly interconnected world.

Table 1 - Legal Terminology

English (target) text
Hrvatske vode (**OIB**: 28921383001), **Water Management Department for the Mura and UpperDrava**, based on Article 164, Paragraph 2 of the Water Act ("**Official Gazette**", number: 66/19, 84/21; further in text: Water Law), in connection with the request of Lotus 91 d.o.o., Varaždin, Jalkovec, Braće Radića 103/a (OIB: 15331545057), represented by the board member Dejan Cvrk, Štefanec, Ludbreška 11 (OIB: 67816901759), for the purpose of issuing a **water rights permit for the discharge of wastewater**, for the location Lotus 91-Ludbreg Plant, Ludbreg, Frankopanska 68, is issued for a:

Source: excerpt from source text pp.1.

The Personal Identification Number (OIB) is has been left unchanged. In Croatia, the OIB a unique identification number used to identify individuals for various administrative and legal purposes whereas they use their PINs (mostly) to access their financial accounts. It is not recommended to translate the OIB from Croatian into English for several reasons, the main one being legal and administrative accuracy[2]. The OIB is (much as the social security number in the USA) a specific identification number that is recognized and used within the Croatian legal and administrative systems, identifying a person and its status within the various citizen institutions. Also, the OIB is widely recognized and used in Croatia, and translating it into English could create inconsistency and hinder recognition in cross-border or international contexts. By maintaining the original term, uniformity and facilitate smooth interactions within the Croatian legal and administrative framework is ensured.

[2]The PIN number is in Croatia regarded as the safety passcode number serving to access personal information, namely financial accounts. Therefore, the discrepancy between the PIN and the OIB is further underlined.

Unlike the OIB, the translation of “Narodne novine” as “Official Gazette” is based on a standardized[3] term. “Narodne novine” is the official government publication in Croatia that serves as the primary vehicle for publishing laws, regulations, official announcements, and other legal documents. It is an official source of legal information and is equivalent to other countries' official gazettes or government journals.

It is important to underline the fact that in the past 10 or more years (especially since Croatia’s joining the EU) the legal and administrative discourse has been standardized; substantial efforts have been made by Croatian-English translators to achieve institutional and/i.e. documentary uniformity when it comes to translation from Croatian into English and vice versa.

3.2. TRANSLATING ADMINISTRATIVE DOCUMENTS

When it comes to translating administrative documents from Croatian into English, a translator is necessarily faced with many choices – it is a field of comparison of terms and selecting names that fitnot only the intended aim of the document, but also its hierarchical position, when it comes to Croatian legislation. As visible in Table 2 the translation of the term “elaborat” and that of “izvještaj” as “report” is an example *par excellence* of some of the choices a translator must make. While both terms can be translated differently depending on the context, translating them as “report” serves as a general and widely accepted approach to convey their meaning in English.

[3] “Gazette” is a commonly used term in English-speaking legal systems to refer to official government publications that publish laws, regulations, and official notices. By using the term "Official Gazette," the translation aligns with established legal terminology used in English-speaking jurisdictions.

English (target) text

- Rulebook on the disposal of all types of waste from the technological process and sludge from the wastewater treatment process on the date of 21.01.2022.
- Copy of the water permit for the discharge of wastewater, CLASS: UPI-325-04/13-05/0492, REG.NO: 374/26-3-14-5, dated 24.07.2014;
- Elaborate on waste management, elaborated by the Office of the Authorized Civil Engineer, Ph.D. Matija Orešković, on the date of 09.05.2019
- Report on testing the watertightness of the tank HRN EN 1508:2007 (EK-KAN- 00125/22, dated 26.04.2022) for the collection pit of Plant 1, test conducted by the Institute for Safety Improvement d.d. examination laboratory, Trg Lava Mirskog 3/111, Osijek; Report on testing the watertightness of the tank HRN EN 1508:2007 (EK-KAN- 001 23/22, dated
- 26.04.2022) for the collection of wastewater from the workshop (Mas), test conducted by the Institute for Safety Improvement d.d. examination laboratory, Trg Lava Mirskog 3/111, Osijek;

Source: Water Rights Permit for Wastewater Discharge, 2022: 6.

The term "elaborat" in Croatian refers to a comprehensive and detailed analysis or documentation on a specific subject. It encompasses the idea of a thorough examination and presentation of information. Similarly, "izvještaj" denotes a formal account or presentation of facts, findings, or results.

Table 2 - Translating Names of Rulebooks, Permits, and Reports

English (target) text
- **Rulebook on the disposal of all types of waste from the technological process and sludge from the wastewater treatment** process, ~~on the date~~ dated 21.01.2022; - **Copy of the Water Permit for the discharge of wastewater**, CLASS: UPI-325-04/13-05/0492, REG.NO: 374/26-3-14-5, dated 24.07.2014; - **Waste Management Report**, executed by the Office of the Authorized Civil Engineer, Ph.D. Matija Orešković, ~~on the date~~ dated 09.05.2019; - **Report on testing the watertightness of the tank** HRN EN 1508:2007 (EK-KAN- 00125/22, dated 26.04.2022) for the collection pit of Plant 1, test conducted by the Institute for Safety Improvement d.d. examination laboratory, Trg Lava Mirskog 3/III, Osijek;

Source: excerpt from source text pp.6.

In the context of technical and business documents, using the term "report" as a translation captures the overall purpose and nature of these documents. It signifies that the text provides a structured and organized account of information related to a particular topic, often including

analysis, findings, and recommendations. While there may be other possible translations for "elaborat" ("elaborate", "report", "study", "survey"[4]) as well as for "izvještaj" ("account", "fill-in", "message", "notice", "relation", "release", "report", "statement", "write-up"[5]) depending on the specific context, translating them as "report" offers a concise and widely understood representation that conveys the essence of the original terms. It provides clarity and consistency in communicating the nature of the document to English-speaking persons, who are familiar with the term "report" in a similar context.

