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A Study on the Establishment of the Concept of a Vessel Constrained by Her Air Draft in COLREG

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Abstract

A vessel with high air draft cannot operate without restriction on manoeuvring in certain height-limited areas. As electricity supply has been possible to island areas, and bridges connecting islands to the mainland or islands to islands are constructed, instances where because of her air draft a vessel is restricted in her ability to deviate from the course she is following (Hereafter "vessel constrained by her air draft") are increased.

This paper reviewed whether the current sailing and steering rules in International Regulations for Preventing Collisions at Sea, 1972 (COLREG) can be properly applicable to the navigation of vessel constrained by her air draft. Firstly, the possibility of application of the sailing rules of 'vessel not under command' and 'vessel restricted in their ability to manoeuvre' was examined. Secondly, sailing and steering rules of 'vessel constrained by her draft' was considered because she has the similar limitation of navigable water as that of a vessel constrained by her air draft. Finally, it was concluded that she is not a vessel that has lost her manoeuvrability or a vessel whose ability is restricted due to the nature of her work to the extent that she is unable to keep out of the way of another vessel. In addition, compared to a vessel constrained by her draft, she may take more responsibility to give a considerable duty of care to the conduct of other vessels under the present rule.

Therefore, for the sake of seamen who operate a vessel constrained by her air draft, a separate definition needs to be included into COLREG such as that of 'vessel constrained by her draft', and importantly the responsibility relation over other vessels must be enacted in terms of the equal status with that of 'vessel constrained by her draft'.

[Keywords] *A Vessel Constrained by Her Air Draft, COLREG, A Vessel Constrained by Her Draft, A Vessel not under Command, A Vessel Restricted in Her Ability to Manoeuvre*

1. Introduction

As electric power cables over seas and various bridges connecting to landmass or islands have been constructed, vessels with high air draft such as mega container vessels, cruise ships, etc. cannot properly maintain their course against ordinary power-driven vessels, and can keep out of sea areas to be constrained by her air draft and can only navigate further through the safe side. Thus risky

situations may occur with regard to the conduct of other vessels which are not aware of such vessels constrained by her air draft.

In case of 'Vessels constrained by their draft', it did not cause any problems until very large vessels came into existence. Since 1960s a large number of very large vessels, in particular Very Large Crude Oil Carriers (VLCC), have come into being and owing to their deep draft the manoeuvrability has become restricted[1].

On the other hand, as the industry has developed and electricity supply has been possible to island areas, and also bridges connecting islands to the mainland or islands to islands, it now occurs that there are instances where some tall ships are restricted in their height in terms of navigation in particular areas.

2. Case Study

The passenger ship N of <Table 1>, which operates between Nock-Dong and Jeju Island in the south of the Republic of Korea, has been passing by means of evading the particular area that restricts height in terms of electrical cables installed over the sea area.

Table 1. Specification of passenger ship N.

LBP	105m	Depth	11.5m
Breadth	23.0m	Draft of full load	4.716m
LOA	116.0m	Vessel type	Passenger ship
Length in registration	110.0m	Gross tonnage	3,780ton
Air draft	37m 33m	Draft of no load	3.426m
Maximum speed	23.0 KNOT	Navigation speed	19.0 KNOT

As <Figure 1> and <Figure 2> show, the area between A point(Yeonhong Island) and B point(Jungang Island, Rock) has electrical power cables over the sea area and the height between power cables and the surface of the waters is 25 meters. The passenger ship 'N' passes under the cables, that is the passenger ship route 'F'.

Commonly, navigational rules apply the Port-to-Port passage between the passenger vessel 'N' and other vessels in particular M/V Y1. However, where the ship 'N' which con-

strained by her air draft has the navigable waterways 'P' on its port side and has the areas to be restricted in height on its starboard side, then its navigational rule of the Starboard-to-Starboard Passage applies with regard to the other ship 'Y2'. This leads to a dangerous situation that the ship 'N' and 'Y1' meet on head-on situation before the conclusion of a navigational passage by means of radio-telecommunication.

Figure 1. Navigation of a vessel restricted in her height to manoeuvre.

