

Welkom bij het seminar
“Scheepsrecycling en Inventaris van Gevaarlijke
Materialen (IHM): De theorie en de praktijk”

6 december 2017



NETHERLANDS
MARITIME
TECHNOLOGY



Port of Amsterdam



MARIN

TNO innovation
for life





Programma

13.30 uur	<i>Inloop met koffie en thee</i>	
14.00 uur	Openingswoord en introductie door dagvoorzitter	Marjolein van Noort Water-fuelled views
14.05 uur	Scheepsrecycling: IMO en EU regelgeving	Niels van de Minkelis Senior beleidsadviseur, KVNR
14.20 uur	Scheepsrecycling en de publieke opinie	Sander den Heijer Sector Manager, NMT
14.40 uur	Scheepsrecycling: maar wat als je nú een schip laat recycleren?	Niels van de Minkelis Senior beleidsadviseur, KVNR
15.05 uur	<i>Pauze</i>	
15.30 uur	IHM-regelgeving: hoe zit het nu precies?	Niels van de Minkelis Senior beleidsadviseur, KVNR
16.00 uur	IHM voor een bestaand schip	Joris Gribnau Technisch Directeur, Kiwa Oesterbaai Maritime & Offshore
16.30 uur	Goedkeuring van een IHM	Gerhard Aulbert Global Head Ship Recycling, DNV GL (Engelstalige presentatie)
17.00 uur	Afronding seminar	Onder leiding van dagvoorzitter



Borrel
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Einde bijeenkomst

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SCHEEPSRECYCLING

Wat is het probleem?

Wat doen de IMO en de EU er aan?

PANAMA PAPER PARADISE PAPERS



A large, light blue puzzle globe is the central focus, with several puzzle pieces scattered on the surface in front of it. The background is a soft, light blue gradient.

MONDIALE PROBLEMEN MONDIALE OPLOSSINGEN

ONZE COMPUTER



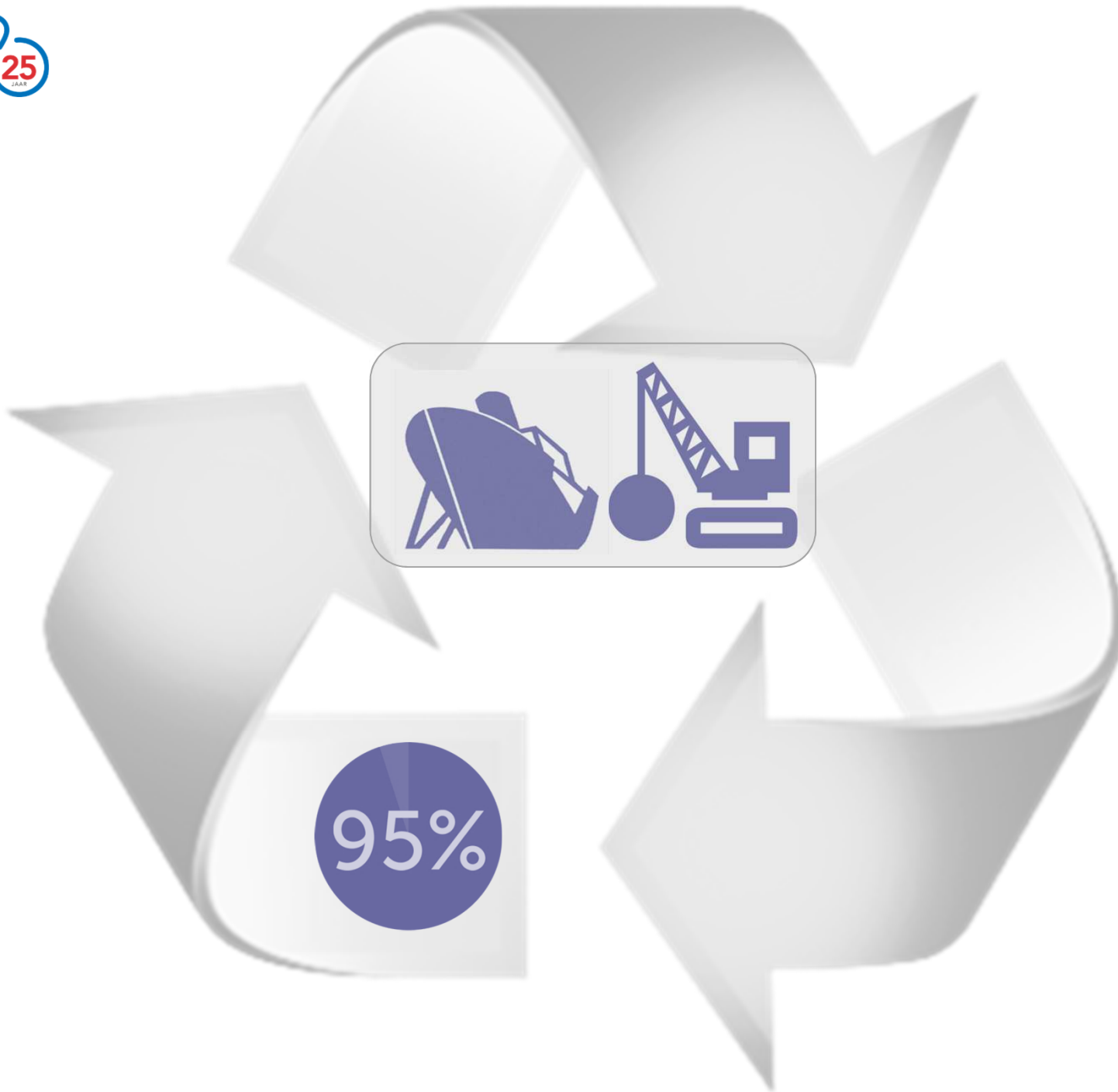
ONZE SPIJKERBROEK





MAATSCHAPPELIJK VERANTWOORD ONDERNEMEN
VAN WIEG TOT GRAF
VAN SCHEEPSBOUW TOT SCHEEPSRECYCLING

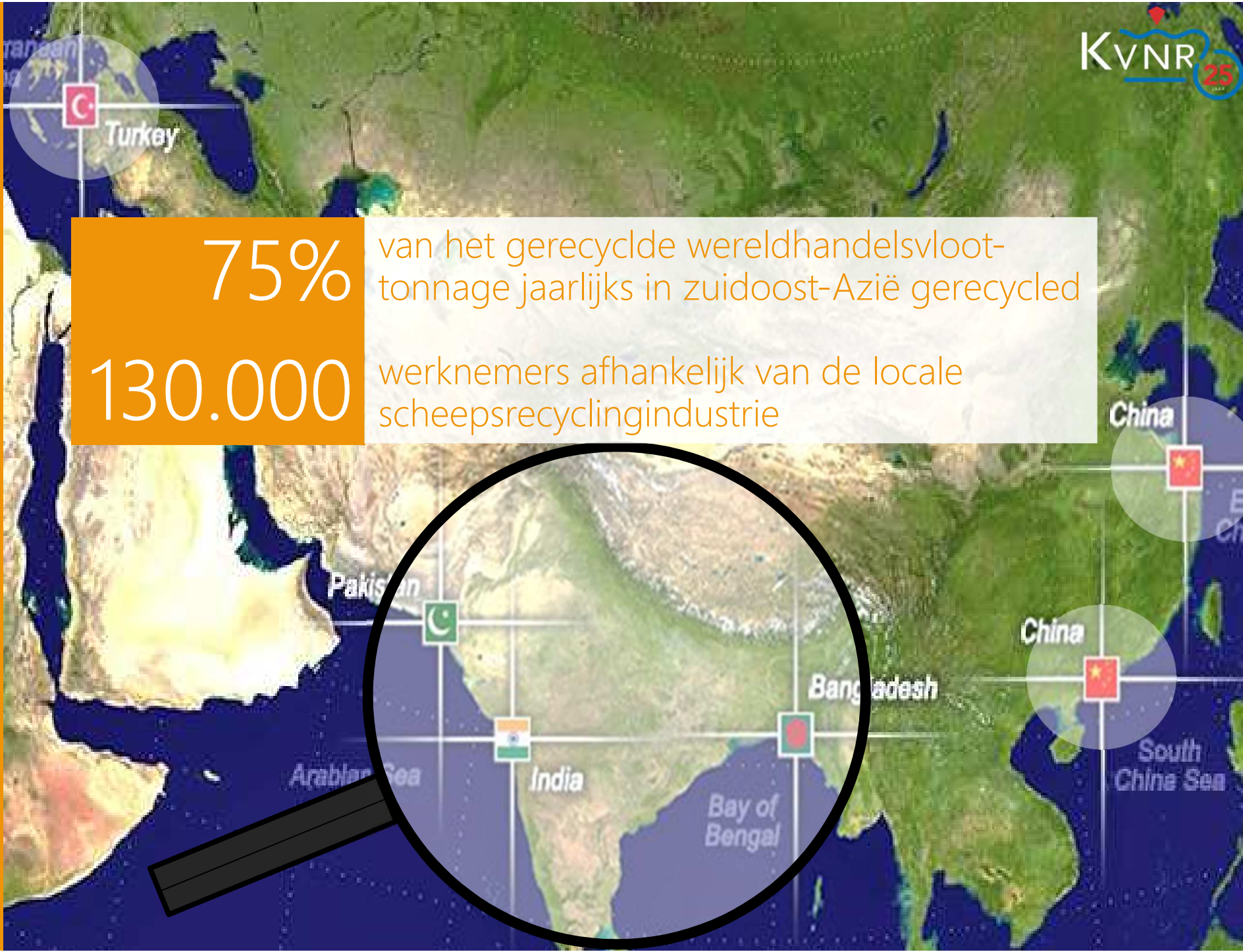
WAT IS SCHEEPSRECYCLING?



WAAR WORDEN SCHEPEN GERECYCLED?

75% van het gerecyclede wereldhandelsvloot-tonnage jaarlijks in zuidoost-Azië gerecycled

130.000 werknemers afhankelijk van de lokale scheepsrecyclingindustrie



HOE WORDEN SCHEPEN GERECYCLED?



'BRUINE RECYCLING'

'GROENE RECYCLING'



WAT MAAKT HET
UIT?

BRUINE RECYLING
GEEFT EEN REDER
MEER WINST



GROENE RECYLING
GEEFT EEN REDER
MINDER WINST



HOE DIT PROBLEEM
OP TE LOSSEN?

WERELDWIJD GELDENDE REGELGEVING NODIG OM RECYCLINGSTANDAARDEN TE VERBETEREN

VAN BRUINE RECYCLING NAAR GROENE RECYCLING

HONG KONG CONVENTION

INTERNATIONAL CONVENTION FOR SAFE AND ENVIRONMENTALLY SOUND RECYCLING OF SHIPS

15
LANDEN

40%
WERELD-
VLOOT

JAARLIJKSE
RECYCLING
CAPACITEIT
3%
VAN
GECOMBINEERDE
VLOOT

I

(Legislative acts)

REGULATIONS

REGULATION (EU) No 1257/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 20 November 2013

on ship recycling and amending Regulation (EC) No 1013/2006 and Directive 2009/16/EC

(Text with EEA reference)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,
Having regard to the Treaty on the Functioning of the European Union, and in particular Article 192(1) thereof,

After consultation of the Committee of the Regions,

Having regard to the opinion of the European Economic and Social Committee,

Acting in accordance with the ordinary legislative procedure (1),

Whereas:

(1) Ships which constitute waste and which are subject to a transboundary movement for recycling are regulated by the Basel Convention of 22 March 1989 on the Control of the Transboundary Movements of Hazardous Wastes and their Disposal (the Basel Convention) and Regulation (EC) No 1013/2006 of the European Parliament and of the Council (2). Regulation (EC) No 1013/2006 implements the Basel Convention as well as an amendment (3) to that Convention adopted in 1995, which has not yet entered into force at international level, and which establishes a ban on exports of hazardous waste to countries that are not members of the Organisation

(1) Current ship recycling capacity in OECD countries which is legally accessible to ships flying the flag of a Member State is insufficient. Current safe and environmentally sound ship recycling capacity in countries which are not members of the OECD is sufficient to treat all ships flying the flag of a Member State and is expected to expand further by 2015 as the results of actions taken by recycling countries to meet the requirements of the Hong Kong Convention.

(4) The Hong Kong Convention was adopted on 15 May 2009 under the auspices of the International Maritime Organization. The Hong Kong Convention will enter into force only 24 months after the date of ratification by at least 15 States representing a combined merchant fleet of at least 40 per cent of the gross tonnage of the world's merchant shipping and whose combined maximum annual ship recycling volume during the preceding 10 years constitutes not less than three per cent of the gross tonnage of the combined merchant shipping of the same States. That Convention covers the design, the

(1) OJ C 299, 4.10.2012, p. 158.
(2) Position of the European Parliament of 22 October 2013 (not yet published in the Official Journal) and decision of the Council of 15 November 2013.
(3) Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste (OJ L 190, 12.7.2006, p. 1).
(4) Amendment to the Basel Convention (Ban amendment) adopted by Decision III/1 of the Parties to the Basel Convention.

