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Powership's Identity and MARPOL Convention Application

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Abstract: The concept, although it is not new, came to surface in the last ten years with significant technological improvement and became a temporary solution for the port cities where the supply of electricity is in need. A ship shaped floatable structure with a huge power generator on board becomes the temporary but effective solution. However, these converted ex-ships are still legally ships in order to admit them sufficiently within the scope of a leading convention, which applies to marine and air pollution from ships. This issue needs research on the legal definition of the "ship" to clarify if it is a ship and to determine whether that would also fall within the concept of MARPOL.

Key words: Maritime ship power, MARPOL, shipowner's liability, pollution, sewage, garbage.

1. Introduction

This article concerns the type of floatable structure, on which a main power of electricity generator is planted, which can be berthed alongside a pier and connected to a national grid to supply electricity to a city. It is obvious the owner/operator of this kind of floating structure might have had the benefit of her navigation availability and usage by virtues of sending her to any destination port where an urgent electricity supplier is in need.

There has been yet a proper legal definition for powership, however, when one googles it the first link appears is the Wikipedia, where it is defined as a special purpose marine vessel, on which a power plant is installed, to serve as a power generation resource.[1] It is beyond doubt that Wikipedia would not be a reliable source for a legal definition of a powership. Despite the fact that this definition contains the word "vessel", other word had been used, namely the "barge" for referring a power generator barge[2], which were used in US in the beginning of 20th century. These were towed mostly by tugboats to the places where need arose. So the idea might not be a new one but perhaps a developed one, considering that the old times' barge had no self-propeller but the converted bulk carriers have nowadays.

Some recently built powerships[3] are fitted with used reciprocating engines, large-bore dual-fuel diesel engines that run on heavy fuel or natural gas to generate power[4] relevant transformers and electric

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[1] Converted from existing bulk carriers, the powerships are self propelled portable power stations which can run on heavy fuel or gas and which plug into national grids where required (Malta Maritime Directory, Bureau VERITAS Classes Powerships, 29.06.2010). Bureau Veritas, an international certification agency with experience in overseeing both shipbuilding and power plant development, classifies such floating power plants as"special service power plants", Wikipedia, https://en.wikipedia.org/wiki/Powership.

[2] To get to idea of sizes and powers of those barges see http://www.powerbargecorp.com/; accessed on 12.06.2015 14.54

[3] In order to see the size of those powerships go tohttp: //www.karadenizenergy.com/Pages.aspx?Language =English&Site =&Menu=Powership&PageID=168, accessed on 12.06.2015 14.57

[4] The ships in question are former freighters that are to be converted into floating diesel power plants. Their mobility was found very useful in connecting to local power grids to temporarily cover demands whenever onsite power plants were broken or became insufficient. Unlike so-called 'power barges' – power plants on pontoons – the 'power ships' are equipped with their own propulsion engines and therefore do not need to be towed (Nilsson, Christin, "MAN Diesel wins 100-million € order") Metal Supply, www.metal-supply.com, 30.10.2009.

switchboards. Utilizing new purpose built ships would not be competitive to modified and converted existing bulk carriers due to the higher cost of construction. In fact the crew quarters and propulsion systems are utilized during the power plant operational period that can be up to the life of the power plant.

It is expected that a power generating floatable structure will moor at one place for an average duration of three to five years, or up to 20 years. For this reason, powerships are an ideal solution to bridge the gap for a certain time until a local power plant is built or the high demand in electricity supply is over.[5] The literature does not help much to know the powership as a legal entity due to the lack of written instruments on this particular subject.

1.1 Research Methodology

The research methodology used here includes publication research, such as articles and books, the court judgments and Internet surfing on papers and discussions, which include both present and historical information.

2. History

2.1 In General

One of the earliest powership was the *SS Jacona* built by the Virginia Shipyard and Dry-Dock Company, for the New England Public Service Company of Augusta, Maine in 1931.[6] Due to the devastating storm of that time the New England major power transmission lines had been taken out and *The Jacona* was called for the support for the city to moor to where was needed and connected to the local national grid in order to restore the power. *The Jacona*, that time, could produce 10,000 KW each.[7]

The US Navy also practiced powership concept when disaster hit a local community and brought down the commercial power grid, and *The USS Saranac* appeared as first converted Navy ship. She was a 1942 built fleet oiler in the Navy before her conversion into a powership, which was selected as a floating power plant to support dredging operations at Guam in 1946[8]. She was departed Guam in 1951 under a tow to Inchon, Korea, where she provided power to Army installations ashore. In 1957, she was sold to Hugo Neu Corporation of New York City and was used then as a power facility abroad by the International Steel and Metal Corporation and she was renamed as *Somerset* in 1959.[9]

Powerships have not only been used for producing electricity but also for the nuclear power needs. The first floating nuclear reactor was the MH-1A, in the Panama Canal Zone [10] where it supplied 10 MW electricity from 1968 to 1975. Due to their mobility, powerships have been required to connect to local power grids to meet the temporary demands whenever on site power plants were insufficient or the building of new power plants would take considerable time.[11] The powerships are able to use any infrastructure available at the site on which she is required[12]while dual-fuel engines on board could be powered by either liquid fuels or gas.

During the 1990s, powerships became a popular way of providing energy to developing nations, with the involvement of the equipment suppliers like General Electric, Westinghouse; by developers such as Smith Cogeneration, AES, GMR Vasavi. They operated floating power plants for customers located in New York City (USA), Khulna (Bangladesh), The Dominican Republic, Brazil, Ecuador, Angola, Nigeria, Thailand, Ghana, as well as in the Philippines, Jamaica, Kenya, and Malaysia. Engineering, procurement and

[5] "MAN duel fuel diesel engines for power ship", The Daily Engineer, 2010-03-11.
[6] https://en.wikipedia.org/wiki/Powership.
[7] "A Floating Power Plant", February 1931, Popular Mechanics detailed article page 217 and 218.
[8] USS Saranac (1957), Wikipedia.
[9] "T2 Tankers-Q-R-S".Mariners-The Website of The Mariners Mailing List.
[10] Wikipedia, https://en.wikipedia.org/wiki/Powership.
[11] MAN duel fuel diesel engines for powership, The Daily Engineer, 11.03.2010.
[12] Nilsson, Christin (2009-10-30). "MAN Diesel wins 100-million € order". Metal Supply.

construction companies such as Power Barge Corporation [13], Waller Marine Inc, Hyundai, IHI Corporation and Mitsui offer gas turbine power barge construction programmes, and Karadeniz Energy, MAN and Wärtsilä offer medium speed engine power barges.[14]

In 2011, Waller Marine finalized installation in Venezuela of two large floating power generation barges into a prepared basin at Tacoa. The two 171 MW barges, each supporting a GE 7FA dual fuel industrial gas turbine, are connected to the grid and soon supply much needed power to Caracas. Power Barge Corporation recently delivered a 96 MW gas turbine power barge to Angola and a 105 MW gas turbine power barge to Venezuela.[15]

A Bahrain based Arab Shipbuilding&Repair Yard Marketing Services Company (ASRY) and a British based power generation packaging specialist Centrax Ltd formed the joint venture company, ASRY-CENTRAX Ltd, and TPB125 Power Barge was developed jointly by Centrax and ASRY. This power barge was installed with two Centrax packaged Trent 60 generator sets producing a total of 125 MW.

