BỘ GIÁO DỤC VÀ ĐÀO TẠO
TRƯỜNG ĐẠI HỌC DÂN LẬP HẢI PHÒNG

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FOREIGN LANGUAGES DEPARTMENT

GRADUATION PAPER

A STUDY ON TRANSLATION OF ENGLISH TERMINOLOGIES RELATED TO WATER SECTOR

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Class:

NA1001

Supervisor:

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HAIPHONG - 2010

BỘ GIÁO DỤC VÀ ĐÀO TẠO
TRƯỜNG ĐẠI HỌC DÂN LẬP HẢI PHÒNG

NHIỆM VỤ TỐT NGHIỆP

Sinh viên: ……Mã số: ……..

Lớp: ……Ngành: …….

Tên đề tài: ……....

……...

NHIỆM VỤ ĐỀ TÀI

1. Nội dung và các yêu cầu cần giải quyết trong nhiệm vụ đề tài tốt nghiệp (Về lý luận, thực tiễn, các số liệu cần tính toán và bản vẽ)

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2. Các số liệu cần thiết để thiết kế tính toán

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3. Địa điểm thực tập:

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CÁN BỘ HƯỚNG DẪN ĐỀ TÀI TỐT NGHIỆP

Người hướng dẫn thứ nhất

Họ và tên:

Học hàm, học vị:

Cơ quan công tác:

Nội dung hướng dẫn:

Người hướng dẫn thứ hai:

Họ và tên:

Học hàm, học vị:

Cơ quan công tác:

Nội dung hướng dẫn:

Đề tài tốt nghiệp được giao ngày……tháng ….. năm 2010

Yêu cầu phải hoàn thành trước ngày……tháng …..năm 2010

Đã nhận nhiệm vụ Đ.T.T.N	Đã giao nhiệm vụ: Đ.T.T.N
Sinh viên	Cán bộ hướng dẫn: Đ.T.T.N

Hải Phòng, ngày……tháng…...năm2010

HIỆU TRƯỞNG

GS.TS.NGƯT. Trần Hữu Nghị

PHẦN NHẬN XÉT TÓM TẮT CỦA CÁN BỘ HƯỚNG DẪN

1. Tinh thần thái độ của sinh viên trong quá trình làm đề tài tốt nghiệp:

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2. Đánh giá chất lượng của khóa luận (So với nội dung yêu cầu đó đề ra trong nhiệm vụ Đ.T. T.N trên các mặt lý luận, thực tiễn, tính toán số liệu):

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3. Cho điểm của cán bộ hướng dẫn (ghi bằng cả số và chữ):

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Hải Phòng, ngày ….. tháng ….. năm 2010

Cán bộ hướng dẫn

(Họ tên và chữ ký)

TABLE OF CONTENT

ACKNOWLEDGEMENTS

At the time taking the first lessons in Hai Phong Private University, we were just like the naive children with little knowledge of language skills and social issues. Throughout 4 years hard studying, thanks to all teachers' experience sharing, teaching and their whole-hearted instructions, we could gradually complete our language and soft skills, especially the precious social knowledge.

First and foremost, it is an honor for me to express my deepest gratitude to my supervisor, Mrs. Hoang Thi Bay, whose encouragement, guidance and willingness to motivate me from the beginning to the end enabled me to complete the graduation paper. This would not have been possible without her supports.

Besides, I would like to address my sincere thanks to Hai Phong Private University for providing us professional learning environment and facilities, as well as all teachers in Foreign Languages Department for giving of enthusiasm and sympathies to lift us to be the better ones as we are today.

Finally, I extend my regards and blessings to all of those who supported me in any aspects during the completion of the graduation paper, particularly staffs of Haiphong Water Supply Company with their willingness of providing me documents, valuable information supports and offering me opportunities to approach this field, which inspired me greatly to do this graduation paper.

PART I: INTRODUCTION

1. Rationale of study

Water is one of the most essential and necessary resources to human beings. Every human daily activities relates to water. However, more than 2 billion people do not have safe supplied water, not only in Vietnam but in other countries all over the world, and thousands of people die from lack of access to clean water. Therefore, water is the most global concern, which is why we take an integrated approach to bringing safe water to the worlds poor. And water sector is a new developing industry that many nations pay attention.

Demands for water resources in Viet Nam are growing rapidly. The crucial role of water in the nation's sustainable development, human health, and life has not always been fully appreciated. Therefore, Water sector still faces substantial challenges highlighting the urgency for the Government to complete sector reforms.

Currently, there are many projects of safe water supply and water supply system in Vietnam carried out by international funding organizations and governments. These require Vietnamese's abilities to communicate and cooperate with foreign specialists in English, providing job opportunities to many people, especially to Foreign Languages students. Also, they are facing with difficulties of its technical terminologies that none of students in the Department has ever had chances to study at school.

A number of Vietnamese working in Water Sector get troubles and are confused at the first time translating or interpreting technical terms, especially English terms related to Water Sector. Hence, it is very necessary

for me to acquire certain accumulation of linguistic and cultural knowledge in both native language and foreign languages. That is the main reason inspiring me to carry out this research. More importantly, studying this theme offers me a chance to have thorough understanding about technical translations.

2. Aims of the study

The study on translation of this basic terms aims to figure out an overview on translation strategies and procedures commonly employed in translation of terminologies in Water Sector.

In details, my Graduation Paper aims at:

- Collecting and presenting English terms in Water Sector.
- Providing their Vietnamese equivalents or expressions.
- Preliminarily analyzing translation strategies and procedures employed in the translation of these English terms into Vietnamese.
- Providing students majoring in the subject and those who may concern a draft and short reference of English terms in Water Sector and their corresponding Vietnamese meanings.

This study is done with the hope of providing readers with overall comprehension about the information and the technical terms relating to Water Sector that helps translators being able to translate it effectively.

3. Methods of study

The terms used in Water field would require a great amount of effort and time to study. However, due to limitation of time and my knowledge, my study could not cover all the aspect of this theme. I only focus the study on

translation and translation strategies in general, and contrastive analysis between specific basic Water Sector terms in English and in Vietnamese.

4. Scope of study

This Graduation paper is carried out with view to help learners enlarge their vocabulary and have general understanding about translation and interpretation of Water Sector terms.

All of English and Vietnamese terms in my graduation paper are collected from: HPWSCo, AECOM and ADB Consultant office's documents, Internet, and reference books. The data is divided into groups based on their common character, and then I carry out my research on procedures used to translate them into Vietnamese.

5. Design of study

My graduation paper is divided into three parts, in which the second, naturally, is the most important part

- ***Part I*** is the INTRODUCTION in which reason of the study, aims of the study, scope of the study, method of the study, design of the study are presented
- *Part II* is the **DEVELOPMENT** that includes 3 chapters:

Chapter I is ***Theoretical background*** which focuses on the definition, methods, procedures of translation in general and ESP translation, technical translation and definition of term as well as some technical terms in Water Sector.

Chapter II is an investigation on Water Sector terms and their equivalents including popular construction of its term and popular strategies applied in translating its term into Vietnamese

Chapter III is **APPLICATION**

- *Part III* is the **CONCLUSION** which includes the Main findings, strength and weakness of the thesis, suggestions for further studies; Reference and Glossary

Part II. DEVELOPMENT

Chapter I. THEORETICAL BACKGROUND

I. Translation theory

1. Definition of translation

Translation has existed in every corner of our life. It is considered as an indispensable part in the field of not only literature, culture and religion but also commercial advertisement, popular entertainment, public administration, immigration and education….Thus, definitions of translation are numerous, and a great numbers of books and articles have been written about this subject. The following are some typical definitions that are basic theoretical background for this study.

- **Translation** is the interpreting of the meaning of a text and the subsequent production of an equivalent text, likewise called a "**translation**," that communicates the same message in another language. The text to be translated is called the "source text," and the language that it is to be translated into is called the "target language"; the final product is sometimes called the "target text."

  Wikipedia

- **Translation** is a transfer process, which aims at the transformation of a written SL text into an optimally equivalent TL text, and which requires the syntactic, the semantic and the pragmatic understanding and analytical processing of the SL.

  _ Wilss (1982: 3) _

- **Translation** is the process of changing something that is written or spoken into another language.

Although these definitions are different in expression, they share common features that they all emphasize the importance finding the closest equivalence in meaning by the choice of appropriate target language's lexical and grammatical structures. Some sorts of movement from one language to another also insist on the different methods of translation which will be taken into consideration in the next part.

2. Translation methods

Newmark (1988b) mentions the difference between translation methods and translation procedures. He writes that, "While translation methods relate to whole texts, translation procedures are used for sentences and the smaller units of language" (p.81). He goes on to refer to the following methods of translation:

◊ **Word-to-word translation:**

This is often demonstrated as interlinear translation, with the TL immediately below the SL words. The SL word-order is preserved and the words translated singly by their most common meaning, out of context.

◊ **Literal translation:**

The SL grammatical construction is converted to the nearest TL equivalents but the lexical words are again translated singly, out of context.

◊ **Faithful translation:**

A faithful translation attempts to reproduce the precise contextual meaning of the original within the constraints of the TL grammatical structures.

◊ **Semantic translation:**

Semantic translation differs from faithful translation only in as far as it must take more account of the aesthetic value of the SL text, compromising on "meaning" where appropriate so that no assonance, word-play or repetition jars in finished version.

◊ **Free translation**:

Free translation reproduces the matter without the manner, or the content with out of the form of the original. The advantage of this type of translation is that the text in TL sounds more natural. On the contrary, the disadvantage is that translating is too casual to understand the original because of its freedom.

◊ **Adaption:**

This is the "freest" form of translation. It is used mainly for plays and themes... The SL culture is converted into the TL culture and is rewritten.

◊ **Idiomatic translation**:

Idiomatic translation reproduces the "message" of the original but tends to distort nuances of meaning by preferring colloquialisms and the idiom where these do not exists in the original.