EUROPESE
VERORDENING
EU/1257/2013

AFWACHTEN EN NIETS DOEN?

REDERS

GUIDELINES ON TRANSITIONAL
MEASURES FOR SHIP-OWNERS
SELLING SHIPS FOR RECYCLING

SCHEEPSRECYCLINGCONVENANT?



RECYLING-
WERVEN

VERKLARINGEN VAN
OVEREENKOMST MET HET
HONGKONGVERDRAG VOOR
INDIASE RECYCLINGWERVEN



CONCLUSIES

SCHEEPSRECYCLING:

- IS EEN MONDIAAL PROBLEEM
- IS CIRCULAIR
- MOET VEILIG EN VERANTWOORD ZIJN
- HEEFT SCHEEPSBOUWWERVEN, TOELEVERANCIERS, SCHEEPSEIGENAREN EN RECYCLINGWERVEN NODIG DIE VERANTWOORDELIJKHEID NEMEN
- IS AFHANKELIJK VAN OVERHEDEN VOOR EFFECTIEVE, NIET-UITSLUITENDE, INTERNATIONALE REGELGEVING (HONGKONGVERDRAG)



DANK U



www.kvnr.nl




kvnr@kvnr.nl



[@zeevaart](https://twitter.com/zeevaart)

Scheepsrecycling en de publieke opinie



Sander den Heijer
Sector Manager
6 december 2017



The messenger
requests that he
please not be shot.



Wat is het probleem?



TRADE



INNOVATION



HUMAN CAPITAL



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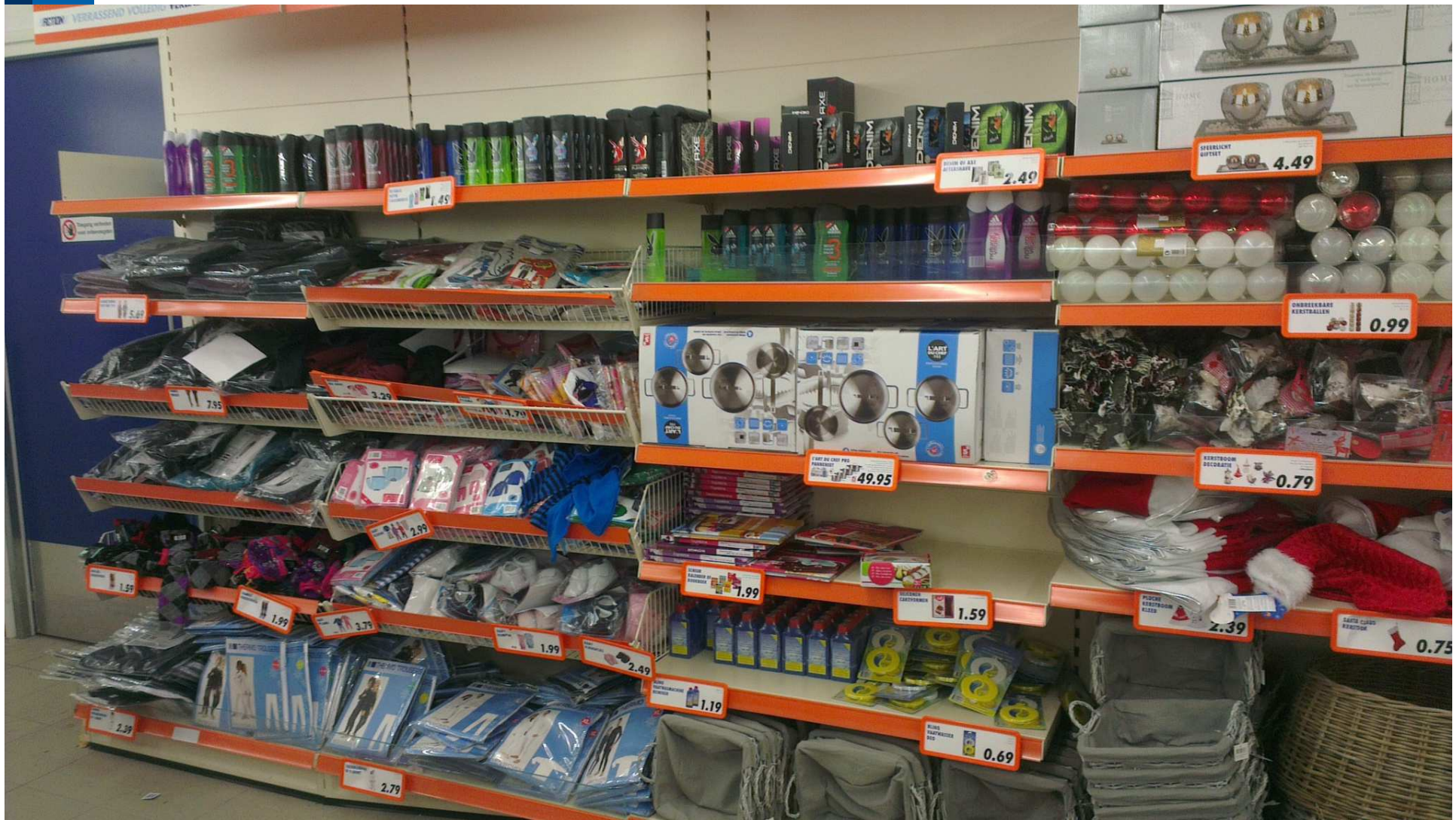
INNOVATION



HUMAN CAPITAL

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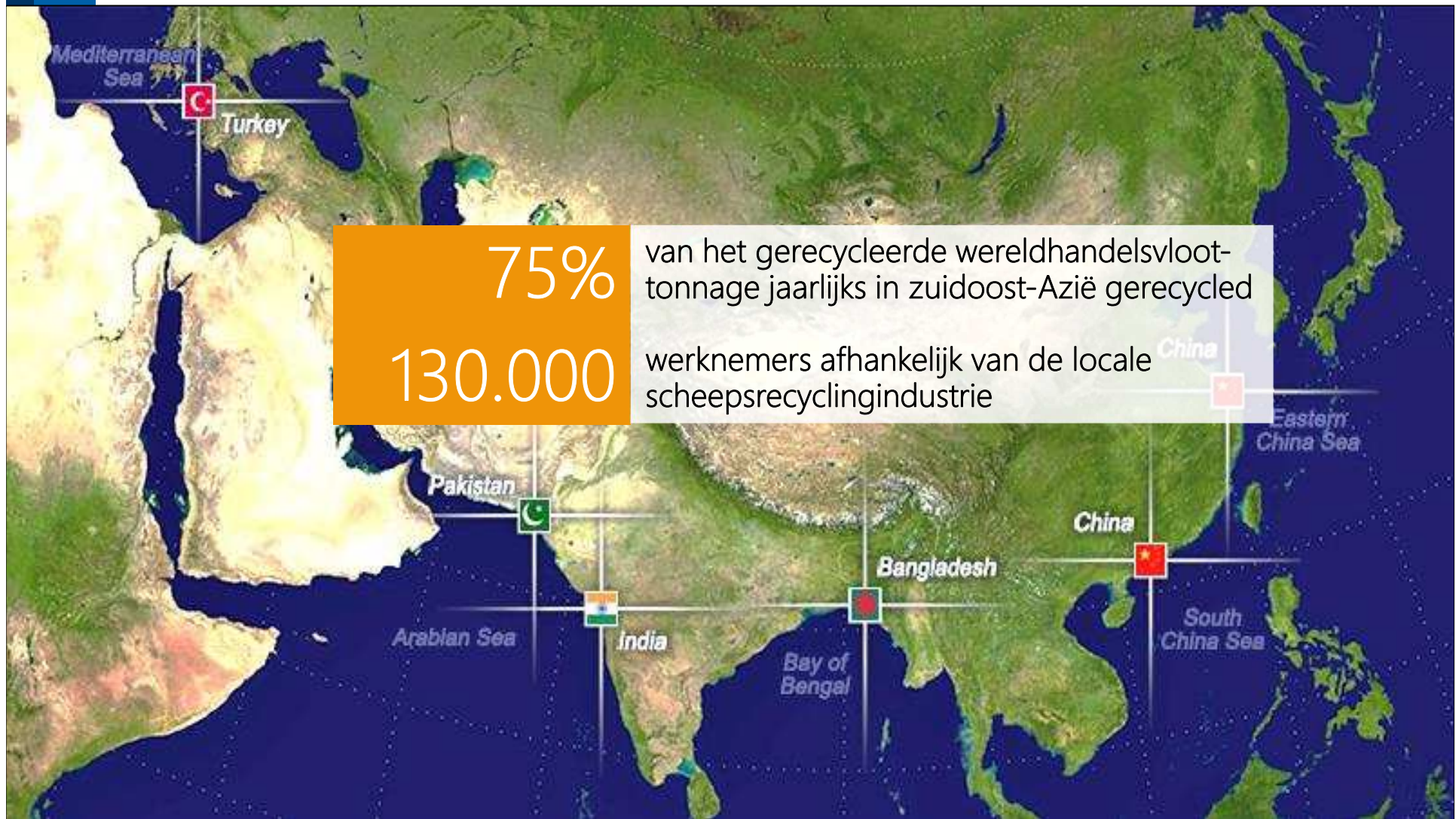
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Cash Buyer!





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Wie zijn de belanghebbenden?



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MEMBERSHIP MEMBER LOGIN CONTACT

NEWS KEY ISSUES SUBMISSIONS FREE RESOURCES PUBLICATIONS ABOUT ICS CAREERS AT SEA SHIPPING FACTS

IN FOCUS

European Shipowners welcome the agreement reached on CO2 Emissions Trading System

Intensive negotiations came to an end two weeks ago when the European Parliament, the Council of Ministers and the European Commission reached a provisional agreement on the reform of the emissions trading system, which today was approved by the Member States.

*European shipowners have a strong interest to decarbonise the...

Wednesday, November 22, 2017 - 14:09



ICS represents the world's shipowners at IMO and other international regulatory fora



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CAMPAIGN TO CLEAN UP

SHIP BREAKING

THE WORLD'S MOST DANGEROUS JOB

The workers in this industry suffer precarious working conditions, lack training, and face serious hazards.
The industry has a responsibility to provide, and workers have a right to expect, safe, healthy, clean and sustainable jobs.
IndustriALL Global Union demands that all member states of the International Maritime Organization (IMO) :
Ratify the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships **NOW!**

www.industriall-union.org




Home > Over de FNV > Nieuws > Nieuwsarchief

OVER DE FNV

Nieuws

[Nieuwsarchief](#)

Meld je aan voor de nieuwsbrief

Actuele dossiers

Organisatie

Koers 2017-2021

Onze standpunten

Ons werk

Internationaal

Werken bij de FNV

Save the date: bijeenkomst shipbreaking

04-10-2017 •

2 november 2017 | 19:30-21:30 | Rotterdam
dat we levens hebben gered met onze veiligheidsovername. Oord, kaderlid FNV Metaal.



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GREENPEACE Greenpeace International 

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Home > Publications > Reports > End of Life: The Human Cost of Breaking Ships

End of Life: The Human Cost of Breaking Ships




"Samen voor een gezonde zee"

NGO SHIPBREAKING PLATFORM

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LAST TWEETS

03 Dec
This is the world's cheapest place to scrap ships – but in Chittagong, it's people who pay the price
<https://t.co/HU4gUrtjvW>

22 Nov
Illegal export of **#Grimstad** ships: (...) we were told to head towards Mombasa to unload empty cargo (...) By leaving...
<https://t.co/DRZ6tFES> [Join us on](#)

SHIPBREAKING
In the media

Press release – One year later and no lessons learned at Gadani as ACES is set aflame – again!

Brussels, 9 November 2017 – Shipbreaking plot no. 54 in Gadani, Pakistan, was sealed off yesterday after a massive fire broke out on-board the ship ACES (IMO 8021850). This is the

Welke middelen zijn er beschikbaar?



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I

(Wetgevingshandelingen)

VERORDENINGEN

VERORDENING (EU) Nr. 1257/2013 VAN HET EUROPEES PARLEMENT EN DE RAAD

van 20 november 2013

inzake scheepsrecycling, en tot wijziging van Verordening (EG) nr. 1013/2009/16/EG

(Voor de EER relevante tekst)



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World Maritime University
(WМУ) and International
Maritime Law Institute

The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships

Adoption: 15 May 2009; Entry into force: 24 months after ratification by 15 States, representing 40 per cent of world merchant shipping by gross tonnage, combined maximum annual ship recycling volume not less than 3 per cent of their combined tonnage

The Hong Kong Convention 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 or to the environment.

