

THE IMO'S WORK ON SHIP RECYCLING*

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SUMMARY

The paper provides a brief history of the issue of ship recycling in IMO and a summary of the IMO Guidelines on Ship Recycling. It also provides information on the latest developments in the IMO Marine Environment Protection Committee on a number of issues related to ship recycling, such as the possible mandatory application of certain elements of the Guidelines, the development of a reporting system for ships destined for recycling, the approval of guidelines for the development of the ship recycling plan, the preparation of a "single list" of the on board potentially hazardous materials, the mechanisms to promote the implementation of the Guidelines, the inter-agency co-operation and others.

1. INTRODUCTION

1.1 Ship recycling contributes to sustainable development and is the most environmentally friendly way of disposing of ships with virtually every part of the hull and machinery capable of being re-used. However, while the principle of ship recycling is a sound one, the reported status of working practices and environmental standards in recycling facilities in certain parts of the world often leaves much to be desired.

1.2 Noting the growing concerns about environmental safety, health and welfare matters in the ship recycling industry, and the need to reduce the environmental, occupational health and safety risks related to ship recycling, as well as the need to secure the smooth withdrawal of ships that have reached the end of their operating lives, the International Maritime Organization (IMO) has taken swift action to develop a realistic and effective solution to the problem of ship recycling, which will take into account the particular characteristics of the world of maritime transport.

2. BRIEF HISTORY OF THE ISSUE OF SHIP RECYCLING IN IMO

2.1 The issue of ship recycling was first brought to the attention of the IMO Marine Environment Protection Committee (MEPC) at its forty-second session in 1998 and at the following sessions of the Committee it was generally agreed that IMO has an important role to play in ship recycling, including preparation of a ship before recycling commences, and a co-ordinating role towards the ILO and the Basel Convention in recycling matters. At MEPC 47 (March 2002), the Committee agreed that, for the time being, IMO should develop recommendatory guidelines to be adopted by an Assembly resolution.

2.2 MEPC 49 (July 2003) finalized the IMO Guidelines on Ship Recycling (hereinafter referred to as the "Guidelines"), which were subsequently adopted on 5 December 2003 at the twenty-third regular session of the Assembly by resolution A.962(23). IMO invited

Governments to take urgent action to apply these Guidelines, including the dissemination thereof to the shipping and ship recycling industries, and to report to the MEPC on any experience gained in their implementation.

2.3 MEPC 50 (December 2003), realized that the amendments to MARPOL Annex I in the wake of the "Prestige" would increase the number of vessels to be recycled within a specific period of time, which implies an increased need for ship recycling facilities and capabilities. The Committee adopted resolution MEPC.113(50), recommending that initiatives should be taken to maintain adequate ship recycling facilities at world-wide level and to promote research and development programmes to improve environment and safety levels in ship recycling operations.

2.4 Ship recycling remains a high priority item on the work programme of the MEPC and intensive work is currently under way with the objective of promoting the implementation of the Guidelines, assessing their effectiveness, reviewing them if necessary, and, finally, determining any other required solutions, including the identification of those parts of the Guidelines which may be made mandatory. The latest developments in the MEPC on the issue of ship recycling are reported in the following section 4.

3. IMO GUIDELINES ON SHIP RECYCLING

3.1 As mentioned in the above paragraph 2.2, the IMO Guidelines on Ship Recycling were adopted on 5 December 2003 by resolution A.962(23). A copy of the Guidelines is available on the Internet (<http://www.imo.org> - select Marine Environment/Ship recycling).

Objectives and background

3.2 The Guidelines have been developed to provide guidance to flag, port and recycling States, shipowners, ship recycling facilities, ship builders and marine

* Views expressed in this paper are those of the author and should not be construed as necessarily reflecting the views of IMO or its Secretariat.

equipment suppliers as to “best practice”, which takes into account the ship recycling process throughout the life cycle of the ship. The Guidelines seek to:

- encourage recycling as the best means to dispose of ships at the end of their operating lives;
- provide guidance in respect of the preparation of ships for recycling and minimizing the use of potentially hazardous materials and waste generation during a ship’s operating life;
- foster inter-agency co-operation; and
- encourage all stakeholders to address the issue of ship recycling.

