

## USING GOOGLE TRANSLATE IN TRANSLATING ENGLISH NAVAL ARCHITECTURE TEXTS BY 1<sup>st</sup> YEAR NAVAL ARCHITECTURE STUDENTS - A CASE STUDY

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**Abstract:** The present article aims at presenting the most common errors encountered in naval architecture students' translation using google as well as the most common difficulties encountered in translating a naval architecture text. Our study was conducted on 131 volunteers out of which 35 used google translate. We have gathered the results and analyzed them according to the language level (lexis, grammar, e.s.o.) and translation strategies.

**Keywords:** error analysis, translating strategies, language levels

### 1. Introduction

Translating specialised text involves choices at several levels: terminological and lexical level (Dejica, 2008), text and discourse level, when the choices of discourse pattern and translation method are decided, and so on. According to Gerzymisch-Abrogast (2008) such choices and solutions are not repeatable, some of them being based on the translator's individual decisions. Taking this into consideration, it is obvious that translation cannot be ruled by objectivity.

There are, however, issues and solutions to these issues which are subject to rules when produced, investigated and discussed. I consider that some of these rules are related to the specificity of the text to be translated and to the difficulties that each type of text might raise. Therefore, identifying the above-mentioned aspects helps the translator make the correct decision.

As for the theoretical framework, the basis was represented by the models offered by Vinay and Darbelnet (1995) and Newmark (1988). According to Vinay and Darbelnet's model, as a general rule, translators can choose between the direct and oblique translation. Some translations may allow for the transposition of the source language message element by element into the target language, because it is based on either parallel categories, or on parallel concepts. The following table summarizes the translations procedures and methods that form the theoretical basis of the current paper.

Vinay and Darbelnet	Newmark	
Methods		Procedures
Borrowing	Word-for-word	Transference
Calque	Literal translation	Naturalization
Literal translation Transposition Modulation	Faithful translation Semantic translation Adaptation	
Equivalence Adaptation	Free translation Idiomatic translation Communicative translation	Compensation Paraphrase Couplets

**Table 1.** Translation methods and procedures

*Calque* is a procedure which was widely used throughout both categories of corpus. It was mainly present in the translation of the software installation guide and in Eurocode design standards. It is also significant to point out that it was, as expected, completely absent from the translation having Romanian as ST. The example provided below are illustration of the use of calque as a translation procedure:

(1) a. The horizontal clear space between transverse bars shall be at least 150 mm. A minimum spacing of 200 mm is recommended to ensure free flow of concrete.

b. Spatiul orizontal liber dintre barele transversale este de cel puțin 150 mm. Se recomanda un spatiu minim de 200 mm pentru a asigura curgerea libera a betonului.

In the case of the set of sentences in (1), maybe more clearly than in other cases, we deal with a structural calque, not only a lexical one, since it also introduced into Romanian the relatively new concept of free flow of concrete. Moreover, the majority of the situation when calque was used were instances of structural calque, as usually there was also a new concept or a new product introduced whose name must be adapted to the TT.

*Oblique translation* procedures were also widely used, due mainly to the differences between the syntactic systems of the two languages in question here. The grammatical rules governing the English and Romanian make impossible, more often than not, the literal transfer of the message from one language to another. Therefore, the need for indirect/oblique procedures is more than justified.

Out of the procedures detailed for the oblique method, *transposition* was used abundantly throughout the whole corpus of analyzed translations. It was by far the best represented category, mainly in the cases dealing with the reflexive/passive alternation and with the switch from definite to indefinite nominal compounds.

Passive, as pointed out by authors such as Trimble (1985), is highly favored in English texts related to science and technology. Taking into account the impression of objectivity that they must offer (Croitoru 1996), as well as their informative function, as Quirk et al. (1972) they have, these types of texts are bound to contain a high number of verbs in the passive voice. The texts under analysis in the current paper, as part of ESP and EST share this characteristic, therefore passive structures abound.