◊ **Communicative translation**:

Communicative translation attempts to reader the exact contextual meaning of the original in such a way that both content and language are readily acceptable and comprehensible to the readership.

Newmark (1991:10-12) writes of a continuum existing between "semantic" and "communicative" translation. Any translation can be "more, or less semantic—more, or less, communicative—even a particular section or sentence can be treated more communicatively or less semantically." Both

seek an "equivalent effect." Zhongying (1994: 97), who prefers literal translation to free translation, writes that," in China, it is agreed by many that one should translate literally, if possible, or appeal to free translation."

II. English for Special Purposes in translation (ESP)

1. Definition of ESP

Before depicting and discussing the characteristics of language as a special language, we need to know what a special language is in general, i.e. one has to define the term ‘special language’. Alternatively, the term ‘language for special purposes’ is in frequent use as well. In the following, characteristic of a special language is its use by experts of a certain field or subject to communicate among each other. Therefore, elements of a group language are inherent, but it can rather be described as a mixture of a group and special language, particularly when the two main features melt together, namely its exclusiveness and its reference to a special subject matter. The focus on the issue is a criterion of delimitation which dominates much more so that the group character becomes only marginal.

The debate on how to categorize special languages has developed two parties. They argue whether special languages are closed systems existing next to common language, or if they just show various deviations concerning the lexicon amongst other things. Some linguists state that it is inadequate to provide an overall definition for special languages and that it is only possible to define them within a certain field. Others describe special languages as varieties with general characteristics in which institutionalized language planning has become effective. The (guided) acquisition of a special language happens through explicit rules which need common language for their introduction, and no language practice at all.

Special languages find their origin in the eighteenth century, as they are based on the division of work. Their rapid development depends on the time when specialization in the working world found a climax; this is to regard before the background of the Industrial Revolution. The earliest special languages were only used orally, for the most part by sailors or craftsmen. With the Industrial Revolution in the eighteenth and nineteenth century, however, the development of special languages as we know them today was initiated (above all technical languages and languages in the field of natural science). That means in practical, the more differentiated the working process is and the more complex technologies are, the more special languages are developed and part with the standard language. In this context, it must be mentioned that written language is typical of special scientific languages. It strives for precision and has to free itself from colloquial language, which has the existence of artificial languages as a consequence. This nonnaturalness mainly manifests itself in the use of formulas and a great quantity of termini as defined linguistic signs, since they are key components of logic, medicine or chemistry, amongst others.

ESP is the abbreviation for English for Specific Purpose. It is defined in the other ways. Some people described ESP as simply being the teaching of English for any purpose that could be specified. Others, however, were more precise, describing it as the teaching of English used in academic studies or the teaching of English for vocational or professional purposes.

- Tony Dudley-Evans, co-editor of the ESP Journal gives an extended definition of ESP in terms of 'absolute' and 'variable' characteristics (see below).

Definition of ESP (Dudley-Evans, 1997)

Absolute Characteristics

1. ESP is defined to meet specific needs of the learners
2. ESP makes use of underlying methodology and activities of the discipline it serves.
3. ESP is centered on the language appropriate to these activities in terms of grammar, lexis, register, study skills, discourse and genre.

Variable Characteristics

- ESP may be related to or designed for specific disciplines.
- ESP may use, in specific teaching situations, a different methodology from that of General English
- ESP is likely to be designed for adult learners, either at a tertiary level institution or in a professional work situation. It could, however, be for learners at secondary school level
- ESP is generally designed for intermediate or advanced students.
- 5. Most ESP courses assume some basic knowledge of the language systems

2. Types of ESP

David Carter (1983) identifies three types of ESP:

- English as a restricted language
- English for Academic and Occupational Purposes
- English with specific topics.

- The language used by air traffic controllers or by waiters are examples of English as a restricted language. Mackay and Mountford (1978) clearly illustrate the difference between restricted language and language with this

statement: “... the language of international air-traffic control could be regarded as 'special', in the sense that the repertoire required by the controller is strictly limited and can be accurately determined situational, as might be the linguistic needs of a dining-room waiter or air-hostess. However, such restricted repertoires are not languages, just as a tourist phrase book is not grammar. Knowing a restricted 'language' would not allow the speaker to communicate effectively in novel situation, or in contexts outside the vocational environment (pp. 4-5).

- The second type of ESP identified by Carter (1983) is English for Academic and Occupational Purposes. In the 'Tree of ELT' (Hutchinson & Waters, 1987), ESP is broken down into three branches:

a) English for Science and Technology (EST)

b) English for Business and Economics (EBE)

c) English for Social Studies (ESS)

Each of these subject areas is further divided into two branches:

- English for Academic Purposes (EAP)
- English for Occupational Purposes (EOP).

An example of EOP for the EST branch is 'English for Technicians' whereas an example of EAP for the EST branch is 'English for Medical Studies'.

- The third and final type of ESP identified by Carter (1983) is English with specific topics. Carter notes that it is only here where emphasis shifts from purpose to topic. This type of ESP is uniquely concerned with anticipated future English needs of, for example, scientists requiring English for postgraduate reading studies, attending conferences or working in foreign institutions.

According to the types of ESP above, **Language in Water Sector** lies in English for Science and Technology (EST).

3. Definition of Technical translation

To understand the definition of **Technical translation**, we should understand what "Technical terminology" or "technical terms" means. So, **Technical terminology** is the specialized vocabulary of any field, not just technical fields. Within one or more fields, these terms have one or more specific meanings that are not necessarily the same as those in common use.

Technical terminology exists in a continuum of formality. Precise technical terms and their definitions are formally recognised, documented, and taught by educators in the field. Other terms are more colloquial, coined and used by practitioners in the field, and are similar to slang. The boundaries between formal and slang jargon, as in general English, are quite fluids, with terms sliding in and out of recognition. As these devices became more important and the term became widely understood, the word was adopted as formal terminology.

Technical terminology evolves due to the need for experts in a field to communicate with precision and brevity, but often has the effect of excluding those who are unfamiliar with the particular specialized language of the group.

Technical translation: is a type of specialized translation involving the translation of documents produced by technical writers (owner's manuals, user guides, etc.), or more specifically, texts which relate to technological subject areas or texts which deal with the practical application of scientific and technological information. While the presence of specialized terminology is a feature of technical texts, specialized terminology alone is not sufficient for classifying a text as "technical" since numerous

disciplines and subjects which are not "technical" possess what can be regarded as specialized terminology. Technical translation covers the translation of many kinds of specialized texts and requires a high level of subject knowledge and mastery of the relevant terminology and writing conventions.

The importance of consistent terminology in technical translation, for example in patents, as well as the highly formulaic and repetitive nature of technical writing makes computer-assisted translation using translation memories and terminology databases especially appropriate. In his book *Technical Translation,* Jody Byrne argues that technical translation is closely related to technical communication and that it can benefit from research in this and other areas such as usability and cognitive psychology.

Traditionally in translation circles, researchers have only been interested in terminology but unless you're actually a terminologist, to reduce technical translation down to the level of a purely terminological issue is downright blinkered and misses the point completely. This approach also had the rather unfortunate effect of supporting Friedrich Schleiermacher's horrible claim way back in 1813 that technical translation is a mechanical activity that anyone with a grasp of two languages can do.

If you ask any experienced technical translator they'll tell you that, more often than not, it's not individual terms that cause most problems, but the way those terms fit into sentences that cause the problems. To tell the truth, depending on the subject area and the language pair you are working with, specialised terminology is sometimes (though not always) the easiest part of a text to translate. In other words it's the things in a text that aren't terminology-related that pose the greatest challenges; it's not the cargo but the ship that needs attention. Things like register, style, set phrases, references to laws or sometimes whether certain information is appropriate for the target audience

or whether the way in which information is sequenced in instructions, for example, makes sense. Sometimes you just don't know what it is the original author is trying to say. That's what causes us problems and that's what we should be concerned about instead of getting undergarments in a bunch about specialised terminology. It doesn't matter how good our cargo of precious specialised terms is, if we're going to load them onto a leaky old rust bucket which will probably sink before it leaves the harbour, we're wasting our time. This isn't to say that getting specialised terminology right is not important. It simply means that we need to put it in perspective; we shouldn't devote too much time to it and risk neglecting other areas which are equally or even more important.

4. Language in Water Sector

A language is considered to be a system of communicating with other people using sounds, symbols and words in expressing a meaning, idea or thought. Primarily there is a distinction between one language and another; usually it may be through country boundaries, population culture, demographics and history. Each country through combinations of blending cultures, environment and other factors has evolved their own unique style of a language. And the most popular language is English, which is used in many fields, such as: communicating, business, commerce, marketing...ect; especially in Water Sector – a new developing sector in Vietnam.

The terminologies used in Water sector are not only ones relating to water but also technology, design, environment and waste water treatment... Some terms can be used with the same meaning with other fields. However, there are some special technical terms (ESP) that only make sense in the context of Water sector. Therefore, to translate these idiomatically, we should be aware of the language base and the knowledge about engineering, technology, water sector and other relevant apects.

III. Popular terms relating to Water Sector

1. Definition of English terms

There are various definitions of terminology by many linguists. Herein, I would like to quote some popular definitions:

- In the Russian Encyclopedia (1976) terminology is defined as "a word or a combination of words that denotes the concept precisely and its relationship with other concepts in specific area. Terminology is a specialized and restricted expression on things, phenomena, characteristics, and the relationship in a specific profession"

- Terminology is a section of special lexis of a language. It consists of fixed words and groups of words which are accurate names of concepts and subjects belonging to different specialized fields of human being.

(Nguyen Thien Giap, 1981)

- Terms are words and compound words that are used in specific contexts. Not to be confused with "terms" in colloquial usages, the shortened form of technical terms (or terms of art) which are defined within a discipline or specific fields.