[4] http://www.design-ers.net/eh-rjecnik.asp
[5] *Ibid.*

4. ANALYSIS OF SOURCE TEXT “OPERATIONAL PROCEDURES FOR WASTE MANAGEMENT”

Source: Elaborat gospodarenja otpadom, 2019: 1.

English (target) text

WASTE MANAGMENT STUDY

LOTUS 91 d.o.o
Jalkovec, Braće Radić 103a, 42000 Varaždin

for performing waste collection and recovery activities via procedure R3, R4, R12 and R13
for NON-HAZARDOUS WASTE

at the waste management site in Ludbreg, Frankopanska 68

HRVATSKA KOMORA INŽENJERA GRAĐEVINARSTVA
dr.sc. Matija Orešković
dipl.ing.grad.
ovlašteni inženjer građevinarstva

Responsible party: Matija Orešković, b.Sc. Civ. Eng.
Place and date: Varaždin, 09.05.2019

Source: Waste Management Study, 2019: 1.

In this document, various technological processes for managing waste and the types of waste to be processed are detailed, including necessary instructions, safety precautions, and legal solutions and documents. For a more encompassing translation, the document was rendered as “Operational Procedures for Waste Management”.

4.1. LAND REGISTER AND CADASTRAL DATA

Source: Elaborat gospodarenja otpadom, 2019: 3.

English (target) text

LOCATION OF THE WASTE MANAGEMENT SITE			
PLACE	Ludbreg	POST NUMBER	42230
ADDRESS	Frankopanska 68	COUNTY	Varaždinska
CADASTRAL DATA			
cadastral municipality	Ludbreg		
cadastral number	519/1		
LAND REGISTRY DEPARTMENT DATA			
cadastral municipality	Ludbreg		
land registry record number	2759		
cadastral number	519/1		

Source: Waste Management Study, 2019: 3.

The Croatian word "katastar" is translated as "cadaster". It is a comprehensive land information system that includes data on land ownership, property boundaries, and other related information. It is maintained by the State Geodetic Administration (Cro. *Državna geodetska uprava*) and its function is to keep records of land parcels, property rights, and changes in land ownership. The cadaster plays a crucial role in legal and administrative procedures related to land transactions, property ownership, and urban planning. It provides accurate and up-to-date information to individuals, businesses, and government authorities to ensure proper management and utilization of land resources. A cadastre parcel is the basic unit of the land cadastre used for legal and administrative delineation of land holdings. It is a specific piece of land identified by its geographical position, dimensions, boundaries, and land register. "Zemljišnoknjižni odjel" is translated as "Land Register Data". It is a juridical instance holding all cadastral data regarding a specific (defined in size and location) geographical unit.

What is interesting regarding the translation of cadastral data in terms of Croatian-to-English translation is the fact that the terms and resources available have been heavily unified and thus such a translation holds almost no problematic elements at all. This example shows to prove just

how important land ownership is, and also, by the amount of regulations involved within this process – how international purchasing of land in Croatia is a common practice. Wherein technical translation will prove to be quite a different matter, translating the economic and juridical aspects of land ownership (and its transfer upon purchase) is one of the easiest tasks for a translator nowadays.

4.2. TECHNICAL MATERIALS AND PROCESSES

English (target) text

CONVERSIONS THROUGH THE TECHNOLOGICAL PROCESS			
WASTE MATERIAL ENTERING THE PROCESS		WASTE MATERIAL COMING OUT OF THE PROCESS	
ECW CODE	WASTE MATERIAL NAME	ECW CODE	WASTE MATERIAL NAME
020104	plastic waste (excluding packaging)	020104	plastic waste (excluding packaging)
070213	plastic waste	070213	plastic waste
120105	shavings from (crushing and milling) plastic	120105	shavings from (crushing and milling) plastic
150101	paper and paperboard packaging	150101	paper and paperboard packaging
150102	plastic packaging	150102	plastic packaging
150103	wooden packaging	150103	wooden packaging
150104	metal packaging	150104	metal packaging
150105	multi-layered packaging	150105	multi-layered packaging
150106	mixed packaging	150106	mixed packaging
150107	glass packaging	150107	glass packaging
150109	textile packaging	150109	textile packaging
160119	Plastic	160119	plastic
170203	Plastic	170203	plastic
19 08 05	compound sludge produced by urban wastewater processing	19 08 05	compound sludge produced by urban wastewater processing
19 12 01	paper and cardboard	19 12 01	paper and cardboard
19 12 02	iron and alloys containing iron	19 12 02	iron and alloys containing iron
19 12 03	non-ferrous metals	19 12 03	non-ferrous metals
19 12 04	plastic and rubber	19 12 04	plastic and rubber
19 12 05	glass	19 12 05	glass
19 12 08	textiles	19 12 08	textiles

Source: Waste Management Study, 2019: 21.

Translating technical materials from Croatian to English presents several challenges. One of the main difficulties lies in accurately conveying the specialized terminology and concepts, which include specific industrial (procedural) context. Additionally, cultural and regional variations can pose challenges in translating technical materials. The following examples are underlined as most interesting in this context:

- The word “strugotine” can be translated into English as either “shavings”, “metal shavings” or “metal filings”. It refers to small, thin pieces or particles of metal that are

produced during processes like machining, grinding, or cutting[6]. Given that the source document stated that the shavings are due to "grinding and milling", the simplest option has been chosen for the translation.

