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.

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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.

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