(http://en.wikipedia.org/wiki/Term_(language)

2. Characteristics

2.1. Systematism

As a part of a language, each term has its own position in the system of concepts and belongs to a terminological system. Each term requires its meaning in the relationship with other terms in its system. Once separated

from its system and meaning in vague. Therefore, systematism is seen as one of the most important features of terminology. There is the difference in viewpoints of the characteristics of terminology among terminologists. Some say the typical characteristic of terminology is the systematic formation, whilst others claim that it is the feature of content. However, it is the combination of both content and expression form. It is impossible to separate a concept from the system to make a term but it determines its position in the system

2.2. Internationalism

As mentioned above, terms are special words expressing common scientific concepts together with the development, cooperation and scientific, technological exchanges among countries throughout the world, terms are internationalized. The globalization enables terminology to be used more popularity in different languages so as to make the international science develop faster. As a result of this process, there are exists a number of terms being internationalized in different languages namely medicine (names of illness, medicine, physic, telecom...).Based on the criteria of terminology, each language may require other principles in accordance with its culture. Accordingly, terminology in Vietnamese is not an exception; it has its typical characteristics including nationalism and popularity

2.3. Nationalism

The term is obviously special linguistic unit of a language used in specific profession; it clearly belongs to national language. As a result, terminology in Vietnam should be imbued with Vietnamese culture, and characteristics of Vietnamese language. They should be appropriate to Vietnamese people from the lexicology to the grammatical composition

2.4. Popularity

The characteristic of terminology itself can bring scientific and technological progress to all people. As a component of linguistics, terminology plays an important role in pushing up the development of science, hence it should be comprehensible to all people in its way of reading, writing, speaking and memorizing

In summary, the general characteristics of terminology have been reviewed. They are the vital principles in the creation and existence of terminology in science and technology

3. Popular terms relating to Water Sector

A single term is a word that can be found in a text in one of its different morphological forms. And a compound term is a combination of words, describing a concept built by combining two (or more) simple terms. For example, "pipe" is a single word term but "pipeline network" is a compound term. So, the following terms are divided as:

3.1. Single terms

Noun – forming by the help of suffixes: “er”; “or”; “y”; “tion”

ENGLISH TERMS	VIETNAMESE
Anthracite	Than hoạt tính
Aqueduct	Kênh dẫn nước
Aquaculture	Nuôi trồng thủy sản
Outlet	Ống cấp vào mạng

Sludge	Bùn
Drain	Cống
Flowmetter	Đồng hồ đo lưu lượng nước
Filter	Bể lọc
Clarifier	Thiết bị lắng, bể lắng
Dewater	Khử nước
Screener	Song chắn rác
Transformer	Trạm biến áp
Sewer	Ống cống
Sewage	Chất thải
Sewerage	Hệ thống thoát nước
Drainage	Kênh dẫn nước
Clarify	Lắng tách
Biofiltration	Lọc sinh học
Connection	Đấu nối
Dechlorination	Khử clo
Desalinization	Khử mặn
Leakage	Rò rỉ, thất thoát

3.2. Compound terms

Terms in Water sector are majority in compound terms which are formed by joining two or more words together. It is important to be able to recognize how such compounds are formed in order to understand what they mean. Belows are the compound nouns broken down according to the meanings:

3.2.1. Terms relating to engineering designs and material

Construction drawing	Bản vẽ xây dựng
Water fountain	Đài phun nước
Over flow channel	Mương xả tràn
Transmission main	Ống truyền tải
List of material	Bảng thống kê vật tư
Material area	Bãi để vật tư
Booster pump	Bơm tăng áp
Pipeline network	Mạng lưới tuyến ống
Tidal gate	Cửa cống ngăn thủy triều
Collector/Interceptor sewer	Kênh gom nước thải

3.2.2.Technical terms of valves

Valves are integral components in piping systems. They are the primary method of controlling the flow, pressure and direction of the fluid. Valves may be required to operate continuously e.g. control valves, or they may be operated intermittently e.g. isolation valves, or they may be installed to

operate rarely if ever e.g. safety valves. A valve can be an extremely simple, low cost item or it may be and extremely complicated, expensive item. In piping design the valves probably require more engineering effort than any other piping component.

Adjusting valve	Van điều chỉnh
Back valve	Van ngược
Bottom discharge valve	Van xả ở đáy
Butterfly valve	Van bướm, van tiết lưu
Conical valve	Van côn, van hình nón
Direct valve	Van xả trực tiếp
Distribution valve	Van phân phối
Discharge valve	Van xả
Electro-hydraulic control valve	Van điều chỉnh điện thủy lực
Flap valve	Van bản lề
Gate valve	Van cống
Tube valve	Van ống

3.2.3.Technical terms of tanks

Water treatment describes those processes used to make water more acceptable for a desired end-use. The goal of the process is to remove existing contaminants in the water, or reduce the concentration of such contaminants so the water becomes fit for its desired end-use. One such use is

returning water that has been used back into the natural environment without adverse ecological impact.

Substances that are removed during the process of **drinking water treatment** include suspended solids, bacteria, algae, viruses, fungi; minerals such as iron, manganese and sulphur and man-made chemical pollutants including fertilisers. So, in water treatment technologies or processes, typical type of tanks is applied in typical parts of water treatment process, which can remove different contaminants in water.

Terms belows are treatment processes using involved tanks in treating water for drinking purpose:

Tanks	Process	Usage	Vietnamese
Pre-chlorination tank	Pre-chlorination	For algae control and arresting any biological growth	Bể Clo hoá sơ bộ
Aeration tank	Aeration	Along with pre-chlorination for removal of dissolved iron and manganese	Bể sục khí
Alkalization tank	Alkalization	Milk lime is injected at outlet of pre-chlorination tanks.	Bể kiềm hóa
Coagulant tank	Dosing of coagulant chemicals.	Inlet and below of mixing impeller	Bể làm đông hoặc kết tủa
Mixing tank	Mixing	Mechanical type in mixing tank	Pha trộn chất đông tụ (phèn nhôm hoặc PAC) bằng bể trộn nhanh kiểu cơ khí trục

			đứng
Coagulation and flocculation tank	Coagulation and flocculation	To improve coagulation and for thicker floc formation	Tạo bông bằng bể phản ứng kiểu cơ khí trục đứng
Sedimentation tank	Sedimentation	For solids separation that is removal of suspended solids trapped in the floc	Lắng và làm trong bằng **bể lắng lớp mỏng**
Filter tank	Filtration	Removing particles from water	Bể lọc
Disinfection tank	Disinfection	For killing bacteria	Bể khử trùng
Treated water reservoir	Treated water	Storing treated water	Bể chứa nước đã qua xử lý

Other tanks:

Depositing tank	Bể lắng bùn
Elevated tank	Tháp nước, đài nước
Clarifying tank	Bể lắng
Sewage tank	Bể lắng nước thải
Septic tank	Bể tự hoại, hố rác tự hoại
Sump tank	Hố nước rác, bể hứng
Supply tank	Bể cấp liệu, bể cung cấp
Underground storage tank	Bể chứa ngầm
Water-storage tank	Bể trữ nước

3.2.4. Terms related to Environment

The indispensable material in water sector obviously is water. It is taken from 3 sources: ground water, surface water and raw water. Three of them are all involving environmental issue, which is the concern for not only the whole Water sector but also Vietnamese government. Environment aspect is a very important part in the operation or actions of the Sector. The following terms are not very environmental but they are technologies applied in water treatment relating to environment:

Activated sludge	Bùn hoạt tính
Aerobic suspended-growth treatment process	Quá trình xử lý sinh học hiếu khí lơ lửng
Anaerobic slude degestion	Phân hủy bùn bằng phương pháp kỵ khí
Acid deposition	Mưa axít
Biological nutrient removal	Khử chất dinh dưỡng bằng phương pháp sinh học
Bag house	Thiết bị lọc túi vải, lọc tay áo

4. Acronyms in Water Sector

An acronym is a kind of abbreviation - a shortened form of a word or phrase. Usually, but not always, it consists of a letter or group of letters taken from the word or phrase that is too long to use comfortably. For instance, Laser is an *acronym* of **L**ight **A**mplification by**S**timulated **E**mission of **R**adiation. If the letters do not make a word, but are pronounced individually, as in the CIA or the BBC, it can be called *initialism*. Also, acronyms are easily met in

both documents and verbal communication in Water Sector to save time and space. This study will provide some of the most common accepted abbreviations using in the Water Sector.

4.1. Common acronyms

Acronyms	English	Vietnamese
CQS	Consultants Qualifications Selection	Lựa chọn năng lực Tư vấn
DMF	Design and Monitoring Framework	Phạm vi thiết kế và giám sát
EFS	Engineering Feasibility Study	Nghiên cứu kỹ thuật khả thi
EIA	Environmental Impact Assessment	Đánh giá tác động môi trường
HDPE	High Density Polyethylene	Polyethylene tỷ trọng cao
HH	Household	Hộ gia đình
HPWSCo	Hai Phong Water Supply One Company	Công ty TNHH một thành viên Cấp nước Hải Phòng
Lpcd	liter per capita per day	Lit trên đầu người trên ngày
MIS	Management Information System	Hệ thống thông tin quản lý
O&M	Operation and Maintenance	Vận hành và bảo dưỡng
PBRA	Project Benefits Reachable Area	Khu vực có thể hưởng lợi từ dự án
PCCP	Prestressed Concrete Cylinder Pipe	Ống bê tông dự ứng lực
PMU	Project Management Unit	Ban quản lý dự án
PPTA	Project Preparatory Technical Assistance	Hỗ trợ kỹ thuật lập dự án

PS	Pumping Station	Trạm bơm
RIA	Road Influence Area	Khu vực đường bị ảnh hưởng
RUPHWSS	Rehabilitation and Upgrading Project of Haiphong Water Supply System	Dự án Cải tạo và Nâng cấp hệ thống Cấp nước Hải Phòng
SEPP	Soil Erosion Prevention Plan	Kế hoạch ngăn chặn xói mòn đất
UFW	Unaccounted-for-water	Nước không được hạch toán
VOC	Vehicle Operating Cost	Chi phí vận hành phương tiện
WS	Water Supply	Cấp nước
WTP	Water Treatment Plant	Nhà máy nước
WWT	Wastewater Treatment	Nhà máy xử lý nước thải