The Hong Kong Convention was adopted at a Diplomatic Conference held in Hong Kong, China, in May 2009 and was developed with input from IMO Member States and non-governmental organizations, and in co-operation with the International Labour Organization and the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. It intends to address all the issues around ship recycling, including the fact that ships sold for scrapping may contain environmentally hazardous substances such as asbestos, heavy metals, hydrocarbons, ozone depleting substances and others. It will address concerns about working and environmental conditions in many of the world's ship recycling facilities.

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.

Ships to be sent for recycling will be required to carry an inventory of hazardous materials, which will be specific to each ship. An appendix to the Convention provides a list of hazardous materials, the installation or use of which is prohibited or restricted in shipyards, ship repair yards, and ships of Parties to the Convention. Ships will be required to have an initial survey to verify the inventory of hazardous materials, renewal surveys during the life of the ship, and a final survey prior to recycling.



Meer schepen naar de sloop door in containervaart

Wat doe je met een afgedankte olietanker van 35.000 ton? Je dumpst hem op de stranden van Zuid-Azië, waar je er nog veel geld voor krijgt ook.

Internationale maatregelen om de schade voor h beperken, lopen op niets uit. Een verslag vanuit I

In Bangladesh sloopt olietankers met hun handen



Slopers op het
Voor de M
container
Banglade
een relat
is tevens
gebracht,



steeds schepen op oopstranden

4 februari 2017



Vol gas het strand op!

28 februari 2015 15:09

Een lijstje

Tags: vrachtschip schip strand varen sloop

Tweet Deel </>

553 KUDOS

0 VANDAAG

45075 VIEWS

3 VANDAAG

49

REACTIES



▲ Werkers verzamelen aangespoeld ijzer van een oud schip voor de kust van Alang in India. © REUTERS

SLOOP Ook Nederlandse schepen worden door arbeiders in bijvoorbeeld Bangladesh onder gevaarlijke omstandigheden uit elkaar gehaald.

Wat is het doel?



TRADE



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HUMAN CAPITAL



SCHEEPSRECYCLING

Maar wat als je nú een schip laat recyclen?

I

(Legislative acts)

REGULATIONS

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Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee⁽¹⁾,

After consulting the Committee of the Regions⁽²⁾,

Acting in accordance with the ordinary legislative procedure⁽³⁾,

Whereas

(1) Ships which constitute waste and which are subject to a transboundary movement for recycling are regulated by the Basel Convention of 22 March 1989 on the Control of the Transboundary Movement of Hazardous Wastes and their Disposal (the Basel Convention) and Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste and of the Council of 14 June 2006 on the implementation of the Basel Convention as well as an amendment⁽⁴⁾ to that Convention adopted in 1995, which has not yet entered into force at international level, and which establishes a ban on exports of hazardous waste to countries that are not members of the Organisation

for Economic Cooperation and Development (OECD). Such ships are generally classified as hazardous waste and prohibited from being sent from the Union to recycling facilities in countries that are not members of the OECD.

(2) The mechanisms for monitoring the application of, and enforcing, international law are not sufficient. The Union and international shipping and international support efforts involving agency cooperation between the International Maritime Organization (IMO), the International Maritime Organisation (IMO) and the Secretariat of the Basel Convention have been successful in reaching agreement on the introduction of mandatory requirements, at global level, aimed at ensuring an adequate recycling capacity in sound and unsound ship recycling facilities in the Hong Kong Convention for the International Ship Recycling (the Hong Kong Convention).

(3) Certain ships (with a capacity of over 500 gross tonnage) flying the flag of a Member State is insufficient. Current safe and environmentally sound ship recycling capacity in countries which are not members of the OECD is sufficient to treat all the waste of a Member State and is expected to increase as a result of actions taken by recycling countries to meet the requirements of the Hong Kong Convention.

(4) The Hong Kong Convention was adopted on 15 May 2009 under the auspices of the International Maritime Organization. The Hong Kong Convention will enter into force only 24 months after the date of ratification by at least 15 States representing a combined merchant fleet of at least 40 per cent of the gross tonnage of the world's merchant shipping and whose combined maximum annual ship recycling volume during the preceding 10 years constitutes not less than three per cent of the gross tonnage of the combined merchant shipping of the same States. That Convention covers the design, the

⁽¹⁾ OJ C 299, 4.10.2012, p. 158.
⁽²⁾ Position of the European Parliament of 22 October 2013 (not yet published in the Official Journal) and decision of the Council of 15 November 2013.
⁽³⁾ Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste (OJ L 190, 12.7.2006, p. 1).
⁽⁴⁾ Amendment to the Basel Convention (Ban amendment) adopted by Decision III/1 of the Parties to the Basel Convention.

Verordening (EU)
 Nr. 1013/2006
 betreffende de
 overbrenging van
 afvalstoffen

ACHTERGROND

EU/1013/2006

VN-verdrag van Bazel:

- EU sinds 1994 partij

OESO-besluit C(2001)107

Verordening (EEG) nr. 259/93 (EVOA):

- voorschriften om overbrenging afvalstoffen aan banden te leggen en te controleren
- EU-stelsel van toezicht en controle op overbrenging van afvalstoffen in overeenstemming met Verdrag van Bazel

Verordening EU/1013/2006 (EVOA):

- update van EEG/259/93

WAT SCHRIJFT
EU/1013/2006
(EVOA) VOOR?

Bijlage III (“groene” lijst van afvalstoffen)

Code GC030

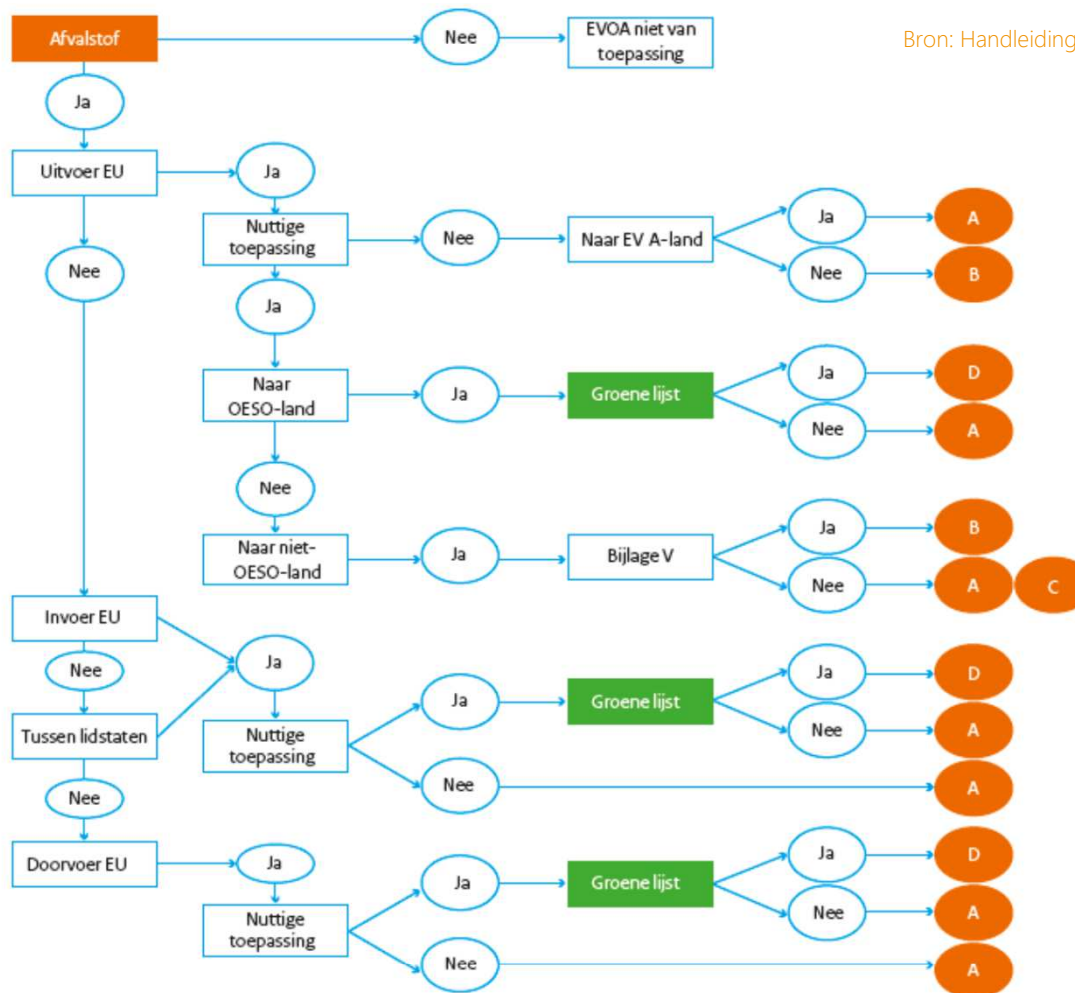
“schepen en ander drijvend materieel bestemd voor de sloop, waaruit eventuele lading en andere van de scheepsexploitatie afkomstige materialen die als gevaarlijke stof of afvalstof geclassificeerd zijn, naar behoren zijn verwijderd”

Uitspraak Raad van State 19 juni 2002 (uitspraak LJN: AE4310 200105168/2)

m.s. Sandrien aangemerkt als afvalstof omdat:

- het schip naast ladingrestanten en overige (vermoedelijk) gevaarlijke afvalstoffen een substantiële hoeveelheid asbest bevat;
- de staat van het schip zodanig slecht was dat het gebruik overeenkomstig de oorspronkelijke bestemming niet zonder meer mogelijk is; en
- uit onderzoek was gebleken dat het schip bestemd is voor de sloop in India.

GRENSOVERSCHRIJDENDE OVERBRENGING



A De overbrenging van afval over de landsgrenzen moet met een kennisgeving plaatsvinden. Bevoegde autoriteiten moeten toestemming geven voor de overbrenging. Bij het transport moet het afvalvervoersdocument en een afschrift van de toestemmingen en eventueel gestelde voorwaarden zijn bijgevoegd. Indien de herkomst een niet-Bazel land kan een verbod van toepassing zijn.

B Voor deze overbrenging geldt een verbod.

C Voor afvalstoffen van de groene lijst kunnen niet-OESO-landen aangeven welke procedure van toepassing is:

- Een verbod of;
- Een kennisgevingsprocedure of;
- Geen procedure, wel begeleidingsbrief bij transport en contract.

D Bij transport moet de vastgestelde begeleidingsbrief (bijlage VII) aanwezig zijn en tussen opdrachtgever en ontvanger dient een contract te zijn, dat door bevoegde autoriteiten kan worden opgevraagd. De ontvangende inrichting moet een inrichting zijn, die conform de toepasselijke nationale wetgeving geëxploiteerd moet worden.

OESO-landen

EU 15, Tsjechië, Slowakije, Polen, Hongarije, VS, Japan, Australië, Canada, Nieuw-Zeeland, Noorwegen, Mexico, Turkije, IJsland, Zuid-Korea, Zwitserland.

EVA-landen

IJsland, Liechtenstein, Noorwegen, Zwitserland.

PROCEDURE KENNISGEVING



Handreiking 'Indienen kennisgeving'

Verordening (EG) 1013/2006





DANK U



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IHM-REGELGEVING

Hoe zit het nu precies?

WELKE
REGELGEVING IS
VAN BELANG?

