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EFFICIENCY OF IMO SMCP FOR SAFE NAVIGATION AT SEA: NEEDS AND CHALLENGES

Summary. As seaborne transportation of goods has become a major industry, world trade has become more dependent on the safe navigation of the ships hence competence of seafarers in all relevant skills to accomplish their duties as required. Shipping industry requires most ships to navigate world-wide visiting many ports of different countries making composition of crews of the ships as well as maritime shipping environment more multi-national and multi-cultural. Through this diversity, the need for safe navigation and conduct of duties on board has made communication skills of seafarers a significant issue of competence. English language is the operational language at sea accepted by International Maritime Organization (IMO). With its special context that requires maritime-routine-area-specific terminology and special communication phrases, English language spoken at sea is Maritime English. Researches on the area have shown that communication failures or lack is the one of the main reasons of the accidents occurred due to human error. In order to overcome the communication issues at sea, IMO, as the prime international regulating body, put a lot of efforts in the past decades, the latest being IMO SMCP (Standard Marine Communication Phrases). SMCP covers a wide range of phrases designed both for external and on-board routine communication, as well as emergency situations. How wide-spread and frequent the use of those phrases has become, surely depends on the practices of the nations. This paper intends to cross reference the content of SMCP to evaluate how good it matches with the navigation operation at sea. Attempt will also be made to pinpoint specific areas of communication needs that might be used to improve its content for accomplishing clear and effective communication on VHF/radio for safe navigation.

Keywords: Maritime English, SMCP, Communication failure, Operational language at sea.

Introduction. The development of world-wide trade and economy mostly depends on maritime transport. The importance of maritime transport for trade and development cannot be underestimated, given that more than 80 per cent of world trade and more than 70 per cent of its value are transported by ships (UNCTAD, 2017). Maritime is an international industry, which in turn has enabled seafarers to become multinational and multicultural. Approximately 70-80% of the world's commercial fleet has a multinational and multicultural crew (Hanzu-Pazara and Arsenie, 2010).

Many marine accidents in the maritime sector stem from communication errors. Therefore, these failures in communication have become a growing problem. As a result, the Manila Amendments 2010 accepted new requirements for effective verbal communication between seafarers to raise awareness on marine accidents related to communication failures (IMO, 2011). Maritime English is literally defined as a general term for English used by people working in the maritime industry (Bocanegra-Valle, 2013), but it is mostly referring to English used in the maritime context (Uchida and Takagi, 2012).

Communication has long been regarded as an important determinant for safe navigation. This importance of communication has also been highlighted in the disastrous evacuation procedures of two recent accidents of cruise ships Costa Concordia and Sewol. Moreover, research has shown that half of all marine accidents are caused only because of communication failures, while it is a contributing factor to almost all marine accidents (John, Brooks, Wand, & Schriever, 2013; Möckel, Brenker, & Strohschneider, 2014). Without communication, seafarers may not be able to establish solid personal relationships, but on a larger scale this may affect their effective communication skills in situations requiring teamwork or leadership. According to Crichton (2005), the most important factor to improve teamwork is communication. De Vries, Bakker-Pieper (2010) stated that communication skills is one of the key components of leadership. Besides, the 2010 Manila Amendments emphasized also the importance of communication, leadership and teamwork (Chauvin, et al, 2013).

Communication on board takes place as (1) internal communication; from bridge to engine room, and (2) external communications; from ship to ship and from ship to shore. Besides these, social talk is to be achieved via a common language as well. The need for safe navigation and conducts of duties on board has made communication skills of seafarers a significant issue of competence. Effectiveness and efficiency are the two key words that describe the quality of communication. In an effective and efficient communication, the misunderstanding is not a matter of discussion. Thus, the given message by transmitter will be well understood by the receiver properly.

In addition to being recognized as the most widely used language in the world, English is also accepted as the language of most professions. So, understanding and efficient understanding in English is a necessity and a requirement for the global world. In other words, English is considered to be a necessary tool for the successful conduct of successful business in multinational companies (Davies, Forey, and Hyatt, 1999; Forey and Nunan, 2002).

