

Evaluation of Hong Kong Convention in the Maritime Industry

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Abstract: The HKC (Hong Kong Convention) adopted by the IMO in 2009 is aimed at ensuring that ships, when being recycled after reaching the end of their operational lives, do not pose any unnecessary risk to human health and safety of the marine environment. The text of the ship recycling Convention was developed with input from the IMO (International Maritime Organization) Member States and relevant NGOs (Non-Governmental Organizations), and in co-operation with the ILO (International Labor Organization) and the Parties to the Basel Convention. The Convention intends to address all the issues around ship recycling, taking into account that ships sold for scrapping may contain environmentally hazardous substances. It addresses concerns raised about the working and environmental conditions at many of the world ship recycling locations. Regulations in the new Convention cover: the design, construction, operation and preparation of ships so as to facilitate safe and environmentally sound recycling, without compromising the safety and operational efficiency of ships; the operation of ship recycling facilities in a safe and environmentally sound manner; and the establishment of an appropriate enforcement mechanism for ship recycling, incorporating certification and reporting requirements. This paper will present and discuss the evaluation of the Hong Kong Convention. Also it will discuss implementing the Hong Kong convention to improve the recycling business, highlighting the effect of the convention on the maritime industry.

Key words: Ship recycling, Hong Kong Convention, Environmentally Sound Management, ship recycling facility, ship recycling facility plan, hazardous materials.

1. Introduction

Ship recycling is the process of dismantling obsolete vessels. The components of the scrapped vessel that are fit and valuable for re-use are salvaged and returned into the market. Approximately 95% of a vessel is recycled with scrap steel making up the most of the recycled material. Typically, ships are used for 20-30 years and then decommissioned and sent to be recycled [1]. Currently, the world suffers from an adverse economic crisis so Ship-recycling is closely linked to market trends. End-of-life vessels provide a monetary source to ship-owners at a time when freight rates decline and ship owners become in need of capital [2].

In May 2009, the IMO (International Maritime Organization) adopted the HKC (Hong Kong Convention) for the Safe and Environmentally Sound

Recycling of Ships to address the growing concerns about the environmental, occupational health and safety risks related to ship recycling. The objective of the Hong Kong Convention is to provide a legally binding instrument which ensures that the process of ship recycling does not pose risks to human health, and the marine environment. Ship recycling contributes to sustainable development because virtually every part of a ship's hull, machinery, fittings, equipment and even furniture is re-used. [According to statistics published by the IMO, the world merchant fleet has grown over the last decade from 575 million gross tons (GT) in 2001 to 106,901 million GT in 2013.] During this time, old ships amounting to between 3.7 and 25 million gross tons per year were dismantled worldwide. About, 97% of this activity, which is most commonly called "ship breaking", "ship scrapping" or more recently "ship recycling", mainly takes place in five countries, namely; India with a percentage of 34%, Bangladesh 24%, China 19%, Pakistan 17% while

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Turkey owns 2.4% from the total worldwide percentage [9].

The paper will present and discuss the evaluation of the Hong Kong Convention. Also it will discuss implementing the Hong Kong convention to improve the recycling business, highlighting the effect of the convention on the maritime industry. The structure of this paper consists of introduction, the structure of the HKC, requirements of the HKC for Ships, advantaged and disadvantage of the HKC, finally conclusion and recommendation.

2. Overview of the Hong Kong Convention

Ship recycling industry has been known for severe conditions of workers in yards without protective equipment, formal training and safety measures. The industry has also been known for causing pollution and irreversible damage to the marine environment. Conventions such as the Basel Convention, IMO guidelines on ship recycling, ILO guidelines, Industry code, etc. were adopted to address growing concerns relating to ship recycling, but have been found to be insufficient due to some practical issues. The IMO, therefore, adopted the HKC in May 2009 to address the health, safety and environmental issues related to ship recycling with a legally binding instrument [2].

The first attempt at addressing the issue of environmentally friendly ship recycling industry was to try to implement “The Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal”, which was adopted in 1989, entered into force in 1992, and currently has 175 parties. The Basel Convention aims to protect the human health and the marine environment against adverse effects that result from the generation and management of hazardous wastes. Particularly, the Basel Convention focuses on regulating the trans-boundary movement of hazardous wastes to protect developing countries from importing wastes that they are incapable of managing in an environmentally sound manner [3].

In the sense of the Basel Convention, “wastes” are

objects or materials which are disposed of, intended, or required to be disposed of by the provisions of the national law (Article 2 (1)). Main obligations of Parties include minimizing the generation and trans-boundary movement of hazardous waste and ensuring the availability of sufficient disposal facilities (Article 4). The notion of Environmentally Sound Management (ESM) of hazardous waste is an axial goal, applying to all facilities that recover or dispose of waste (Article 2) [4].