HONG KONG CONVENTION

HONG KONG INTERNATIONAL CONVENTION FOR THE SAFE AND ENVIRONMENTALLY SOUND RECYCLING OF SHIPS, 2009

WITH THE GUIDELINES FOR ITS IMPLEMENTATION

2013 EDITION

Internationaal
Verdrag van
Hongkong voor het
veilig en
milieuvriendelijk
recyclen van
schepen, 2009



VOORSCHRIFT 5 (HONGKONGVERDRAG)

Inventaris van gevaarlijke materialen

1. Elk nieuw schip:

- IHM, opgesteld conform IMO IHM-richtsnoer en geverifieerd door vlaggenstaat of klassenbureau
- bevat in Deel I de HM genoemd in Aanhangsels 1 en 2 met locatie + hoeveelheden (benadering)

2. Bestaande schepen:

- IHM voor zover praktisch uitvoerbaar binnen 5 jaar na inwerkingtreding of voordat gerecycled gaat worden
- a.d.h.v. Plan van Visuele Inspecties en/of Monsternamen

RESOLUTION MEPC.269(68)
(adopted on 15 May 2015)

2015 GUIDELINES FOR THE DEVELOPMENT OF THE
INVENTORY OF HAZARDOUS MATERIALS

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee conferred upon it by international conventions for the prevention and control of marine pollution from ships,

RECALLING ALSO that the International Conference on the Safe and Environmentally Sound Recycling of Ships held in May 2009 adopted the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (the Hong Kong Convention), together with six Conference Resolutions,

NOTING that regulations 5.1 and 5.2 of the annex to the Hong Kong Convention require that ships shall have on board an Inventory of Hazardous Materials which shall be prepared and verified taking into account guidelines, including any threshold values and exemptions contained in those guidelines, developed by the Organization,

NOTING ALSO resolution MEPC.197(62) by which it adopted *Guidelines for the development of the Inventory of Hazardous Materials* (the guidelines) and resolved to keep them under review,

RECOGNIZING the need to improve the guidance on threshold values and exemptions, as contained in the aforementioned guidelines,

HAVING CONSIDERED, at its sixty-eighth session, the recommendation made by the Sub-Committee on Pollution Prevention and Response, at its second session,

- 1 ADOPTS the *2015 Guidelines for the development of the Inventory of Hazardous Materials* as set out in the annex to this resolution;
- 2 INVITES Member Governments to apply the 2015 Guidelines as soon as possible, or latest when the Convention enters into force;
- 3 AGREES to keep the 2015 Guidelines under review in the light of experience gained with their application;
- 4 SUPERSEDES the guidelines adopted by resolution MEPC.197(62).

IMO-richtsnoeren
voor de
ontwikkeling van de
IHM



I

(Legislative acts)

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for Economic Cooperation and Development (OECD). Such ships are generally classified as hazardous waste and prohibited from being shipped from the Union to recycling facilities in countries that are not members of the OECD.

(2) The mechanisms for monitoring the application of, and enforcing, the Basel Convention and international law are not adapted to the specificities of ships and international shipping, nor do they involve emergency cooperation between the International Labour Organization (ILO), the International Maritime Organization (IMO) and the Secretariat of the Basel Convention. These bodies have been successful in reaching agreement on the introduction of mandatory requirements, at global level, aimed at ensuring an effective solution to unsafe and unsound ship recycling practices: in the form of the Hong Kong Convention for the Safe and Environmentally Sound Recycling of Ships (the Hong Kong Convention).

(3) Current ship recycling capacity in OECD countries which are not members of the Basel Convention is insufficient. Current safe and environmentally sound ship recycling capacity in countries which are not members of the OECD is sufficient to treat all ships flying the flag of a Member State and is expected to expand further by 2015 as the result of actions taken by recycling countries to meet the requirements of the Hong Kong Convention.

(4) The Hong Kong Convention was adopted on 15 May 2009 under the auspices of the International Maritime Organization. The Hong Kong Convention will enter into force only 24 months after the date of ratification by at least 15 states representing a combined merchant fleet of at least 40 per cent of the gross tonnage of the world's merchant shipping and whose combined maximum annual ship recycling volume during the preceding 10 years constitutes not less than three per cent of the gross tonnage of the combined merchant shipping of the same states. That Convention covers the design, the

⁽¹⁾ OJ C 299, 4.10.2012, p. 158.

⁽²⁾ Position of the European Parliament of 22 October 2013 (not yet published in the Official Journal) and decision of the Council of 15 November 2013.

⁽³⁾ Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste (OJ L 190, 12.7.2006, p. 1).

⁽⁴⁾ Amendment to the Basel Convention (Ban amendment) adopted by Decision III/1 of the Parties to the Basel Convention.

Verordening (EU)
Nr. 1257/2013
inzake
scheepsrecycling

ARTIKEL 4 (EU/1257/2013):

Controle van gevaarlijke materialen

De installatie of het gebruik van gevaarlijke materialen, als bedoeld in Bijlage I, wordt verboden of beperkt zoals bepaald in Bijlage I (..).

ARTIKEL 5 (EU/1257/2013):

Inventaris van gevaarlijke materialen

3. De inventaris van gevaarlijke materialen:

- a) is specifiek voor het schip;
- b) levert het bewijs dat het schip voldoet aan het verbod of de beperkingen inzake de installatie of het gebruik van gevaarlijke materialen in overeenstemming met artikel 4;
- c) wordt samengesteld rekening houdend met de toepasselijke IMO-richtsnoeren; en
- d) wordt geverifieerd door hetzij de administratie, hetzij een door de administratie gemachtigde erkende organisatie

EMSA Best Practice Guidance on the Inventory of Hazardous Materials

EMSA's Best Practice Guidance on the Inventory of Hazardous Materials

IHM development and maintenance in the context of the EU Ship Recycling Regulation.

Monitoring and enforcement in the context of the EU Ship Recycling Regulation.

Date: 28-10-2016

WAARUIT BESTAAT
EEN IHM?

INVENTARIS VAN GEVAARLIJKE MATERIALEN (IHM)

DEEL I

Scheepsconstructie en
-uitrusting

BIJLAGE I

[EU/1257/2013]

(= **TABEL A**
[IMO Res.269(68)])

BIJLAGE II

[EU/1257/2013]

(= **TABEL A + B**
[IMO Res.269(68)])

DEEL II

Operationeel afval aan boord

TABEL C

[IMO Res.269(68)]

DEEL III

Vorraden aan boord

TABEL D

[IMO Res.269(68)]

HONGKONGVERDRAG

AANHANGSEL I
(=TABEL A)
beheersing van
gevaarlijke
materialen

AANHANGSEL II
(=TABEL A+B)
minimumlijst van
items voor de
Inventaris van
Gevaarlijke

IMO IHM-RICHTSNOEREN

TABEL A
materialen genoemd in
Aanhangsel 1 van de
Bijlage van het
Hongkongverdrag

TABEL B
materialen genoemd in
Aanhangsel 2 van de
Bijlage van het
Hongkongverdrag

TABEL C
potentieel gevaarlijke
items

TABEL D
gangbare
gebruiksgoederen die

EU/1257/2013

BIJLAGE I
(=TABEL A+)
controle van
gevaarlijke
materialen

BIJLAGE II
(=TABEL A++B+)
lijst van items voor
de Inventaris van
Gevaarlijke
Materialen



EU/1257/2013

- Asbest
- Ozonafbrekende stoffen
- Gepolychloreerde bifenylen (PCB)
- Perfluorooctaan sulfonzuur (PFOS)¹
- Aangroeiwerende verbindingen en verfsystemen

¹ n.v.t op niet-EU-gevlagde schepen

BIJLAGE I:
controle van gevaarlijke materialen

BIJLAGE II:
lijst van items voor de Inventaris van Gevaarlijke Materialen

TABEL C (IMO IHM-
RICHTSNOER):
potentieel gevaarlijke items

TABEL D (IMO IHM-
RICHTSNOER):
gangbare gebruiksgoederen die mogelijk gevaarlijke materialen bevatten

EU/1257/2013

- Alle in BIJLAGE I opgesomde gevaarlijke materialen
- Cadmium en cadmiumverbindingen
- Zeswaardig chroom en zeswaardigchromverbindingen
- Lood en loodverbindingen
- Kwik en kwikverbindingen
- Polybroombifenyl (PBB' s)
- Polybroomdifenylethers (PBDE' s)
- Polychloornaftalenen (meer dan 3 chlooratomen)
- Radioactieve stoffen
- Bepaalde gechloreerde paraffinen met een korte keten (alkanen, C10-C13, chloor)
- Broomhoudende brandvertrager (HBCDD)

BIJLAGE I:
controle van gevaarlijke materialen

BIJLAGE II:
lijst van items voor de Inventaris van Gevaarlijke Materialen

TABEL C (IMO IHM-
RICHTSNOER):
potentieel gevaarlijke items

TABEL D (IMO IHM-
RICHTSNOER):
gangbare gebruiksgoederen die mogelijk gevaarlijke materialen bevatten

EU/1257/2013

- Kerosene
- White spirit
- Lubricating oil
- Hydraulic oil
- Anti-seize compounds
- Fuel additive
- Engine coolant additives
- Antifreeze fluids
- Boiler and feed water treatment and test re-agents
- De-ioniser regenerating chemicals
- Evaporator dosing and descaling acids
- Paint stabilizers/rust stabilizers
- Solvents/thinners
- Paints
- Chemical refrigerants
- Battery electrolyte

BIJLAGE I:
controle van gevaarlijke materialen

BIJLAGE II:
lijst van items voor de Inventaris van Gevaarlijke Materialen

TABEL C (IMO IHM-
RICHTSNOER):
potentieel gevaarlijke items

TABEL D (IMO IHM-
RICHTSNOER):
gangbare gebruiksgoederen die mogelijk gevaarlijke materialen bevatten

EU/1257/2013

- Alcohol, methylated spirits
- Acetylene
- Propane
- Butane
- Oxygen
- CO₂
- Perfluorocarbons (PFCs)
- Methane
- Hydrofluorocarbon (HFCs)
- Nitrous oxide (N₂O)
- Sulfur hexafluoride (SF₆)
- Bunkers: fuel oil
- Grease
- Waste oil (sludge)
- Bilge and/or waste water generated by the after-treatment systems fitted on machineries
- Oily liquid cargo tank residues
- Ballast water

BIJLAGE I:
controle van gevaarlijke materialen

BIJLAGE II:
lijst van items voor de Inventaris van Gevaarlijke Materialen

TABEL C (IMO IHM-
RICHTSNOER):
potentieel gevaarlijke items

TABEL D (IMO IHM-
RICHTSNOER):
gangbare gebruiksgoederen die mogelijk gevaarlijke materialen bevatten

EU/1257/2013

- Raw sewage
- Treated sewage
- Non-oily liquid cargo residues
- Fuel gas
- Dry cargo residues
- Medical waste/infectious waste
- Incinerator ash¹³
- Garbage
- Fuel tank residues
- Oily solid cargo tank residues
- Oily or chemical contaminated rags
- Batteries (incl. lead acid batteries)
- Pesticides/insecticide sprays
- Extinguishers
- Chemical cleaner (incl. electrical equipment cleaner, carbon remover)

BIJLAGE I:
controle van gevaarlijke materialen

BIJLAGE II:
lijst van items voor de Inventaris van Gevaarlijke Materialen

TABEL C (IMO IHM-
RICHTSNOER):
potentieel gevaarlijke items

TABEL D (IMO IHM-
RICHTSNOER):
gangbare gebruiksgoederen die mogelijk gevaarlijke materialen bevatten

- Detergent/bleacher (could be a liquid)
- Miscellaneous medicines
- Fire fighting clothing and Personal protective equipment
- Dry tank residues
- Cargo residues
- Spare parts which contain materials listed in Table A or Table B

EU/1257/2013

BIJLAGE I:
controle van gevaarlijke materialen

BIJLAGE II:
lijst van items voor de Inventaris van Gevaarlijke Materialen

TABEL C (IMO IHM-
RICHTSNOER):
potentieel gevaarlijke items

TABEL D (IMO IHM-
RICHTSNOER):
gangbare gebruiksgoederen die mogelijk gevaarlijke materialen bevatten

- Electrical and electronic equipment
- Lighting equipment
- Non ship-specific furniture, interior and similar equipment

* This table does not include ship-specific equipment integral to ship operations, which has to be listed in part I of the inventory.

EU/1257/2013

BIJLAGE I:
controle van gevaarlijke materialen

BIJLAGE II:
lijst van items voor de Inventaris van Gevaarlijke Materialen

TABEL C (IMO IHM-
RICHTSNOER):
potentieel gevaarlijke items

TABEL D (IMO IHM-
RICHTSNOER):
gangbare gebruiksgoederen die mogelijk gevaarlijke materialen bevatten

OPSTELLEN IHM

WANNEER?

INVENTARIS VAN GEVAARLIJKE MATERIALEN (IHM)

DEEL I

Scheepsconstructie en
-uitrusting

DEEL II

Operationeel afval aan boord

TABEL C
[IMO Res.269(68)]

GEDURENDE LEVENSDUUR VAN HET SCHIP

(= **TABEL A**
[IMO Res.269(68)])

BIJLAGE II
[EU/1257/2013]

(= **TABEL A + B**
[IMO Res.269(68)])

DEEL III

NA BESLISSING TOT RECYCLING
VAN EU-GEVLAGD SCHIP, MAAR
VÓÓR DE LAATSTE INSPECTIE (DIE
WORDT VERRICHT VÓÓR HET
SCHIP UIT DIENST WORDT
GENOMEN EN VÓÓR DE
RECYCLING VAN HET SCHIP IS
BEGONNEN).