TPB125 powerbarge is at 82 m in length, 28m in width and with a draft of just 4.5 m allowing her for easier positioning to the shoreline with less efforts on-shore preparations. This barge's double-skin fuel and oil tanks, low emissions and low noise (80 dBA) also ensure highest environmental standards.[16]

2.2 Recent Example

A Turkish based energy group started their energy business by building first power plant on land in South Eastern of Turkey in 1999 with a 35 MW[17]. In 2002, Karadeniz Energy Group became the first company to obtain multiple licenses as part of the liberalization efforts of the Turkish Energy Industry and the addition of export and wholesale licenses to the existing generation license portfolio paved the way in making Karadeniz Holding a leader of the Turkish energy industry.[18]

Karadeniz Energy Group stepped into the global energy sector in 2009 and began designing world's first floating power-plant fleet—aptly named "powerships" and as a part of the global expansion strategy, four ships were constructed in the opening stage and the first powership of the project, which can supply 144 MW power, went into service at the beginning of 2010 off the shore near Basra in southeastern Iraq[19] and the second powership was sent to the same place.[20]

KPS Irem Sultan, the 5th member of powership fleet, started its operations also in Iraq. *Irem Sultan* is the first powership with a dual-fuel option, capable of operating both on Natural Gas, and Heavy Fuel Oil[21]. *Fatmagul Sultan* involved in the start of our Lebanon project and *Kaya Bey,* with a capacity of producing 216.4 MW (almost 220), has been in use since 2011 comparing to its ancestors remarkable how it has developed itself[22].

According to the contents of the company's website, the second phase of the powership program is under construction with five new powerships all with dual-fuel power capability under project codename "Power of Friendship"[23]. The total capacity of the powership fleet is expected to exceed 2,000 MW in 2015.[24]

Karadeniz Holding happened to sign contracts with

[13] www.powerbargecorp.com
[14] Wikipedia, https://en.wikipedia.org/wiki/Powership; also Dr Paul Sullivan, YuzerElektrikSantralleri (Flotable Power Generators), Turkiye Internet TV, 2.5.2014.
[15] Wikipedia, https://en.wikipedia.org/wiki/Powership.
[16] http://www.engineerlive.com/content/23797.
[17] See, www.karadenizholding.com.
[18] Cited at www.karadenizholding.com.
[19] Letter to the Editor: Question about an old Nuke- Where was Sturgis moored?, The Panama News, February 3-16, 2008; accessed on 15.05.2014.
[20] C. Frederick, Sears (1969). Army engineer reactors group fort Belvoir va engineering div., ed. *MH-1A REFUELING, 17-25 OCTOBER 1969*. Defense Technical Information Center.p. 39.
[21] See www.karadenizenergy.com.
[22] All those information and specifications about Karadeniz power ships power have been obtained from http: //www.karadenizenergy.com/Pages.aspx?Language=English&Site=&Menu=Powership%20Fleet&PageID=169
[23] See www.karadenizenergy.com.
[24] See www.karadenizenergy.com.

Pakistan, Lebanon, Iraq, Syria and Ghana[25]. Below are two pictures picked up from google search in order to give some idea about how a powership is like[26] where Fig. 1 looks like just a floatable but stable object comparing to Fig. 2 that is in ship shape.

3. Searching for "Definition"

3.1 Does a Powership Fitto Find a Room in the Definition of a Legal Ship?

A powership is a special, purpose-built floating structure, on which a power generating plant is installed to serve as a power resource, but is this a ship in legal sense? It is of great concern to determine her as a ship since the liabilities of the owners/operators would vary according to its legal definition. Before going to analyze the definitions given in different domestic laws and international conventions it would be proper to see what functions may be required from a powership.

In most of the cases, it is an existing ship that has been modified for the purpose of power generating, an ex-seagoing vessel, on which a power plant is installed to serve as a power generation resource. Having converted from existing ships, recent powerships are self-propelled, ready to go where there is a need arisen in mostly developing countries that plug into national grids as required. It might be reasonable that the concept of powership seems requiring "navigation" since that capability would assist the prevailing aim of movability function in order to reach the aim that is expected from a floatable electricity generator. It is more likely that the "navigability' is one of the functional element which should be seen in the concept of powership.

Fig. 1.

Fig. 2.

The powership is better to be described as a floatable structure capable of being used in navigation on the navigable waters with an installed plant on board for the purpose of generating power. Thus the legal definition of a "ship" in a legal instrument becomes more prominent if it applies to "powership" and if that is the case then it would be lenient to see which legal instruments (domestic or international) would impose responsibilities on the owner/operator of the powership.

3.2 Comparative Study on the Definition of Ship whether It Covers also Powership

A large boat for transporting people or goods by sea is the definition for the ship in Oxford Dictionary.[27]A large boat for travelling on water, especially across the sea is also a definition for a ship in Cambridge Dictionary[28]. Neither of them, however, refers to the powership. It is prominent to find a legal definition whether a particular structure is a ship or not because it will determine the basis of liability. Before going

[25] The existing names of those floating structures are, respectively, *KPS DoğanBey* 144 MW, 2010, serving in Basra, Iraq, *KPS RaufBey* 200 MW, 2010, serving in Basra, Iraq. *KPS Kaya Bey* 220 MW, 2011, serving in Pakistan, *KPS Ali Can Bey* 110 MW, 2011, serving in Pakistan, *KPS Irem Sultan* 110 MW, 2012, serving in Basra, Iraq, *KPS Fatmagul Sultan* 205 MW, 2013, serving in Beirut, Lebanon, *KPS OrhanBey* 136 MW, 2013, serving in Beirut, Lebanon.

[26] https://www.google.co.uk/search?q=powership&es_sm=91&source=lnms&tbm=isch&sa=X&ved=0CAgQ_AUoAmoVChMI7YD3g_2fxwIVy7waCh19PQJV&biw=613&bih=438

[27] http://www.oxforddictionaries.com/definition/english/ship.