4.2. Acronyms in Land acquisition and Resettlement

Acronyms	Full form	Vietnamese
AH	Affected household	Hộ gia đình bị ảnh hưởng
AP	Affected Person	Đối tượng chịu tác động
C&P	Consultation and participation	Tham vấn
CPC	Commune Peoples' Committee	Ủy ban Nhân dân Xã
CRC	Compensation and resettlement committee	Ban đền bù và tái định cư
DMS	Detailed measurement survey	Khảo sát đo đạc chi tiết
DPC	District Peoples' Committee	Ủy ban nhân dân quận, huyện
EA	Executing agency	Cơ quan triển khai

FGD	Focus group discussion	Thảo luận nhóm tập trung
IOL	Inventory of losses	Kiểm kê các khoản lỗ
LA	Land Acquisition	Thu hồi đất
LAR	Land Acquisition and Resettlement	Thu hồi đất và tái định cư
LCA	Least-cost analysis	Phân tích chi phí tối thiểu
PPC	Provincial Peoples' Committee[1]	Ủy ban Nhân dân Tỉnh, thành phố
RIB	Resettlement Information Booklet	Số tay thông tin tái định cư
RP	Resettlement plan	Kế hoạch tái định cư
SES	Socio-economic survey	Nghiên cứu kinh tế xã hội
SIA	Social Impact Assessment	Đánh giá tác động xã hội
VaW	Violence Against Women	Bạo lực chống lại phụ nữ

Chapter II: Popular Strategies and procedures applied in the translation of Water Sector terms into Vietnamese

1. Strategies applied in the translation of single terms

1.1. Translating by a more specific word

In some cases, it may be appropriate or necessary to use a more specific word to translate the single terms into Vietnamese. This usually involves choosing among several different words, as there may be many Vietnamese words that correspond to the general category or meaning expressed by English terms. For instance, the term "clarify" generally means to make (an idea, statement) clear or intelligible, to free from ambiguity or to remove solid matter from (a liquid) and to free (the mind, intelligence, etc.) from confusion. Yet, it is translated in terms of Water Sector to be "Lắng tách" – a technology of Water treatment. Similarity, the term for "flowmetter" can be translated by different Vietnamese words, such as "lưu lượng kế" or "lưu tốc kế". However, it should be understood of the metter for measuring the water flow. Therefore, the Vietnamese term for it must be "đồng hồ đo lưu lượng nước" or "đồng hồ đo lưu lượng dòng chảy".

As same as these terms above, "curb" or "kerb" in American English is another example of this strategy. Its meaning could not be looked up in general dictionaries but technical ones. "Kerb" in Wikipedia's definition is the edge where a raised pavement/sidewalk/footpath, road median, road shoulder meets an unraised street or other roadway; or a concrete border or row of joined stones forming part of a gutter along the edge of a street. These cannot help translators with little technical knowledge and vocabulary imagining and defining what the exact meaning of "kerb" is. Please take a look on the pictures below:

(1)

(2)

Picture (1) is the kerb in general understanding but picture (2) is itself the term using in Water Sector. In other word, it is a V-shaped channel along the pavement for discharging rain water, and the term in Vietnamese is "cống hàm ếch"

1.2. Translating by a more general word

In other cases, it may be appropriate to use a more general word to translate single terms. As in SL, sometimes they omit the nominal words that go together with the terms because they do not have to mention that word but other people still understand the meaning. For examples, in the word "filter", it is impossible for the translator to translate the exact meaning of "Bể lọc" without understanding that the word "tank" has been omitted. Also in the word "outlet", translator should be aware that the word "pipe" must be omitted. So that, if he wants to translate it correctly, it is unspoken to know that the terminology should be "outlet pipe", which means "Ống cấp vào mạng". So, in Vietnamese, the term "Ống cấp vào mạng" was translated by a more general word.

English	Vietnamese
Basin	Bể chứa
Transformer	Trạm biến áp
Pre-chlorination	Clo hóa sơ bộ

2. Strategies applied in the translation of compound terms

2.1. Shift or transposition translation

Shift translation is one of the most popular strategies applied in translation of the compound terms. Transposition is a translation procedure involving a

change in the grammar from SL to TL. The change in the word order is named "Automatic translation", and offers translators no choice.

Thus, the compound "Discharge valve" is translated as "van xả". It is clear that the position between two nouns has changed when it is translated into Vietnamese. The other term 'Septic tank" is known as "Bể tự hoại" in Vietnamese. There is also change in the order of these words, in English, the word "Septic" stands before and modifies the noun "Tank", however, when it is translated into Vietnamese, the word "Septic" comes after the noun.

Another example is "physical work" or sometimes "civil work" – a very common term in the Sector. These terms are very difficult for a green translator to find the exact meaning. As you can see, "physical" itself is an adjective with the meaning of pertaining to the body; to which is material; or to the physical sciences, such as physics...etc. If translating it based on the order, "vật lý công việc" is so ridiculous. Or else, it could be translated as "công việc mang tính chất vật lý" by guess. However, this does not make sense, and nobody knows what that work is. Another way of understanding is "công việc thuộc về vật chất" or "công việc mang tính hữu hình". Yet, none of them are correct in the context of Water sector. The suggestion answer should be "công tác xây dựng".

Looking at these terms, it is realizable that automatic shift is applied in translating flexibly, and all words in these terms are naturally converted from English into Vietnamese without adding any expression. Thank for automatic shift strategy application, translators can feel more simple and unconfused when dealing with some redundant or additional words during the translation process of these terms

Belows are some examples for this translation strategy:

Activated carbon	Than hoạt tính
Activated sludge	Bùn hoạt tính
Acid deposition	Mưa axít
Bar rack	Song chắn rác
Pumping Station	Trạm bơm
Reinforced Concrete	Bê tông cốt thép
Entire Project Area	Toàn bộ khu vực dự án
Environmental Management Plan	Kế hoạch quản lý môi trường
Detailed measurement survey	Khảo sát đo đạc chi tiết
Land acquisition	Thu hồi đất

Another case of this strategy is called "Rank-shift translation". In this case, the TL adds or omits word comparing with the SL. For instance, in the compound term "Consultation and participation":

Consultation and participation	Tham vấn (transposition)
Noun + conjunction+ noun	Verb

As we can see, in SL, "Consultation and participation" is composed by two nouns and a conjunction, but the two nouns become Verb as this term is translated into TL. There is also an omission in Vietnamese translation, for "Consultation and participation" should be translated as "tư vấn và tham gia" in Vietnamese. In similarity with "consultation and participation", the term "water treatment plant" is translated as "Nhà máy nước", instead of "nhà máy xử lý nước". So, "treatment" herein is omitted in Vietnamese

translation. Therefore, by the way of changing in grammar of the word from SL to TL, translator can make his work become more sufficient and standard.

2.2. Translation by paraphrase using related word

This strategy tends to be used when the concept expressed by the source item is lexicalized in the target language but in a different form, and when the frequency with which a certain form is used in the source text is significantly higher than would be natural in TL. SL "Consultants Qualifications seclection", for instance, is known as "lựa chọn năng lực tư vấn" in TL, Taking consideration of the word "qualifications", its meaning is normally "chất lượng" in Vietnamese. However, it is not translated like that in Water Sector. Hence, if this term is transferred word by word from English into Vietnamese, translation result may become more redundant. In order to avoid poorly in translation, related word are used in transference in case of this term.

Source language	**Target language**
Ductile Iron Cement Lined	Ống gang lót lớp xi măng
Non-timber forest products	Các sản phẩm phi gỗ
Non-revenue water	Nước thất thoát, nước không hóa đơn
Interceptor manhole	Miệng cống kiểu xifông

2.3. Translation by using loan word - loan word plus explanation

This strategy is particularly common in dealing with culture-specific items, modern concept and buzzwords. Using loan word is dramatically strong

method applied for the word which have foreign origin or have no equivalence in TL. Taking following example:

English	**Vietnamese**
TOR (Terms of Reference)	TOR (Đề cương nhiệm vụ)
SCANDAR	SCANDAR (Hệ thống kiểm soát /giám từ xa)
UFW (Unaccounted-for-water)	UFW (Nước không được hạch toán)
NRW (non-revenue water)	NRW (nước thất thoát)
O&M (Operation&Maintanance)	O&M (vận hành và bảo dưỡng)
ADB	ADB (Ngân hàng phát triển châu Á)
LIBOR rate	LIBOR (lãi suất LIBOR theo ngân hàng Luân Đôn)
ICB (International Competitive Bidding)	ICB (Đấu thầu quốc tế cạnh tranh)
AusAID	AusAID (Cơ quan phát trển quốc tế Úc)

It can be seen from this illustration that the term is represented by using the first letter of words, in English, it is known as "acronym"- "LIBOR" is often used as a loan word in Vietnamese, not because it has no equivalent but because it is a term widely and popularly used in international transactions.

2.4. Translation by phrasing

Addition phrasing is the translation in which additional information is supplied in a TL in order to help the reader understand it exactly. For example the term "**Anaearobic sludge degestion"** can be translated into "Phân hủy

bùn kỵ khí", but if it is translated as "phân hủy bùn bằng phương pháp kị khí" it will be more clearly.