3.3 The Guidelines take into account the "Industry Code of Practice on Ship Recycling"^[1] and complement other international guidelines addressing this issue; notably those produced under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal focusing on issues related to ship recycling facilities^[2], and those of the International Labour Organization addressing working conditions at the recycling facilities.^[3]

Identification of potentially hazardous materials

3.4 The Guidelines place a significant emphasis on the identification of potentially hazardous materials on board ships prior to recycling and introduce the concept of the **Green Passport**. The Green Passport for ships is a document providing information with regard to materials known to be potentially hazardous utilised in the construction of the ship, its equipment and systems. This document should accompany the ship throughout its operating life and successive owners of the ship should maintain the accuracy of the Green Passport and incorporate into it all relevant design and equipment changes, with the final owner delivering the document, with the ship, to the recycling facility. In identifying potentially hazardous materials on board ships, Appendices 1 and 2 to the Guidelines provide two lists to consider for guidance, while the format contained in Appendix 3 of the Guidelines may be used as a model for the preparation of the inventory of the potentially hazardous materials on board the ship.

Design and construction of ships

3.5 Acknowledging that a number of the problems associated with ship recycling might be addressed at the design and construction stage, the Guidelines encourage ship designers and shipbuilders to take due account of the ship’s ultimate disposal when designing and constructing a ship.

3.6 The use of materials which can be recycled in a safe and environmentally sound manner, the minimization of the use of materials known to be potentially hazardous to health and the environment, the consideration of structural designs that could facilitate ship recycling and the promotion of the use of techniques and designs which, without compromising safety or operational efficiency, contribute towards the facilitation of the recycling operation are some of the recommendations provided by the Guidelines with regard to the design and construction of ships.

3.7 Manufacturers of marine equipment that contains hazardous substances are also encouraged to design the equipment so as to facilitate the safe removal of those substances, or give advice as to how such substances can be safely removed at the end of the working life of the equipment.

Use of potentially hazardous substances

3.8 Minimization of the use of potentially hazardous substances and of waste generation is also recommended for the lifetime of ships and therefore shipowners should:

- make every effort to minimize the amount of potentially hazardous materials on board the ship, including those carried as stores, during routine or major maintenance operations or major conversions; and
- continuously seek to minimize hazardous waste generation and retention during the operating life of a ship and at the end of a ship's life.

Preparation of a ship for recycling

3.9 The Guidelines also provide a number of recommendations with regard to the preparation of a ship for recycling, which should begin before the ship arrives at the recycling facility. These preparations include amongst others:

- the selection by the shipowner of a recycling facility which has the capability to recycle the ships it purchases in a manner consistent with national legislation and relevant international conventions;
- the development of a recycling plan by the recycling facility in consultation with the shipowner, ensuring that a ship has been prepared to the maximum extent possible prior to its recycling and that the safety of the

ship, prior to delivery, has been taken into account;

- preparations to protect occupational health and safety, such as issue of gas-free/hot work certificates, marking of any oxygen-deficient compartments onboard and identification of any area of the ship where there may be structural integrity problems or critical support structures; and
- preparations to prevent pollution, such as minimization of the quantities of fuel, diesel, lubricating, hydraulic and other oils and chemicals on board at delivery to the facility, removal of wastes at appropriate port reception facilities, and controlled drainage, by the recycling facility, of potentially harmful liquids from the ship.

Role of stakeholders and other bodies

3.10 The Guidelines provide guidance to all stakeholders in the ship recycling process. This includes flag, port and recycling States, authorities of shipbuilding and maritime equipment supplying countries, as well as relevant intergovernmental organizations and commercial bodies such as shipowners, ship builders, marine equipment manufacturers, repairers and recycling facilities. Additional stakeholders include workers, local communities, and environmental and labour bodies.

