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Circular

China Classification Society

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To: relevant departments of CCS Headquarters, CCS surveyors, shipbuilders, ship recycling facility(ies), ship repairers, equipment suppliers, product manufacturers, shipowners and ship management companies

Supplementary notice on Implementation of IMO MSC.282(86) relating prohibition of new installation of materials containing asbestos

Background

Before 1 July 2002, asbestos were widely used onboard the ship. Concerning the substantial hazardous property of the asbestos for the human being health and the environment, IMO adopted the Resolution MSC.99(73) (SOLAS 2000 Amendments), requiring new installation of materials which contain asbestos shall be prohibited except for some particular watertight joints and linings worked at high temperature or pressure, special vanes and special thermal insulation assemblies used at high temperature (refer to CCS Circular (2001) No.021).

On 5 June 2009, IMO adopted the Resolution MSC.282(86) at the MSC 86th session meeting. Regarding the asbestos used onboard, SOLAS Regulation II-1/3-5.2 is revised further to require that for all ships, new installation of materials which contain asbestos shall be prohibited from 1 January 2011. This Society has been issued No.30 Circular which requires plan approval and survey departments to carry out the plan approval and survey in accordance with the newly revised regulation II-1/3-5.2.

On 15 May 2009, IMO adopted the Hong Kong International Convention for the

Safe and Environmentally Sound Recycling of Ships, 2009 (hereinafter referred to as "the Hong Kong Convention", pending to enter into force), asbestos are listed in Appendix 1, control of hazardous materials, which requires that for all ships, new installation of materials which contain asbestos shall be prohibited (refer to CCS Circular (2010) No.11).

Recently, numerous Administrations focus on this issue. From July this year, one Administration in Europe declares that through the investigations on board more than 300 ships in ports (in Europe), asbestos was found on 95% of the ships, including on ships built after 1 July 2002 with asbestos-free declarations. For instance, for a new-build ship provided with statutory certificates and an asbestos-free declaration, after inspection, it revealed that it has more than 5,000 gaskets containing asbestos in the piping systems on board and it took almost half a year to remove and replace them with asbestos-free gaskets. This Administration prepares a submission to MSC 88.

It's informed that two MSC Circular related to asbestos were adopted at MSC88 meeting. MSC.1/Circ.1379 addresses that: most asbestos is used on board in materials where it cannot easily be identified visually; the aim of this circular is to raise awareness of maritime Administrations, recognized organizations, shipyards, ship suppliers, crew members and all other parties; the importance of adequate training of surveyors and inspectors and inspection practice; any further use of asbestos on board ships are prohibited; the importance that Administrations take appropriate action in case ship is in violation of SOLAS; when asbestos is detected on board, in contravention of SOLAS regulation II-1/3-5, action should be taken to have it removed and the removal – assigned to professional asbestos removal companies – should take place within a time frame of 3 years from the date when the contravention is found and should be conducted in close consultation with and, where applicable, under the supervision of the flag State concerned. In such cases, a suitable exemption certificate should be issued by the flag State. MSC.1/Circ.1374 addresses that any material (any new physical installation on board) purchased prior to 1 January 2011 being kept in the ship's store or in the shipyard for a ship under construction, should not be permitted to be installed after 1 January 2011 as a working part.

Besides the abovementioned IMO circulars, some Classification Societies are

preparing the enhanced measures in order to implement the statutory requirements in an appropriate way. As the responsibility which issues the "asbestos free declaration", newbuilding yards should take active actions to control all materials purchased in order to avoid economic loses.

It's also noticed that it has to spend a long time for removal operation (drain the pipeline systems, even out of service for the ship itself), and the removal operation costs around 10% of the original price. As the giant in the fields of newbuilding and repair, it should be avoid the negative impact on newbuilding and maritime manufacture industry.

Asbestos is categorized as six kinds of substances: Chrysotile; Crocidolite; Amosite / Grunerite; Anthophyllite; Tremolite; Actinolite. In general, asbestos can be detected by using Polarized Light Microscopy (PLM), supplemented by electron microscope techniques and/or X-Ray Diffraction (XRD) as applicable. To date, some expert companies have developed the speed analysis. For those asbestos can be found onboard the ship, please refer to Annex 1.

CCS Requirements

Requirements for Survey of Newbuildings/Major conversion

1. For newbuilding ships the keels of which are laid or which are at a similar stage of construction on or after 1 January 2011, and existing ships major conversion of which commence on or after 1 January 2011:

1.1 It is obligation and responsibility for ship-builders/ship-repairers to ensure that materials containing asbestos will be prohibited to be used on board newbuilding ships and major conversion portion of existing ships, and the asbestos free Statement of Compliance with SOLAS Regulation II-1/3-5 amended by IMO resolution MSC.282(86) will be provided to CCS and other concerned parties before the delivery.