Please take a look on the picture below and its explaination:

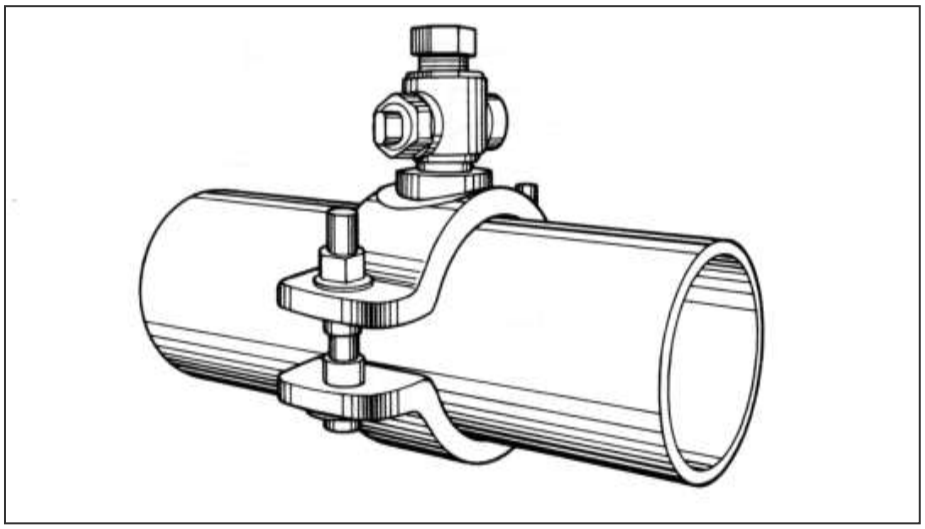
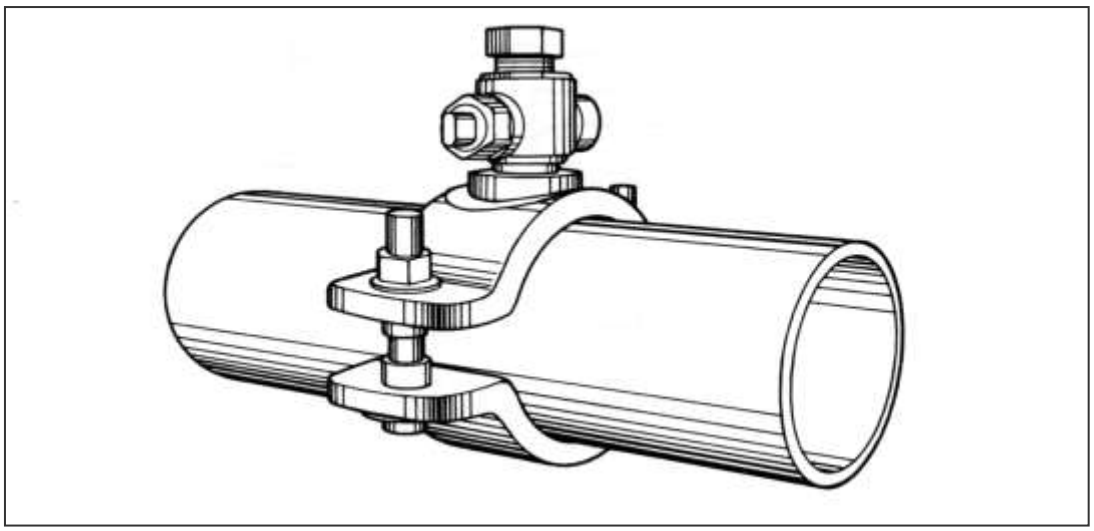


Figure 1. Principle of direct tapping with a saddle from the main line.

This is the method of connecting new house connections to the existing water mains and to large service pipes done by adopting tapping method procedure and connections can be done under pressure. By this way doing, water supply interruptions can be minimised.

However, it is translated into Vietnamese as:



Hình 1. Nguyên tắc khoan ống khi sử dụng côliê tiêu chuẩn

Probably, many readers will be confused with the concept of "côliê" and wonder what it is, technical engineers find it easy for them to understand because they know about it clearly enough, perhaps better than:" Nguyên tắc khoan ống nước trực tiếp bằng rèn vòng kẹp" – a literally translated term in Vietnamese.

Here are some other terms applied this strategy:

English	Vietnamese
Biological nutrient removal	Khử chất dinh dưỡng bằng phương pháp sinh học
Aerosol and Sol	Hỗn hợp lỏng và khí trong môi trường khí
Aerobic attached-growth treatment process	Quá trình xử lý sinh học hiếu khi lơ lừng
Scouring pipe	Ống cấp gió rửa lọc
Grade	Cấp độ chất lượng sản phẩm

3. Difficulties encountered in the translation procedures of terms in Water Sector

It is very hard and complicated to translate technical documents in Water Sector that only specialists could understand the meaning of terms. In order to gain a comparatively good translation skill, it is necessary to court, to collect specialist documents and information, and then learners may start the process of translating term from English into Vietnamese. Personally, during the time translating those documents, I have met many difficuties encountered in the translation procedures. The first difficuty is misunderstanding – a very common situation to many translator. I had problems of misunderstanding

between the meaning of general English words and specific terms or among the fields. The second one is that I lack of practice information about this field. Also, many terms could not be found in dictionary. So, it is really not easy to translate it equivalently into Vietnamese or vice versa.

On the other hand, I also met difficulties in translating terms of drainage system. There are some different terms but same layer of meaning, such as: sewer, sewage, sewerage, wastewater, drain, drainage... Some words are derivations of each other, but sometimes can be understood with the meaning of "thoát nước" or "nước thải". So, green translators at the first time dealing with these terms will be unavoidably confused. Let's take this sentence as example:

Eg: ***Septage*** *arising from the desludging of septic tanks is transported to a site located adjacent to the existing sanitary landfil.*

It is so difficult to look up the meaning of "Septage" in this sentence, particularly difficult for any translator at the first time dealing with this term. The definition of "septage" is the partially treated waste store in a septic tank. It is generally split into three parts in a septic tank.

- **Scum:** which floats to the top and is generally where the bacteria live that treat the waste.
- **Effluent:** which is the semi-treated liquid that comprises the majority of the material in the septic tank
- **Sludge:** the solids which collect at the bottom of the tank

Septage waste is periodically removed (with a frequency depending on tank capacity, system efficiency, and usage level, but typically less often than annually) from these septage tanks by specialized vehicles known as septage,

pumper, or "Honey" trucks. They pump the septage out of the tank, and transport it to a treatment facility.

Therefore, based on the definition above and the context of Water sector, the suggested translation is:

→ ***Rác thải*** *phát sinh từ việc hút bể phốt được vận chuyển tới khu đất cạnh bãi rác Tràng Cát***.**

Another example, as in the compounding "Sewerage and sewage treatment", I was very confused with choosing the appropriate meaning when translating "sewerage" and "sewage" seperately because they have the same layer of meaning. So, what is the difference between "sewage" and "sewerage"? According to their their definition, "sewage" is the waste matter carried off by sewer drains and pipes. Sewerage refers to the physical facilities (e.g., pipes, lift stations, and treatment and disposal facilities) through which sewage flows. Basing on this, "Sewerage and sewage treatment" is translated as "Thoát nước và xử lý nước thải".

Moreover, only translating the name of Hai Phong Sewage and Drainage Company can brings troubles to translator if he does not know about that company. He will tend to translate the whole term of "sewage and drainage" without any word omission. I faced this too. Then I was very surprised to discover that its name is so differernt as what I have translated. Hai Phong Sewage and Drainage Company **(**or HPSADCO) is the English name of "Công ty Thoát nước Hải Phòng".

Chapter III: APPLICATION

1. Strength and weakness of the thesis

As Water sector is not very popular to people so far, particularly to any students of Foreign Languages Department, this graduation paper is an overview and general information about the English terms using in the Sector, with relavant examples. So, it is organized in a way that helps readers find it easy to get general ideas about it.

On the other hand, this has some limitations that may affect the final results. Firstly, due to the limited time of doing the research, the paper only reaches the basic terms of Water Sector often met in the documents and on some popular strategies applied in translating these terms. Moreover, some terms in the study are not all analysised in particular context or at a deeper level. Hence, the analysis can hardly provide a comprehensive approach to the issue. Secondly, mistakes and shortcomings in this graduation paper are unavoidable due to my limitation of time and knowledge. Therefore, I'm always willing to receive the contributions, advices and sympathies from teachers and readers to make my graduation paper much better. Finally, a part of terms selected for analysis are somewhat not updated, which might affect comprehensiveness of the study in terms of translation quality.

2. Suggestion for the further research and final comments

The Water Sector has developed so fast and it is becoming increasingly important; A lot of Foreign investors care and concern about this. So, it requires translations of high quality, not only translating but also interpreting. Therefore, more studies should be carried out so that translating the documents becomes easier. These studies should touch up on translation from different perspectives, especially the impacts of the translations on their readers because it is the readers that are the final and most important assessors of translations.

In conclusion, I would like to contribute to the study of English-Vietnamese translations in universities and on the media this thesis. In my opinion, it can be considered a companion of all people who are seeking to improve their English-Vietnamese transition skills as well as the quality of their translations. Hopefully, readers of this thesis can find it useful in their future work and study or at least see it as a reference worth looking at.

PART III: CONCLUSION

The world is becoming smaller and smaller as the systems of communication and information are developing and getting more and more sophisticated. It is undergoing complex changes in different areas such as business, education, economy, technology and some infrastructural sectors, particullarly in Water Sector. In the process of such a rapid exchange of information and for the purpose of improving cultural contacts, one thing is inevitable, and that is "translating".

According to Shahvali (1997), theoretical knowledge and practical skills alone are not adequate to prepare students to face the developments in the field. There is a need for ability to adapt, a good command of language and the flexibility in transforming the SL into TL; therefore, it is necessary to focus on students' self-updating and to develop their relevant mental, communicative, and planning skills. Thus, translating process requires a lot of efforts and practice everyday.

My topic for the graduation paper is “A study on translation of English terminologies related to Water Sector”, which I was inspired and have longed for a long time due to my experience in the Sector. This study aims at analysis of translation strategies or procedures of English terms in Water Sector through 3 main parts of the study. The first, this provides general information about the paper, as well as an overview on translation theory and a list of some popular terms used in the Sector. Instead of listing the terms according to their word formation, the compound terms in the study are listed basing on the meaning. They are divided into 4 groups: environment, engineering design & material, valves and tanks. These 4 groups are the most important aspects belonging to Water Sector.