Romanian, on the other hand, makes use of the passive far less than English. The voice highly favored in Romanian technical text is the reflexive. Moreover, again unlike English, Romanian favours structures beginning with the predicate and drops the subject whenever possible (Vișan 2006).

Taking into account the discussion presented above regarding the differences between the two languages, it becomes clear that transposition is a necessary procedure when it comes to the rendering the message in the combination English-Romanian or Romanian-English. The example listed below is relevant for the use of transposition.

(2) a. In order to ensure that the concrete flows freely and that the physical concrete cover complies with ENV 1992, the design cover shall be at least 75 mm.

b. În scopul asigurării curgerii libere a betonului și a respectării pentru acoperirea cu beton a condițiilor din ENV 1992, în proiect acoperirea trebuie să fie de cel puțin 75mm.

A sequence of clauses in the ST was transposed into a sequence of nominal components in the TT, in accordance with the Romanian preference of nominal compounds over the verbal ones.

(3) a. Odată cunoscută capacitatea totală și gradul de ocupare al zonei turistice, pentru calculul debitului de apă uzată menajeră ce trebuie epurată se utilizează metoda restituției specifice pentru acest tip de folosință.

b. Once the total capacity and the occupancy level of the tourist area are known, the method based on typical restitution is applied to calculate domestic wastewater flow for this type of user.

With respect to the other oblique procedures, there are several aspects to be mentioned that are valid for specialized translations in general, as well as for the ones in civil engineering. The most relevant of these aspects is that two of the procedures, namely modulation and equivalence, were scarcely present in the translations under analysis. The other aspect to be noted is that adaptation was completely absent, due to the specificity and characteristics of such texts, which do not require for the use of the aforementioned procedure.

(4) a. In accordance with EN 1990, 3.2 (3) P, the changes to the structure during stages of execution (such as different stages of the form of the structure, dynamic characteristics, etc.), which may modify the effects due to wind, should be taken into account.

b. In conformitate cu EN 1990, 3.2 (3) P sunt luate in considerare schimbarile structurii din timpul fazelor de executie (cum ar fi diferitele etape ale geometriei constructiei, a caracteristicilor dinamice etc.) ce pot modifica efectului vantului.

In rendering the text above into Romanian, the syntactical structure was changed, namely the SV order in the source text was changed into VS in the target text, in accordance with the Romanian grammatical rules.

After having undertaken an analysis of the translation methods and procedures in specialized discourse, the conclusion can be drawn that there are certain translation methods and procedures that are typical for this type of text, while others are not.

## 2. Methods and Methodology

For the present study we have given three different texts to 120 Naval Architecture students in their 1<sup>st</sup> year of study. They had to translate the texts and write the materials used to perform the task. Besides, they were given a questionnaire asking them how long every text took to be translated, what were the most common issues in translating the given texts. After gathering the data, we could see that 60 student's used google translate in order to perform the task (50%). We have analyzed the translation offered by Google in order to see how accurate it was.

## 3. Corpus

For the purpose of the present analysis, I chose three types of bilingual texts, either with English as Source Text and Romanian as Target Text, or vice-versa. The first text is an excerpt from the bilingual newsletter issued by DAMEN Galati. The second text is part of a course taught at the Faculty of Naval Architecture Galati. The third text is taken from Classifications Rules issued by DNV-GL.

Source Text	Target text
Please allow me to introduce myself for the first time in this newsletter. I am proud to present myself to you: "BJ" ter Riet, currently your interim General Director, normally Managing Director of Damen Shipyards	Permiteți-mi vă rog să mă prezint pentru prima oară în această revistă. Sunt mândru că vă pot spune cine sunt: "BJ" ter Riet, actualmente Directorul General interimar al șantierului, în mod normal Directorul General