This tendency for shipping led to the introduction of SMNV (Standard Marine Navigational Vocabulary) in 1977, afterwards to Blakey's Maritime English in 1983, Week's Wavelength in 1986 and SEASPEAK project, and then SMCP (Standard Marine Communication Phrases) which is used

worldwide today. Besides, International Maritime Organization (IMO) requires crew members to use English as working language if there are no other common language that can be used and reinforce the good communication with SMCP (Standard Marine Communication Phrases) as a more comprehensive safety standard that contains verbal communication phrases regarding operational needs at sea (IMO, 2000).

This paper focuses on various needs of communication and possible areas of interest in addition to SMCP to help improve English Communication skills and navigation safety. This paper intends to cross reference the content of SMCP to evaluate how good it matches with the navigation operation at sea. Attempt will also be made to pinpoint specific areas of communication needs that might be used to improve its content for accomplishing clear and effective communication on VHF/radio for safe navigation.

Review of SMCP. The role of communication shows itself in safety issues that require effective and efficient communication both for inter-ships and intra-ship communication. The safety of ship can be ensured only by timely, correct and sufficient communication in ship-to-ship, ship-to-shore or vice versa and on-board communication.

The SMCP booklet got in force in 2001 by the International Maritime Organization (IMO) consisting of "precise, simple and unambiguous" phrases (IMO, 2001). It aimed to cover all possible situations that can be necessary for both internal and external communications in order to reduce "problems of communication [which] may cause misunderstandings leading to dangers to the vessel, the people on board and the environment" by using "a simplified version of maritime English in order to reduce grammatical, lexical and idiomatic varieties to a tolerable minimum, using standardized structures for the sake of its function aspects" (IMO, 2001). The "ability to use and understand the IMO SMCP is required for the certification of officers in charge of a navigational watch on ships of 500 gross tonnage or more" and made mandatory under the International Convention on Standards of Training, Certification and Watchkeeping (STCW) for seafarers in 1978, revised in 1995 (IMO, 1995). The Manila Diplomatic Conference on the STCW Convention in 2010 highlighted again the importance of efficient verbal communication (Trenkner & Cole, 2010).

The STCW Convention requires sufficient English knowledge from the officer to be able to understand and use documents, publications, circulars and messages regarding the safety and operation of the ship as well as to be able to communicate with other ships and VTS centers by using and understanding IMO SMCP. Also, it is expected from officers to be able to communicate with a multinational team too.

The IMO SMCP aims to:

– Enhance the safety of navigation,

– Standardize the English language with standard phrases used in both internal and external communication to eliminate ambiguity, and

– Recommend Maritime Education and Training (MET) institutions in meeting those objectives.

The IMO SMCP consists of four sections;

– Section I is a general informative section that covers topics such as procedure, spelling, message markers and ambiguous words.

– Section II comprises of a glossary on maritime standard terms.

– Section III concentrates on external communication phrases for emergency communications, safety communications, distress, search and rescue (SAR), piloting and special cases.

– Section IV includes on-board communication phrases, for ship handling operation, cargo han-