INVENTARIS VAN GEVAARLIJKE

DEEL I

Scheepsconstructie en
-uitrusting

BIJLAGE I
[EU/1257/2013]

(= **TABEL A**
[IMO Res.269(68)])

BIJLAGE II
[EU/1257/2013]

(= **TABEL A + B**
[IMO Res.269(68)])



Nieuw EU-gevlagd schip (>500GT)

Vanaf uiterlijk **31.12.2018** uitgerust met een **IHM Deel I** dat bevat:

- een inventarisatie (locatie en hoeveelheid) van materialen als genoemd in Bijlage II; en
- informatie uit Material Declarations (MD) en Supplier' s Declaration of Conformity (SDoC).

Scheepsbouwer is verantwoordelijk voor opstellen **IHM Deel I** (uiterlijk bij oplevering schip).

[IMO Res.269(68)]

INVENTARIS VAN GEVAARLIJKE

DEEL I

Scheepsconstructie en
-uitrusting

BIJLAGE I

[EU/1257/2013]

(= **TABEL A**
[IMO Res.269(68)])

BIJLAGE II

[EU/1257/2013]

(= **TABEL A + B**
[IMO Res.269(68)])



Bestaand EU-gevlagd schip
(>500GT) **in de vaart**

Vanaf **31.12.2020** uitgerust met een
IHM Deel I dat bevat:

- een inventarisatie (locatie en hoeveelheid) van materialen als genoemd in Bijlage I en - voor zover mogelijk - Bijlage II.

Scheepseigenaar is verantwoordelijk
voor opstellen IHM Deel I.

[IMO Res.269(68)]

INVENTARIS VAN GEVAARLIJKE

DEEL I

Scheepsconstructie en
-uitrusting

BIJLAGE I

[EU/1257/2013]

(= TABEL A

[IMO Res.269(68)])

BIJLAGE II

[EU/1257/2013]

(= TABEL A + B

[IMO Res.269(68)])



Bestaat EU-gevlagd schip (> 500GT) dat gerecycled gaat worden ná **31.12.2016** maar vóór de datum van toepassing (uiterlijk **31.12.2018**) van EU/1257/2013

Uitgerust met een IHM Deel I dat bevat:

- een inventarisatie (locatie en hoeveelheid) van materialen als genoemd in Bijlage I, voor zover uitvoerbaar.

Scheepseigenaar is verantwoordelijk voor opstellen IHM Deel I.

[IMO Res.269(68)]

INVENTARIS VAN GEVAARLIJKE

DEEL I

Scheepsconstructie en
-uitrusting

BIJLAGE I

[EU/1257/2013]

(= TABEL A

[IMO Res.269(68)])

BIJLAGE II

[EU/1257/2013]

(= TABEL A + B

[IMO Res.269(68)])

[IMO Res.269(68)]



Bestaand niet-EU-gevlagd schip (>500GT) **in de vaart**, dat een EU-haven of -ankerplaats aandoet

Vanaf **31.12.2020** uitgerust met een IHM Deel I dat bevat:

- Een inventarisatie (locatie en hoeveelheid) van materialen als bedoeld in Bijlage I en - voor zover mogelijk - Bijlage II;
- Verklaring van Overeenstemming

Scheepseigenaar is verantwoordelijk voor opstellen IHM Deel I.

INVENTARIS VAN GEVAARLIJKE

DEEL I

Scheepsconstructie en
-uitrusting

BIJLAGE I

[EU/1257/2013]

(= TABEL A
[IMO Res.269(68)])

BIJLAGE II

[EU/1257/2013]

(= TABEL A + B
[IMO Res.269(68)])



EU-gevlagde schip (>500GT)

- Uiterlijk **31.12.2020** een eerste inspectie en een specifiek "inventariscertificaat" van gevaarlijke materialen op basis van IHM Deel I.
- Na ten hoogste 5 jaar een hernieuwde inspectie en vernieuwd certificaat.

[IMO Res.269(68)]

INVENTARIS VAN GEVAARLIJKE

DEEL I

Scheepsconstructie en
-uitrusting

BIJLAGE I

[EU/1257/2013]

(= TABEL A

[IMO Res.269(68)])

BIJLAGE II

[EU/1257/2013]

(= TABEL A + B

[IMO Res.269(68)])

IHM Deel I:

- Bijhouden en actualiseren gedurende levensduur schip;
- Melding in IHM van nieuwe installaties van "Bijlage II-gevaarlijke materialen" ;
- Verificatie door vlaggenstaat of Erkende Organisatie;
- Mogelijk ontheffingen of overgangsmatregelen voor niet-EU-gevlagd schip.

[IMO Res.269(68)]



EU-gevlagd schip (> 500GT)
dat gerecycled gaat worden

Uiterlijk vóór aanvang
scheepsrecycling uitgerust met
IHM Deel II dat bevat:

- een inventarisatie (locatie en
hoeveelheid) van materialen als
genoemd in Tabel C van IMO-
resolutie 269(68).

Scheepseigenaar is verantwoordelijk
voor opstellen **IHM Deel II**.

Vlaggenstaat of Erkende Organisatie
verifieert **IHM Deel II**.

HAARLIJKE MATERIALEN (IHM)

DEEL II

Operationeel afval aan boord

TABEL C

[IMO Res.269(68)]

DEEL III

Vorraden aan boord

TABEL D

[IMO Res.269(68)]



EU-gevlagd schip (> 500GT)
dat gerecycled gaat worden

Uiterlijk vóór aanvang
scheepsrecycling uitgerust met

IHM Deel III dat bevat:

- een inventarisatie (locatie en hoeveelheid) van materialen als genoemd in Tabel D van IMO-resolutie 269(68).

Scheepseigenaar is verantwoordelijk
voor opstellen **IHM Deel III**.

Vlaggenstaat of Erkende Organisatie
verifieert **IHM Deel III**.

ARLIJKE MATERIALEN (IHM)

DEEL II

Operationeel afval aan boord

TABEL C

[IMO Res.269(68)]

DEEL III

Vorraden aan boord

TABEL D

[IMO Res.269(68)]

OPSTELLEN IHM

Door wie?

EMSA BEST PRACTICE GUIDANCE ON THE IHM

Hoofdstuk 4 – Basic concepts for the development and maintenance of the IHM

"The development procedure of a new IHM may differ depending on whether the ship is a new or an existing one. However, the overarching principles remain the same. The ship owner or the shipbuilder may draw upon assistance by an IHM expert. This is strongly recommended for safety and health protection reasons and in order to have a minimum assurance that the work is carried out by competent personnel, under a quality management system and in accordance with recommended guidance (i.e. the EMSA' s guidance document and the relevant IMO guidelines)."

HOE MOET EEN IHM
ERUIT ZIEN?

STANDARD FORMAT OF THE INVENTORY OF HAZARDOUS MATERIALS¹⁵

Part I

Hazardous materials contained in the ship's structure and equipment

I-1 – Paints and coating systems containing materials listed in table A and table B of appendix 1 of these guidelines

No.	Application of paint	Name of paint	Location	Materials (classification in appendix 1)	Approximate quantity	Remarks
1	Anti-drumming compound	Primer, xx Co., xx primer #300	Hull part	Lead	35.00 kg	
2	Anti-fouling	xx Co., xx coat #100	Underwater parts	TBT	120.00 kg	

I-2 – Equipment and machinery containing materials listed in table A and table B of appendix 1 of these guidelines

No.	Name of equipment and machinery	Location	Materials (classification in appendix 1)	Parts where used	Approximate quantity	Remarks
1	Switch board	Engine control room	Cadmium	Housing coating	0.02 kg	
			Mercury	Heat gauge	<0.01 kg	less than 0.01kg
2	Diesel engine, xx Co., xx #150	Engine room	LeadCadmium	Bearing Starter for blower	0.02 kg	
3	Diesel engine, xx Co., xx #200	Engine-room	Lead	Starter for blower	0.01 kg	Revised by XXX on Oct. XX, 2008 (revoking No.2)
4	Diesel generator (x 3)	Engine-room	Lead	Ingredient of copper compounds	0.01 kg	
5	Radioactive level gauge	No. 1 Cargo tank	Radioactive substances	Gauge	⁵ (1.8E+11) Ci (Bq)	Radionuclides: ⁶⁰ Co

I-3 - Structure and hull containing materials listed in table A and table B of appendix 1 of these guidelines

No.	Name of structural element	Location	Materials (classification in appendix 1)	Parts where used	Approximate quantity	Remarks
1	Wall panel	Accommodation	Asbestos	Insulation	2,500.00 kg	
2	Wall insulation	Engine control room	Lead	Perforated plate	0.01 kg	cover for insulation material
			Asbestos	Insulation	25.00 kg	under perforated plates
3						

Part II
Operationally generated waste

No.	Location ¹	Name of item (classification in appendix 1) and detail (if any) of the item	Approximate quantity		Remarks
1	Garbage locker	Garbage (food waste)	35.00	kg	
2	Bilge tank	Bilgewater	15.00	m ³	
3	No.1 cargo hold	Dry cargo residues (iron ore)	110.00	kg	
4	No.2 cargo hold	Waste oil (sludge) (crude)	120.00	kg	
5	No.1 ballast tank	Ballast water	2,500.00	m ³	
		Sediments	250.00	kg	

¹ The location of a part II or part III item should be entered in order based on its location, from a lower level to an upper level and from a fore part to an aft part. The location of part I items is recommended to be described similarly, as far as practicable.

**Part III
Stores**

III-1 - Stores

No.	Location ¹	Name of item (classification in appendix 1)	Unit quantity		Figure		Approximate quantity		Remarks ²
								m ³	
								kg	
								kg	
									Details are shown in the attached list.
5	Paint stores	Paint, xx Co., #600	20.00	kg	5	pcs	100.00	kg	Cadmium containing.

III-2 – Liquids sealed in ship's machinery and equipment

No.	Type of liquids (classification in appendix 1)	Name of machinery or equipment	Location	Approximate quantity		Remarks
1	Hydraulic oil	Deck crane hydraulic oil system	Upper deck	15.00	m ³	
		Deck machinery hydraulic oil system	Upper deck and bosun store	200.00	m ³	
		Steering gear hydraulic oil system	Steering gear room	0.55	m ³	
2	Lubricating oil	Main engine system	Engine-room	0.45	m ³	
3	Boiler water treatment	Boiler	Engine-room	0.20	m ³	


III-3 – Gases sealed in ship's machinery and equipment

No.	Type of gases (classification in appendix 1)	Name of machinery or equipment	Location	Approximate quantity		Remarks
1	HFC	AC system	AC room	100.00	kg	
2	HFC	Refrigerated provision chamber machine	AC room	50.00	kg	

III-4 – Regular consumable goods potentially containing hazardous materials

No.	Location ¹⁶	Name of item	Quantity	Remarks
1	Accommodation	Refrigerators	1	
2	Accommodation	Personal computers	2	

ASBESTONDERZOEK NEDERLANDS SCHIP



Inspectie Leefomgeving en Transport
Ministerie van Infrastructuur en Waterstaat

**INSTRUCTION TO SHIP OWNERS , SHIPPING COMPANIES AND
RECOGNIZED ORGANIZATIONS (RO's) ¹**

**Registered under: Instruction to RO's Nr. 24
Ban on the use of Asbestos on board ships**

versus

RESOLUTION MEPC.269(68)
(adopted on 15 May 2015)

**2015 GUIDELINES FOR THE DEVELOPMENT OF THE
INVENTORY OF HAZARDOUS MATERIALS**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee conferred upon it by international conventions for the prevention and control of marine pollution from ships,

RECALLING ALSO that the International Conference on the Safe and Environmentally Sound Recycling of Ships held in May 2009 adopted the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (the Hong Kong Convention) together with six Conference resolutions,

NOTING that Regulations 5.11 and 5.12 of the annex to the Hong Kong Convention require that ships shall have on board an Inventory of Hazardous Materials which shall be prepared and verified taking into account guidelines, including any threshold values and exemptions contained in those guidelines, developed by the Organization,

NOTING ALSO resolution MEPC.197(62) which adopted *Guidelines for the development of the Inventory of Hazardous Materials* (the guidelines) and resolved to keep them under review,

RECOGNIZING the need to improve the guidance on threshold values and exemptions, as contained in the aforementioned guidelines,

HAVING CONSIDERED, at its sixty-eighth session, the recommendation made by the Sub-Committee on Pollution Prevention and Control, at its second session,

- 1 ADOPTS the 2015 *Guidelines for the development of the Inventory of Hazardous Materials* as set out in the annex to this resolution;
- 2 INVITES Member Governments to apply the 2015 Guidelines as soon as possible, or latest when the Convention enters into force;
- 3 AGREES to keep the 2015 Guidelines under review in the light of experience gained with their application;
- 4 SUPERSEDES the guidelines adopted by resolution MEPC.197(62).