1.2 For structures/equipments/components which likely potentially contain asbestos (referring to, but not limited to Annex 1, "Asbestos can be found onboard the

ship"), ship-builders/ship-repairers will be required to provide asbestos free statements issued by manufacturers. If such asbestos free statements are unavailable or CCS field surveyors are uncertain about whether it contains asbestos, a sampling-check will be required by CCS and will be carried out by CCS recognized expert parties, sampling-check report will be issued by such expert parties after completion of sampling-check. CCS recognized expert parties will have relevant qualification certificate and comply with the requirements of IACS Recommendation No.113 – expert parties engaged in visual and/or sampling checks for Preparation of Inventory of Hazardous Materials (as Annex 2) and the relevant ISO Standards, or, have the qualification of National Laboratory Accreditation. However, as main body bearing responsibility of newbuilding ships/major conversion ships, ship-builders/ship-repairers will be required to provide CCS field surveyors one copy of the above mentioned asbestos free statements and sampling-check reports together with expert party's qualification certificate so that CCS field surveyors satisfactorily check and verify that no materials containing asbestos will be used on board the ship.

1.3 Ship-builders/ship-repairers are required to provide in time asbestos free statements, sampling-check reports and checking qualification certificates in above mentioned paragraph 1.2 to CCS field surveyors after structures/equipments/components are installed on board the ship in order to avoid that CCS field surveyors can not soon check and verify that no materials containing asbestos used on board the ship in the vicinity of delivery of ship, which maybe result in delay of issuance of ship operation certificates. On the other hand, CCS field surveyors will communicate in time with ship-builders/ship-repairers to implement that materials containing asbestos will be prohibited to be used on board the ship.

1.4 If ship-builders/ship-repairers apply CCS for issuance of asbestos free Statement, CCS field surveyors may issue the Statement (Annex 3, Form CSB-2) after the provisions in above mentioned paragraphs 1.1 to 1.3 are satisfactorily implemented before delivery of ship.

2. For being constructed ships the keels of which are laid or which are at a similar stage of construction before 1 January 2011, but which will be delivered on or

after 1 January 2011:

2.1 According to SOLAS regulation II-1/3-5 amended by IMO resolution MSC.99(73), if installations of three exceptional cases (including vanes used in rotary vane compressors and rotary vane vacuum pumps, watertight joints and linings used for the circulation of fluids for temperature above 350℃ or for pressure above 7MPa, and supple and flexible thermal insulation assemblies used for temperatures above 1000℃) of materials containing asbestos actually on board the ships are before 1 January 2011, ship-builders will provide the relevant materials' certificates and documents to CCS field surveyors. After CCS field surveyors satisfactorily check and verified them on board the ships, information including names, quantity of equipments/components materials containing asbestos， locations, and date of installations, will be reported in Form RA. At the request of ship-builders, CCS field surveyors may issue Statement of Compliance (Annex 4, Form CSB-2).

2.2 If installations of the abovementioned three exceptional cases actually on board the ships are on or after 1 January 2011, the requirements in above mentioned paragraphs 1.1 to 1.3 shall be met. Similarly, CCS field surveyors may issue asbestos free statement in above mentioned paragraph 1.4 at the request of ship-builders.

Requirements for Survey of Ship in-Service

1. The attending surveyor is to confirm that there is no structures/equipments/components containing asbestos fitted on board since last survey. If yes, the requirements stipulated in following paragraph 2 shall be compliance with.
2. For those structures/equipments/components installed on board on or after 1 January 2011 during the repair at shipyard, the ship owner is to provide an asbestos free statement issued by manufacturer/supplier or shipyard. If such an asbestos free statement is unavailable or the attending surveyor is uncertain about whether it contains asbestos, a sampling-checking is to be carried out by CCS recognized expert party, and sampling-check report together with copy of checking party's qualification certificate are to be provided accordingly.
3. Upon completion of the survey, the survey result is to be noted at the relevant survey report (i.e., form PH/AS).

ISM Audit

CCS auditors need to pay attention during the audit on or after 1 January 2011.

Annex 1: Asbestos can be found onboard the ship

Annex 2: Expert Parties Engaged in Visual and/or Sampling Checks for Preparation of Inventory of Hazardous Materials (IACS Recommendation No.113)

Annex 3: Statements of Compliance, Form CSB-2, on or after 1 January 2011

Annex 4: Statements of Compliance, Form CSB-2, before 1 January 2011

Please feel free to contact Technical Management Department of CCS for any inquiry.

E-mail: rt@ccs.org.cn

This Circular is available on www.ccs.org.cn and forwarded by each branch to relevant shipbuilders, ship recycling facility(ies), ship repairers, equipment suppliers, product manufacturers, shipowners and ship management companies within its business area.