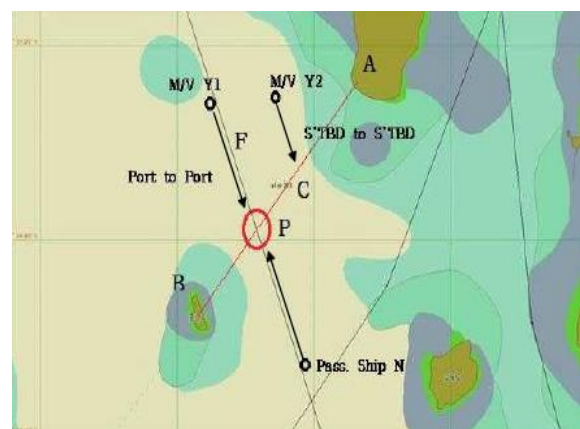
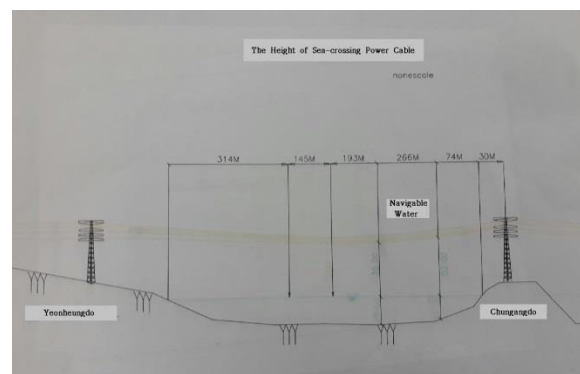


Figure 2. Height of sea-crossing power cables between electrical towers.



3. Review of COLREG, 1972

The International Regulations for Preventing Collisions at Sea, 1972(hereinafter "COLREG") were adopted by the International Maritime Organization(IMO) in 1972 and came into force in 1977. Through the sixth revision, IMO Res. A1085(28) newly enacted Part VI(Rules

39, 40, 41) and such Rules entered into force in 1 January 2016[2]. According to Rule 1(a), COLREGs apply to all vessels lying on the high seas and in all waters connected therewith where seagoing vessels are able to navigate. Rule 1(b) of COLREGs requires the administration to make special rules which conform as closely as possible to COLREG Rules although nothing in COLREG Rules shall interfere with the operation of special rules made by an appropriate authorities for roadsteads, harbours, rivers, lakes or inland waterways connected with the high seas and navigable by seagoing vessels. COLREG Rules provide for the principle of the unification of maritime traffic rules globally. Therefore under the present COLREG Rules, it needs to be considered to see whether mariners may choose proper navigational rules in the operation of a vessel constrained by her air draft, and to see whether, with regard to steering and sailing rules that have been chosen, responsibility relation between two parties can be judged by inference.

Steering and Sailing Rules of COLREG have been set by means of the division of the visibility status. Rules 4-10 apply to the conduct of vessels in any visibility, and Rules 11-18 apply to the conduct of vessels in sight of one another, and Rules 19 apply to vessels in restricted visibility. The conduct of vessels in any condition of visibility, the conduct of vessels in restricted visibility and the conduct of vessels in sight of one another equally apply to both sides having approaches with the risk of collision[3]. Although a vessel constrained by her air draft, action to avoid collision does not differ from any other vessels. However, except for COLREG Rules 9(Narrow Channels), 10(Traffic Separation Schemes) and 13(Overtaking) under the conduct of vessels in sight of one another, the rules 18 of responsibilities between vessels apply in terms of the superiority and inferiority of manoeuvrability. Vessels having the superiority of manoeuvrability must keep out of the way of vessels of manoeuvrability inferiority. The manoeuvrability of ships can be divided like power-driven vessel>sailing vessels>vessels engaged in fishing>vessels restricted in their ability to manoeuvre>vessels not under command[1]. Therefore

the problem is to see whether vessels constrained by her air draft in case of the conduct of vessels in sight of one another should take action to avoid collision in accordance with Rule 18 under what extent of responsibilities between vessels. In order to judge the clear responsibility relation of vessels constrained by her air draft, the paper needs to give consideration to see whether they may be regarded as 'vessels not under command' or 'vessels restricted in their ability to manoeuvre', and to see whether their responsibility superiority and inferiority can be judged in comparison with 'vessels constrained by their draft'.