<p>Gorinchem and chairman of the Damen Shipyards Galatz Council of Administration. Since 25 years I have been working for Damen, of which the last 15 years regularly travelling to Galatz in Romania. My first project here (1999) was the building of the 'Granuaile', the buoy laying vessel for "The Commissioners of Irish Lights". We started the contract with stock owned Santierul Naval Galatz and the ship was delivered when the yard had become Damen Shipyards Galatz. Then the years after, as Director Offshore &amp; Transport, we built together quite a number of beautiful ships.</p> <p>After Flemming Sørensen leaving last August, we have been continuously in search for a best fit for a new managing director. We have spoken to many candidates, but your current level of organization and performance requires quite an experienced candidate, in order to be able to assist the yard and all its people with their next development steps.</p> <p>Excellent candidates both with experience in shipbuilding, as well in leading a lean large (&gt; 2,000 people) production environment, have been proven hard to come by.</p> <p>Damen, Noutati, 19.05.2015</p>	<p>al Șantierului Naval Damen Gorinchem și președintele Consiliului de Administrație al Șantierului Naval Damen Galați. Lucrez de 25 de ani pentru Damen dintre care, în ultimii 15 am călătorit frecvent la Galați. Primul meu proiect aici (1999) a fost construirea navei de amplasat balize 'Granuaile' pentru compania "The Commissioners of Irish Lights". Când am început contractul, am semnat cu Șantierul Naval Galați, companie de stat iar livrarea navei a avut loc când deja șantierul devenise Șantierul Naval Damen Galați. Ulterior am devenit Director al Diviziei Offshore &amp; Transport și în anii ce au urmat, am construit împreună numeroase nave deosebite.</p> <p>După plecarea lui Flemming Soerensen din august anul trecut, am căutat continuu cea mai bună variantă pentru un nou director general.</p> <p>Am discutat cu mulți candidați însă nivelul actual al organizației și performanțele voastre necesită un candidat experimentat, care să poată susține eficient șantierul și întregul personal în parcurgerea cu succes a următoarelor etape de dezvoltare. S-a dovedit că astfel de candidați excelenți, care să aibă atât experiență în construcțiile navale cât și abilitatea de a conduce o organizație relativ mare (&gt; 2000 angajați) sunt foarte greu de găsit.</p> <p>Damen, Noutati, 19.05.2015</p>
<p><b>The Structure of a Ship</b></p> <p>The main structure of a ship is composed of a multitude of parts that are introduced either for strength, watertightness, or safety. As no space can be wasted and weight must be kept as low as possible, the structural design and arrangement has developed in such a way that most of the parts serve at least two purposes, and sometimes more.</p> <p>Generally speaking, the ship may be considered as a huge box girder, the sides of which are composed of the shell plating and the decks. These parts are in turn strengthened by such members as the keel, frames, beams, keelsons, stringers, girders, and pillars. To appreciate the ship</p>	<p><b>Structura unei nave</b></p> <p>Structura principală a unei nave este alcătuită dintr-o multitudine de elemente care sunt prevăzute pentru rezistență, etanșeitate sau pentru siguranță. Deoarece nici un spațiu nu trebuie lăsat nefolosit, iar greutatea trebuie păstrată pe cât posibil la valoarea minimă, proiectul structurii navei și amenajările s-au dezvoltat într-o astfel de manieră încât majoritatea elementelor au cel puțin două întrebuițări, uneori chiar mai multe.</p> <p>În general, nava poate fi privită ca o uriașă grindă goală 1 ale cărei laturi sunt compuse din învelișul metalic al corpului navei și din punți. Acestea la rândul lor sunt consolidate prin componente cum ar fi: chila, crevace, traverse, carlingi laterale, stringhere, grinzi și pontili. Pentru a privi nava ca pe un întreg, este necesară înțelegerea modului cum funcționează fiecare dintre aceste elemente. Chila constituie în primul rând coloana vertebrală pe care este construită nava.</p>