[28] http://dictionary.cambridge.org/dictionary/british/ship_1.

further, seeing what a "ship" means in different legal sources would be useful where the definitions might differ widely even within the same State[29].

Some jurisdictions or statutory applications of the term "ship" may omit oar-propelled boats from the definition whereas others may specifically include oar-propelled boats.

3.2.1 Ship Definition in Some Conventions

Conventions define the ship in order to clarify their own scope of application. For instance, 1999 SC (Salvage Convention) describes the vessel as "any ship or craft, or any structure capable of navigation" (art 1/b). Here the element of "navigation" comes to frontline as a defining element comparing to the structural shape of the floating object. At the first glance the scope seems to cover the powership since it is within the concept of any structure capable of navigating.

The recent Convention on Carriage of Goods wholly or partly by Sea (Rotterdam Rules 2009) defines the ship as "any vessel used to carry goods by sea" (art 1/25). This definition reflects the scope of the convention, which seemingly limits its application to the "ships with cargo carrying capacity". Powership, having no capacity of carrying cargo, is clearly put outside the definition, since the Rotterdam Rules have no aim on regulating powership.

"Ship" is defined in CLC (Civil Liability Convention) for Oil Pollution Liability 1992 as "any seagoing vessel and seaborne craft of any type whatsoever constructed or adapted for the carriage of oil in bulk as cargo, provided that a ship capable of carrying oil and other cargoes shall be regarded as a ship only when it is actually carrying oil in bulk as cargo and during any voyage following such carriage unless it is proved that it has no residues of such carriage of oil in bulk aboard" (art 1/1). This definition is considerably longer than the other above conventions. At the first glance, the references to "carriage" and "cargo" in art I.1 clearly imply that a floating object should be constructed or modified (adapted) so as to enable it to move oil in bulk from one place to another, and to move oil in bulk *as cargo.* However, any persistent hydrocarbon mineral oil such as crude oil, fuel oil, heavy diesel oil and lubricating oil, whether carried on board a ship as cargo or in the bunkers of such a ship would also lead to think that it is limited to the "cargo" but includes also the "bunker" the oil/fuel kept on board for the vessel to run.

Therefore, from the first thought, the CLC Convention cannot cover the powership since one of the requirement of its application is that of a vessel actually carrying oil cargo and/or built for carrying oil cargo which obviously no connection to the floating structure generating electricity or other source of power. However, from the second thought we may assume that the powership—as ex-bulk carrier—there exists a need of consuming the bunker to navigate–may well be in the concept of "ship". This can be a subject of an academic discussion.

Perhaps the more attention should be given to the International Convention for the Prevention of Pollution from Ships (MARPOL) 1973, the "ship" means a vessel of any type whatsoever operating in the marine environment and includes hydrofoil boats, air-cushion vehicles, submersibles, floating craft and fixed or floating platforms (art 2/4). Here, the definition of ship is wide enough to cover the "powership" since it refers to "…any type of vessel operating in the marine environment…". However, because of the annexes to this Convention a thorough analysis is in need to find out if all annexes are applicable to, which will be dealt with below.

3.2.2 US Law

In the US law "the term ship or vessel includes every description of watercraft or other artificial contrivance, except aircraft, used or capable of being used as a means of transportation on water, whether or not it is actually afloat"[30]. However, there is another definition

[29] The reason of choosing those conventions and domestic laws is not because they are best to describe the ship but because the can give the reader a comparative sense of approach to English-American and Continental aspects of law.

[30] US Code, Title 47.

in US law as well, which defines the ship as a "vessel of any type whatsoever not permanently attached to the sea-bed, including dynamically supported craft, submersibles or any other floating craft, but does not include a war ship, a ship owned or operated by a government when being used as a naval auxiliary or for customs or police purposes, or a ship which has been withdrawn from navigation or laid up" [31] . This definition in the US law allows any floating object, no matter how its structural shape is, as long as moveable (driven out of the wordings of "not attached to the sea-bed" and/or "not withdrawn from navigation" and/or "not laid-up") may lead that the powership can be construed as a ship to some extent if the "vessel of any type not permanently attached to the seabed". However, the words used for the "ship withdrawn from navigation or laid up" must also be analyzed since the powership is normally expected to dock to the pier in order to allow its facilities to be connected to the national grid for long periods.

Floating structures are not considered to be in navigation as they are almost permanently fixed to the shore; although in *Offshore Co v Robinson*[32] it was held that an offshore drilling platform was a vessel. However, permanent connection should be understood as having no intention of future restitution of navigation function.

3.2.3 Canadian Law

Canada Shipping Act sec 2 describes the vessel as "a boat, ship or craft designed, used or capable of being used solely or partly for navigation in, on, through or immediately above water, without regard to method or lack of propulsion, and includes such a vessel that is under construction. It does not include a floating object of a prescribed class." The second sentence may cause some ambiguity although the first sentence seems to cover the powership. The meaning of "prescribed class" needs clarification.

The court approach shows some clarity as "a floating crane" was determined to be a ship under the decision on *Saint John Shipbuilding* [33] but in *The Gulf of Aladdin*[34], a simple barge with no independent means of propulsion was held not to be a ship.

In *Croswell v Dabal,*[35] the issue was the former Canada Shipping Act (1906) in a tort action involving two pleasure crafts or "speed-boat", both 30 feet long. Judge Logie of the Ontario Court indicated that "... there can be no question that each of the motor-boats in question was a 'ship' under the Canada Shipping Act 1906". In another, considering the North American Free-Trade Agreement, determined that a ship was a "large sea-going vessel"[36].

Rather than referring to the "navigation", some legal usages refer to a vessel made to move either on the surface of or under the water. Obviously, a ship is distinct from the cargo it carries. Thus, under Canadian perspective, the size is not a matter but moving on the water independently is something significant which would be the element for being regarded as a "ship". Under all circumstances the powership, as an ex-bulk carrier passes this test.

3.2.1 Chinese Law

Chinese Maritime Code 1992 does not give the legal definition of the "ship" but refers to the cover of application of the Code on the "ship" as the "sea-going ships and other mobile units", but it does not include ship or craft to be used for military or public service purposes, nor small ships of less than 20 tons gross tonnage (CMC art 3). In Chinese law size is of some concern, which must not be less than 20 metric tons of gross tonnage. As size is one of the elements the other is the requirement that the floating object must be used above the sea for its movable capability. Under this limited definition it would be correct to admit that the powership falls in this definition since it is big enough in size as a seagoing movable object unless the military or government operates it. With this limited reference

[31] Title 18 of the US Code
[32] 266 F.2d 769 (5th Cir, 1959)
[33] *St John Shipbuilding v Kingsland Maritime Corp.* 126 **DLR** 3d 353 (1981, **F.C.A.**)
[34] *R v The Gulf of Aladdin* 27 **C.C.C.** 2d 562 (1975)
[35] *Croswell v Daball* 47 **O.R.** 354 (1920)
[36] *Canada v McNally Construction Inc*. 2002 FCA 184; also at 214 DLR 4th 478

made in CMC the powership would be considered within the concept of ship.