3.11 In accordance with the Guidelines:

- **flag State Administrations** should promote the application of the Guidelines, establish criteria to declare a ship "ready for recycling", promote the use of ship recycling sales and purchase contract and co-operate with recycling States to facilitate the implementation of the Guidelines;
- **port States** should promote the widespread use of the Guidelines within the industry and co-operate with flag States and recycling States to facilitate their implementation. It is also stressed that ships destined for recycling are subject to current port State control procedures, as any other ship, in accordance with applicable international regulations;
- **recycling States** should introduce, implement and enforce sound legislation and other requirements concerning the recycling of ships,

including measures to authorize or license recycling facilities and regulations in relation to the condition of ships purchased for recycling both at the time of purchase and at the time of delivery. They should check that any potentially hazardous wastes, which might be generated during the recycling operation, can be safely handled prior to the delivery of the ship for recycling, and monitor the safe handling of any hazardous materials generated during the recycling process. Recycling States should also assess the capabilities of their recycling facilities and make available the results of those assessments and ensure that, in authorising a recycling activity, adequate reception facilities are in place;

- **the shipping industry** should continue its co-operation with the other stakeholders towards improving plans to decommission ships in a safe and environmental sound manner and is encouraged to continue the further development of the "Industry Code of Practice on Ship Recycling"; and
- **the ship recycling industry** should take due note of available technical guidance on ship recycling, develop a code of practice appropriate to that industry and improve the quality management system of the recycling facilities. It should also encourage recycling facilities to make available details regarding procedures for the chosen method for the safe handling of hazardous materials and working practices and establish adequate waste management systems.

3.12 The Guidelines also refer to the role of the ILO, the Basel Convention and the London Convention 1972/1996 Protocol, making reference to their relevant provisions and guidelines applicable to ship recycling.

Technical co-operation

3.13 Finally, the Guidelines suggest that national or regional organizations should co-operate with Governments in ship recycling States and other interested parties on projects involving the transfer of technology or aid funding to improve facilities and working practices in the recycling facilities.

4. MEPC'S WORK PROGRAMME ON THE ISSUE OF SHIP RECYCLING

4.1 Ship recycling is one of the high priority items in the agenda of the MEPC. The Committee held its fifty-second session from 11 to 15 October 2004 and taking into account the outcome of that session on ship recycling, the Committee's work programme on this issue could be summarized as follows.

Mandatory application of certain elements of the Guidelines

4.2 MEPC 52, having considered the need for developing mandatory measures for ship recycling, agreed that certain parts of the IMO Guidelines might be given mandatory effect. The Working Group on Ship Recycling (hereinafter referred to as the "Group"), established at that session, developed an initial list of the elements of the Guidelines for which a mandatory scheme might be regarded as the most suitable option for their implementation, as set out in the annex.

4.3 In this respect, the Committee noted that the outcome of this work should be considered as a starting point for the future work that was needed intersessionally in order to develop further this list and to consider issues associated with the possible mandatory application of the identified measures.

4.4 The Committee further noted that the Group, in considering how the implementation of such a possible mandatory scheme could be achieved, discussed briefly whether existing IMO instruments were the appropriate legal framework for the ship recycling provisions or whether these should be developed as a new separate legal mechanism. Whilst it was suggested that existing IMO instruments, such as MARPOL 73/78, could provide an appropriate vehicle for the implementation of some of the identified measures, the Group agreed that **a new IMO instrument could be developed with a view to providing legally binding and globally applicable ship recycling regulations** and that further work was needed before a concrete proposal could be made on this issue.

Reporting system for ships destined for recycling

4.5 Regarding the reporting system for ships destined for recycling, the Group agreed that this system should be developed in accordance with the following basic principles:

- the system should be transparent, effective, ensure uniform application and respect commercially sensitive information;
- the system should be developed in such a way as to facilitate the control and

enforcement of any mandatory provisions on ship recycling that may be developed by IMO;

- the system should be implemented by the shipowner, the recycling facility, the flag State and the recycling States with the latter two stakeholders having the primary role for ensuring its proper application;
- the system should be a stand-alone reporting mechanism; and
- although existing notification and reporting procedures under other existing legal instruments could be taken into account, the system should be a workable and effective one, with the minimum required administrative burden and catering for the particular characteristics of world maritime transport.

4.6 MEPC 52 developed, as a starting point, a draft outline of the reporting system for ships destined for recycling in order to identify in a schematic way what should be reported, to where and by whom. In this respect, it was noted that additional work was needed for the further development of this system with the aim of considering, amongst other issues, the appropriate time-frame for the reporting, a harmonized reporting format and the possible need for additional flow of information between the involved stakeholders.