<p>as a whole, it is well to understand the function of each of the parts.</p> <p>The keel is primarily the backbone about which the ship is built. It consists of a rigid fabrication of plates and structural shapes which run fore and aft along the center line of the ship. At the forward end is connected the stem, and at the after end stern frame, which supports both the rudder and the propeller.</p> <p>The frames are the ribs of the ship. Their lower ends are attached at intervals along the keel, and their upper ends are attached through brackets to the beams which support the deck. Internal bracing is provided by keelsons and stringers which run fore and aft. The frames must determine the form of the ship, and support and stiffen the shell plating.</p> <p>Further protection against damage is provided by the double bottom tanks. These are formed by a second complete layer of watertight plating, located a few feet above the outer bottom and extending from bilge to bilge. Any grounding or similar damage which pierces the outer bottom plating will flood one or more of these tanks instead of allowing water to enter one of the main holds. Under ordinary service conditions these tanks are used to carry fresh water, fuel oil, or salt water ballast.</p> <p>(English through Translation)</p>	<p>Constă într-o constituție rigidă din plăci și profiluri structurate care se întind spre prova și spre pupa de-a lungul axei centrale a navei. La capătul din față se cuplează etrava, iar la cel din spate etamboul, care susține atât cârma, cât și elicea.</p> <p>Crevacele sunt coastele navei. Capetele inferioare ale acestora sunt prinse de chilă la anumite intervale, iar capetele superioare se fixează prin brachete de traversele care susțin puntea. Consolidarea interioară se realizează prin carlingi laterale și stringhere care se întind de la prova până la pupa. Crevacele trebuie să dea forma navei, să sprijine și să întărească bordajul exterior.</p> <p>O protecție suplimentară împotriva avariilor este asigurată prin tancurile de la dublu-fund. Acestea sunt formate de un al doilea strat de bordaj etanș situat la câteva picioare deasupra carenei și care se întinde din gurnă în gurnă. Orice coliziune cu fundul apei sau cu un obstacol asemănător care ar duce la perforarea bordajului exterior al carenei ar produce inundarea a unuia sau mai multora dintre aceste tancuri în loc să permită accesul apei într-unul din compartimentele principale. În condiții de lucru normale, aceste tancuri sunt folosite pentru transportul apei potabile, a combustibilului sau a apei de mare folosită ca balast.</p>
<p><b>A.1 Rules and Guidelines</b></p> <p><b>A.1.1 Underlying GL Rules and Guidelines</b></p> <p><b>A.1.1.1</b> The Classification of ships, of other floating units and of any pertinent equipment is based on:</p> <ul style="list-style-type: none"> <li>• the respective latest edition of the Rules for Classification and Surveys of Germanischer Lloyd (GL)</li> <li>• the Construction Rules and Guidelines relating to the respective ship type or installation, as applicable on the date of conclusion of the contract between shipyard (builder) and prospective ship owner (buyer), see also D.1.</li> </ul> <p><b>A.1.1.2</b> The Construction Rules cover Rules for materials and welding and any other special Rules published by GL that may be applicable from case to case 1.</p> <p><b>A.1.1.3</b> In case of multi-lingual editions, the English text shall be authoritative in the event</p>	<p><b>Reguli și orientări</b></p> <p><b>A.1.1. Precizarea regulilor și clasificărilor</b></p> <p><b>A 1.1.1.</b> Clasificarea navelor , a altor unitati plutitoare si a orice echipament pertinent este bazat pe :</p> <p>Respectiv , cea mai recenta editie a regulilor pentru clasificare si sondaje a GL</p> <p>Regulile de constructie si orientari si tipul navei respective sau instalatiei , dupa caz , la data incheierii contractului intre santierul naval si cumparator , vezi de asemenea D1</p> <p>A 112. Regulile de constructie acopera regulile pentru materiale si sudare si oricare alte reguli speciale , publicat de GL , care poate fi aplicat de la caz la caz</p> <p>A 113. In cazul unor editii multi-linguale, textul englez trebuie sa fie autorizat in caz de indoieli cu privire la interpretarea GL, Reguli de constructie si orientari</p> <p>A 1.2. Urmatoarea trebuie aplicata cu exceptia cazului in care prevede altfel :</p>