- The expression "glodanje" in English can be translated in several ways, including: milling, machining, milling operation(s), cutting, and millwork. Depending on the context, the chosen translation may vary, as was the case with the object translation.
- The word "muljevi" is commonly translated to English as "sediments" or "sludge sediments". Depending on the context, variations in translation are possible. In the example being examined, the term chosen was "compound sludge" given that it refers to a mixture or combination of various types of sludge. Sludge is a semi-solid material produced as a byproduct of industrial, wastewater treatment, or other processes, containing solids, liquids, and sometimes gases. "Compound sludge" can therefore denote a mixture of different sludges or a sludge that has undergone some form of treatment or processing to create a composite material.
- When it comes to translating the term "višeslojna ambalaža" aside from "multi-layer packaging", other translations include "multilayer packaging", "multi-ply packaging", or "multi-level packaging". All of these translations describe the concept of packaging that consists of multiple layers of materials.
- The term "obojeni metali" is translated as "non-ferrous metals". It is a common technical translation, although in Croatian the emphasis is on their color wherein in English the emphasis is in the fact that these metals do not contain iron in significant amounts. Common examples of non-ferrous metals include aluminum, copper, zinc, lead, nickel, and precious metals like gold, silver, and platinum. In the context of this translation the most important characteristic if non-ferrous metals is that they are differently colored than iron and can be distinguished from it (at first glance) by color alone.

[6] The translation may vary depending on the context and the specific type of metal being referred to.

English (target) text

Supervision of the technological process

The serviceability of the device/equipment is proven by a Certificate

- mill for crushing ABLE plastic packaging, a Record on the performed inspection and examination of work equipment
- crusher for AMIS bulk plastic, a Record on the performed inspection and examination of work equipment
- crusher for MEWA bulk plastic, Certificate of testing machine or device with increased hazards

Source: Waste Management Study, 2019: 32.

Certain names of machines have not been translated, given that they refer to the official i.e. commercial name of a specific piece of equipment or material. Such acronyms include:

- ABLE plastic packaging
- AMIS bulk plastic, and
- MEWA bulk plastic.

Table 3 - Technical Translation of Method

English (target) text
The waste management site is equipped with devices, ***fire extinguishing equipment and means***, a hydrant network, ***fire extinguishing devices*** and sand barrels. ***According to Art. 55 The Occupational Safety and Health Act (OG 71/14, 118/14, 154/14, 94/18, 96/18)*** the means of evacuation are organized and provided in the case of a sudden event (natural disaster, fire, explosion, release of hazardous substances in quantities above the permitted levels, etc.) which may endanger the safety and health of employees or other persons in the following ways:

Source: Source: excerpt from source text pp.9.

The translation aims to accurately convey the content and information from the source text. It ensures that the meaning of each sentence and phrase is preserved, allowing the reader to understand the original intent. The translation maintains the use of legal terminology to ensure consistency with the original text and the relevant legal framework. It uses terms such as “The

Occupational Safety and Health Act"[7] to reflect the specific legislation mentioned in the original text. Also, it has been taken into account the specific context of waste management, safety regulations, and workplace protection thus ensuring that the reader, who may not be familiar with the Croatian legal system, can understand the purpose and measures related to safety and health at the waste management site.

Table 4 - Translating "Pravilnik" as "Ordinance"

English (target) text
Article 18, paragraph (5) of the ***Ordinance on packaging and packaging waste*** (OG 88/15, 78/16, 116/17)

Source: excerpt from source text pp.14.

One may argue that due to the different legal systems and jurisdictions, a legal text can never be accurately i.e. straightforwardly translated. Still, having in mind that this is a plan for Croatian waste management, it is certain that the document will be used (installed) in no other country than Croatia. Therefore, the "Ordinance on packaging and packaging waste" effectively conveys the necessary information along with the official references for the publication of the ordinance in the Official Gazette.

[7] The "Occupational Safety and Health Act" (mentioned with its corresponding number and official references) ensures compliance with the original legal requirements and provides accurate information about the regulations that apply, given the different legal systems and jurisdictions.

Source: Elaborat gospodarenja otpadom, 2019: 14.

English (target) text

Article 18, paragraph (4) of the Ordinance on packaging and packaging waste (OG 88/15, 78/16, 116/17)	
Special terms and conditions for performing individual technological processes	***The collector is obliged to hand over the collected waste packaging to the person authorized for the waste packaging process.***
Fulfilment method	The collected waste packaging is handed over to the person authorized for processing waste packaging.
Article 18, paragraph (5) of the Ordinance on packaging and packaging waste (OG 88/15, 78/16, 116/17)	
Special terms and conditions for performing individual technological processes	***The collector is obliged to keep records of separately collected waste packaging quantities with regard to the type of the material and depending on the processor who provided the waste, as well as with regard to the condition of the waste packaging warehouse. The contractor is also obliged to submit the data from the records for the previous month to the Register on the form Report on collected waste packaging (hereinafter text: Form AO4) referred to in Annex VIII of this Regulation once a month.***
Fulfilment method	Records of separately collected quantities of packaging waste are kept with regards to the type of the material and depending on the processor who provided the waste, as well as with regard to the condition of the packaging waste warehouse. The data from the records for the previous month is submitted to the Register once a month in the prescribed form.

Source: Waste Management Study, 2019: 14.

In this case, "Članak 18. stavak (5)" is translated as "Article 18, paragraph (5)". This maintains the structure and numbering system used in legal texts[8]. The term "Pravilnik o ambalaži i otpadnoj ambalaži" is translated as "Ordinance on packaging and packaging waste", providing an accurate representation of the subject matter. The word "ordinance" is commonly used to translate the term "pravilnik" in legal contexts. It refers to a regulatory or administrative rule issued by a competent authority that has the force of law. The choice of "ordinance" as a translation is based on the similarity of functions and legal significance between the two terms in their respective legal systems. However, there are alternative translations for "pravilnik" depending on the specific context. Some possible alternatives include "regulation", "rule" or "bylaw". These terms can also convey the idea of a legally binding document that prescribes specific rules, regulations, or requirements.