3.2.5 Turkish Law

Another reference may be given for Turkish Commercial Code, Book V (Maritime Part of the Code), in which it says, "a floatable object, which its purpose usage depending on its navigability on the waters, is construed as ship provided that it is not that small in size"[37]. So, in this definition, for instance, there is no requirement under the definition of ship to include a self-propeller, whether by machine, or wind, or by hand (oar). However the main overriding element can be "the aim of using her must depend on its navigability function". Being a floatable object, her purpose usage depending on her navigability on the waters (which makes the coverage wider than those of sailing on the sea), and being quite significant in size makes the powership accepted as a "ship". In an Admiralty Court decision in 1981[38] a floatable dock used for purposes of vessel repair was regarded as "ship" based on the ground that she navigated the place where the vessel lies with no capability of sailing in order to fulfill the necessary repair and maintenance. However, an argument was raised that because the floatable dock performs its duty to repair whilst standstill and anchored at a certain specific point on the sea, this may signify that the navigation element is not a priority. Therefore, any argument based on the element of navigation was not necessarily an element to determine the powership as a legal "ship" since the navigation element is not an essential part of her operation. However, judge's view was right in giving the priority to the element of navigation function because without having this function the floatable dock would not have been required by the ports where there was an urgent need of temporary and effective power generator, which she could certainly navigate where she could effectively reach.

3.2.6 English Law

At common law, as Blackburn J held in *Ex parte Ferguson*[39], where the issue was whether a coble in question was a ship and therefore was obliged to assist in a nearby fatal sinking of another vessel. Whether a ship is propelled by oars or not, it is still a ship, unless the words "not propelled by oars" excludes all vessels which are ever propelled by oars. Most small vessels rig out something to propel them and it would be inappropriate to classify them out of the concept.

Statute supported this old definition of the "ship". According to section 742 of the Merchant Shipping Act (MSA) 1894, "vessel" includes any ship or boat, or any other description of vessel used in navigation; "ship" includes every description of vessel used in navigation not propelled by oars.

It can be said that this old definition contains four elements: the "vessel" is referred as a concept covering wider areas than the word "ship" (…vessel includes any ship or boat…), the physical structure (vessel as a hollow container, with a free empty space, such as a bowl or cask) and most crucially, the "navigation" part, which reflects the compulsory requirement of a usage of this object in navigation, leaving any possibility of non-navigability outside the definition. Here, the word "navigation" brings "floating" part within the definition. Hence, unless the purpose of the floating object is "navigation" on waters, there would be no concept of ship. The fourth element is that no way a floating object propelled by oars would constitute a "ship".

More recently, section 313/1 of the MSA 1995 defines ship as including "every description of vessel used in navigation". If this would be admitted as a definition then the first element in the old definition would be no longer be there. The same is true regarding the fourth element, which is a "throwing element" for a

[37] Turkish Commercial Code (6102) sec 931/1.

[38] Istanbul (3) Commercial Court (competent for admiralty issues) decision, dated10.07.1981 Petition No:E.81/273 Judgment No:K.81/329 cited at Prof Dr Fahiman Tekil, Deniz Hukuku (Maritime Law), 2001Istanbul, p 72 fn 15. However, the same court changed its view in another case, dated 08.02.1991, Petition No:E.86/514 and Judgment No:K.91/54, ibid p 73 fn 17.

[39] (1871) LR 6, QB 280, p 291.

floating object used in navigation if propelled by oars. Any object steered by using an oar can legally be a "ship" provided that it is used in navigation. Therefore, this creates a new version of the definition of ship remains with two elements, namely "concave or hollow structure" (appearance) and the "purpose usage requiring navigation" (purpose).[40]

Section 24 of the SCA (Senior Court Act) 1981 also describes the ship in a similar manner to the MSA 1995 as it "…includes any description of vessel used in navigation and...". This definition shows no requirement of any shape for a floating object to become a ship provided that it is used in navigation.

Despite the fact that the statutory provisions do not refer to a shape, its concave and hollow element were evaluated by Sheen J in *Steedman v Scofield*[41] where the dispute was about collision between a jet-ski and a speed boat. Sheen J pointed out that the manufacturers do not describe it as a boat, rather as a personal watercraft. The jet ski—in his mind—cannot be boarded until it has reached a certain level of speed at which it is stable enough for the rider to pull himself aboard, otherwise the jet-ski is not stable to ride on while it floats standstill on the water. Regarding the definition of "vessel", Sheen J referred to the ship as usually a hollow receptacle for carrying goods or people. In common language, "vessel" is a word used to refer to a craft larger than rowing boats, and it includes every description of watercraft used or capable of being used as a means of transportation on water.[42]It seems that although the shape was construed as concave and hollow for jet ski the lack of carrying capacity appeared to be a determent for the judge to admit that the jet ski satisfied the first element. In fact, this should not have been the reason for the main investigation concerned the "navigation" element, because navigation should be something that the floatable object should be served to go from one point to the other point in waters, and that would be lenient to consider the jet ski as ship regardless of its carrying capacity.

In *The Mudlark*,[43] and *St John Pilot Commissioners v Cumberland Rly & Coal Co*[44]a barge was held to be a ship. The "blower boat" was shaped like a ship, having a flat bottom and flat ends, with the purpose of having barges to lay alongside it. A vessel, which was only towed from time to time, was also considered as "ship" in *Cook v Dredging and Construction Co Ltd*[45].

Scrutton LJ described ship using the following metaphor:"one might possibly take the position of the gentleman who dealt with the elephant by saying he could not define an elephant, but he knew what it was when he saw one".[46] In other words, a person cannot define a vessel or ship but can recognize it when he encounters.[47] The importance of the physical structure as being concave and hollow can also be required and evaluated under the tonnage regulations,[48] a surveyor cannot issue a tonnage certificate if he finds that that element is not satisfied and eventually it will not be registered as ship.

The recent huge powerships are the converted versions of ex-bulk carriers, and they maintain their concave and hollow structure as in all bulk carriers, therefore powerships satisfy the first element of physical appearance.

