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RECYCLING OF SHIPS

Draft Guidelines for safe and environmentally sound ship recycling

Submitted by the International Association of Classification Societies (IACS)

SUMMARY

Executive summary:	This document provides comments on the report of the correspondence group on ship recycling guidelines, document MEPC 60/3
Strategic direction:	7.1
High-level action:	7.1.2
Planned output:	7.1.2.1
Action to be taken:	Paragraph 9
Related document:	MEPC 60/3

Introduction

1 This document provides comments on document MEPC 60/3 and is submitted in accordance with the provisions of paragraph 4.10.5 of the Guidelines on the organization and method of work of the Committees and their subsidiary bodies (MSC-MEPC.1/Circ.2).

2 The comments provided in this document are submitted with a view to progressing the development of the draft "Guidelines for safe and environmentally sound ship recycling" as provided in the annex to document MEPC 60/3.

Comments on Hazardous Materials Management (section 3.5.2 of the draft guidelines)

3 The report of the correspondence group notes that Ship Recycling Facilities (SRF) will conduct "checking" work, including sampling. Further, paragraph 23 of the report states:

> "*It was also pointed out that this section put too much emphasis on the sampling and chemical analysis work to be done by the SRFs*".

However, whilst IACS agrees on the value of simplicity, it is essential that the basic information on what to test for and how it is available, is agreed, in order to avoid different people around the world working to different standards and providing different results. This has been our experience to date, and will lead to lack of confidence and to liability issues.

4 IACS believes it is essential to define, simply and accurately, the definitive form of testing for these materials. It is essential to note that these should be the "definitive" methods. This is not to stop simple "field" or "indicative" tests being carried out, but is to describe what should be done for "definitive" testing that would avoid disputes.

5 IACS also believes that the information should not be overly detailed or have lengthy prescriptive procedures at this time, and in this regard it is noted that this opinion is in agreement with that of the correspondence group (paragraph 12 of document MEPC 60/3).

6 With the above principles in mind, IACS proposes, in the annex to this document, text for the final part of the section entitled "Sampling and Analysis, Protocols and Test Methods".

7 It is noted that the taking and preparation of samples is critical to laboratory procedures, and Member States may consider the requirement for this. However, IACS hopes that, provided definitive materials and test methods are laid down at this level, such procedures may be simply defined and not overly detailed or prescriptive.

8 Simple consequence study. The idea behind this proposal is to provide definitive testing techniques, widely available at a practical cost, such that both shipowners and facilities will have fair and equal access to laboratory techniques that will give accurate and reliable answers. In order to test this approach a simple check was undertaken online to assess the provision and cost of such services in Bangladesh. Two laboratories advertising suitable facilities were found in Chittagong:

.1 Bangladesh Standards and Testing Institution. Central agency in Dhaka, regional laboratories in Chittagong, Khulna and Rajshahi – industrial analysis of organic and inorganic materials (www.bsti.gov.bd); and

.2 Bangladesh Council of Scientific and Industrial Research (BCSIR). Eight research laboratories, including BCSIR Laboratories, Chittagong. As an example, this laboratory advertises GC-MS testing for 20,000taka = $288/E200/JPY26617/ CNY2000 (www.bcsir.gov.bd).

IACS believes this simple test indicates that the proposed techniques are readily and cost effectively available to recycling facilities.

Action requested of the Committee

9 The Committee is invited to consider the comments provided above and the proposed text provided in the annex to this document and decide as appropriate.

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ANNEX

PROPOSED AMENDMENTS

Note: references are given with respect to "Option 1" but apply similarly to "Option 2".

1 Text to be included in document MEPC 60/3, annex 2, section 3.5.2.1, pages 26 to 28:

Asbestos

Types to test for: as per resolution MEPC.179(59); Actinolite CAS 77536-66-4 Amosite (Grunerite) CAS 12172-73-5 Anthophyllite CAS 77536-67-5 Chrysotile CAS 12001-29-5 Crocidolite CAS 12001-28-4 Asbestos Tremolite CAS 77536-68-6.