[8] The reference to "NN 88/15, 78/16, 116/17" indicates the Official Gazette numbers and years in which the ordinance was published. This information is crucial for readers to locate the official text and review the specific provisions mentioned in the article.

4.3. TRANSLATING NAMES OF GOVERNMENT INSTITUTIONS

Translating names of government institutions from Croatian to English can present several challenges due to differences in administrative structures, cultural contexts, and terminology. With the respect to the lack of official English translations, some government institutions in Croatia do not have official English translations readily available. This lack of standardized translations can make it difficult to find accurate equivalents in English. Translators therefore have to rely on their own judgment or use descriptive translations to convey the meaning of the institution's name. Also, government institutions often have names that are specific to the political and administrative context of the country. These names may reference historical, geographical, or cultural aspects that are unique to Croatia. Translating such names requires considering the cultural significance and finding appropriate equivalents that convey the essence of the original name in the target language.

English (target) text

Version:

Office of the certified **civil engineer**
Matija Orešković, b.Sc. Civ. Eng.
Jalkovečka 80, **42000 Varaždin**

Waste management permit:

CLASS:	VARAŽDIN COUNTY - CITY DEPARTMENT OF BUILDING AND ENVIRONMENTAL PROTECTION
REGISTRY NUMBER:	
DATE:	
COPY OF THE STUDY: *1*	L.S.

THE PARTY RESPONSIBLE FOR THE STUDY

NAME AND SURNAME	MATIJA OREŠKOVIĆ		
Personal Identification Number (ID-NUMBER)	75089140194		
TITLE AND QUALIFICATION	b.Sc. Civ. Eng.		
NAME OF THE CHAMBER	CROATIAN CHAMBER OF CIVIL ENGINEERS		
PHONE NUMBER	-	E-MAIL	matija.oreskovic@gmail.com
MOBILE NUMBER	098/424-431	TELEFAX	-

INFORMATION ON THE APPLICANT FOR THE PERMIT

COMPANY	LOTUS 91 Ltd.		
Personal Identification Number (ID-NUMBER)	15331545057	SOC. SEC. NO.	070042067
HEADQUARTERS			
PLACE	Jalkovec	POST NUMBER	42000
ADDRESS	Braće Radić 103a	COUNTY	Varaždinska
PHONE NUMBER	042/370-116	E-MAIL	info@lotus91.hr
MOBILE NUMBER	-	TELEFAX	042/370-316

Source: Waste Management study, 2019: 1.

In the example (source text) evaluated here, the administrative subdivisions of the Croatian Republic, known as "županije", can easily be translated. The appropriate equivalent is "counties", meaning that "varaždinska županija" was translated as "Varaždin County". However, institutions such as "Upravni odjel za prostorno uređenje, graditeljstvo i zaštitu okoliša" proved to be a more difficult undertaking. No official English translations were found[9] on the web pages of this particular department or on the websites of other departments operating under the same name in different Croatian counties, leaving the translator to rely on their own means once again.

[9] When it comes to differences in administrative structures, it is notable that government institutions in different countries may have varying administrative structures and functions. Translating names of Croatian government institutions to English may require adapting the terminology to fit the corresponding administrative systems in the English-speaking countries. This can involve using terms such as "department", "office", "agency", or "ministry" depending on the specific nature of the institution.

In this case, and similar cases, a verbatim translation was used: “Department of Physical Planning, Construction, and Environmental Protection”.

Government institutions often have legal and jurisdictional implications associated with their names. When translating these names, it is important to ensure that the translated name accurately reflects the institution's legal status and responsibilities in the target language. Legal and jurisdictional research is often necessary to ensure accuracy and compliance with the relevant laws and regulations. Therefore, maintaining consistency in translated names of government institutions is crucial, especially when multiple institutions with similar functions exist. Translators need to ensure that the translated names align with established conventions and terminologies used in English-speaking countries. In this sense, consistency is paramount for it helps in avoiding confusion and facilitates effective communication in the target language.

4.4. SPECIFIC MACHINES AND MATERIALS

Table 5 - Machines and Materials

English (target) text
The company disposes of adequate devices and equipment for waste collection and recovery, namely: - an automatic sorting machine for plastic - an inclined conveyor **that transports packaged waste to a sorting unit** - a straight belt conveyor for packaged waste in sorting process - an inclined belt conveyor for transporting sorted packaged waste to the mill - crushing mills for plastic packaging - air transport of **crushed granulate** to the shaker - a **crushed granulate** shaker - a flotation (separation) device - **crushed granulate** dryer - air transport of dried crushed granulate to be bagged up - a bulk plastic **crusher**

Source: excerpt from source text pp. 15.

Translating the names of technical (mechanical and electronic) devices, as well as the various names of the materials in use when it comes to the process of waste management has so far proved the most challenging task. Idioms such as “inclined conveyor”, “straight conveyer belt”, “crushed granulate”, “crushed granulate shaker” and “bulk plastic crusher” were some results of the most creative and research filled results that the translator has undertaken.

Specific technology requires the use of specific machines. Numerous appliances are listed in the chapter of the document that details the necessary equipment for waste management and recovery. Several Croatian terms posed challenges in translation, and everyday dictionaries or glossaries provided little assistance. “Transporter” is a commonly used Anglicism when referring to conveyors. The terms “tekuća vrpca” or “pokretna traka” refer to the same technology. However, multiple types of conveyors are used, and not all of them have belts or their Croatian equivalents, “tekuća vrpca” or “traka”. “Konvejer”, a phonetically appropriated Anglicism, is often used as a synonym for the same machine.