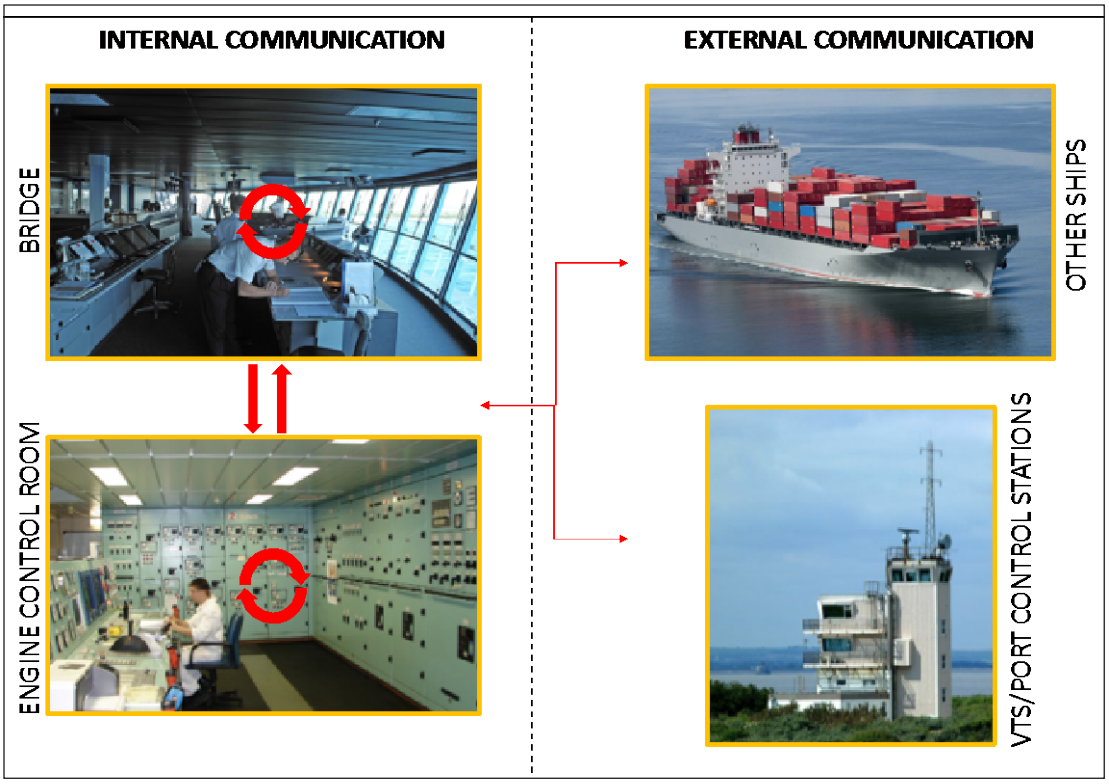

Figure 1. Communication routine of merchant ships. Adapted from Sihmantepe, A., et. al (2011)

dling operations, drills, man overboard and passenger care (MSC/Circ.794, 1998).

Operations at Sea. Considering the multinational and international nature of maritime business, many of the maritime accidents are attributable to communication barriers/failures. Shipping industry requires most ships to navigate worldwide. The diversity especially in the seagoing part of the maritime business may naturally result in difficulties in communication. When ship-to-ship, ship-to-shore and on-board communication interactions as represented in Figure 1, are taken into consideration, inefficient communication together with differences in accents of seafarers may result in accidents causing harm to human life and environment. However, this paper deals only with the ship-to-ship and ship-to shore communication problems or deficiencies by cross referencing the content of SMCP with the communication needs at sea.

As maritime transportation may involve a variety of operations at sea, safety of navigation mostly depends on ship-to-ship interactions in the open sea, straits and canals and port approaches which this paper mostly dealt with. During these interactions, VHF verbal communication, when required, plays a critical role for safe navigation of the ships for correct actions. Pilot embarkation, docking, mooring and anchoring are other operations in which effective communications plays substantial role for safety.

As previously stated, SMCP covers a wide range of phrases designed both for external and on-board routine communication, as well as emergency situations. How wide-spread and frequent the use of those phrases has become surely dependent on the practices of the nations. Besides, it also makes sense that real-life situations may require communication phrases beyond SMCP depending on the specific situation on scene.

In the open sea, except emergency situations, there is no need to communicate for ships in overtake, head on and/or crossing situations according to COLREGs. Because COLREGs clearly states the course of actions to be taken in those situations which are supposed to be already possessed by well-trained individual seafarer. However, when in doubt, to avoid entanglement, ships still prefer to make a passage agreement through VHF in some situations such as overtaking, head-on meeting and/or crossing. To set a perfect remedy to those communication requirements however, the SMCP, does not propose standard and commonly accepted phrases that can clearly be understood and used by everyone in those situations. Hence it can be deduced that SMCP does not cover clear and commonly used passage agreement phrases and this is one of the shortages.

Cross Referencing. SMCP serves as a standardization of maritime language which aims to reduce communication failures. However, naturally SMCP cannot cover each and every verbal communication need that can occur at sea. Still it has to cover at least more frequently needed phrases such as phrases used in congested areas for passage agreement. Even so, a short investigation of the SMCP booklet shows that it lacks standard phrases for passage agreement as explained above. Due to maritime business' global nature, crew members come from a variety of countries and speak English as their operation language but of course mostly with their own way of pronunciation. Proposing a training method to overcome difficulties arising from pronunciation and cultural differences is not practical by the nature and seems to be beyond maritime education and training (Ziarati, R. et.al., 2009). This challenge and shortage may also hinder clear and effective communication on

VHF/radio for safe navigation.