3.1. Consideration of the application of the sailing rules of 'vessel not under command' or 'vessel restricted in their ability to manoeuvre'

According to Rule 3 of COLREG, 'vessel not under command' refer to a vessel which through some exceptional circumstances is unable to manoeuvre as required by COLREG Rules and is therefore unable to keep out of the way of another vessel. The term 'some exceptional circumstances' excludes circumstances or situation or any cause commonly applying to all ships[1]. The English court cases do not admit that the status of 'vessel not under command' is presumed with inclement weather[4]. The exceptional cases refer to circumstances where the vessel is unable to manoeuvre owing to the breakdown of the steering gear system or the breakdown of the main engine or the propulsion system. Therefore in order for a vessel to be 'vessel not under command', it first must lose its manoeuvrability objectively and, second, proves that it is unable to keep out of other vessels. Finally, it must inform other vessels around of the status of 'vessel not under command'. The requirement of notification is necessary because it is difficult to see by appearance if a vessel has lost her ability to manoeuvre.

When being underway, situations having restriction in height depend on geographical environments rather than the restriction resulting from the air draft of a vessel itself. Vessels constrained by her air draft refer to vessels whose manoeuvrability is restricted

owing to the limitation of the width of a navigable fairway relating to their air draft. They cannot meet those criteria mentioned above because it cannot be considered that their own manoeuvrability have been lost and they cannot keep out of the way of other vessels. Therefore, vessels constrained by her air draft are not vessels not under command.

Nevertheless, where the master of a vessel constrained by her air draft has notified other vessels of her situation by means of lights and shapes or whistle signal, this may be controversial. In this case, the other vessel sees that the vessel constrained by her air draft is really a vessel not under command and will take appropriate action to avoid collision. When no maritime accident occur there is no problem, but if there is a collision incident, a vessel constrained by her air draft should take responsibility with fault since it is considered that the vessel has inflicted a loss on a third party in good faith. This is backed by an English court case that did not accept that a vessel restricted in her ability to manoeuvre asked other vessels to keep out of the way by means of showing the lights, shapes and whistle signals of a vessel not under command[5].

Where a vessel restricted in her height to manoeuvre is not 'vessel not under command', it needs to be considered to see if it can be considered 'vessel restricted in her ability to manoeuvre'. The term 'vessel restricted in her ability to manoeuvre' means a vessel which, from the nature of her work, is restricted in her ability to manoeuvre as required by COLREG Rules and therefore is unable to keep out of the way of another vessel[8]. COLREG Rule 3(g) provides that the term 'vessel restricted in her ability to manoeuvre' shall include but not be limited to the following six types of vessels in <Table 2>. A vessel restricted in her height to manoeuvre is not one of the six types and it needs to be considered to see if it can be regarded as a vessel restricted in her ability to manoeuvre with its similarity to the six types of ships.

Table 2. COLREG Rule 3(g) (i)-(vi) types of vessels restricted in her ability to manoeuvre.

	Vessels restricted in her ability to manoeuvre
1	A vessel engaged in laying, servicing or picking up a navigation mark, submarine cable or pipeline
2	A vessel engaged in dredging, surveying or underwater operations;
3	A vessel engaged in replenishment or transferring persons, provisions or cargo while underway;
4	A vessel engaged in the launching or recovery of aircraft;
5	A vessel engaged in mine clearance operations;
6	A vessel engaged in a towing operation such as severely restricts the towing vessel and her tow in their ability to deviate from their course.

First, even though COLREG Rule 3(g) provides that the term 'vessel restricted in her ability to manoeuvre' shall include but not be limited to those six types of ships, it is reasonable that the term should be limited to the case where a vessel must be restricted in her ability to manoeuvre to the equivalent extent. Otherwise, there may be many cases that vessels abuse the position of a vessel restricted in her ability to manoeuvre deliberately. Therefore the first condition for satisfying the term 'vessel restricted in her ability to manoeuvre' is a vessel whose ability is actually constrained because of the nature of her work and next, a vessel which is unable to keep out of the way of other vessels. A vessel constrained by her air draft is not a case with the de facto limitation of manoeuvrability due to the intrinsic work on board. This is because the direct reason for the limitation of height to manoeuvre results from the outside environment. Finally, A vessel constrained by her air draft cannot meet those criteria aforementioned, it cannot be applied to the term 'vessel restricted in her ability to manoeuvre'.