"Single list" of the on board potentially hazardous materials

4.7 MEPC 52 agreed that a "single list" of the on board potentially hazardous materials should be developed replacing the existing Appendices 1, 2 and 3 of the Guidelines. The "single list" would provide guidance on the identification of potentially hazardous materials on board ships and the preparation of the relevant inventories.

4.8 The Committee noted that the Group, having agreed that a standard format should be developed in order to provide for a uniform and consistent application, developed an initial layout of the "single list" for further consideration in the intersessional period.

4.9 The Committee further noted that the Group agreed that:

- the "single list" should be user friendly, workable and practicable, specific for shipboard applications, exclude any generic terms and provide

information on all hazards associated with the entries in the list;

- Appendix 3 of the Guidelines should be the basis for the “single list”, supplemented as necessary by selective entries from Appendices 1 and 2 of the Guidelines, in order to be as comprehensive as possible; and
- once the “single list” has been developed it might be appropriate, prior to its finalization, to seek input and comments from the Joint ILO/IMO/BC Working Group on Ship Scrapping (see section 5).

Mechanisms to promote the implementation of the Guidelines and Criteria for ships to be declared “Ready for Recycling”

4.10 A set of possible and suitable mechanisms for the promotion of the implementation of the Guidelines and an initial draft set of the criteria for ships to be declared “ready for recycling” were prepared by the intersessional Correspondence Group on Ship Recycling established by MEPC 51 and submitted for consideration and further development to MEPC 52.

4.11 At MEPC 52, it was recognized that the outcome of the work outlined in the above paragraphs 4.2 to 4.9 would have a significant effect on the further consideration of the possible mechanisms for the promotion of the implementation of the Guidelines and on the further development of the criteria for ships to be declared “Ready for Recycling” and, therefore, it was agreed that these issues should be considered at a future session.

4.12 Regarding the promotion of the implementation of the Guidelines, the Committee agreed that a preliminary plan should be developed identifying priorities, achievable deadlines, and input required from other IMO Committees and Sub-Committees.

Proposed amendments to the Guidelines

4.13 The Committee, at its fifty-second session, considered a number of proposals for amendments to the Guidelines submitted by the Industry Working Party on Ship Recycling^[4], which was invited to prepare a revised text of the proposed amendments to the Guidelines for further consideration in the intersessional period.

Ship Recycling Fund

4.14 MEPC 52, having considered a proposal by Bangladesh, agreed, in principle, to the need for the establishment of an International Ship Recycling Fund to promote the safe and environmentally-sound

management of ship recycling through the IMO’s technical co-operation activities. However, it was agreed that the working arrangements and funding mechanism of such a Fund would require further consideration and clarification and the IMO’s Technical Co-operation Committee was invited to consider further the arrangements to establish such a dedicated fund.

Future working arrangements

4.15 MEPC 52, taking into account the need to progress the work on ship recycling issues in an expeditious manner:

- agreed to the establishment of a correspondence group to further progress the work in the intersessional period;
- approved a three-day intersessional meeting of the Working Group on Ship Recycling during the week before MEPC 53 (to be held from 18 to 22 July 2005) to consider the issues related to the terms of reference of the Correspondence Group; and
- agreed to re-establish the Working Group on Ship Recycling at the next session of the Committee.

Guidelines for the development of the ship recycling plan

4.16 In accordance with section 8.3.2 of the IMO Guidelines on Ship Recycling, the development and implementation of a recycling plan can help ensure that a ship has been prepared to the maximum extent possible prior to its recycling and that the safety of the ship, prior to delivery, has been taken into account. The ship recycling plan should be developed by the recycling facility in consultation with the shipowner, taking into account the potential hazards which may arise during the recycling operation, the relevant national and international requirements and the facilities available at the recycling facility in terms of materials, handling and the disposal of any wastes generated during the recycling process.

4.17 MEPC 52 approved the Guidelines for the development of the ship recycling plan, aimed at providing technical information and guidance for its preparation. These Guidelines have been circulated by means of MEPC/Circ.419 and are also available on the Internet (<http://www.imo.org> - select Quick links/Circulars/MEPC).

5. INTERAGENCY CO-OPERATION

5.1 IMO maintains close co-operation with ILO and

the Basel Convention on the issue of ship recycling and the establishment by the three Organizations of the Joint ILO/IMO/Basel Convention Working Group on Ship Scrapping is a good example and evidence of this enhanced co-operation at the international level.