3. The Structure of the Hong Kong Convention

The Convention includes three main parts: articles, regulations and appendices. First, it has 21 articles establishing the main legal mechanisms. Second, it has 25 regulations containing technical requirements and are divided into four chapters, which are: general provisions (regulation 1-3), requirements for ships (regulation 4-14), requirements for ship recycling facilities (regulation 15-23), and reporting requirements (regulation 24-25). Third, it has 7 appendices with lists of Hazardous Materials, forms and certificates related to the Convention.

The Convention has a two-level design with the major procedural and governance rules explained in the main text of the Convention under the heading “Article”, while the Convention is further supported by detailed requirements and more specific regulations included in the annex. Annex is an integral part of the Convention which is not legally independent and its requirements have the same strength as those of the articles to the Convention. This two-level design allows for more flexibility because the annex can be modified more easily than the main body of the Convention.

In addition, there are certain guidelines have been developed and adopted. These guidelines aim for supporting party states in the early implementation of the technical standards of the Convention. These include the Guidelines for the Development of the SRP

(Ship Recycling Plan) (Annex 2), Guidelines for the Development of the Inventory of Hazardous Materials (IHM) (Annex 3), Guidelines for Safe and Environmentally Sound Ship Recycling (Annex 4), and Guidelines for the Authorization of SRF (Ship Recycling Facilities) (Annex 5) [2].

Since 2001 till 2004 many codes and guidelines have been developed by the industry, UNEP and ILO, in 2004 the IMO adopted the voluntary Guideline on Ship Recycling under resolution A.962 (23) and recommended the Green Passport Inventory, finally in 2009 the IMO adopted the Hong Kong Convention which required the Inventory of Hazardous Materials. The HKC has not yet entered into force. It would be applied two years after specified conditions are met which are to be ratified by 15 States which it should be represented by 40% of the world merchant shipping by gross tonnage, and a maximum annual ship recycling volume not less than 3% of the combined tonnage of the ratifying States should exist. [8].

In addition, at the end of 2013, the European Regulation on Ship Recycling entered into force this may promote ratification of the Convention, particularly in Europe. In August 2014, Norway (17470000 DWT), France (4096000 DWT) and Congo (9000 DWT) became Party to the Convention [5]. Furthermore, Japan is likely to aid India to improve the facility at Alang-Sosiya ship recycling yard. The SRIA (Ship Recycling Industries Association) of India agreed to the Japanese condition of abiding by the rules of the HKC. SRIA agreed to the offer of help from Japan to enhance their facility, where the largest number of ships is being recycled. Japan can help India on condition that the latter ratifies the HKC. In this way, India would cooperate with the global efforts to put the HKC into force.

4. Requirements of the Hong Kong Convention for Ships

Ship recycling, is seen as posing threats to the environment, human health and safety. Workers in

yards are exposed to hazardous materials such as asbestos, polychlorinated biphenyls (PCBs), mercury, lead etc. Their safety is often endangered as they work without PPE (Personal Protective Equipment) such as safety shoes, glasses, gloves, helmets, etc. Recycling yards with no facilities to deal with hazardous waste are a threat to marine environment [2].

Therefore, the convention required the IHM (Inventory of Hazardous Materials) on board new ships, which aimed to gather information regarding the location and the quantity of hazardous materials in order to ease procedures and to enhance the possibilities of protecting human health and the environment during the recycling process. The establishment of such an inventory of hazardous materials supports compliance with the broader objectives of the HKC at an early stage in the life cycle of a certain ship. Parties, defined in the HKC as countries that have ratified the convention to ensure that hazardous materials listed in Appendix 1 to the Convention will not be installed on their ships nor will they be used in their ship yards. [10].

All ships in operation will be provided with an IHM to identify the type and amount of any materials listed in Appendices 1 and 2 of the Convention. Part I of the IHM will have to be updated after any installations of materials listed in Appendix 2 of the HKC. All ships will have to undergo renewal surveys verifying that the IHM continues to meet the requirements of the HKC and will be issued with the ICIHM (International Certificate on Inventory of Hazardous Materials) with 5 years' maximum validity. Most importantly, all ships flying the flag of a Party to the Convention will have to be recycled in the recycling facilities of the Party States [3].

4.1 Requirements for Recycling States

A recycling state is a country which is party to the Convention under whose jurisdiction the SRF operates. The job of the recycling state is to establish a mechanism to ensure that the SRF is authorized for

ship recycling and is “designed, constructed and operated in a safe and environmentally sound manner”, in compliance with the regulations of the Convention. This authorization is to be carried out by the CA (Competent Authority), designated by the recycling state [2]. Recycling states are required to establish legislation implementing the HKC, establish a mechanism for ensuring that SRF function in accordance with the HKC and set an instrument for authorizing SRF. This authorization offers information on any delimitation imposed on the SRF, which may be limited by the types or sizes of the ships they recycle, as well as the categories and quantities of hazardous materials they can process in a sound manner [3].