The second, after listing those terms, it reviews and analyses some popular strategies with relevant examples applied in translating the terminologies in Water sector so that readers can get to know the procedures of translattion. For example, in the strategy of single term translation, according to Wikipedia's or general definition, people will only understand that "kerb" is the concrete border along the pavement. However, it is, in the context of Water Sector, a V-shaped channel or an open channel along the pavement. So, as in strategy of translating by a more specific word, it should be "cống hàm ếch" in Vietnamese.

The third, the study explains many problems I have met and found it much difficult not only for me but also translators/interpretors working in this field, during the time translating the documents.

So, the question is: what skills are needed to promote translating ability? And how can one solve the problems or difficulties meeting with in translation process to be a better translator / interpretors in Water Sector? These questions suggest for further research in the future, which requires more of our attention, time and efforts.

Finally, due to the limitation of time and knowledge, mistakes are unavoidable in this paper. All remarks, contribution are deeply welcome and highly appreciated.

In conclusion, this graduation paper is for contribution to the study of English-Vietnamese translation in HPU only. They do not have any connection to commercial activities or violate to IPR. Those, who find its law-broken concerns, please keep us informed.

Other sstudents, studying in Hai Phong Private University, consider the paper as a material for study purposes can wish their manifold of copies. Hopefully,

the readers of this thesis can find it useful and meaningful in their future work and study or at least see it as a reference worth reading.

A last word to say, throughout 4 years studying in HPU, we are now more confident in ourselves and are more well-equiped and knowledgable. I am myself so proud of being a student graduating from Foreign Languages Department in HPU, where I have been growing up. I will try my best to prove that the efforts of every teachers teaching me here are meaningful and not worthless.

Once again, I would like to send my sincere thanks to all who always stand beside me on the way to the bright future, for their precious supports and instruction.

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APPENDIX

Common Acronyms in Water Sector

Abbrev	English	Vietnamese
AADT	Annual Average Daily Traffic	Lượng xe ngày đêm trung bình trong năm\
ADB	Asian Development Bank	Ngân hàng phát triển Châu Á
AIEC	Average Incremental Economic Cost	Chi phí kinh tế gia tăng trung bình
ANOVA	Analysis Of Variance	Phân tích biến động
AP	Affected Person	Đối tượng chịu tác động
AusAID	Australian Agency for International Development	Cơ quan phát triển quốc tế của Úc
CQS	Consultants Qualifications Selection	Lựa chọn năng lực Tư vấn
CSP	Country Strategy and Program	Chiến lược và chương trình quốc gia
CV	Contingent Valuation	Đánh giá ngẫu nhiên
CVM	Contingent Valuation Method	Phương pháp đánh giá ngẫn nhiên
Danida	Danish International Development Assistance	Hỗ trợ phát triển quốc tế của Đan Mạch
DFR	Draft final report	Sơ thảo báo cáo cuối kỳ
DI	Ductile Iron	Gang dẻo
DICL	Ductile Iron Cement Lined	Gang dẻo tráng vữa xi măng
DMF	Design and Monitoring Framework	Phạm vi thiết kế và giám sát
DSCR	Debt-service coverage ratio	Hệ số năng lực trả nợ
DRC	Development and Reform Commission	Uỷ ban phát triển và cải cách

EA	Executing Agency	Cơ quan thực hiện
EDR	Equalizing Discount Rate	Tỷ lệ chiết khấu cân bằng
EFS	Engineering Feasibility Study	Nghiên cứu kỹ thuật khả thi
EIA	Environmental Impact Assessment	Đánh giá tác động môi trường
EIRR	Economic Internal Rate of Return	Tỷ suất hoàn vốn kinh tế nội bộ
EMAB	Ethnic Minority Affairs Bureau	Cục các vấn đề dân tộc thiểu số
EMDF	Ethnic Minorities Development Framework	Phạm vi phát triển các dân tộc thiểu số
EMDP	Ethnic Minorities Development Plan	Chương trình phát triển các dân tộc thiểu số
EMP	Environmental Management Plan	Kế hoạch quản lý môi trường
EOCC	Economic Opportunity Cost of Capital	Chi phí cơ hội kinh tế của vốn
EPA	Entire Project Area	Toàn bộ khu vực dự án
EPB	Environmental Protection Bureau	Cơ quan bảo vệ môi trường
ERD	Economics and Research Department	Phòng kinh tế và nghiên cứu
FGD	Focus group discussion	Thảo luận nhóm tập trung
FIA	Financial Impact Assessment	Đánh giá tác động tài chính
FIRR	Financial internal rate of return	Tỷ lệ suất hoàn vốn tài chính nội bộ
FMA	Financial Management Assessment	Đánh giá quản lý tài chính
FMAQ	Financial Management Assessment Questionnaire	Bảng hỏi đánh giá quản lý tài chính
FRP	Fiberglass Reinforced Plastics	Nhựa sợi thuỷ tinh
FSR	Feasibility Study Report	Báo cáo nghiên cứu khả thi
FYP	Five-Year Plan	Kế hoạch 5 năm
GHG	Greenhouse Gas	Khí nhà kính
GoV	Government of Vietnam	Chính phủ Việt Nam
GRP	Glass-reinforced Plastic	Nhựa thuỷ tinh

HDPE	High Density Polyethylene	Polyethylene tỷ trọng cao
HH	Household	Hộ gia đình
HPWSCo	Hai Phong Water Supply One Company	Công ty TNHH một thành viên Cấp nước Hải Phòng
RUPHWSS	Rehabilitation and Upgrading Project of Haiphong Water Supply System	Dự án Cải tạo và Nâng cấp hệ thống Cấp nước Hải Phòng
IA	Implementation Agency	Cơ quan triển khai
ICB	International Competitive Bidding	Đấu thầu quốc tế cạnh tranh
IEC	information, education and communication	Thông tin, giáo dục và truyền thông
IEE	Initial Environmental Examination	Khảo sát môi trường ban đầu
IFO	International Financing Organization	Tổ chức cấp vốn quốc tế
IP	Indigenous Peoples	Các nhóm dân bản địa
IPA	Immediate Project Area	Khu vực lân cận dự án
IPSA	Initial Social and Poverty Assessment	Đánh giá xã hội và nghèo đói ban đầu
IRR	Internal Rate of Return	Tỷ suất hoàn vốn nội bộ
JBIC	Japanese Bank for International Cooperation	Ngân hàng hợp tác quốc tế Nhật Bản
JICA	Japanese International Cooperation Agency	Cơ quan hợp tác quốc tế Nhật Bản
LCB	Local competitive bidding	Đấu thầu cạnh tranh trong nước
LCS	Least-cost selection	Lựa chọn chi phí thấp nhất
LDI	Local design institute	Cơ quan thiết kế địa phương
LIBOR	London interbank offered rate	Lãi suất LIBOR
Lpcd	liter per capita per day	Lit trên đầu người trên ngày
M&E	Metcalf & Eddy Ltd	Metcalf & Eddy Ltd
MDG	Millennium Development Goals	Mục tiêu phát triển thiên niên kỷ

MEP	Ministry of Environmental Protection	Bộ Môi trường
MIS	Management Information System	Hệ thống thông tin quản lý
MLG	Minimum living guarantee	Đảm bảo mức sống tối thiểu
MoC	Ministry of Construction	Bộ xây dựng
MoET	Ministry of Education and Training	Bộ giáo dục và đào tạo
MoF	Ministry of Finance	Bộ Tài chính
MoH	Ministry of Health	Bộ y tế
MoNRE	Ministry of Natural Resources and Environment	Bộ tài nguyên và môi trường
MPI	Ministry of Planning and Investment	Bộ kế hoạch và đầu tư
MSL	Minimum Standard of Living	Mức sống tối thiểu
NBS	National Bureau of Statistics	Cục thống kê quốc gia
NCB	National Competitive Bidding	Đấu thầu cạnh tranh trong nước
NDRC	National Development and Reform Commission	Uỷ ban phát triển và cải cách quốc gia
NGO	Non-governmental Organization	Tổ chức phi chính phủ
NPV	Net Present Value	Hiện giá ròng
NTFP	Non-timber forest products	Các sản phẩm phi gỗ
OD	Origin-destination	Nguồn – đích
O&M	Operation and Maintenance	Vận hành và bảo dưỡng
PAC	Polyaluminium chloride	Phèn nhôm
PBRA	Project Benefits Reachable Area	Khu vực có thể hưởng lợi từ dự án
PCCP	Prestressed Concrete Cylinder Pipe	Ống bê tông dự ứng lực
PCU/D	Passenger car units per day	Đơn vị xe chở khách trên ngày
PLG	Project Leading Group	Ban chỉ đạo thực hiện dự án
PMU	Project Management Unit	Ban quản lý dự án
PPMS	Project Performance Management	Hệ thống quản lý hoạt động của

	System	dự án
PPP	Purchasing power parity	Cân băng sức mua
PPTA	Project Preparatory Technical Assistance	Hỗ trợ kỹ thuật lập dự án
PS	Pumping Station	Trạm bơm
PSA	Poverty and Social Assessment	Đánh giá xã hội và nghèo đói
PSP	Private Sector Participation	Sự tham gia của khối tư nhân
QCBS	Quality Cost Based Selection	Lựa chọn trên cơ sở chất lượng – chi phí
RC	Reinforced Concrete	Bê tông cốt thép
RIA	Road Influence Area	Khu vực đường bị ảnh hưởng
RRP	Report and Recommendation of the President	Báo cáo và kiến nghị của Chủ tịch
SAP	Social action plan	Kế hoạch hành động xã hội
SEIA	Summary Environmental Impact Assessment	Đánh giá tác động môi trường tóm tắt
SEPA	State Environmental Protection Agency	Cơ quan bảo vệ môi trường quốc gia
SEPP	Soil Erosion Prevention Plan	Kế hoạch ngăn chặn xói mòn đất
SIA	Social Impact Assessment	Đánh giá tác động xã hội
SPRSS	Summary Poverty Reduction and Social Strategy	Tóm tắt chiến lược xã hội và xoá đói giảm nghèo
TA	Technical Assistance	Hỗ trợ kỹ thuật
TOR	Terms of Reference	Đề cương nhiệm vụ
UFW	Unaccounted-for-water	Nước không được hạch toán
VOC	Vehicle Operating Cost	Chi phí vận hành phương tiện
WB	World Bank	Ngân hàng thế giới

WS	Water Supply	Cấp nước
WTP	Water Treatment Plant	Nhà máy nước
WWT	Wastewater Treatment	Nhà máy xử lý nước thải

GLOSSARY

MỘT SỐ THUẬT NGỮ TIẾNG ANH THƯỜNG DÙNG TRONG BẢN VẼ KỸ THUẬT NGÀNH NƯỚC.