IMO-richtsnoeren voor de ontwikkeling van de IHM



DANK U



www.kvnr.nl



kvnr@kvnr.nl



[@zeevaart](https://twitter.com/zeevaart)

Inventory of Hazardous Materials (IHM)



Joris Gribnau (Technisch Directeur Kiwa Oesterbaai)

scheepsrecycling
& inventarisatie
gevaarlijke materialen
(IHM)

**Trust
Quality
Progress**

Inhoud presentatie IHM

- 📖 voorbereiding inventory
- 📖 gevaarlijke stoffen en bijzonderheden
- 📖 visuele inspectie en bemonsteringsplan
- 📖 resultaten en rapportage
- 📖 risico analyse → quick response acties
- 📖 follow-up, recyclingplan, innovaties, “hoe verder.....?”



Trust
Quality
Progress

Vorbereiding

- aanleiding: 1% voor recycling

99% t.b.v. planning 2020, compliance & crew

- welk bouwjaar, welk land, welke werf?
- eerdere eigenaren?
- zusterschepen?
- onderhoud en dokbeurten?
- kentallen in het algemeen
- welke gevaarlijke stoffen?



Trust
Quality
Progress

Asbest, een natuurproduct



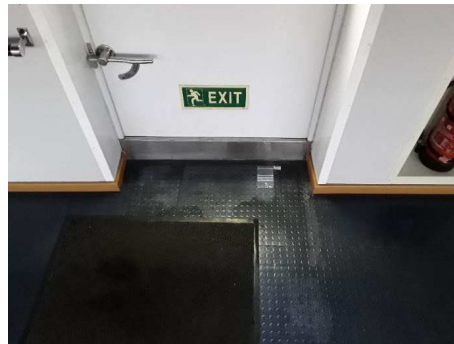
Trust
Quality
Progress

Asbest



Trust
Quality
Progress

PCB



Trust
Quality
Progress

Ozone Depleting Substances (ODS)



**Trust
Quality
Progress**

PFOS



Trust
Quality
Progress

HBCDD



Trust
Quality
Progress

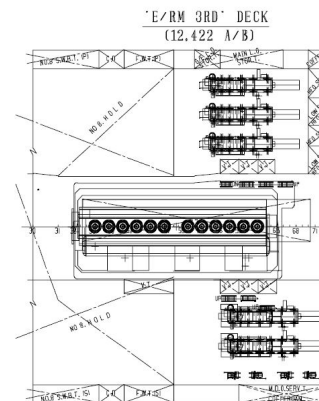
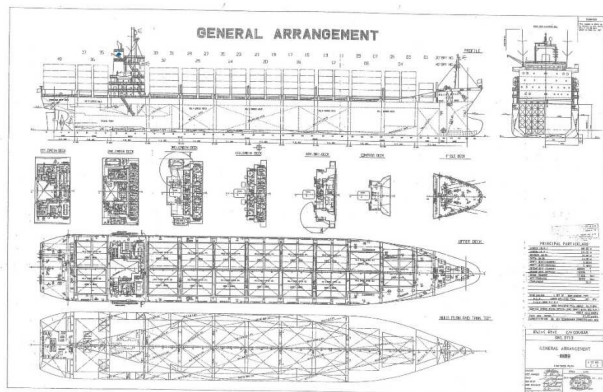
Antifouling - TBT



Trust
Quality
Progress

Visueel/Monsternamen Inspectie Plan

- o.a. GA, ODS logboek, AFC, soort schip & evt verdere relevante informatie over schip
- sjabloon en tablet inrichting (inspectie 1 port call)



Trust
Quality
Progress

Visueel/Monstername Inspectie Plan

Indeling in secties/zones:

- ▣ buitendekken
- ▣ accommodatie
- ▣ machinekamer
- ▣ technische ruimten
- ▣ bijzondere installaties (materialen i.r.t. eigenschappen)



Trust
Quality
Progress

Visueel/Monstername Inspectie Plan



Indeling in secties/zones:

- ▣ bijzondere installaties (materialen i.r.t. eigenschappen)



Trust
Quality
Progress

Bemonsteringsplan (VSCP)

- 📄 checklijsten i.r.t. eigenschappen
- 📄 checklijsten i.r.t. ruimtes
- 📄 checklijsten per systeem
- 📄 bijzondere installaties aan boord
- 📄 gebruik van data afkomstig uit deskresearch



Trust
Quality
Progress

Aan boord: het onderzoek

- 📌 vrijwel zelfstandig, assistentie bij hydraulische olie
- 📌 beperkt destructief onderzoek
- 📌 bemonstering zonder (zichtbare) schade
- 📌 uitsluitingen noteren
- 📌 <100 m¹ schip 1 lange mandag, <400 m¹ 2 mandagen
- 📌 100-125 samples, 125-175 samples



Trust
Quality
Progress

Analyses en Hoeveelheden

- 📌 geaccrediteerde laboratoria (PCB / ODS twee weken)
- 📌 analyses in percentages of mg/kg
- 📌 hoeveelheden in gewichten/oppervlaktes
- 📌 extrapolatie onzekerheid
- 📌 wat te doen met afwijkingen t.o.v. de stortbonnen t.z.t.?



Trust
Quality
Progress

Rapportage met resultaten



📌 asbest → meestal kleine hoeveelheden na 1993

→ betrouwbare? Asbestos Free markeringen

- 📌 FiFi CO₂ lines 100 stuks pakkingen
500 kg inclusief flenzen
- 📌 Isolatiematerialen reparatiestukken (bv door dokken in Azie)
500 kg totaal, verdeeld door hele schip
- 📌 Spares 10-100 kg pakking/koord/zekering
soms met ongewenste besmettingen

**Trust
Quality
Progress**

Rapportage met resultaten

❏ PCB

❏ <5% aangetroffen (olie, verflagen, rubbers)

❏ PFOS

❏ <1% aangetroffen (AFFF schuim)

❏ HBCDD

❏ <1% aangetroffen (gordijn)



Trust
Quality
Progress

Rapportage met resultaten

❏ Zware metalen

- ❏ helft van de schepen aangetroffen (verflagen)

- ❏ meestal loodhoudende verf

❏ ODS

- ❏ R12 en R22 (nog niet verboden)



Trust
Quality
Progress

Risico's / quick-response acties

- 📌 cultuurverschil: asbest is in veel landen geen probleem
- 📌 cultuurverschil: PCB, PFOA/PFOS, ooit wel eens van gehoord???
- 📌 “overdreven” reacties: asbestpakking in peilglas → breeduit in het nieuws: op schepen van multinational asbest aangetroffen: schandalig voor bemanning
- 📌 vlaggenstaat: andere accreditatie / analyse per land



Trust
Quality
Progress

Risico's / quick-response acties

- 📌 asbest: onverwacht spares aantreffen in stores
- 📌 asbest: verontreinigingen op “pakkingsnijblokken”, werkbanken en vloeren
- 📌 Aantreffen asbest vs SOLAS Regulation
- 📌 adviezen: inkadering en luchtmetingen
- 📌 → Asbest Management Plan



Trust
Quality
Progress

Innovaties

- elke vloot is met kentallen en gegevens van zusterschepen van een inschatting van HazMats te voorzien....
- welke waardevolle onderdelen vertegenwoordigen waarde, databank....
- KIWA IHM rapport lay-out ligt nu vast (DNVGL, BV, Lloyd's)
- toekomst: eenduidig Asbestos Management Plan, Removal and Recycling Plan, dataverwerking



Trust
Quality
Progress

Vragen.....?

Contact gegevens

Web : www.kiwaoesterbaai.com

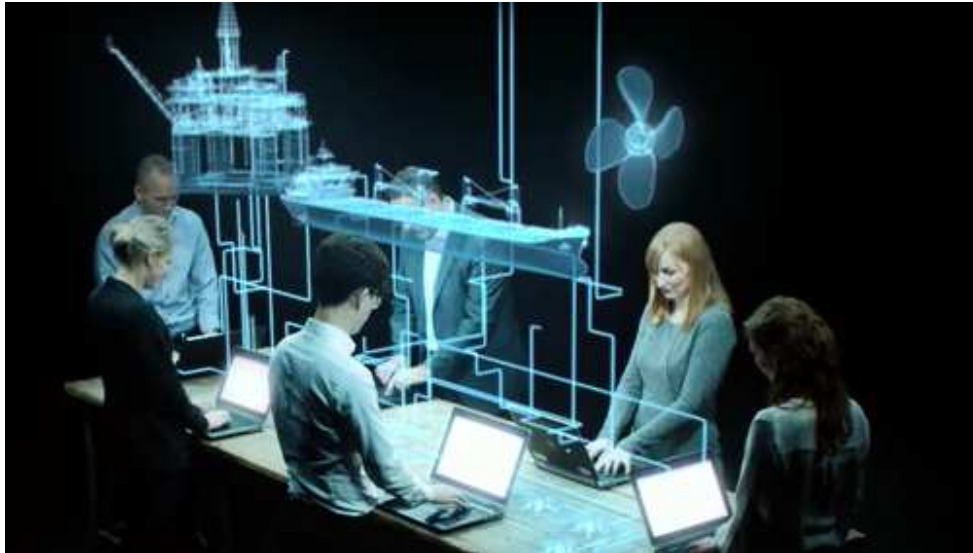
Email : joris.gribnau@kiwaoesterbaai.nl
maritiem@kiwaoesterbaai.nl

Phone : +31 10 2088 444
+31 624 733 592

Contact person : [Mr. G.J.P.L.C. Gribnau \(Joris\)](#)



**Trust
Quality
Progress**



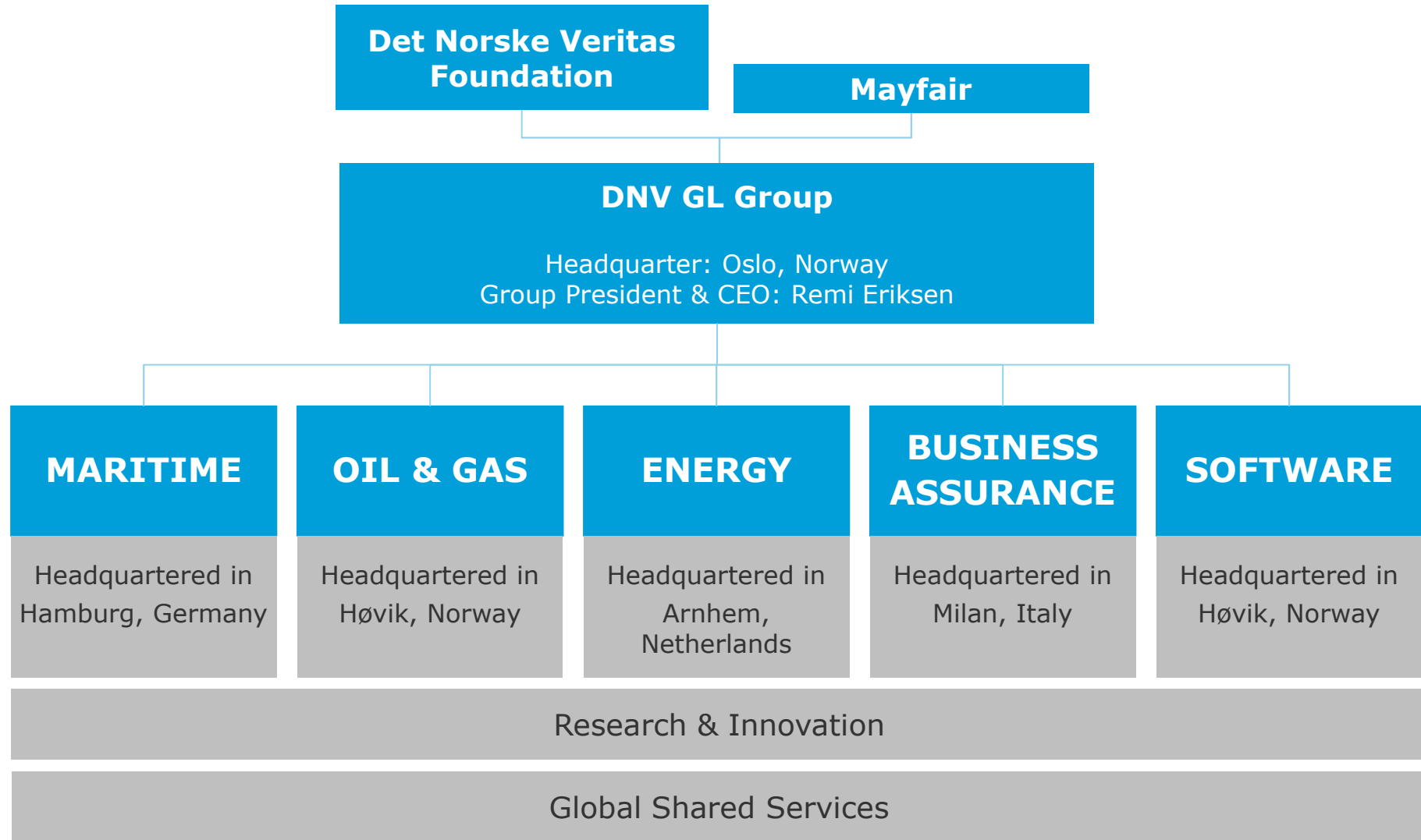
MARITIME

Seminar "Scheepsrecycling en Inventaris van Gevaarlijke Materialen (IHM): De theorie en de praktijk"