5.2 The overall task set by the three Organizations for the Joint Working Group is to act as a platform for consultation, co-ordination and co-operation in relation to their work programmes and activities with regard to issues related to ship recycling. The Joint Working Group aims to promote a co-ordinated approach to the relevant aspects of ship recycling with the aim of avoiding duplication of work and overlapping of roles, responsibilities and competencies between the three Organizations, and identifying further needs.

5.3 The first session of the Joint ILO/IMO/Basel Convention Working Group on Ship Scrapping, hereinafter referred to as the "Joint Working Group", was held at the IMO headquarters in London from 15 to 17 February 2005.

5.4 During the first meeting, the Joint Working Group considered the respective work programmes of the pertinent bodies of ILO, IMO and the Conference of Parties to the Basel Convention on the issue of ship recycling and developed a list of the main items that are being considered by the three Organizations concurrently. This includes the possible development of mandatory requirements, a reporting system for ships destined for recycling, the development of a "single list" of potentially hazardous materials on board, the issue of the abandonment of ships on land or in port, the promotion of the implementation of the Guidelines on ship scrapping, and technical co-operation. For each item identified, a list of work programme activities being carried out or planned by each of the Organizations was developed, and a number of recommendations were proposed to be taken into account by the three Organizations, as appropriate, during their future deliberations on these work items.

5.5 With a view to identifying any possible gaps, overlaps, or ambiguities, the Joint Working Group began a comprehensive initial examination of the relevant IMO, ILO and BC guidelines on ship recycling, based on a comparison of the issues presented in each of the guidelines in the form of a matrix, and a draft overview paper outlining the purpose of each of the guidelines, their respective field of application and main contents. However, it was recognized that this was a large undertaking that was unlikely to be completed at this initial meeting. The Joint Working Group agreed that intersessional work and further work at the second session would be needed.

5.6 The implementation of the guidelines was seen as being of paramount importance for the minimization of the environmental, occupational health and safety

hazards related to ship recycling and the improvement of the protection of human health and the environment at ship recycling facilities. In this respect, the Joint Working Group agreed that each Organization should consider the translation of its guidelines into the working languages of the main ship recycling States, and that each should also ensure that a user-friendly web page is established, providing information on ship recycling matters and a link to the other two Organizations' relevant web-pages and guidelines. It also agreed to invite the ship recycling States to make point-of-contact details for the competent authorities responsible for issues related to ship scrapping publicly available, and to invite Governments and all involved stakeholders to provide information to the three Organizations on any experience gained in the implementation of the guidelines.

5.7 It was agreed that the implementation of the guidelines should be also promoted through joint technical co-operation activities, and the Joint Working Group agreed to invite Governments and other stakeholders to provide information to the three Organizations on any technical co-operation activities or other relevant initiatives already launched or planned so that these activities could be taken into account in the future technical co-operation programmes of the Organizations. Each Organization should be asked to invite the other two to participate in any workshops or seminars they organize, and a section providing information on the guidelines of the other two Organizations should be included in the programme of any such activities. It was agreed that the three Organizations should be asked to consider a global technical co-operation programme on ship scrapping.

5.8 The report of the first session of the Joint Working Group will be submitted to the pertinent bodies of the three Organizations. The second session of the Joint Working Group will be hosted by the Basel Convention in Geneva, Switzerland, either in December 2005 or January 2006.

6. CONCLUSIONS

6.1 Recycling is one of the basic principles of sustainable development and ship recycling is, generally, the best option for all time-expired tonnage. IMO, therefore, encourages and promotes ship recycling in compliance with the international standards on safety, health and environment.

6.2 IMO's work on ship recycling aims at the development of a realistic, pragmatic, well-balanced, workable and effective solution to the problem of ship recycling, which should take into account the particular characteristics of world maritime transport and the need for securing the smooth withdrawal of ships from trade at the end of their operating lives.

6.3 Areas where IMO has focused its attention include, but are not limited to:

- the minimization of the use of hazardous materials in the design, construction and maintenance of ships, without compromising their safety and operational efficiency;
- the identification of potentially hazardous materials on board ships and the preparation of the relevant inventories (e.g. Green Passport); and
- the preparation of ships for recycling in such a manner as to reduce environmental and safety risks and health and welfare concerns as far as practicable.