4.2 Requirements for Ship Recycling Facilities

According to the HKC, a SRF authorized by the Party to the Convention can only accept ships which meet the requirements of the Convention (Regulation 17 (2) (1)). It can only accept ship which it is given authority to recycle (Regulation 17 (2) (2)) [2]. Ship recycling facilities operating under the legal authority of a party shall abide by the requirements of the Convention and be authorized in accordance with the Convention. The authorization shall have 5 years’ maximum validity. The SRF must prepare a SRFP (Ship Recycling Facility Plan), a document that details how the ship will be dismantled [4].

Furthermore, a ship-specific SRP shall be developed taking into account information provided by the ship-owner to facilitate the recycling process. A ship recycling facility preparing to receive a ship shall notify its Competent Authority of the intention (Regulation 9) [3]. Recycling facilities should be managed to prevent negative effects on human health and the marine environment, and to ensure safe and environmentally sound management of hazardous materials, emergency preparedness and response and worker safety and training. Facilities shall establish and use procedures bearing in mind specific guidelines to be developed by the IMO [4].

4.3 Requirements for Ship Owners

Ship owners are required to initiate the process of ship recycling by informing the “administration” (i.e. flag state) about the need to get the ship recycled. Once a ship is approved to be recycled, the flag state prepares for survey to verify the IHM as well as certification for recycling as per the requirements of the Convention (Article 24 (1)). The ship owners shall give all available information regarding the ship including a completed IHM and ICIHM to the SRF for the development of SRP. Beside, selecting an authorized recycling facility (in a Party State) which must be capable of dealing with the types and quantities of hazardous materials contained in the ship (in compliance with IHM), ensure that the amount of cargo residue, fuel oil, and waste on board is kept to a minimum prior to entering the SRF (Regulation 8 (2)).

5. Advantages of the Hong Kong Convention

Although with certain flaws, the HKC is a laudable attempt towards safe and environmentally sound ship recycling. The Secretariat of the Basel Convention describes the principle of environmentally sound management as: The protection of human health and the environment by minimizing hazardous waste production to the least amount possible making use of an integrated life-cycle approach, which involves firm controls from the generation of hazardous waste to its storage, transport, treatment, re-use, recycling, recovery and final disposal [6, 11].

The most compelling feature adopted by the Convention is the life-cycle approach. It deals with hazardous materials installed in ships from cradle to grave and aims at banning and limiting their use by regulating design, construction, operation and maintenance of ships. Management of IHM during the entire life-time of the ship is a major step in achieving safe and environmentally sound ship recycling. Additionally, the HKC aims at establishing a “cradle-to-grave” regulation that spans across the whole life-cycle of a ship. This envisions regulations

that begin at design and construction reaching up to the point that the ship is dismantled. The “cradle-to-grave” approach, and the limitation of hazardous materials on board as well as the requirement for ships to carry an inventory of such materials are crucial steps forward in the direction of cleaner shipping and ship dismantling [7].

6. Disadvantages of the Hong Kong Convention

The HKC makes several important advances over the Basel Convention; however, it is plagued by a few apparent deficiencies. A group of critics of the HKC expressed strong dissatisfaction over some issues, such as ship exemptions and the beaching method. Firstly, exemptions for ship recycling do not include further processing and disposal of components and materials recovered from the ship in different facilities (Article 2 (10)). This certainly means that the final fate of the hazardous materials recovered from the ship during the ship recycling process is not addressed by the Convention. Thus, this approach undermines the concept of the environmentally sound ship recycling.

Also, The Convention is not applicable to war-ships, naval vessels and government-owned non-commercial ships (Article 3 (2)). The practical effect, therefore, may be restricted since war-ships make up the bulk of vessels. In addition, ships under 500 gross tonnage and ships engaged solely in domestic voyages are exempted from the Convention (Article 3 (3)). In fact, war-ships and naval vessels contain huge amounts of hazardous materials such as asbestos and PCBs, and thus need to be subjected to stricter regulations. Such exemptions would not allow complete eradication of the ill practices of the ship recycling industry.

Secondly, beaching method in the Convention does not follow a direct approach while setting standards for ship recycling methods. It does not introduce particular compulsory methods that are safe and environmentally sound. Moreover, it does not mention a certain recycling methods which are known to cause

impediment to a safe and environmentally sound ship recycling process. It is widely known that “beaching”, which is deliberately running a vessel aground, has been denounced by environmental groups for being unfavorable in that it poses obstacles to safe and environmentally sound ship recycling [2].