Bãi để vật liệu: Material Area
Bản vẽ số..: Drawing No...
Bản vẽ xây dựng: Contruction Drawing
Bảng thống kê vật tư: List of Material
Bích nhựa rỗng: Combiflange for UPVC
Bích rỗng: Steel Flange
Bình clo: Chlorine drum
Bộ xử lý phát hiện rò rỉ Clo: Microprocessor _base_d gas warning system
Bơm chìm thoát nước rò rỉ: Sump pump for sludge water
Bơm chìm: Submersible pump
Bơm định lượng: Dosing Pump
Bơm kỹ thuật: Booters pump
Bơm nước vào mạng: Treated water pump
Bơm thu hồi nước thải: Clear water pump
Bu gang BU: Flange spigot pipe
Bu lông: Bolt
Buồng chứa ống: Filter pipes gallery

Cái: Piece
Cân lò xo loại 500 – 2000 kg: Spring balance for craines 500 – 2000kg
Chủ đầu tư:Owner
Chủ trì: Team Leader
Clo hoạt tính: Activited Chlorine
Cơ quan điều hành: Executing Agency
Còi báo động: Signal horn
Côn: Reducer
Cửa thông sang bể chứa: Gate connection to resorvoir
Cút thép mạ kẽm: Galvanize Steel bend
Cút thép: Steel bend

Đài nước: Water tower
Đất tự nhiên: Natural soil
Đèn báo động: Flash – light
Đơn vị: Unit
Đường ống kỹ thuật: Technical pipes
Duyệt: Approved

Ecu: Nut
Ejector: Injector

Hố van đồng hồ: Flowmetter
Họng tưới nước: Outlet Refer
Hợp đồng số: Contract No

Kiểm tra: Checker
Lá chắn thép: Penetration Plate
Lá chắn thép: Steel Plate

Máng thu nước răng cưa: Water collection cog-channel
Mặt bằng cụm xử lý nước: Plan of water treatment Modul
Mặt bằng ngăn phản ứng và bể chứa nước sạch: Plan of Contact tank and treated water resovoir
Mặt bằng tổng thể trạm xử lý: General layout of Water treatment plan.
Mặt cắt: Section
Mặt đứng: Façade
Máy khuấy trộn vôi: Mixer for lime slurry
Mối nối mềm: Flexible coupling
Mương xả tràn: Over flow Channel

Neo ống: Anchor pipe
Nhà bảo vệ: Guard House
Nhà điều hành: Coltrol Building
Nhà hóa chất: Chemical House
Nhà thầu: Contracter
Nhà xưởng: Workshop
Nối kép: Galvanize Steel Adapter
Nối thẳng: Straight Fitting
Nối với mạng: Connect to network

Ống cấp gió rửa lọc: Scouring Pipe
Ống cấp nước trở lại khu xử lý: Return waste water to water treatment block
Ống cấp vào mạng: Outlet
Ống dẫn bùn từ bể lắng, lọc sang bể chứa bùn: Sludge disposal pipelines from sedimeniation and Filters to sluge lagoon
Ống dẫn Clo: Clo/Chlorine pipeline
Ống dẫn nước rửa lọc: Backwashed Pipeline
Ống dẫn nước thô: Raw water Pipeline
Ống dẫn nước thu hồi: Return waste water pipe
Ống dẫn phèn: Alum pipeline
Ống dẫn vôi: Lime Pipeline
Ống dịch vụ: Service Pipeline

Ống nhựa mềm: PE Pipe
Ống nhựa: UPVC pipe
Ống thép không rỉ: Stainless steel pipe
Ống thép thông hơi: Steel pipe air
Ống vào: Inlet
Ống xả cặn bể lắng: Sludge discharge pipelines
Ống xả kiệt: Drain Pipe
Ống xả tràn: Over Flow

Quần áo bảo hộ và mặt nạ phòng độc: Stand – alone body and eye shower
Quạt hút gió: Exhauster Fan
Ren ngoài : Male Screw

Sàn công tác: Working Platform
Sensor phát hiện khí clo: Chlorine gas sensor
Sơ đồ cao trình thủy lực: Hydraulic Profile
Số lượng: Quanity
Số thứ tự: No

Tê thép: Steel Tee
Tên vật tư – quy cách: Specification types of materiala
Thép tấm không rỉ: Stainless steel panel
Thiết bị báo khí rò rỉ khí clo: Safety System gasdetect
Thiết bị điều chỉnh chân không: Vacuum regulator with liqid Chlorine trap
Thiết bị điều chỉnh định lượng bằng tay: Dosing unit with manual rate valve
Thiết bị nâng: Lift device
Thiết bị trộn tĩnh: Static Mixer
Thiết kế: Designer
Thùng thép không rỉ trộn vôi: Stainless steel tank for Lime Slurry
Trạc ba bằng nhựa: Strainers Upvc
Trắc dọc tuyến ống cấp nước rửa lọc: Longitudinal Profile Of backwashed water pipe
Trắc dọc tuyến ống cấp nước sạch: Longitudinal Profile Of treated water pipe
Trắc dọc: Longitudinal Profile
Trạm biến áp: Transfomer
Trạm bơm cấp 2: Pumping station
Trạm bơm nước thô: Raw water intake

Van bi bằng thép không rỉ (nối ren): Ball valves Stainless steel (fermale screwed connection)
Van bướm hai chiều: Buttefly Valve
Van bướm một chiều: CheckValve
Van phao: Floating valve

Zoăng cao su: Rubber ring

Một sô thuật ngữ Anh Việt Môi trường

Absorption (n): hấp thụ
Accident n Tai nạn
acid deposition. mưa axit
acid rain mưa axit
act (n): luật
Activated carbon than hoạt tính
Activated sludge Bùn hoạt tính
Adsorption n hấp phụ
Aerobic attached-growth treatment process: Quá trình xử lý sinh học hiếu khí dính bám

Aerobic suspended-growth treatment process: Quá trình xử lý sinh học hiếu khí lơ lửng

Aerosol n Sol khí - hỗn hợp lỏng và khí trong môi trường khí.
Agriculture n nông nghiệp
air n không khí
air conditioning np điều hoà không khí
Air pollution control kiểm soát ô nhiễm khí alkaline. n kiềm.
alkalinity n độ kiềm
ambient a xung quanh
Anaearobic sludge degestion Phân hủy bùn = pp kỵ khí

Anaerobic a kỵ khí
Applied Sciences khoa học ứng dụng
aquaculture n nuôi trồng thuỷ sản
aquatic a nước
aqueduct n kênh dẫn nước
artificial a nhân tạo
ash n tro
Atmospheric a khí quyển
Atomic energy np năng lượng nguyên tử

Bag house np thiết bị lọc túi vải, lọc tay áo
Bar rack n Song chắn rác
Basin n bể pond, tank,
Baterium n bacterium, bacteria (pl) (n): vi khuẩn
Biodiversity n đa dạng sinh học
Biofiltration n lọc sinh học
Biological a
Biological nutrient removal np khử chất dinh dưỡng bằng phương pháp sinh học

Biology n sinh học
Boiler n Lò đốt
burn v cháy

Characteristics n Tính chất
Characterization n đặc tính
Chemical a hoá học
chemistry n chemistry (n). Chemical (a) - hoá học
clarifier n thiết bị lắng, bể lắng
Clarify v lắng tách
Classification n phân loại
Classify v phân loại
clay n đất sét
Collect v Thu gom
Combust v đốt
composition n thành phần
Composting n chế biến thành phân bón
condensation n ngưng tụ
condense v ngưng tụ

Conservation n tiết kiệm
Constituent n Thành phần
contaminant chất ô nhiễm
Control v,n kiểm soát
Conversion n chuyển hoá
convey v vận chuyển
Conveyance n vận chuyển
Cyclone separator Tách bụi bằng xyclon
dangerous a nguy hiểm

Dechlorination n khử clo
Deep-well injection np Phun vào giếng sâu
Desalinization n khử mặn
Dewater v khử nước
discharge v thải bỏ
Disinfection n khử trùng
Disposal n thải bỏ
Domestic waste np chất thải sinh hoạt
Drainage kênh dẫn nước, ống cống sewer
Dust n bụi participate

Thuật ngữ anh Việt của một số loại bể (Tank)

auxiliaty tank : bình phụ; thùng phụ
catch tank : bình xả
charging tank : bình nạp
clarifying tank : bể lắng, bể thanh lọc
collecting tank : bình góp, bình thu
compartmented tank : bình chứa nhiều ngăn, thùng nhiều ngăn

depositing tank : bể lắng bùn
destritus tank : bể tự hoại
digestion tank : bể tự hoại
dip tank : bể nhúng (để xử lý)
dosing tank : thùng định lượng

elevated tank : tháp nước, đài nước
emergency tank : bình dự trữ; bể dự trữ cấp cứu
exhaust tank : thùng xả, thùng thải; ống xả
expansion tank : bình giảm áp; thùng giảm áp

feed tank : thùng tiếp liệu; bình tiếp liệu
Gravity Filter: Bể lọc nhanh trọng lực
Filter: Bể lọc
Flocculation tank: Bể phản ứng vách ngăn
Sludge lagoon: Bể thu hồi bùn
Waste water largon: Bể thu hồi nước thải
Disinfection: Bể trộn vách ngăn
Mixing tank: Bể trộn