6.4 The issue of ship recycling has been given high priority at the MEPC in order that the promotion of the implementation of the IMO Guidelines on Ship Recycling and the consideration of a possible new legally binding IMO instrument on ship recycling are progressed as efficiently and expeditiously as possible.

6.5 IMO maintains close co-operation with ILO and the appropriate bodies of the Basel Convention, with the aim of avoiding duplication of work and overlapping of responsibilities and competencies between the three Organizations.

ANNEX

INITIAL LIST OF THE ELEMENTS OF THE IMO GUIDELINES ON SHIP RECYCLING IDENTIFIED FOR CONSIDERATION AS AREAS FOR POSSIBLE MANDATORY APPLICATION

Mandatory Requirement	Guidelines Reference
Recycling Facilities	
Recycling State to require operational waste reception facilities at recycling facilities	9.4.2.3
Ship Recyclers to be "licensed"	9.4.4.1
Shipowners required to use "approved/licensed" recycling facilities	8.1.6
Shipowners to arrange for removal of materials the recycling facility cannot handle	8.1.5
Reporting	
Ship Recycling Plan	
Recycling facility to prepare a ship recycling plan in consultation with the shipowner	8.3.2.2
Ship Recycling Contract	
Shipowners/Recycling facilities to include elements of the Guidelines such as the Ship Recycling Plan, etc. in recycling contracts	8.3.2.5, 9.2.2, 9.4.3.3, 9.8.2
Potentially Hazardous Materials	
States to prohibit/restrict/minimize the use of potentially hazardous materials in new ships	6.1.1, 6.1.4, 6.1.2
Shipbuilders to provide the first shipowner with Part 1 of the inventory	5.5
States to prohibit/restrict/minimize the use of potentially hazardous materials in existing ships	7.2.1
Shipowners to provide an updated inventory of potentially hazardous materials on board on arrival at the recycling facility	5.6
Shipowners to mark assumed and identified potentially hazardous materials included in the inventory and any potentially hazardous spaces in accordance with the Ship Recycling Plan	8.3.1.1, 8.3.1.2.2, 8.3.3.2.8, 8.3.4.1.2-4
Shipbuilders to seek advice on limiting the use of identified potentially hazardous materials in ships	6.1.6
Green Passport	
Shipbuilders to provide new ships with a "Green Passport"	5.5, 5.5.1, 5.8
Shipowners to maintain Ship Details and Part 1 of Inventory sections of the "Green Passport"	5.1, 5.3
Shipowners to prepare Parts 2 and 3 of the Green Passport prior to the final voyage to the recycling facility	5.6
Shipowner to develop "Green Passport, Part 1" for existing ships as far as is practicable and reasonable	5.5.2
Shipowners to deliver "Green Passport" to recycling facility	5.1
Gas Free for Hot Work Certificate	
Shipowners to arrange with recycling yard for a "gas-free-for-hot-work" certificate covering enclosed cargo and other spaces and empty fuel spaces at handover or in accordance with the Ship Recycling Plan	8.3.4.1, 9.4.3.2, 8.1.3.3
Ship Details	
Shipowners to hand over the Continuous Synopsis Record to the recycling facility	5.2.1 (Pending development of the "Green Passport")

[1] In co-operation with other industry organizations, ICS has produced the "Industry Code of Practice on Ship Recycling", outlining the measures that shipowners should be prepared to take prior to recycling (see www.marisec.org/recycling).

[2] Technical Guidelines for the Environmentally Sound Management of the Full and Partial Dismantling of Ships adopted by the Sixth Meeting of the Conference of Parties to the Basel Convention on 13 December 2002 (see <http://www.basel.int/ships/techguid.html>).

[3] *Safety and Health in Shipbreaking: Guidelines for Asian countries and Turkey*, developed by ILO (see www.ilo.org/public/english/protection/safework/sectors/shipbrk/index.htm).

[4] The Industry Working Party on Ship Recycling was established in February 1999 comprising representatives from BIMCO, INTERCARGO, INTERTANKO, ICS, ITOFP, ITF, and OCIMF with active participation, as observers, also from ECSA and IACS.

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