Definitive testing technique: Polarised Light Microscopy (PLM), supplemented by electron microscope techniques and / or X-Ray Diffraction (XRD) as applicable.

Definitive reporting information: Type of asbestos, quantity.

2 Text to be included in document MEPC 60/3, annex 2, section 3.5.2.8, page 33:

Ozone-depleting substances

Types to test for: Halon 1211, Bromochlorodifluoromethane; Halon 1301 Bromotrifluoromethane; Halon 2402 1,2-Dibromo-1,1,2,2-tetrafluoroethane (also known as Halon 114B2); CFC-11 Trichlorofluoromethane; CFC-12 Dichlorodifluoromethane; CFC-113 1,1,2-Trichloro-1,2,2-trifluoroethane; CFC-114 1,2-Dichloro-1,1,2,2-tetrafluoroethane; CFC-115 Chloropentafluoroethane; Carbon tetrachloride, chlorodifluoromethane (includes R22, R401a, R401b, R402a, R402b, R403a, R403b, R408a, R408b, R409a, R411b). 1,1-Dichloro-1,fluoroethane (R141b).

Definitive testing technique: Gas Chromatography-Mass Spectrometry **(**GC-MS), coupled Electron Capture Detectors (GC-ECD) and Electrolytic Conductivity Detectors (GC-ELCD).

Definitive reporting information: Type and quantity of ODS.

3 Text to be included in document MEPC 60/3, annex 2, section 3.5.2.2, pages 28 to 30:

Polychlorinated biphenyls (PCB)

Note: there are 209 different congeners (forms) of PCB – it is impracticable to test for all. Various organizations have developed lists of PCBs to test for as indicators. In this instance the seven congeners used by the International Council for the Exploration of the Sea (ICES) have been chosen. Laboratories should be familiar with the requirements and consequences of using this list.

Types to test for: ICES7 congeners (28, 52, 101, 118, 138, 153, 180). Note: In specific circumstances, where the type of PCB is suspected due to vessel type, age, place of build, etc., other more specific testing may be substituted such as the US EPA 8082a standard for 19 congeners and 7 types of aroclor. However, this test method is specific to common aroclor mixtures (and weathered aroclors) and so the ICES7 should still be tested.

Definitive testing technique: GC-MS (congener specific) or GC-ECD or GC-ELCD for applicable mixtures such as aroclors. Note: standard samples must be used for each type.

Definitive reporting information: PCB congener, ppm in sample.

Alternatively, well known brands or types of PCB such as aroclor 1260 may be listed instead of congener, where this is known and has been tested for using a calibrated standard and especially when the relevant method has been used.

Notes:

.1 Field or indicator tests for PCBs must be treated with great care. Many rely on the identification of free chlorine ions and are thus highly susceptible to chlorine contamination and false readings in a marine environment where all surfaces are highly contaminated with chlorine ions from the sea water and atmosphere.

.2 Several congeners are tested for as "indicator" congeners. They are used because their presence often indicates the likelihood of other congeners in greater quantities (many PCBs are mixes, many mixes use a limited number of PCBs in small quantities, therefore the presence of these small quantities indicates the potential for a mix containing far higher quantities of other PCBs).

4 Text to be included in document MEPC 60/3, annex 2, section 3.5.2.6, page 33:

Anti-fouling compounds and systems

Types to test for: Anti-fouling systems containing organotin compounds as a biocide, including: Tributyl tins (TBT), Triphenyl tins (TPT) and Tributyl tin oxide (TBTO).

Definitive testing technique: The method is to convert the suspected compound and its degradation products to volatile butyltin hydrides, or to use alkylation to form alkylbutyltins. The hydrides or alkalated species can then be separated on a chromatographic column and detected. Methods include: GC-MS, ICPAES, ICP.

Definitive reporting information: Type and quantity of organotin compound.

Note: For "field" or "indicative" testing it may be acceptable to simply identify presence of tin, due to the expected good documentation on anti fouling systems.