The second element of "being navigable" was discussed in *Perks v Clark*[49]. Here it was referred to as a jack-up drilling unit (rig), indicating that non-availability of its functioning without the firm attachment to the seabed meant this unit not a "ship".

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[40] Similar view at Mandaraka-Sheppard, Modern Admiralty Law and Risk Management (Mandaraka), 2nd Edition, 2007, p 16.
[41] [1992] 2 Lloyd's Rep 163, pp 165-166.
[42] Mandaraka, p 16-17.
[43] [1911] P 116.
[44] [1910] AC 208.
[45] [1958] 1 Lloyd's Rep, p 334.
[46] Merchant Marine Insurance Co v North of England Protection and Indemnity Association (1926) 26 Ll L Rep 201:[1926]32 Com Cas, 165, CA.
[47] See also Shaw R, "What is a ship in maritime law?" (2008) JIML 11(4), p 247 t0 249.
[48] Merchant Shipping (Tonnage) Regulations 1997 (SI 1997/1510) as amended.
[49] [2001] 2 Lloyd's Rep 431.

This view led to the crucial importance of the element of "navigability". Numerous cases have attempted to explain whether an object is seaborne in order to be considered as a ship. For instance, in *Global Marine Drilling & Co v Triton Holdings Ltd (The Sovereign Explorer),* [50] a mobile offshore drilling unit was arrested for the purpose of obtaining security, and at the first instance the Judge ignored the defence of oil drilling unit not a ship, which would seem to show that a drilling unit (rig) with no attachment to the seabed can be considered as a "ship". There was consideration as to whether an object is sufficiently mobile to be a vessel as opposed to some other structure.

In *R v Goodwin*[51] in judge's view the ship has to move from one place to another, and considered that a jet ski was not a seaborne ship. Here, "navigation" is construed as capacity to move from one point to another on the sea. However, this decision does not reflect the distinction between the "sole capacity to move" regardless of what is expected from her as a main aim, and the "need of movability for the sake of reaching the aim what is expected from her". If the "sole capacity to move" is regarded as an element, a powership can be considered a sea-going vessel in the sense of being a navigable object, because she moves to the place where she is called, classifying her as a "ship". However, the "need of movability for the sake of reaching the aim what is expected from her" requires further analysis.

No definition is provided in the aforementioned jurisdictions which indicate that the floating object needs to navigate, either by its own power or by external support, in waters in order to reach the expected port of destination. In this sense, the powership provides its service by connecting to the national grid after navigating from her last departure point to the place where power generation is required. It is beyond doubt that her structural shape is regarded as that of a ship's because the power generating plant is normally placed on an existing ship, which means that the ship structure's continues. Its usage of being navigable as a floating object also remains the same, since that type of floating object is required by the port city authority to come, via the sea, to provide an efficient and immediate energy support.

An argument that these floating objects should not be regarded as ships can be put forward on the assumption that they do provide an expected service to supply energy; and they are only stabilized by mooring to the proper berth in the port. Therefore, this assumption could lead to the consideration that such floating objects cannot be defined legally as ships since their main aim is to generate electricity.

As to the element that the "need of movability for the sake of reaching the aim what is expected from her", which could be considered as "purpose use", is of real concern, since the expected performance of those floating objects are performed while they are fixed to the seashore so as to enable her to connect to the national grid of the country. Thus in performing her task, the powership is moored at the port of State for a certain time, most likely years, where and when the aim expected from her is to supply energy to the port State.

An early decision, in *Merchants Marine Insurance Co v North of England Protection and Indemnity Association*[52] ,a ship-shaped floating crane platform which was capable of being moored in different places, was not be considered a ship. Here the "continuity" of being used in navigation was the determinative element. Despite the fact that its movability was practiced it was used only as pontoon moored at the seashore for its "purpose usage". Clearly, its few moves from one point to another could not justify the navigation function therefore did not fall within the definition of "ship".

The navigation function was investigated in another case, *The Upcerne*[53], where a floating gas-powered buoy was in question, whether it was a ship for the

[50] [2001] 1Lloyd's Rep. p 60.
[51] [2006] 1 CA ,Lloyd's Rep, p 432.
[52] (1926) 32 Com Cas 165, CA.
[53] [1992] P 160

purpose of admiralty jurisdiction. It was held that the prevailing "purpose usage" for this buoy was not to navigate notwithstanding it was fully capable of moving and indeed it moved from time to time in order to operate elsewhere. The fact was that that buoy did not move from its position while it was performing its work, but it was fixed to the bottom of the sea. Comparing the buoy to the powership the latter does not move from their position in order to perform in accordance with its "purpose usage" as well, but it does have the additional characteristic of being used for navigation for long distance, long routes, more continuously. Unfortunately, this case was not determinative to draw a clear distinction between "ships with limited use of navigation" and "those unable to move from their position".[54]

In *Wells v Owners of the Gas Float Whitton (No2)*[55]the question before the House of Lords was whether a gas float was a ship. A gas float was shaped like a boat however there was no intention in navigating her and she was not equipped for navigating. She was moored in tidal waters to give light to vessels. For clear reasons, as such never being intended to navigate, the gas float was considered not a "ship".

The "continuity" of navigation issue was also questioned for a yacht, capable of moving anytime, in *R v Carrick District Council, ex parte Prankerd (The Winnie Rigg)*[56]. In this disputed case a yacht had moored in a harbour for 15 years which is reasonable enough for a thought that this ship had lost its navigation function for its "purpose usage". The phrase "used in navigation" was evaluated here as to whether the ship was "actually" or "potentially" capable of being used for navigation. Nevertheless she had remained "moored" rendering her incapable of navigating such a long time as the judge held that there was still a reasonable expectation that she would regain her capacity to navigate, thus this expectation renders this floatable structure a "ship" title.

So how one should justify the proper link between the "purpose usage" and "used in navigation"?The "usage in navigation" was determined by Sheen J in *Steedman v Scofield*[57]. Sheen J paid more attention to the concept of transporting persons or properties by water to an intended destination on a planned movement in order to justify the phrase "used in navigation" in his mind.[58] However, the prevailing element should not have been transporting person or property because navigation function could be used for any "purpose" apart from transportation. The movability should not be subject matter of carrying capacity, but just an expectation of her movement could be sufficient to render her as ship if she is required to move from one place to another.