However, it is necessary to differentiate between types of conveyors, such as the commonly used and well-known “belt conveyor” or “conveyor belt” and chain conveyors, gravity-rolled conveyors, etc. “Conveyor” serves as a hypernym, while “conveyor belt”, “inclined conveyor”, and others function as hyponyms, i.e., they are subcategories of the noun “conveyor”. “Kosi transporteri” are essentially conveyor belts that operate at an angle to transfer waste (or any other materials) from one level of a plant to another. This machine is known as an “inclined conveyor” in the English language. Therefore, “ravni trakasti transporter” was translated as “straight conveyor belt”.

4.5. LACK OF HOMOGENOUS TERMINOLOGY

The lack of homogeneous terminology poses a considerable challenge in translation. This is due to several categories:

- Inconsistency: when there is no standardized or established terminology for specific terms or concepts in the source language (Croatian), it becomes challenging to find appropriate and consistent equivalents in the target language (English). This inconsistency can lead to confusion and/or lack of clarity in the translation, wherein often elaborate footnotes have to be used.
- Accuracy and precision: technical translation requires precise and accurate terminology to ensure the correct understanding of complex concepts. Without a homogeneous terminology, translators may struggle to find the most appropriate and accurate terms in the target language.

- Communication and understanding: technical documents are often meant to convey specialized information to a specific audience, such as engineers, scientists, or professionals in a particular field. Using consistent and well-defined terminology is crucial for effective communication and understanding among experts in that field. When the terminology is not standardized, as is the case here, it becomes difficult to ensure clear communication and accurate transmission of technical knowledge.
- Comprehensibility: homogeneous terminology helps establish a shared vocabulary and understanding within a particular domain or industry. It allows professionals to easily identify and comprehend specific terms and concepts, leading to more efficient work processes and effective collaboration. As is the case with translation the Land Register and/or Cadastre data, one such substantially precise standardization of technical terms in various technical fields would be a valuable linguistic investment.

The lack of homogeneous terminology requires translators to navigate through various options, conduct extensive research, and make informed decisions to ensure a quality translation that effectively conveys the intended meaning of the source text in the target language. As a result, it is difficult to find proper established equivalents. New terms are not being coined for developing technologies, which depletes the language and often leads to borrowing words from other languages. A translator might encounter words or terms that are not part of the standard language. Such was the case with the term “tresač drobljenca”. With no prior experience in waste management and the lack of homogeneous terminology, the translator is in a difficult position. When encountering a word that may not be semantically correct, one is still expected to successfully translate the term without an established database. How can one be sure which equivalent is *correct* if the nomenclature is not established?

Translators are expected to be well-versed in diverse topics, or at least familiar with them. Only two results were found for the phrase “tresač drobljenca”, which suggests that this is not the usual term for this particular machine. According to Bujas' Croatian-English dictionary, “drobljenac” is a term commonly used in civil engineering and means “crushed run-stone”. In the context of “Operational Procedures for Waste Management”, it presumably refers to ground plastic waste, while “tresač” refers to a sorting device that filters tiny pieces of shredded plastic

from larger ones. In the instructions for specific machines that follow this chapter (unfortunately, the instructions for the “tresač drobljenca” are not included), “drobljenac” is referred to as “mljevenac”, a word not part of standard Croatian language or terminology but could be understood as “finely ground plastic waste”.

In translation theory, achieving communicative function refers to the goal of effectively conveying the intended meaning and message of the source text in the target language.

Achieving communicative function requires not only linguistic accuracy but also an understanding of the cultural and social aspects associated with the source and target languages. Translators strive to maintain the intended impact and effect of the original text while adapting it to suit the target audience's language and cultural context. Translators employ different strategies, techniques, and approaches to achieve communicative function, such as using appropriate language registers, adapting cultural references, preserving the tone and style, and ensuring clarity and coherence in the target text. The ultimate goal is to facilitate effective communication between different languages and cultures while maintaining the essence and purpose of the original message, as is shown in the translation below.

English (target) text

After the control process is done, the waste is brought to the warehouse.

Waste in bales or in bulk is delivered by truck to the warehouse. The storage of waste in nature represents the space whose base is asphalted and is shown on the "Outline of the Spatial Arrangement of Technological Processes" marked S3. Baled waste will be stored at the warehouse and waste in bulk will be stored in closed containers, extremely open containers covered with a net. The waste material to be stored is solid waste and there is no need for secondary containers for waste collection. Within the warehouse there will be a container for residual waste contained in the received waste material. The floor surface of the warehouse is easily washable and resistant to the effects of the waste that is stored.

Source: Waste Management Study, 2019: 22.

"[T]he intrinsic value of a text is entirely subordinate to its purpose, and [therefore] the text [comes out] as a pure tool for achieving a communicative function. The translator is only responsible for the target context and, furthermore, the target text can be completely independent of the original" (Ganggui, 2023: 129).