3.2. Consideration of sailing rules of 'vessel constrained by her draft'

In accordance with Rule 3(h) of COLREG, the term 'vessel constrained by her draft' means a power-driven vessel which because

of her draft in relation to the available depth and width of navigable water, is severely limited in her ability to deviate from the course she is following. The original COLREG did not see the concept but it came into being in 1972 COLREG due to a trend in the size of ships becoming larger.

A vessel constrained by her draft is a vessel which is constrained in its manoeuvrability by the geographical nature of the depth of the waters and may run into danger, for instance running aground, when altering her course. Therefore it has a duty of notifying the surrounding ships of its excessive draft by means of lights and shapes. In case that it did not meet the duty of care and became involved in collision, then it will not be free from its liability with fault.

A vessel constrained by her draft will have priority over other vessels since it cannot evade the way of other vessels owing to its large draft and limitation of navigable fairways. When sailing vessels, fishing vessels and power-driven vessels encounter a vessel constrained by her draft, they must take positive action to avoid the risk of collision. However, this kind of priority is not a kind of absolute priority over all vessels and a vessel constrained by her draft cannot enjoy priority over vessel not under command or restricted in her ability to manoeuvre. This results from the fact that in the inception of COLREG, a vessel constrained by her draft cannot be equally treated as vessels not under command or restricted in her ability to manoeuvre because it cannot ensure rationality in terms of the application of navigation rules. Therefore COLREG needed a separate conception of a vessel constrained by her draft in order to give different status of responsibilities to vessels not under command or restricted in her ability to manoeuvre. It also needed to make provisions of lights and shapes which a vessel constrained by her draft must show.

A vessel constrained by her air draft can be similar to 'vessel constrained by her draft' when considering the responsibility relation of 'vessel constrained by her draft' in terms of navigational rules. First, a vessel constrained

by her air draft is similar to 'vessel constrained by her draft' from the fact that it is not a vessel of being not under command or being restricted in her ability to manoeuvre due to the problem with a vessel itself resulting from the breakdown of the main engine or the breakdown of the steering gear system. In normal cases, the same steering and sailing rules as a power-driven vessel apply to a vessel constrained by her air draft and it has limited ability to manoeuvre because of the limitation of navigable fairways in relation to the height of structures over the seas such as bridges, cables or cable cars involving geographical setting. This is the same as the case where 'vessel constrained by her draft' has limitation with manoeuvrability resulting from the limitation of navigable fairways owing to the depth of the waters. Also like 'vessel constrained by her draft', it cannot say that the manoeuvrability is absolutely limited in relation to vessels not under command or restricted in her ability to manoeuvre. Therefore it is inferred that the navigational priority of a vessel constrained by her air draft cannot exceed over vessels not under command or restricted in her ability to manoeuvre and is equal to that of 'vessel constrained by her draft'.

4. Conclusions

A vessel constrained by her air draft has no definition in the present COLREG and the point was to see whether it can enjoy the same status as 'vessel not under command' or 'vessel restricted in her ability to manoeuvre' in terms of responsibility relation in COLREG. However, as mentioned above, a vessel constrained by her air draft does not meet the criteria of 'vessel not under command' and 'vessel restricted in her ability to manoeuvre' and it cannot see that its manoeuvrability is limited in comparison with that of vessels not under command or restricted in her ability to manoeuvre. A vessel constrained by her air draft is not a vessel that has lost her manoeuvrability or not a vessel whose ability is restricted due to the nature of her work to the extent that she cannot give way. Therefore it takes responsibility to

give a considerable duty of care to the conduct of other vessels.

On the other hand, a vessel constrained by her air draft has similarity to 'a vessel constrained by her draft' from the perspective of the reasons for the restriction of manoeuvrability and also responsibility relation under steering and sailing rules. Therefore, for the sake of seamen who operate a vessel constrained by her air draft, a separate definition needs to be included into COLREG such as that of 'a vessel constrained by her draft', and importantly the responsibility relation over other vessels must be enacted in terms of the equal status with that of 'a vessel constrained by her draft'.

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