The beaching method has incurred severe pollution, occupational disease and even death in India, Pakistan and Bangladesh. In addition, ship recycling based on beaching results in the release of toxic chemicals including asbestos, and heavy metals such as mercury, cadmium and lead. The HKC does not forbid the beaching method of recycling. The developers of the Convention realized that banning beaching would be meaningless, since three quarters of the world’s recycling capacity depends on the beaching method. Some drastic characteristics of intertidal beaching operations include the impossibility of containing pollutants such as heavy metals, toxic paints and oils due to a soft and shifting wet tidal sand surface and thus polluting sea water and the absolute impracticality of conducting hazardous waste management operations in the ecologically delicate coastal zone [3].

7. Conclusion and Recommendation

The Hong Kong Convention includes features, if fully implemented, could reduce the human health and environmental impacts of ship recycling, such as an inclusive IHM on board ships. However, the HKC is short of certain elements crucial to achieving the objective of environmentally sound management of waste. The future of regulating the ship recycling industry is uncertain in many ways. What is certain is that the harms posed by hazardous wastes generated during shipbreaking can be devastating to the local marine environment and health of workers. The HKC is a valuable development on this front as a starting point for a more profound development of international legal regimes for ship recycling.

As a matter of fact, the Convention is a significant step forwards in that it would assist raising the level of

standards in the ship recycling industry. The requirements on from owners are far more particularized as they will need an inventory based on a sampling plan, a SRP provided by the facility, an authorized SRF, and a permission from the flag state to conduct a final survey in order to issue an international ready-for-recycling certificate.

The comprehensive applicability of SRF, the life cycle approach and the legally compelling criteria are major features of the Convention. Such features make it potent and distinct from other legal regimes and guidelines regarding the ship recycling process. Still, the HKC, unfortunately, has several deficiencies and delimitations. For instance, exemptions to certain classes of ships and the beaching method are some of the main drawbacks that weaken its effectiveness. There is no reason to believe that the HKC could not likewise develop into a better instrument for regulating ship recycling. It has incorporated a flexible amendment procedure that should allow for easy development once it enters into force.

At the end, the recommendation is for the Egyptian government which should become a Party to the HKC despite the fact that the country have a lot of advantages such as a lot of ports on both the Mediterranean and the Red Sea. Many of ships pass through the Suez Canal. Ship-recycling would provide scrap metal that saves raw material, as well as job opportunities in ship yards in which will have a lot of benefits to the economy of the country.

References

- [1] Lloyd's Register. 2009. "Summary on the New Hong Kong Convention for the Safe and Environmentally Sound Recycling of Ships." Accessed March 2015. http://www.ilo.org/safework/info/publications/WCMS_154921/lang--en/index.htm.
- [2] Jain, K. P., Pruyn, J. F. J., and Hopman, J. J. 2013. "Critical Analysis of the Hong Kong Convention on Ship Recycling." Accessed Jan. 2015. <http://waset.org/publications/17105/critical-analysis-of-the-hong-kong-international-convention-on-ship-recycling>.
- [3] Mikelis, N. 2010. "The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships." Accessed March 2015. <http://www.imo.org/en/KnowledgeCentre/PapersAndArticlesByIMOSTaff/Documents/UNCTAD%20on%20the%20Hong%20Kong%20Convention%20-%20N%20Mikelis.pdf>.
- [4] European Commission. 2010. "An Assessment of the Link between the IMO Hong Kong Convention for the Safe and Environmentally Sound Recycling of Ships, the Basel Convention and the EU Waste Shipment Regulation." Accessed Feb. 2015. <http://ec.europa.eu/environment/waste/ships/pdf/report0310.pdf>.
- [5] UNCTAD Secretariat. 2014. "Based on Data Provided by Lloyd's List Intelligence." From <http://www.lloydslistintelligence.com>.
- [6] Carey, T. 2011. "The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships Progress." Accessed March 2015. <http://lup.lub.lu.se/luur/download?func=downloadFile&recordId=2520915&fileId=3046718>.
- [7] Ormond, T. 2013. "Hong Kong Convention and EU Ship Recycling Regulations: Can they Change Bad Industrial Practices Soon?" Accessed July 2015. http://www.tradeenvironment.eu/uploads/Ormond_on_ship_recycling.pdf.
- [8] ILO. 2009. "The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships." Accessed March 2015. http://www.ilo.org/safework/info/publications/WCMS_154921/lang--en/index.htm.
- [9] IMO. 2009. "The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships." Accessed Dec. 2014. <http://www.basel.int/Portals/4/Basel%20Convention/docs/ships/HongKongConvention.pdf>.
- [10] News to use. "The World'S Biggest Ships- Batillus-Class Supertankers." Accessed July 2015. <http://www.newstouse.org/biggest-ships-batillus/>.
- [11] The Center for Industrial Environmental Law. 2011. "Shipbreaking and the Basel Convention: Analysis of the level of Control Established under the Hong Kong Convention." Accessed October 2014. http://www.ciel.org/Publications/Shipbreaking_22Apr11.pdf.