4.6. THE LIMITS OF DIGITAL TRANSLATION TOOLS

English (target) text

II. LIST OF WASTE MANAGEMENT PROCEDURES, ASSOCIATED TECHNOLOGICAL PROCESSES, TYPES AND QUANTITIES

Table 1: Processes and their capacities in procedures

No.	PROCEDURE IDENTIFIER	PROCESS LABEL	TECHNOLOGICAL PROCESS NAME	PROCESS CAPACITY
1.	S	S1	Waste collection	∞
2.	S	S2	Waste reception	25.000t/year
3.	R13	S3	Storage	10.575m3
4.	R12	O1	Dismantling of baled waste	25.000t/year
5.	R12	O2	Classification	25.000t/year
6.	R12	O3	Baling - pressing	25.000t/year
7.	R3, R4	O4	Crushing	25.000t/year
8.	R3, R4	O5	Flotation – Separation	25.000t/year
9.	R3, R4	O6	Dehumidification	25.000t/year
10.	R3, R4	O7	Drying	25.000t/year
11.	R3, R4	O8	Packaging	25.000t/year

Source: Waste Management Study, 2019: 4.

For simpler procedures in translating a technical-administrative text, digital tools can be used to facilitate and accelerate the process. Digital translation tools, also known as computer-assisted translation (CAT) tools, are software applications designed to assist translators in their work. These tools leverage technology to automate and enhance various aspects of the translation process. Some of the most common types of digital translation tools are (Zokić, 2018):

- Translation Memory (TM) systems store previously translated segments of text in a database, known as a translation memory. When a translator encounters similar or identical phrases or sentences in a new text, the TM system suggests previously translated equivalents, increasing consistency and saving time.
- Machine Translation (MT) systems use algorithms to automatically translate text from one language to another. They can be rule-based, statistical, or based on neural networks. MT systems are useful for generating initial translations, but they often require human post-editing to ensure accuracy and naturalness.

- Terminology management tools help translators maintain consistency in terminology across different projects. They provide databases or glossaries where translators can store and access approved translations of specific terms, ensuring accuracy and uniformity.
- Alignment tools: alignment tools assist in aligning the source and target texts, sentence by sentence or segment by segment. This process creates a parallel corpus, which can be used to build translation memories or train machine translation systems.
- Concordance tools allow translators to search a large collection of bilingual or multilingual texts to find instances of specific words, phrases, or expressions. They help translators understand the context and usage of terms and aid in maintaining consistency.
- Quality Assurance (QA) Tools perform automated checks on translated texts to identify potential errors or inconsistencies, such as spelling mistakes, inconsistent terminology, missing translations, or formatting issues. They help improve the overall quality and accuracy of translations (Zokić, 2018).

These digital translation tools are designed to enhance translators' productivity, improve consistency, and streamline the translation process. While they provide valuable assistance, they are not meant nor can they qualitatively replace human translators but rather support and complement their work.

5. ANALYSIS OF SOURCE TEXT “EXAMINATION REPORT OF WORK ENVIRONMENT”

The “Examination Report on Work Environment” is a document that serves to analyze and assess the working environment of a specific workplace or area. This report provides a detailed overview of the conditions and factors that can affect the safety, health, and well-being of workers in that environment.

English (target) text

EcoMISSION d.o.o.
za ekologiju, zastitu i konzalting

42000 Varazdin, Zagrebacka 183
Tel./Fax.:042/210-074
E-mail: ecomission@vz.t-com.hr
IBAN: HR3424840081106056205
OIB: 98383948072

Report number: 99/727-611-21-RO
Report date: July 26th 2021

EXAMINATION REPORT

OF WORK ENVIROMENT

EMPLOYER:	**LOTUS 91 d.o.o.** Brace Radica103a, Jalkovec, 42000 Varazdin **OIB: 15331545057**
LOCATION:	SEPARATE FACILITY INLUDBREG Frankopanska 68, 42230 Ludbreg

NAME OF WORK SITES AND BUILDINGS:

- PACKAGED WASTE PROCCESSING HALL
- SORTING FACILITY
- IMPLEMENTS STORAGE
-

WORKSHOP
- OFFICE GROUND FLOOR
- OFFICE1

TEST TYPE:

Testing of working environment parameters - physical hazards: (microclimate (temperature, relative humidity and air velocity), illuminance, noise).

PARTICIPATED IN THE TEST PROCEDURE:

Name and surname:	Professional qualification:	OIB:	Professional exam in OHS:
DAVORIN BARTOLEC	MA Mech. Eng.	85065595388	1652
NINOSLAV DIMKOVSKI	MA Elec. Eng.	34874169427	2618

TESTING START AND END DATE:

July 26th, 2021

Source: Examination Report of Work Environment, 2021: 1.

Within the translation of this document, as is shown in Tables 6, 7, and 8, the translation of applied regulations and standards as well as that of technical abbreviations, involve dealing with specific legal and technical concepts. This involves researching and consulting specialized dictionaries, glossaries, and subject matter experts to ensure accuracy. However, it also enables the translator to be creative to an extent (Wæraas and Nielsen, 2016), as long as his/her findings are supported with previous findings from within the specific (technical, business and administrative) field, with respect to the cultural context of both source and target languages.

Table 6 - Applied Regulations and Standards

English (target) text
APPLIED REGULATIONS AND STANDARDS The following regulations and standards have been applied in the examination and assessment of the working environment: a) Occupational Safety and Health Act (OG no.71/14,118/14,94/18,96/18) b) **Regulations for testing work environment** (OG no. 16/16)

c) **Regulations for occupational safety and health for workplaces** (OGno.105/20)
d) **Regulations for the protection of workers from exposure to noise at work** (OG no. 46/08)
e) HRN EN12464-1:2012Lights and lighting equipment - Workplace lighting equipment - Part 1:Internal working spaces(EN 12464-1:2011)

Source: excerpt from source text pp.3.