Annex 1: Asbestos can be found onboard the ship:

Structure and/or equipment	Component
Propeller shafting	Packing with low pressure hydraulic piping flange
	Packing with casing
	Clutch
	Brake lining
	Synthetic stern tubes
Diesel engine	Packing with piping flange
	Lagging material for fuel pipe
	Lagging material for exhaust pipe / Exh. pipe packing
	Lagging material turbocharger
Turbine engine/steam turbine	Lagging material for casing
	Packing with flange of piping and valve for steam line, exhaust line and drain line
	Lagging material for piping and valve of steam line, exhaust line and drain line
Boiler	Insulation in combustion chamber
	Boiler claddings casings and insulation
	Packing for casing door
	Lagging material for exhaust pipe
	Fire bricks and furnace linings
	Gasket for manhole
	Gasket for hand hole
	Gas shield packing for soot blower and other hole
	Packing with flange of piping and valve for steam line, exhaust line, fuel line and drain line
	Lagging material for piping and valve of steam line, exhaust line, fuel line and drain line
Exhaust gas economizer	Packing for casing door
	Packing with manhole
	Packing with hand hole
	Gas shield packing for soot blower
	Packing with flange of piping and valve for steam line, exhaust line, fuel line and drain line
	Lagging material for piping and valve of steam line, exhaust line, fuel line and drain line
Incinerator	Packing for casing door
	Packing with manhole
	Packing with hand hole
	Lagging material for exhaust pipe
Auxiliary machinery (pump,	Packing for casing door and valve

Structure and/or equipment	Component
compressor, oil purifier, crane, windlass, steering gear, winch, shaft brake, cargo gear, separators, hydraulic systems)	Gland packing
	Friction material for brakes (brake lining)
Heat exchanger/heaters	Packing with casing
	Gland packing for valve
	Lagging material and insulation
Valve	Valve packing/Gland packing with valve, sheet packing with piping flange, bonnet
	Gasket with flange of high pressure and/or high temperature
Pipe, duct	Lagging material and insulation, gland packing for piping
Tank (fuel tank, hot water, tank, condenser), other equipments (fuel strainer, lubricant oil strainer)	Lagging material and insulation
Electric equipment	Insulation material, electrical equipment such as circuit breakers and fuses, Circuit breaker arc chutes, electrical cable materials/insulation (particularly cables with cloth like sheathes）
Airborne asbestos	Wall, ceiling
Ceiling, floor and wall in accommodation area, galleys and messes	Ceiling, ceiling covering, floor, wall
Fire Insulation (accommodation, engine room, funnel and uptakes, auxiliary and service spaces. Stores, control spaces such as fire control spaces/cargo control spaces, navigation spaces, lockers etc)	Doors(packing, construction and insulation of the fire door), boards, penetrations (particularly cables and pipes in fire bulkheads), bulkheads, fireshields and fireproofing, rope door sealants, sprayed on insulation
Inert gas system	Packing for casing, etc.
Air-conditioning system	Sheet packing, lagging material for piping and flexible joint, HVAC ducts (Ducts are used in heating, ventilation, and air conditioning)
Miscellaneous	Ropes/ cords Thermal insulating materials Fire shields/fire proofing Space/duct insulation Galley equipment Electrical bulkhead penetration packing Brake linings Steam/water/vent flange gaskets Thermal laggings and insulation for high temperature applications, special pipes and high temperature conduits uptakes, exhausts, service spaces steam pipes, high temp fuel/oil/water/other fluid laggings, gaskets, glands Paints (temperature insulation intention, i.e. paints for M.E. casing) Adhesives/glues/mastics/ sealants/fillers Tiles/Floor tiles/deck underlay

Structure and/or equipment	Component
	Sound damping/sound insulation plaster (including decorative mouldings) Plastics(Moulded plastic products) Putty(Sealing putty) Shaft (seal for propeller shaft, bearing part for propeller shaft) Underlays Hangars 衬垫 Inserts Pipe hanger inserts Padding Joints Surfacing materials Welding curtain Welding equipment (Weld shop protectors/burn covers) Firefighting equipment (Fire-fighting blankets/clothing/gloves, overalls, heat protective blankets) Concrete ballast Concrete laid for passive fire protection Shielding Textiles

No. 113 (Aug 2010) Expert Parties Engaged in Visual and/or Sampling Checks for Preparation of Inventory of Hazardous Materials

1. Introduction

This recommendation gives guidelines intended for ship owners regarding the use of expert parties for onboard visual and/or sampling checks, including the use of services from laboratories carrying out testing of samples.