Above two decisions give rise to confusion in determining whether the powership is legally a "ship". The application of the view in *The Winnie Rigg* could bring the powership into the definition of a "ship", because the powership remains used in navigation so long as she would eventually move from one port to another port to deliver likewise services. Considering that she has to move for periodical maintenance repair and replacement works and periodical surveys for class certifications this would grant her the status of "ship". However, the decision in *Steedman v Scofield* requires the floating object to transport the persons or property by water, which may lead to a view that the main aim is transporting something. Could electricity be considered as a good and can be transported as cargo which renders the powership a "ship"? This is subject to highly academic discussion.

A contrary view has been raised that a power ship does not satisfy the element of being a "navigable object" insomuch that it lacks movement[59]. This view refers to the duration in which the powership remains

[54] SinemOgis, "Power ships: what are they and what does the law say?" (Ogis), Shipping & Trade Law, Informa, Dec 2014, p 4.
[55] [1897] AC 337.
[56] [1998] 2 Lloyd's Rep 675.
[57] [1992] 2 Lloyd's Rep 163.
[58] Cited at Ogis, p 4.
[59] Cited at Ogis, p 4-5.

idle, indicating that if she is moored in the port for more than 10 years, due to the lack of movement, the ship is not capable of being considered a navigable object, so not a "ship". It is also suggested that further factors as to whether the powership is disabled somehow during the stationary period, namely whether important engine parts are removed and then refitted before departure may give rise to new criteria for testing the powership as a "ship". However, this view clearly contradicts with a view in *The Winnie Rigg*.

In *Stewart v Dutra Construction Co*[60] the judge considered whether the aim that was expected from the floating object was to be permanently fixed to a point, which may lead to the presumption that a permanently moored structure never falls within the definition of ship. Another decision was released in *Lozman v City of Riveria Beach,*[61] where the court considered that the vessel's capacity of transportation across the water under section 3 of the Rules of Construction Act USC, which defines a "vessel" as including "every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water".

A wider approach would have more support if it were considered that the navigability skill is a necessity and without it the main aim cannot be reached. This seems to be the case since that floating object is required to proceed to the place where a port facility exists, hence it needs to sail from where it lies to where it can perform its service. As such, the floating object would better be construed as a ship. A closer look may be needed for a specific application of MARPOL.

Having analyzed the different ship definitions, a suggested definition can be as such: "A powership is a floatable structure capable of being used in navigation in waters together with an installed plant on board for the purpose of generating power notwithstanding it is stable during the time of its purpose usage".

[60] 543 US 481 (2005), p 495,
[61] 649 F.3d 1259 (11th Cir, 2011).

4. Is MARPOL Convention Applicable on Powership?

4.1 From the Definition Aspect

The aim envisaged by the drafter of MARPOL Convention 73/78[62] is described in the preamble as "desiring to achieve the complete elimination of intentional pollution of the marine environment by oil and other harmful substances and the minimization of accidental discharge of such substances". In that sentence there is no reference to the "ship". It seems like any source polluting the marine environment is the question. However, it goes on to indicate that this "harmful substance" is regarded as a polluting material which would be sourced by the ship, or perhaps any floatable object being on waters, being obviously supported by the long explanation for the "harmful substance" in the following context as in regulation (reg) 2. Therefore, any floatable object could be the source of pollution and thus it should, first, be understood what the harmful substance is in order to determine if a powership can produce such a harmful substance.

Pursuant to the subtitle "definitions" the "harmful substance" is defined as "any substance, which, if introduced into the sea, is liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea, and includes any substance subject to control by the present Convention"[63]. Convention goes on referring to the concept of

[62] The MARPOL Convention was adopted on 2 November 1973 at IMO. The Protocol of 1978 was adopted in response to a spate of tanker accidents in 1976-1977. As the 1973 MARPOL Convention had not yet entered into force, the 1978 MARPOL Protocol absorbed the parent Convention. The combined instrument entered into force on 2 October 1983. In 1997, a Protocol was adopted to amend the Convention and a new Annex VI was added which entered into force on 19 May 2005. MARPOL has been updated by amendments through the years, see http://www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-thePrevention-of-Pollution-from-Ships-(MARPOL).aspx.
[63] Reg 2/2.

"discharge of the harmful substance" from the "ship" as any release howsoever caused from a ship and includes any escape, disposal, spilling, leaking, pumping, emitting or emptying (reg 2/3,a)[64].

Having had this definition harmful substance—clearly—is not limited to the "oil" but any material or non-material (gas or any intangibles) substance. As a matter of fact MARPOL intends to deal with the ship reasoned pollution since the discharge of harmful substances is envisaged as a discharge from the ship. For that reason the meaning of the "ship" is of importance.

Having considered that the discharge of harmful substances is envisaged as a discharge from the ships(reg2/2 and 2/3), the prevention, control and minimization of the harmful substances discharged from any floating structure—provided that it is legally considered as a ship—will be recognized within the scope of MARPOL Convention. It would be necessary to understand what the legal definition of a ship is and by doing so it could be understood that what type of floating object could possibly be subject to the monitoring system of MARPOL.Is there any reference to a need of a ship carrying goods? Does ship need to navigate in order to be considered within the scope of MARPOL? Although we have seen many definitions, in some of which the powership is covered, MARPOL has its own coverage.

MARPOL refers the "ship" as a vessel of any type whatsoever operating in the marine environment and includes hydrofoil boats, air-cushion vehicles, submersibles, floating craft and fixed or floating platforms (reg 2/4).This "numerusclasus" definition is likely to cover the powership since it is made as floatable object for seas and other waters. It is huge enough in size and resembles the ship in shape. The existing navigation capability appears to be an essential element in order to reach the aim expected from her "purpose usage".

It would be necessary to mention that the ship must be expected to hoist a member State flag, since the Convention applies to the ships entitled to fly the flag of a member State of the Convention, however, the ships which are not hoisting the flag of a member State but which operate under the authority of any member State are also accepted as within the scope of this Convention (reg3/1).

Referring the ship definition in MARPOL it does make a diversion from the definition made under other maritime conventions. A good comparative example might be the CLC[65] where it is concluded that the term was deliberately linked to the carriage of oil in bulk as cargo, and that such carriage was understood to involve the navigation of a ship on a voyage, which obviously emphasis the criteria of "navigability".

The definition of ship in MARPOL should be regarded as wider than in the other versions of the definitions, since most of the definitions given in different State laws make particular emphasis on the "navigability" and "floatability" in the most. However, here, there is something really significant; this definition covers a fixed platform that refers to an object that fixed to the seabed, such as an oilrig or any ship shape object, or any floatable loading/discharging platform offers its services while fixed to the berth and/or seabed. This obviously breaks into the criteria of navigability that is required by the common ship definitions. It can be put in other way as such: the "navigability" would not take the priority as influencing the definition of the ship as a main element, but perhaps the "floatability" would. Once this flexible criteria is adopted, as it is, then the criteria required by the general definitions, namely "its usage aim must depend on its navigability" is predominated by the MARPOL's approach to define the ship. Therefore, having adopted this wider approach the adaptation of the powership to a ship as in terms of a legal concept would be easier. Besides, the purpose of constructing a floating object is producing electricity and it is a temporary solution which is expected from that kind of

[64] Exemptions are mentioned in reg 2/3(b).