Unlike the "Pravilnik o ambalaži i otpadnoj ambalaži", which was translated as "Ordinance on packaging and packaging waste", the word "Regulation" was used in this case, in plural. The reason for this is based on the context of the translations. While both "regulations" and "ordinance" can refer to rules or laws enacted by an authority, they may have slightly different connotations and usage. "Regulations" is a broader term that generally encompasses rules and guidelines established by a governing body or organization to regulate certain activities or practices. It is often used to refer to a set of specific rules within a particular field or industry. On the other hand, "ordinance" typically refers to a specific type of law or regulation enacted by a local or regional authority, such as a municipality or city council. It often deals with local matters and may have a more limited scope compared to broader regulations. In this case, the Regulations refer to a set of rules which can be found in a common juridical unit. The later can be called an Ordinance, as it encompasses many Regulations in the field of occupational safety.

5.1. TRANSLATING TECHNICAL ABBREVIATIONS FROM CROATIAN TO ENGLISH

The translation of technical abbreviations from Croatian to English requires careful attention to accurately convey the intended meaning in the target language. During the process of translation, it was necessary to carefully consider the context and accurately translate the technical abbreviations, which was an "organic"[10] undertaking as the metric system is highly clear to both source text and target text audiences. Consequently, the English version of the text effectively conveys the meaning of the original Croatian abbreviations in a clear and understandable manner.

[10]Stable, unchallenging.

Table 7 - Technical Abbreviations in Source and Target Text

English (target) text

Symbol	Measurement unit	Meaning
OC	+/-	positive or negative expert assessment
G.V.		Threshold value
P.V.		prescribed value
T	OC	air temperature in ° C
R.V.	%	relative air humidity in %
v	m/s	air flow rate in m/s
E	lx	illumination in lx
F	*lighting type*	fluorescent lighting or compact fluorescent lamps (energy saving lamp)
ZN	*lighting type*	incandescent lighting
H	*lighting type*	halogen lighting
VTFE	*lighting type*	high pressure bulbs - mercury
LED	*lighting type*	LED lighting
LAeq	dB	measured equivalent noise level
Lc,peak	dB	measured peak value
Te	h	worker exposure to noise
LEx,d	dB	normalized daily personal exposure of workers to noise

Source: screenshot from source text pp. 5.

Here is an explanation of the translation provided in Table 7:

- OC +/-: this abbreviation represents a positive or negative expert assessment. The translation captures the same meaning in English, ensuring clarity in conveying the assessment's nature;
- G.V.: in the Croatian version, it stands for “granična vrijednost”,which translates to “threshold value” in English. The translation accurately reflects the purpose of establishing a limit or boundary;
- P.V.: similarly, “propisana vrijednost” is translated as “prescribed value”. The English translation maintains the concept of a specified value according to regulations or standards;
- T °C: this abbreviation denotes the air temperature in degrees Celsius. The translation effectively communicates the measurement of air temperature in the specified unit;
- R.V. %: the abbreviation stands for “relativna vlažnost zraka u %”, representing relative air humidity. The English translation accurately conveys the concept of percentage-based relative humidity;

- V m/s: this abbreviation refers to the air flow rate in meters per second. The translation captures the measurement unit and effectively communicates the flow rate in the target language;
- E lx: the abbreviation represents illumination measured in lux (lx). The translation maintains the unit of measurement and conveys the concept of illumination;
- F: in the Croatian version, it represents the type of lighting, specifically fluorescent lighting or compact fluorescent lamps (energy-saving lamp). The translation maintains the general category of lighting type and provides an explanation of the specific options;
- ŽN, H, VTFE, LED: these abbreviations represent different types of lighting (incandescent, halogen, high-pressure bulbs - mercury, and LED). The translation accurately conveys the lighting types, ensuring clarity and understanding for the English-speaking audience;
- LAeq dB, Lc,peak dB: these abbreviations represent measured noise levels (equivalent noise level and peak value). The translation captures the measurement units (decibels) and accurately conveys the nature of the noise levels;
- Te h: the abbreviation represents worker exposure to noise, measured in hours. The translation effectively communicates the duration of noise exposure for workers;
- LEx,d dB: this abbreviation represents the normalized daily personal exposure of workers to noise, measured in decibels. The translation accurately conveys the measurement and purpose of assessing workers' daily exposure to noise.

5.2. TRANSLATING TECHNICAL DESCRIPTIONS

Technical descriptions are usually written with a specific purpose and audience in mind. They tend to be more straightforward and concise, using precise terminology and industry-specific language. Frequently used descriptive terms are also easier to find in databases or glossaries that provide approved translations for specific terms. Also, technical descriptions typically provide more contextual cues compared to other types of texts. They often include diagrams, illustrations, or references to related components or processes. These additional contextual elements help translators better understand the content and make informed translation choices.

English (target) text

1. TEST TASK

At the employer **LOTUS91 d.o.o., Brace Radica 103a, Jalkovec, 42000 Varazdin**on the site **SEPARATE FACILITY INLUDBREG,** on location **Frankopanska 68, 42230 Ludbreg** on work site or building:

- **PACKAGED WASTE PROCCESSING HALL**
- **SORTING FACILITIE**
- **IMPLEMENTS STORAGE**
- **WORKSHOP**
- **OFFICE GROUND FLOOR**
- **OFFICE1**

it is necessary to determine the parameters of the working environment - physical hazards:

- microclimate (temperature, relative humidity and air flow rate)
- illumination
- noise

Source: Examination Report of Work Environment, 2021: 3.

Aside from these factors, Table 8 shows how descriptive concepts and concepts used for describing processes are usually less prone to ambiguity compared to legal texts or official government documents. Legal terms, for example, may have nuanced meanings that vary across legal systems or require in-depth knowledge of specific jurisdictions. In contrast, technical descriptions are more focused on conveying specific information thus reducing the level of ambiguity.