IHM approval by Class

06 December 2017

Industry focused organization





Addressing challenges in the maritime industry

Safety issues

Regulatory change

Cost pressures

New technology

Reliability

Overview over ship recycling services in DNV GL

Maritime Approval centres



IHM trained surveyors



Advisory



Other

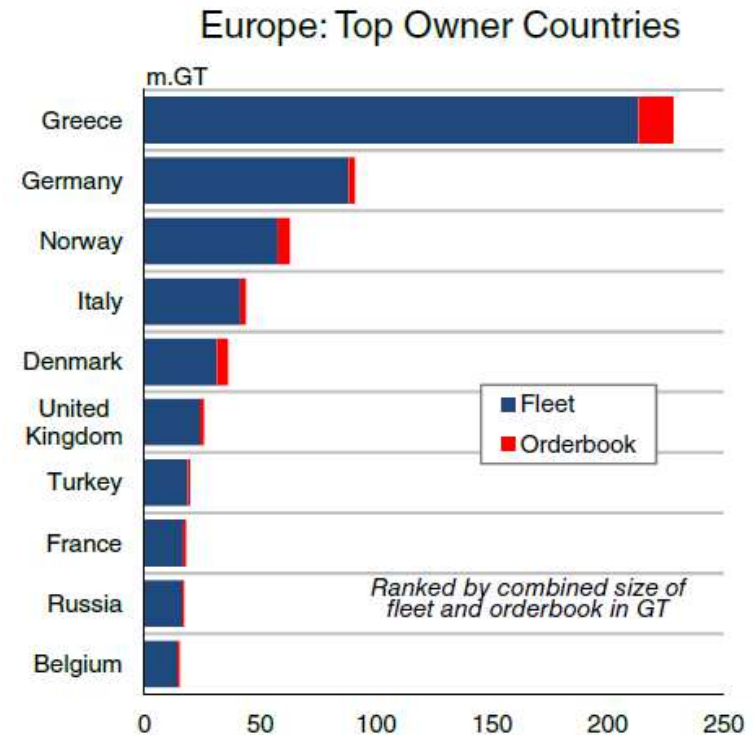


IRRC = International ready for recycling certificate; SRF = Ship recycling facility; HazMat = Hazardous materials; Cert = SoC = Statement of compliance; FIS = Fleet in service



World merchant fleet – EU top owner countries

EU-Europe	01-Sep-17			Fleet m. GT, end:			
	No.	Age ¹	\$bn ⁶	2013	2014	2015	2016
Greece	5,444	14.8	97.3	163.9	179.8	192.1	203.0
Germany	3,545	14.1	42.0	95.4	94.8	92.6	86.5
Italy	2,019	21.9	31.5	35.6	36.0	39.3	40.0
Denmark	1,456	17.9	20.2	30.3	30.0	31.0	30.5
United Kingdom	1,409	19.6	24.4	17.0	18.6	21.8	23.8
France	910	16.9	18.1	15.6	17.2	17.9	16.3
Belgium	427	14.6	8.2	9.9	12.4	13.1	13.8
Netherlands	2,010	16.8	21.5	13.6	13.4	13.3	13.3
Sweden	579	33.0	7.5	7.2	7.1	7.0	7.0
Cyprus	185	21.2	1.4	3.7	3.0	2.7	2.8
Spain	567	25.4	3.1	2.4	2.3	2.3	2.4
Finland	270	37.6	2.7	2.3	2.3	2.2	2.3
Poland	270	30.0	1.0	2.2	2.0	1.9	1.8
Croatia	325	28.2	1.0	1.9	1.8	1.7	1.7
Ireland	179	18.8	1.7	0.7	0.9	1.1	1.3
Bulgaria	139	28.1	0.5	0.9	0.8	0.9	1.0
Others (12)	152	30.2	0.5	0.6	0.6	0.6	0.6
TOTAL	20,535	18.5	284.4	405.2	424.9	443.6	450.2

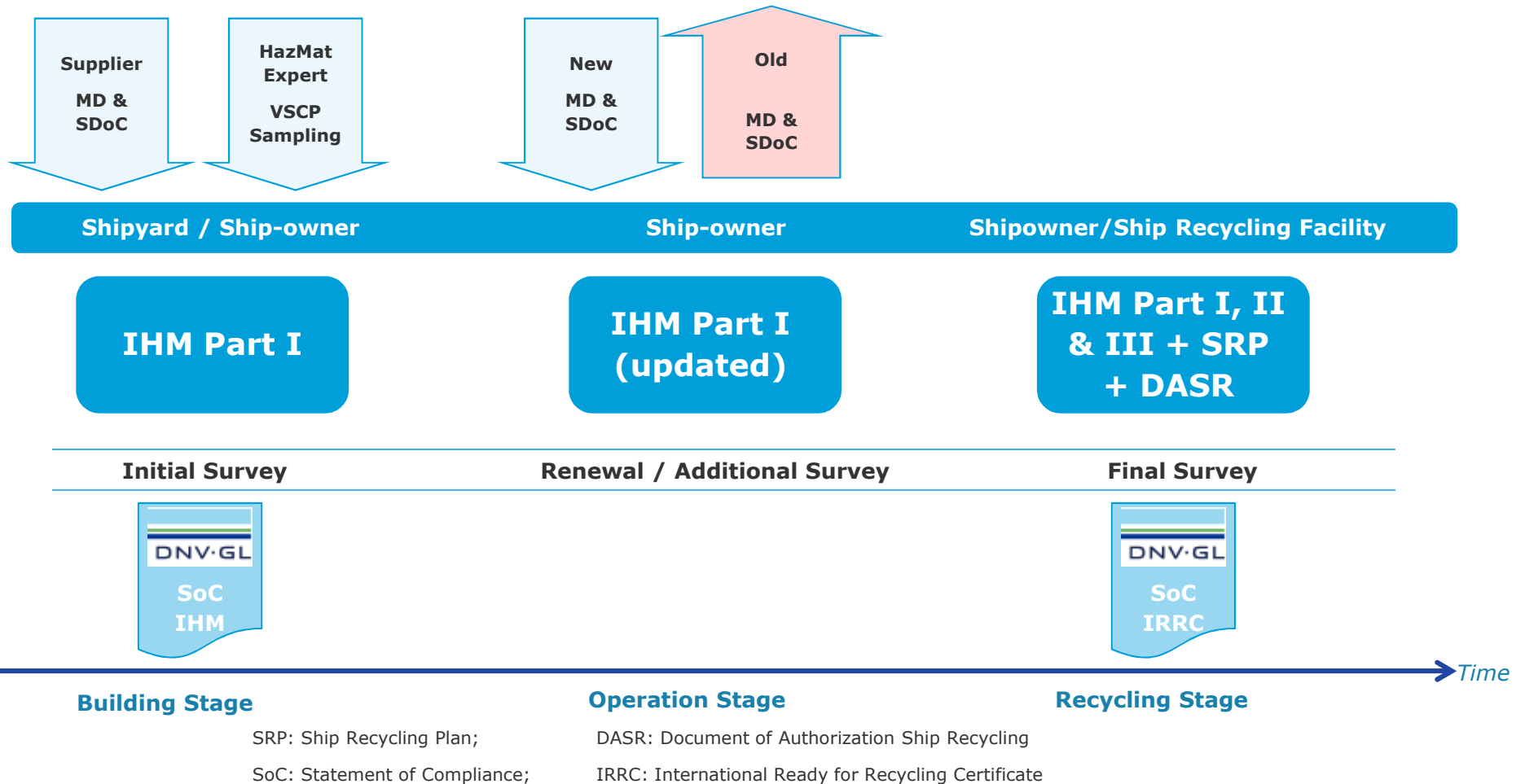


The number of EU flagged ships of 500 GT and over is around 10,000.

Clarkson, World Fleet Monitor 09.17, above 100 GT

IHM according to HKC and EU SRR

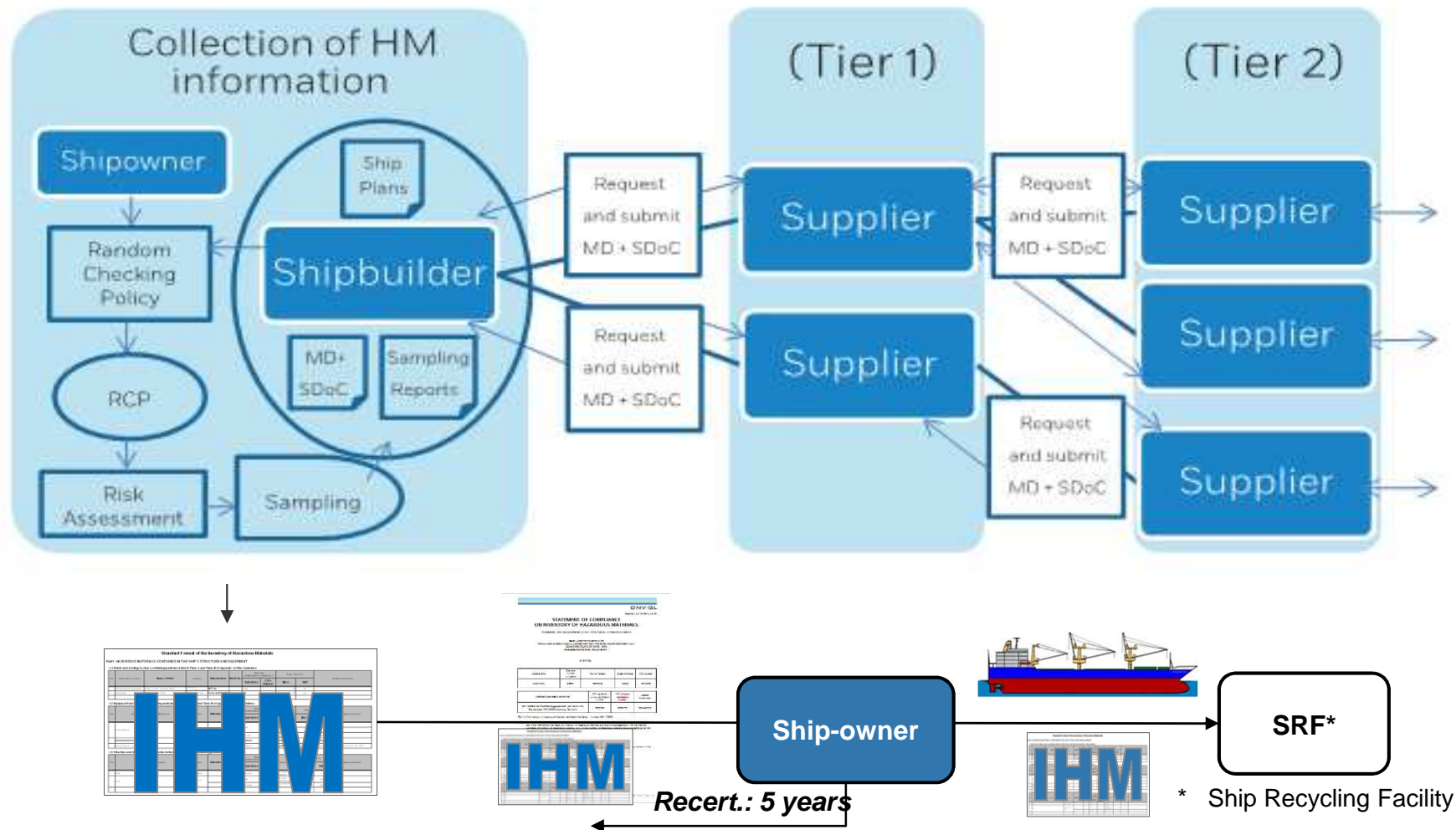
The diagram below illustrates how the IHM follows the ship throughout its lifetime.