[65] Civil Liability Convention 1992.

a structure and can move to another place after completing the task in previous spot, thus floatability supersedes the navigability.

Considering the service contracts are ranging—generally—from one to five years contracts those floating objects cannot be regarded as permanently fixed objects for producing electricity and in fact the "floatability" and "navigability" both together should be seen as the crucial skills which are deliberately sought for by the contractual party. The contrary argument might be raised on the grounds that the powership provides its expected service as moored in fixed and stable position whilst connected to the national grid and so that there is no sufficient ground for it to be become a ship. However, even if the powership's expected purpose usage is to be stable and fixed for connecting to the national grid for the production of the electricity to supply the area's need this can be within the coverage of MARPOL since it clearly refers to "fixed or floating platforms".

As a matter of fact the navigability tempts the governors' attention so that they could join into a contractual relation with a company which has a moveable plant for generating power for the city and easily release the connectivity with this moveable plant once the stronger and permanent plant installed on soil. Therefore, the "floatability" and navigability must be construed as necessary elements for those structures, and clearly those elements are also construed within the legal concept of the "ship". As to "the usage aim depending on its navigability" (purpose), again this cannot be an endurance for admitting the floatable structure as ship since the service contracts are made only for temporary periods and for makeshifts.

4.2 Surveillance Practice

It should also be taken into account that those floating structures are under the surveillance system of the Classification Societies (CS), all powerships which modified from ex-bulk carriers are in need of examination and require surveillance since it is compulsory to hold class certificates for navigation, which otherwise they could not sail in waters. This approach towards the powership considering the powership needs classification surveying quite possible amount to that the shipping industry see her literally as "ship".

Classification Societies provide supervision and surveillance service for the ships and also other floatable objects. They test them by some certain trials whether as a ship or other floatable object suitable to be approved for sailing, by examining their hulls, machineries, propeller systems, all equipment, communication systems, navigation systems, the sanity conditions (de-rat certificate and others) and etc. Hence, it is more likely that those floating structures are to be construed as genuine ships by the people working in this area of the shipping industry. Since the aim of those examinations and certificating are for the approvals of the operative functions for those floatable objects. Thus, even this factor alone may be considered as a good ground for the powership to be legally admitted by the shipping industry as "ship". Therefore, the classification societies maintain to provide surveys and/or maintenance and/or repair work on those floating structures. To put it in example, those vessels, which owned by Karadeniz Energy Co Ltd, are supervised during their conversion work and, once they were done, supported by the set of seaworthiness documentation provided by the classification society, Bureau Veritas, in Turkey.[66]

In practice there can be some legal conflicts when the dry dock period comes, while the power generator is in the middle of her contract. The contractual party, the city government, would not enjoy the fact that this floating structure must go in dry dock for a couple of months, for this the contract must contain specific terms allowing the owner to instruct his powership leave the port and enter dry docking because it is compulsory for them to maintain. It would be wiser to substitute it with another powerbarge during

[66] See fn 1 above.

dry-docking however that would be really costly; therefore, the contract terms must be carefully handled.

Powership may well be within the coverage of MARPOL Convention at the first glance. However, MARPOL should be more scrutinized through its attached annexes, because each of them makes a definition for the ship, again, for the purposes of the application of the related annex.The Convention aims at preventing and minimizing pollution from ships—both accidental pollution and that from routine operations—and currently includes six technical Annexes. Special areas with strict monitoring system on operational discharges are included in most Annexes.

4.3 Applicable Annexes

1. **Annex I**[67] to MARPOL Convention for the Prevention of Pollution by Oil, covers prevention of pollution by oil from operational measures as well as from accidental discharges; the 1992 amendments to Annex I made it mandatory for new oil tankers to have double hulls and brought in a phase-in schedule for existing tankers to fit double hulls, which was subsequently revised in 2001 and 2003.

The reference made for a ship in Annex I to MARPOL[68] is in the scope of application. It is mentioned that, unless expressly provided otherwise, the provisions of this Annex shall apply to all ships (Annex I, reg 2/1). However, Annex I refers to the oil tanker and the combination carrier, hence it does limit the concept of ship only for the ships carrying oil products and same like (reg 1/4 and 1/5). It also mentions about new ship and existing ship definitions but this does not affect the main definition of the ship. Since the Annex I embraces the ship concept in specific manner, making reference to the oil carrying vessels then it should be construed having no application to all ships, but vessels carrying oil then it cannot be applicable on powerships, since their purpose built function is only producing electricity for the cities by connecting the national grids. However, the word "oil fuel" referred in the "definitions" might confuse the mind, since that fuel is the fuel that is used for the running of the ship not the cargo carried, where powership surely uses the same for sailing[69]. Thus Annex I might be of concern of the owners of a powership if she consumes oil fuel for running. It might be a matter of academic discussion.

2. Regulation for the control of pollution by noxious liquid substances in bulk, which is **Annex II**[70]details the discharge criteria and measures for the control of pollution by noxious liquid substances carried in bulk; some 250 substances were evaluated and included in the list appended to the Convention; the discharge of their residues is allowed only to reception facilities until certain concentrations and conditions (which vary with the category of substances) are complied with and in any case, no discharge of residues containing noxious substances is permitted within 12 miles of the nearest land.

It also makes reference to the definition of chemical tanker (reg 1/1), however this annex also applies to all ships carrying noxious liquid substances in bulk (reg 2/1). Powership where its usage purpose lying on the ability to generate electricity may amount to that this Annex II not applicable to the powership since powership neither is a chemical tanker nor carrying any noxious liquid.

3. **Annex III**[71] contains regulations for the prevention of pollution by harmful substances carried in packaged form that obviously does not apply to a ship that does not carry anything, as it is the case in powership, here the electricity generating plant cannot be considered as something that being carried, because the plant cannot be loaded and/or discharged like the other separate goods, however, mantled on board

[67] The annex entered into force on 2 October 1983.
[68] MEPC 51/22 Annex 5 Revised Annex IV of MARPOL 73/78.
[69] Reg 1/3 refers to the "oil fuel" which means any oil used in connection with the propulsion and auxiliary machinery of the ship in which such oil is carried.
[70] The annex entered into force on 2 October 1983.
[71] The annex entered into force on 1 July 1992.

permanently. The possibility and capability of dismantling the power plant on board does not make the plant a cargo.