Table 8 - Descriptive Instances

English (target) text
DESCRIPTION OF SITES AND BUILDINGS, AND DATA ON HAZARDS THAT OCCUR At the specified test location, the above-mentioned buildings are located. Heating in office spaces was carried out through central heating, while in the warehouse and packaged waste processing hall blow heaters were used for purpose of heating. Ventilation occurs natural through doors and windows. Lighting was carried out with fluorescent tubes and VTFE bulbs. The source of noise in the workspace comes from the work equipment used. In the attached sketch, all measuring points are visible and numbered.

Source: excerpt from source text pp.3.

In terms of the description of the sites and buildings, the Croatian phrase “Opis prostora i prostorija” was translated as “Description of sites and buildings”. This translation captures the general idea of providing information about the physical spaces and structures present at the test location. In the context of the text, the term “site” implies a specific place or area where the

testing is taking place. It suggests a defined location with physical structures and facilities. Alternatively, the term "space" is more general and can encompass various types of areas, including physical spaces, virtual spaces, conceptual spaces, etc., which explains the above mentioned selection made by the translator.

English (target) text

2. DESCRIPTION OF SITES AND BUILDINGS, AND DATA ON HAZARD THAT OCCURS

At the specified test location, the above-mentioned buildings are located. Heating in office spaces was carried out through central heating, while in the warehouse and packaged waste processing hall blow heaters were used for purpose of heating. Ventilation occurs natural through doors and windows. Lighting was carried out withfluorescent tubes and VTFE bulbs.The source of noise in the workspace comes from the work equipment used.In the attached sketch, all measuring points are visible and numbered.

Source: Examination Report of Work Environment, 2021: 3.

Regarding the heating systems, the Croatian phrase "Grijanje u uredskim prostorima izvedeno je putem centralnog grijanja, dok je u skladištu i hali za obradu ambalažnog otpada grijanje izvedeno preko kalorifera" was translated as "Heating in office spaces was carried out through central heating, while in the warehouse and packaged waste processing hall blow heaters were used for the purpose of heating". The term "hall blow heater" for "kalorifer" has been used to convey the method of heating. Although alternatives include "space heater" and "radiator", the translator's choice has been determined by the descriptive element of the idiom "hall blow heater" and the implications it conveys with the regard to the context. The term "hall blow heater" conveys the meaning that heating in the mentioned areas is achieved through the use of portable heaters. These heaters are typically used to provide localized heating in specific spaces or rooms, particularly warehouses and waste processing halls. In terms of ventilation, the Croatian phrase "Ventilacija je prirodna kroz vrata i prozore" was translated as "Ventilation occurs naturally through doors and windows", effectively communicating that the ventilation in the location is provided through the natural flow of air via doors and windows. The phrase "Rasvjeta je izvedena sa fluorescentnim cijevima i VTFE[11] žaruljama" was translated as "Lighting was carried out with fluorescent tubes and VTFE bulbs" reflecting the use of

[11] The term "visokotlačne fluorescentne žarulje" translates to "high-pressure fluorescent bulbs" in English.

fluorescent tubes and VTFE bulbs for the lighting system. Lastly, the translation accurately mentions that the source of noise in the workspace comes from the work equipment used, conveying the information provided in the original text.

6. CONCLUSION

Throughout this paper, various aspects of translation have been analyzed, particularly focusing on challenges related to translating technical materials, legal terms, and applied regulations and standards from Croatian into English. Important insights have been underlined with the regard to the importance of extensive research, semantic precision, and a deep understanding of the subject matter in achieving accurate translations of technical translation with a special regard to translating business and administrative documentation.

When it comes to translating technical materials, it has been shown that a translator's creativity is often limited, as these types of texts require a strict adherence to terminology and specific meanings. Translators must invest significant effort into conducting thorough research to grasp the technical concepts involved. The precision in translating terms that are commonly used in everyday communication is crucial to ensure accuracy and avoid misunderstandings.

Legal translation poses its own set of challenges, as legal terms are deeply rooted in specific legal systems and cultural contexts. Translating legal terms requires additional research, consultation of expert dictionaries, and a sound methodology to ensure the accurate conveyance of legal concepts. An example this was most evident in translating the document entitled "Vodopravna dozvola", which has been translated as "Water Rights Permit", effectively capturing the legal rights associated with water usage and management.

Furthermore, the paper has discussed the difficulties encountered in translating the title of the document "Elaborat gospodarenja otpadom" ("Waste Management Study"), where the term "elaborat" presented multiple challenges due to its varied usage across different contexts. The lack of expert dictionaries and resources in specific domains, such as waste management and bureaucratic documentation, further complicated the translator's task. To accurately translate the title and purpose of a document, translators often resort to descriptions and consider the intended purpose and target audience.

In the context of applied regulations and standards, it shows the need for a strong understanding of both legal and technical terminology has been emphasized. Translators must possess expertise in the relevant fields, including the legal frameworks and industry practices of both the source and target languages. This ensures the accurate translation of regulatory requirements while maintaining the same level of rigor and compliance.

The paper highlights the complexity and importance of translation in various specialized domains as it gives specific examples and explains the process of problem-solving with the regard to those examples. It is evident that successful translation requires a combination of extensive research, linguistic expertise, contextual understanding, and ongoing updates to keep pace with evolving regulations and standards.

In conclusion, the hypothesis of business and technical documents requiring a combination of expertise in both the source and target languages, as well as a comprehensive understanding of the subject matter has been verified, given that the translation process for technical materials, legal terms, and applied regulations and standards demands meticulous attention to detail, constant learning, and a deep understanding of the subject matter. By overcoming the challenges inherent in these translations, skilled translators ensure accurate and effective communication, contributing to the global exchange of knowledge and information.

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8. APPENDIX