2. Expert parties engaged in visual and/or sampling checks

2.1 General

The following guidance may be used by ship owners when selecting expert parties engaged in visual and/or sampling checks for hazardous materials onboard existing ships as specified in “Guidelines for the development of the Inventory of Hazardous Materials” (Res.MEPC.179(59)) and Appendix 1 and 2 of the Annex to the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009, and which can advise on quantities and locations of samples, taking of samples in a safe manner as well as prepare reports on the quantities, locations and estimates of these onboard materials.

Visual and/or sampling checks shall be executed by persons with professional knowledge of hazardous materials licensed as required and, who are trained and equipped experts, in particular with regards to the evaluation and sampling of hazardous materials and materials containing hazardous materials as:

Appendix 1

- Asbestos;
- PCB;
- Ozone depleting substances; and
- Anti-fouling systems containing organotin compounds as a biocide.

Appendix 2

- Cadmium and Cadmium Compounds;
- Hexavalent Chromium and Hexavalent Chromium Compounds;
- Lead and Lead Compounds;
- Mercury and Mercury Compounds;
- Polybrominated Biphenyl (PBBs);
- Polybrominated Diphenyl Ethers (PBDEs);
- Polychlorinated Naphthalenes (more than 3 chlorine atoms);
- Radioactive Substances;
- Certain Shortchain Chlorinated Paraffins (Alkanes, C10-C13, chloro).

Expert parties should have documented quality systems covering all relevant activities. An accredited quality system that complies with the current version of the ISO 9000 series would be acceptable.

No. 113 (cont)

2.2 Expert parties engaged in visual and/or sampling checks

Expert parties carrying out sampling checks shall use appropriate laboratories engaged in the testing of samples which should be accredited or certified according to recognized standards. Specific equipment used on-board the ship for the purpose of sampling checks should be duly calibrated and/or certified according to recognized standards.

Expert parties carrying out visual and/or sampling checks of relevant hazardous materials shall have professional knowledge of ship structures, equipment, hazardous materials and materials used for ship structures and equipment, taking of samples handling of such materials.

2.3 Work shall be executed in accordance with documented work and safety procedures that contain at least the following:

- information on survey preparation;
- safety procedures relevant to the hazards;
- selection and identification of visual and/or sampling check locations;
- material preparation;
- sample removal;
- reinstatement of safe conditions for the material once the sample is taken;
- sample storage, identification and transport requirements; and
- report preparation and content.

Reports shall be based on the IMO Guidelines for the Development of the Inventory of Hazardous Materials Resolution MEPC.179(59).

2.4 Expert parties engaged in visual and/or sampling checks shall document each job by including the signatures of operator's designated responsible person in the final report for verification purposes.

2.5 Such expert parties shall provide evidence of all the necessary training, qualifications, licenses or equivalent thereto and the work and safety procedures for visual and/or sampling checks and the handling of specified hazardous material(s), in accordance with recognized national or international standards or the equivalent thereto, and other associated work practices as applicable.

End of Document

附件 3　Annex 3　　Form CSB-2

中　国　船　级　社

CHINA CLASSIFICATION SOCIETY

No.:_____

ASBESTOS FREE STATEMENT

Particulars

Name of Ship	:
Type of Ship	:
CCS ID No.	:
IMO No.	:
Ship-builder or Ship-repairer*	:
Yard No.	:
Date on which keel was laid or ship was at similar stage of construction or on which major conversion commenced*	:
Date of completion of newbuilding survey or major conversion survey*	:

THIS IS TO CERTIFY THAT no installations of materials containing asbestos used on board the newbuilding Ship or major conversion portion of the Ship* on the basis of the fact that the undersigned already satisfactorily checked/verified as practicable as possible asbestos free statements issued by products' manufacturers and/or sampling-check reports which certified no asbestos was contained and issued by CCS recognized qualified expert parties, for structures and equipments and components, which likely potentially contain asbestos.

Issue Place　:_____

Issue Date　:_____

_____

(Yan Chuan Shi)

Surveyor to CHINA CLASSIFICATION SOCIETY

* Delete as appropriate

附件 4　Annex 4　Form CSB-2

中　国　船　级　社

CHINA CLASSIFICATION SOCIETY

No.:_____

STATEMENT OF COMPLIANCE

Particulars

Name of Ship :
Type of Ship :
CCS ID No. :
IMO No. :
Ship-builder :
Yard No. :
Date on which keel was laid or ship was at similar stage of construction :
Date of completion of newbuilding survey :

THIS IS TO CERTIFY THAT the following equipments/components of materials containing asbestos used on board the newbuilding Ship, and comply with the requirements of SOLAS Regulation II-1/3-5 amended by IMO MSC.99(73). The details are as follows:

No.	Name of equipments or components	Quantity	Location	Date of installation
1				
2				
3				
….				

Issue Place :

Issue Date :

(Yan Chuan Shi)
Surveyor to CHINA CLASSIFICATION SOCIETY