This Annex contains general requirements for the issuing of detailed standards on packing, marking, labeling, documentation, stowage, quantity limitations, exceptions and notifications.

For the purpose of this Annex, "harmful substances" are those substances which are identified as marine pollutants in the IMDG Code (International Maritime Dangerous Goods Code) or which meet the criteria in the Appendix of Annex III.

4. However, **Annex IV** is about the discharge of raw sewage into the sea where this action can create a health hazard. Sewage can also lead to oxygen depletion and can be an obvious visual pollution in coastal areas—a major problem for countries with tourist industries. Despite the fact that the main sources of human-produced sewage are land-based—such as municipal sewers or treatment plants, the discharge of sewage into the sea from ships also contributes to marine pollution.

Annex IV bears the header of "Regulations for the Prevention of Pollution by Sewage from Ships", and, while dealing with the sewage from the ships, defines the ship by dividing her as a "new ship" and "existing ship"[72]. New ship is for which the building contract is placed, or in the absence of a building contract, the keel of which is laid, or which is at a similar stage of construction, on or after the date of entry into force of this Annex; or the delivery of which is three years or more after the date of entry into force of this Annex. Existing ship is referred "as not a new ship" only. Hence, here lays down a different rule that will apply to a new ship and existing ship (chapter1 reg 1).

Here, the existence of a "ship"—in the view of the MARPOL drafter—seemingly is envisaged as a structure as long as the keel appeared to exist, even if that is not yet a floatable object. The article goes on to say that a delivery of a vessel within three years or more after the date of entry into force of this regulation is also considered as new ship.

Size of the ship is mentioned in Annex IV[73], where new ship or existing ship, puts a benchmark of 200 gross tonnages and carrying more than 10 persons shall be within in the coverage of this Annex (reg 2). The size of a powership falls well within this scope of application.

Annex IV imposes the duties for the ship owners to control pollution of the sea by sewage. Annex IV defines the "sewage" as the drainage and other wastes from any forms of toilets and urinals, drainage from medical premises, wash tubs and scuppers located in these premises; drainage from spaces containing living animals, and other waste waters mixed with drainage as above (reg 1/3). Bearing in mind that the powership, in fact, is an developed version of a bulk carrier with a vast technological advancement providing power generating services through the plant constructed on board, the whole drainage system referred in this paragraph is applicable for the powership.

Annex IV provides survey requirements and every ship is required to comply with the provisions of those regulations, and powership has to comply with as well. The owner of the powership must also deal with International Sewage Pollution Prevention Certificate and other necessary documentation (reg 4 and 7). The discharge of sewage into the sea is prohibited, except when the ship has—in operation—an approved sewage treatment plant or when the ship is discharging comminuted and disinfected sewage using an approved system at a distance of more than three nautical miles from the nearest land; sewage which is not comminuted or disinfected has to be discharged at a distance of more than 12 nautical miles from the nearest land. Sewage should not be discharged instantaneously, but at the moderate rate when the ship is en-route and doing a speed of not less than 4 knots (reg8/1(a)).

[72] Those definitions are made in Reg 1/6 and 7.

[73] The Annex entered into force on 27 September 2003. A revised Annex IV entered into force on 1 August 2005.

It would be rather strange if not, a powership, while navigating and/or moored, must be subject to the Annex IV since those ships have sewage system and may cause marine pollution.

5. Another regulation, which would interest the powership owner, is the **Annex V**[74] that is Regulations for the Prevention of Pollution by Garbage from Ships. "Garbage" means all kind of domestic and operational waste that is generated during the normal operation of the ship (reg 1/1). Amongst the concept of garbage, there exist plastics, food wastes, domestic wastes, cooking oil, incinerator ashes, operational wastes, cargo residues, animal carcasses and fishing gear (reg 3).Every ship of 400 tons gross tonnage and above, and every ship which is certified to carry 15 persons or more, shall carry a garbage management plan, which the crew shall follow (reg 9/2).

This Annex can be applicable to all ships, including yachts, fishing vessels and offshore platforms. Those are limited and powership can surely within this coverage. It deals with different types of garbage and specifies the distances from land and the manner in which they may be disposed of; the most important feature of the Annex is the complete ban imposed on the disposal into the sea of all forms of plastics. This Annex V must also be applicable for the powerships since those ships produce domestic and operational waste during the normal operation of the ship. The powership must keep the records of garbage discharges (reg 4).

6. **Annex VI**[75] is the regulations for the prevention of air pollution from the ships. All ships are to comply with those regulations envisaging air pollution irrespective of Flag State[76].

It can be a great concern for the powership since it is designed to apply to all ships on and over 400 GRT and carrying 14 persons and sewage is a concept which all type of floating and/or fixed objects in waters have duties and liabilities for the existing sewage system and its operation.

It introduces emission control area, and it means an area where the adoption of special mandatory measures emissions from ships is required to prevent, reduce and control air pollution from nitrogen oxide (NOx) and sulphur oxide (SOx). Emission means any release of substance subject to control by this Annex from ships into the atmosphere or sea (reg 2/3). It sets limits on sulphur oxide and nitrogen oxide emissions from ship exhausts and prohibits deliberate emissions of ozone depleting substances; designated emission control areas set more stringent standards for SOx, NOx and particulate matter.

Final

To conclude, power generating floating structures, owing to their ship-shape structure (appearance) and the capability to navigate, fulfil the services which are expected from her to produce the electricity (purpose). Thus the navigability comes forward as a significant element of its definition. In addition, the ship industry's approach to that kind of structure as it is surveyed by the classification societies and the manner it is treated by the ship registries, is most likely to be construed as "ship" as legal description. Therefore, it is acceptable to see those types of floating objects are to be subject to IMO Regulations, wherever the Regulations fall suitable. However, it must also be remembered that not all and whole of each IMO conventions find a place to be applied. As it can be seen hereby, MARPOL can be applicable but not through all its annexes. The MARPOL definition of ship in the main context embraces the concept of a powership but by the analysis of the wordings used in each annexes, it may come to a conclusion that the Annex IV, Annex V and Annex VI can be applicable to that kind of floating structure, Annex I might also take the floor, however it is an academic discussion if it applies to powership.

[74] The Annex entered into force on 31 Dec 1988 and a revised annex entered into force on 1 Jan 2013.
[75] The annex entered into force on 19 May 2005. The revised MARPOL Annex VI and the associated NO_x Technical Code 2008, which entered into force on 1 July 2010.
[76] Reg 5.