It is necessary to communicate effectively and efficiently in a common language for a safe and effective working environment especially on-board ships that is mostly a multinational and multicultural environment. Since English is regarded as the working language of the shipping industry, of course it may require a good and enough operational knowledge of English and crew members may also need to have a solid understanding of sociocultural issues that can occur on-board multinational ship. When it comes to sociocultural issues, it should be underlined that each of the people of different nationalities working on ships may have different accents. But the problem is that it is not possible to know the nationality of each crew member on board ships, likewise it is impossible to know how they speak English and the accent they have.

The difference sources from the process how the usage of a language evolved in a particular country. Depending on the people's mother language, various pronunciation patterns will be introduced into the other languages they speak. People from different nationalities can make different word emphasises and intonations. For a person who has learned English in their home country, his/her accent may be affected by the instructor depending how much the English teacher give importance on accent and pronunciation as well as obviously instructors nationality. Such a person may think that he/she can communicate well and correct in English when they live in their own country. This is because they speak English only with people who have same regional accents and come across only same kind of pronunciations. The problem would begin when this type of person embarks a ship and met people from other English-speaking nations with different accents they did not recognize. This problem affects the communication efficiency of that person as well as the operational communication needed on board which eventually endangers the safety of the working environment.

The maritime industry is linguistically diverse and pronouncedly affects effective maritime communication. Written communication does not cause that much difficulty to understand and does not cause high risk problems. But in verbal communication includes sounds, and these can vary on many factors such as "biology, physiology, psychology, vocal chords, air, tongue, tooth frame, teeth, lips, jaw, nose, throat, genes, DNA, ethnicity, culture. regions, races, climate, temperatures, continents, countries, mother/native language, etc" (Yangon, M. & Win, A.N., 2012). Each word is spoken under the influence of these factors and it causes different intonations and accents.

The use of SMCP can be diminished in emergency situations and thus the safety of navigation can be affected by the failures in ship-to-ship and ship-to-shore communications. Especially non-native seafarers can easily move away from SMCP usage in emergency situations depending on the severity of the

emergency. Other than not using standard phrases and lead to possible misunderstandings accent differences can always be a problem as in communication difficulty. When external ship-to-ship, ship-to-shore communication interactions are taken in to consideration inefficient communication together with differences in accents of seafarers may result in accidents causing harm to human life and environment.

Conclusion. Maritime industry is an international industry which requires most ships to work world-wide, visiting different ports of different countries. Moreover, most ships are crewed with people from different countries making the working environment multi-national and multi-cultural. This can be said to be starting point of communication/ language problem as these people speak in different languages. Researches on the area has shown that lack of communication is the one of the main reasons of the accidents occurred due to human error. To prevent these accidents IMO, as the prime international regulating body, has been putting a lot of efforts to standardize maritime communication through SMCP. These efforts included both on board, ship-to-ship and ship to shore (vice versa) communication phrases in routine or emergency situations. This study focused on external verbal communication (ship-to-ship and ship to shore communication) to contribute to safe navigation hence protection of human life and environment. As naturally SMCP cannot cover each and every verbal communication need it was seen that there are some phrases it does not cover. However, this study suggests that SMCP should at least cover frequently used phrases such as passage agreement phrases used mostly in congested areas. Therefore, SMCP booklet should be reviewed and updated regarding operational needs.

Besides, just learning SMCP isn't enough by itself because in a multi-national and multi-cultural working environment not everyone speaks English as their mother tongue. It is a natural consequence that the officers of different nationalities have difficulty in understanding each other due to the differences in accents will cause errors in the operational sense. Furthermore, it is hard to speak a different language under pressure. Even in the simulator environment, it is expected to move away from the use of SMCP in the event of an emergency in non-native English language officers, and even in English, depending on the severity of the emergency.

This paper also suggests helping seafarers to improve their English communication skills through simulators. Practices performed in the simulators will help seafarers to improve their communication skills they need on the merchant vessels. Cadets in the Maritime Education and Training institutions can use simulators to enhance their English levels, thus their communication skills. Still, it is obvious that even simulator trainings cannot be enough to overcome the challenge of accent differences. However, with the contributions of the simulator studies and life-like scenarios, seafarers can gain familiarity to those differences and their awareness will be raised. This in return, will prevent accidents caused by communication failures in the long run. Ultimately improving communication skills will contribute to safe navigation and environment protection.

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