Float tank: bình có phao, thùng có phao
flowing water tank : bể nước chảy
gage tank : thùng đong
gathering tank : bình góp, bể góp
gauging tank : bình đong, thùng đong
head tank : két nước có áp
Fountain: Bể cảnh

holding tank : thùng chứa, thùng gom
measuring tank : thùng đong
overhead storage water tank : tháp nước có áp
precipitation tank : bể lắng; thùng lắng
priming tank : thùng mồi nước, két mồi nước
regulating tank : bình cấp liệu; thùng cấp liệu
rejection tank : buồng thải
ribbed tank : bình có gờ,

sand tank : thùng cát
sediment tank : thùng lắng
self-sealing tank : bình tự hàn kín
separating tank : bình tách, bình lắng
septic tank : hố rác tự hoại; hố phân tự hoại
settling tank : bể lắng
sewage tank : bể lắng nước thải
slime tank : bể lắng mùn khoan;
slurry tank : thùng vữa; thùng nước mùn; bể lắng mùn khoan
storage tank : thùng chứa, thùng bảo quản, thùng trữ, bể trữ
suds tank : bể chứa nước xà phòng
sump tank : bể hứng; hố nước rác, bể phân
supply tank : bể cấp liệu; bể cung cấp
surge tank : buồng điều áp;

tailrace surge tank : buồng điều áp có máng thoát;
tempering tank : bể ram, bể tôi
underground storage tank : bể chứa ngầm (dưới đất)
vacuum tank : bình chân không; thùng chân không
water tank : thùng nước, bể nước, xitéc nước
water-storage tank : bể trữ nước
Storage Resorvoir: Bể chứa

Thuật ngữ Anh Việt một sô loại Van

adjusting valve : van điều chỉnh
air-operated valve : van khí nén
alarm valve : van báo động
amplifying valve : đèn khuếch đại
angle valve : van góc
automatic valve : van tự động

back valve : van ngược
balanced valve : van cân bằng
balanced needle valve : van kim cân bằng
ball valve : van hình cầu, van kiểu phao
ball and lever valve : van hình cầu - đòn bẩy
bleeder valve : van xả
bottom discharge valve : van xả ở đáy
brake valve : van hãm
bucket valve : van pit tông
butterfly valve : van bớm; van tiết lưu
by-pass valve : van nhánh

charging valve : van nạp liệu
check valve : van cản; van đóng; van kiểm tra
clack valve : van bản lề
clapper valve : van bản lề
compensation valve : van cân bằng, van bù
compression valve : van nén
conical valve : van côn, van hình nón
control valve : van điều chỉnh; van kiểm tra;
cup valve : van hình chén
cut-off valve : van ngắt, van chặn

delivery valve : van tăng áp; van cung cấp;
diaphragm valve : van màng chắn
direct valve : van trực tiếp
discharge valve : van xả, van tháo
disk valve : van đĩa
distribution valve : van phân phối
double-beat valve : van khóa kép, van hai đế
draining valve : van thoát nớc, van xả
drilling valve : van khoan

ejection valve : van phun
electro-hydraulic control valve : van điều chỉnh điện thủy lực

emergency closing valve : van khóa bảo hiểm
emptying valve : van tháo, van xả

exhaust valve : van tháo, van xả
expansion valve : van giãn nở
feed valve : van nạp, van cung cấp
feed-regulating valve : van điều chỉnh cung cấp
flap valve : van bản lề
float valve : van phao
flooding valve : van tràn
free discharge valve : van tháo tự do, van cửa cống
fuel valve : van nhiên liệu

gas valve : van ga, van khí đốt
gate valve : van cổng
gauge valve : van thử nước
globe valve : van hình cầu
governor valve : van tiết lưu, van điều chỉnh

hand operated valve : van tay
hinged valve : van bản lề
hydraulic valve : van thủy lực

injection valve : van phun
inlet valve : van nạp
intake valve : van nạp
interconnecting valve : van liên hợp
inverted valve : van ngược

leaf valve : van lá, van cánh; van bản lề
levelling valve : van chỉnh mức
lift valve : van nâng

main valve : van chính
multiple valve : van nhiều nhánh
mushroom valve : van đĩa

needle valve : van kim
nozzle control valve : van điều khiển vòi phun

operating valve : van phân phối
orifice valve : van tiết lưu;
oulet valve : van xả, van thoát
overflow valve : van tràn

overpressure valve : van quá áp
paddle valve : van bản lề
penstock valve : van ống thủy lực
pilot valve : van điều khiển; đèn kiểm tra
pintle valve : van kim
pipe valve : van ống dẫn
piston valve : van pít tông
plate valve : van tấm
plug valve : van bít
pressure operated valve : van áp lực
pressure relief valve : van chiết áp

rebound valve : van ngược
reducing valve : van giảm áp
reflux valve : van ngược
regulating valve : van tiết lưu, van điều chỉnh
release valve : van xả
relief valve : van giảm áp, van xả
return valve : van hồi lưu, van dẫn về
reverse-acting valve : van tác động ngược
reversing valve : van đảo, van thuận nghịch
revolving valve : van xoay

safety valve : van an toàn, van bảo hiểm
screw valve : van xoắn ốc
selector valve : đèn chọn lọc
self-acting valve : van lưu động
self-closing valve : van tự khóa, van tự đóng
servo-motor valve : van trợ động
shut-off valve : van ngắt
slide valve : van trượt
spring valve : van lò xo
springless valve : van không lò xo
starting valve : van khởi động
steam valve : van hơi
stop valve : van đóng, van khóa
straight-way valve : van thông
suction valve : van hút
supply valve : van cung cấp, van nạp

thermostatic control valve : van điều ổn nhiệt
three-way valve : van ba nhánh
throttle valve : van tiết lưu
through-way valve : van thông

transfer valve : van thông; van thoát
transforming valve : van giảm áp, van điều áp
triple valve : van ba nhánh
tube valve : van ống
tube needle valve : van kim
turning valve : van quay
two-way valve : van hai nhánh
water-cooled valve : van làm nguội bằng nước
water-escape valve : van thoát nước; van bảo hiểm

Gutter: máng nước
drainpipe: ống thoát nước ống máng
continents: các lục địa
River: sông ngòi
canal: kênh, sông đào
main river: sông chính .sông cái
course of a river: lòng sông
island: đảo
fluid property: tính chất dòng chảy
rush: chảy mạnh chảy dồn
flood: lũ lụt. {Flooded (adj): bị lụt, bị ngập - tobe floodded with+.N..)
flood tide: triều cường
floodway: kênh thoát lũ
flood abatment: sự giảm lũ
flood plane: mặt nước lũ
jetty: đê chắn sóng
area: diện tích, vùng,mặt cắt ướt
area of +N..,
air course: luồng không khí
main course: dòng chảy chính
alluvieal(adj): thuộc đất phù sa _(n) alluvium
alluvial water course: lòng sông bồi lắng phù sa
top: đỉnh, ngọn
crest:+of .(N)..đỉnh, ngọn
crest of flood : đỉnh lũ
crest of overfall: đỉnh đập tràn
crest of tide: đỉnh triều
crest of wave: ngọn sóng
current: dòng chảy, luồng
flow(n): sự chảy, luồng nước
turbulent flow: dòng chảy rối
laminar flow: dồng chẩy tầng
adverse current : dòng chảy ngược
convection current : dòng đối lưu
coastal current: dòng ven bờ

Arch: vòng cung. (a curved,usually load-bearing,structure across an space1 kiểu kiến trúc vòng ,qua một khoảng trống ,thường chịu đựng sức nặng. ex:the arch has greater strength than a straight member. vòng cung chịu đựng sức nặng nhiều hơn dạng thẳng). E.g: the arch has greater strength than a straight member.

Gravity: trọng lực (the force that tends to pull all bodies toward the center of the earth: Lực có khuynh hướng kéo mọi vật thể về phía trung tâm trái đất). E.g: the engineers use the force of gravity in many ways

Gravity Dam: đập trọng lực. (a masonry dam which ,by its weight ,resists the forces against it). E.g: gravity dams were built in Spain as early as the 16th century

Hydraulic: thuộc về thuỷ lợi. (having to do with the force of liquid under pressure. Có liên quan đến sưc mạnh cua chất lỏng dưới áp lực)

Hydraulic Jump: nước nhảy. (a sudden increase in the exerted by a stream of water when the depth increases. Sức mạnh dòng nươc tăng đột nhiên khi gặp chỗ sâu). E.g: there is a loss of energy in the hydraulic jump

Ydroelectric: thuỷ điện (relating to the production of electricity by water power: Liên quan đến việc sản xuất điện bằng sức nước). E.g: My company is completing contruction of a big hydroelectric

Seepage: nước rỉ. (the movement of a liquid through small in a material: Nước chảy qua nhữngkẽ hở nhỏ trên một vật liệu). E.g: the seepage line is clearly shown in the drawing

Silt: bùn đọng (earth particles finer than sand carried and deposited by water - Những hạt đất nhỏ hơn cát bị nước quấn đi và đọng cặn lại). E.g: Silt can change the course of a stream

Siphon: si-phôn. (a bent tube through which liquid is carried upward and then downward by the force of the surrounding air on the surface of the liquid: Một ống cong trong đó chất lỏng được đưa lên hạ xuống bởi lực của không khí xung quanh tác dụng vào bề mặt chất lỏng). E.g: Both ends of the siphon were

beneath the surface of the water (hai đ ầu ống si-ph ông đều đặt ưới mặt nước.

Spillway: đường nước thoát. (a device through or along which excess water flows a way: Một bộ phận để cho nước dư chảy đi). E.g: the spillways are placed further upstream (Những đường nước thoát thường đặt ở đầu dòng nước)