<p>of doubts as to the interpretation of the GL Construction Rules and Guidelines.</p> <p><b>A.1.2</b> The following shall apply unless otherwise specified:</p> <p><b>A.1.2.1</b> The date of "contract for construction" of a vessel is the date on which the contract to build the vessel is signed between the prospective ship owner and the shipyard. This date is normally to be declared to GL by the ordering client (a client being the person/entity concluding the respective contract with GL) applying for the assignment of Class to a newbuilding, see also D.1.</p> <p><b>A.1.2.2</b> The date of "contract for construction" of a series of sister vessels 2, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective ship owner and the shipyard. (gl_i-0-0_e, DNV-GL)</p>	<p>A 1.2.1 Data "contractului pentru constructie" a unei nave este data la care contractul de construire a navei este semnat intre cumparatorul navei si santierul naval . Aceasta data este normal declarata pentru GL de clinetul care comanda ( un client fiind persoana\ identitatea care incheie contractul respectiv cu GL , solicita alocarea de clasa pentru o noua constructie , vezi de asemenea D1</p> <p>A1.2.2 Data "contractului pentru constructie " a unei serii de doua nave surori , incluzand nave optionale specifice pentru care optiunea este in cele din urma exercitata , este data la care contractul pentru construirea seriilor este semnata de cumparator si santierul naval.</p>
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**Table 2.** Google translation of the three types of texts from the field of Naval Architecture

#### 4. Results

Table 3 summarizes the data gathered. As we can see, students considered the first text as the easiest to translate. The technical vocabulary was the challenge for their translation. Sample text 2 was the hardest and that is due to its technical vocabulary.

	Text's difficulty			Types of difficulties			Timing				
	Easy	Medium	Hard	Technical vocabulary	Complex sentences / phrases	Word order	15 min	30 min	45 min	60 min	180 min
Sample text 1	35	62	10	43	35	28	40	36	24	15	6
Sample text 2	2	34	63	86	30	14	5	25	24	47	16
Sample text 3	25	45	26	43	25	32	35	32	23	22	8

**Table 3.** Translating from English into Romanian. Questionnaire's Results.

The sources used to translate the Romanian texts into English include two specialized printed dictionaries (Neculai, 2001; Niculescu, 2006), and several online resources included in the Webography.

Difficult phrases/words	Translation
Hard to come by	sunt foarte greu de găsit.
chairman	preşedintele Consiliului de Administraţie
yard	şantierul
Directory Offshore and transport	Director al Diviziei Offshore & Transport
Stock owner	companie de stat
Your interim	interimar
a multitude of parts that are introduced either for strength, watertightness, or safety.	o multitudine de elemente care sunt prevăzute pentru rezistenţă, etanşeitate sau pentru siguranţă.

watertight	etanșeitate
frames	crevace
beams	traverse
keelsons	chesoane
stringers	stringhere
girders	grinzi
Laying vessel	navei de amplasat
Lean large	Relative mare
environment	Mediu inconjurător
welding	sudura
Ship owner	armatorul
shipyard	șantier
a series of sister vessels	seriilor

**Table. 4** Most difficult words/phrases according to the students.

## 5. Conclusions

Direct translation procedures, namely borrowings, calque and transposition were most frequently used for transferring the message from the ST to TT.

Compensation, through-translation and synonymy were also present to high extent. On the other hand, adaptation and equivalence (Vinay and Darbelnet's definition) were almost absent. As for methods, faithful translation was the most common of the ones listed by Newmark.

The most important role in the choice of a procedure or another is played by the grammatical rules governing the two languages with which the translator operates for that particular translation. It is therefore necessary for the translator to master to a high degree the formal structures of the SL and the communicative context. Beside the lexical and grammatical structures with which a translator must operate, the phraseology and collocational patterns of the TL must also conform to the target language norms.

## Webography

[www.barcholic.ro](http://www.barcholic.ro)  
[www.bing.com](http://www.bing.com)  
[www.cartula.ro](http://www.cartula.ro)  
[www.dex-online.ro](http://www.dex-online.ro)  
[www.dictio.ro](http://www.dictio.ro)  
[www.dictionar.rol.ro](http://www.dictionar.rol.ro)  
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