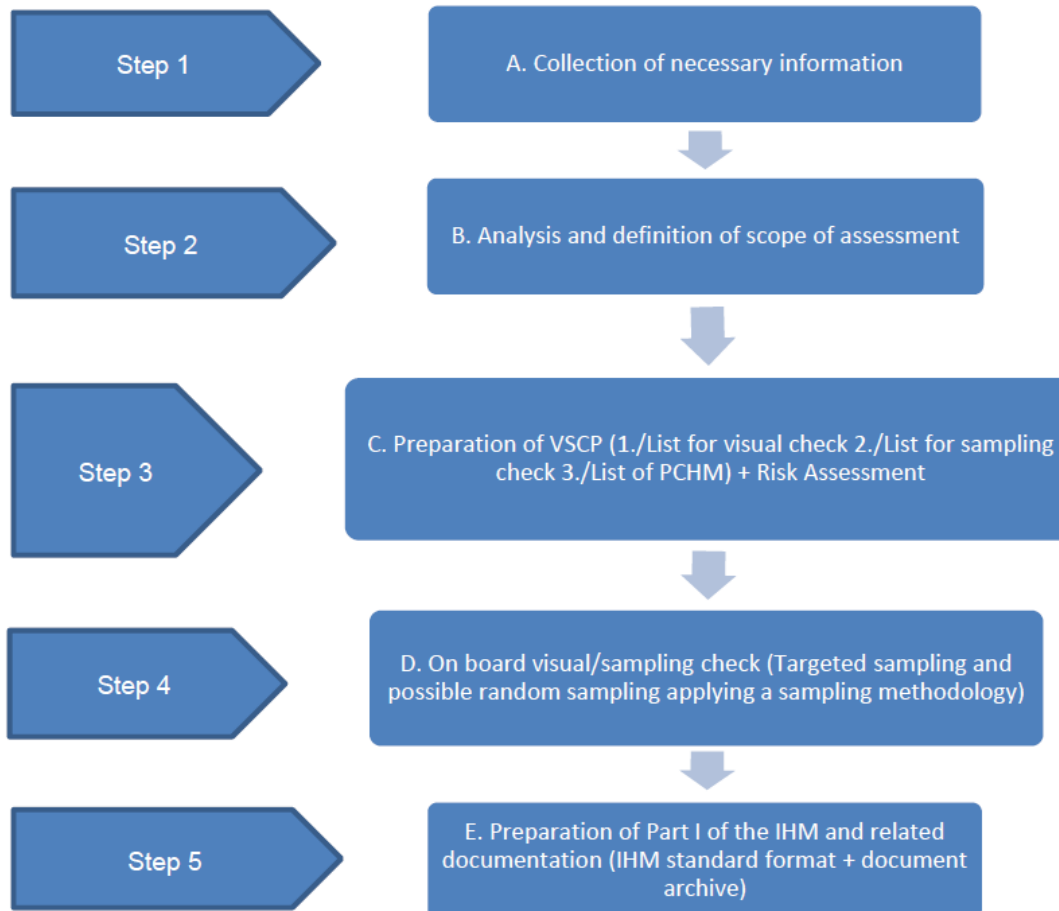
Preparation of IHM for new ships

Information from supply chain



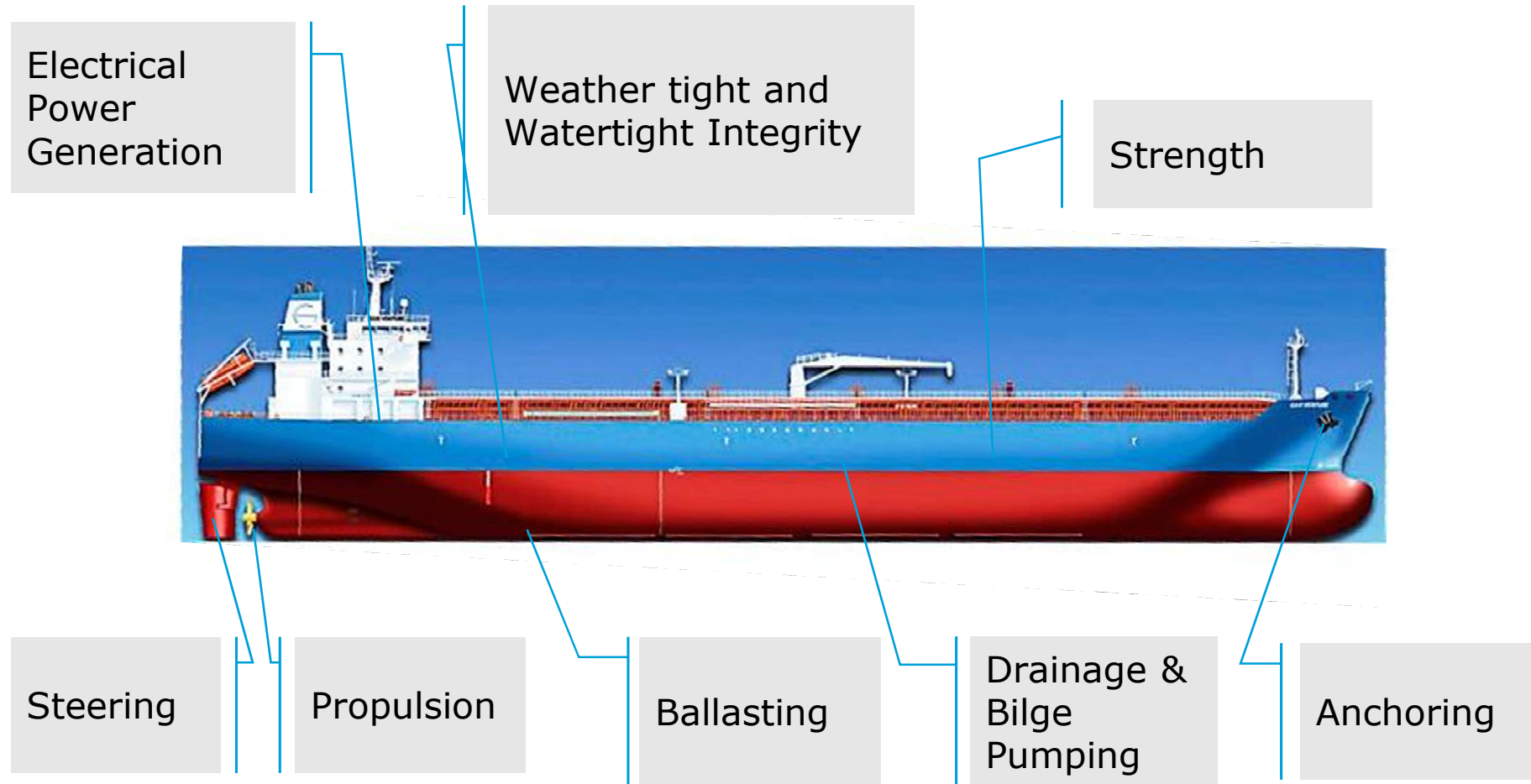


Preparation of IHM for existing ships



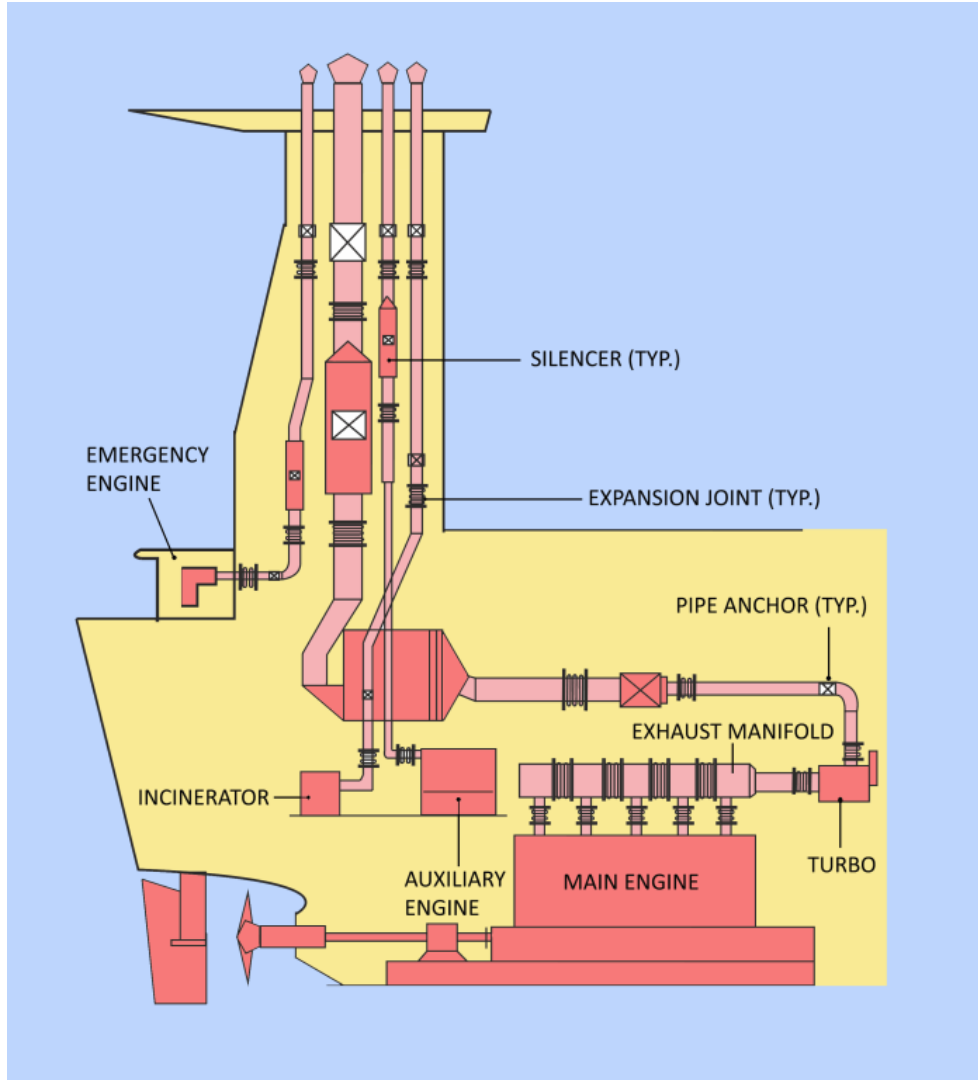
Preparation of IHM for existing ships

What are a ship's main functions?



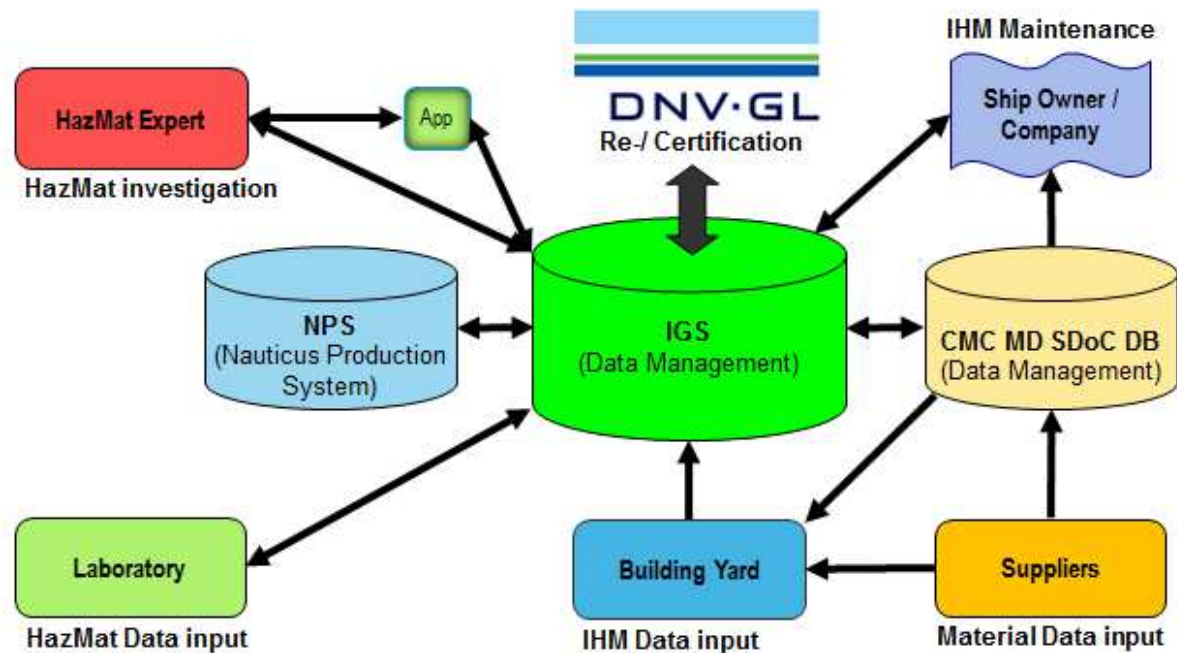
Preparation of IHM for existing ships

Basic structure of a ship: Exhaust gas system



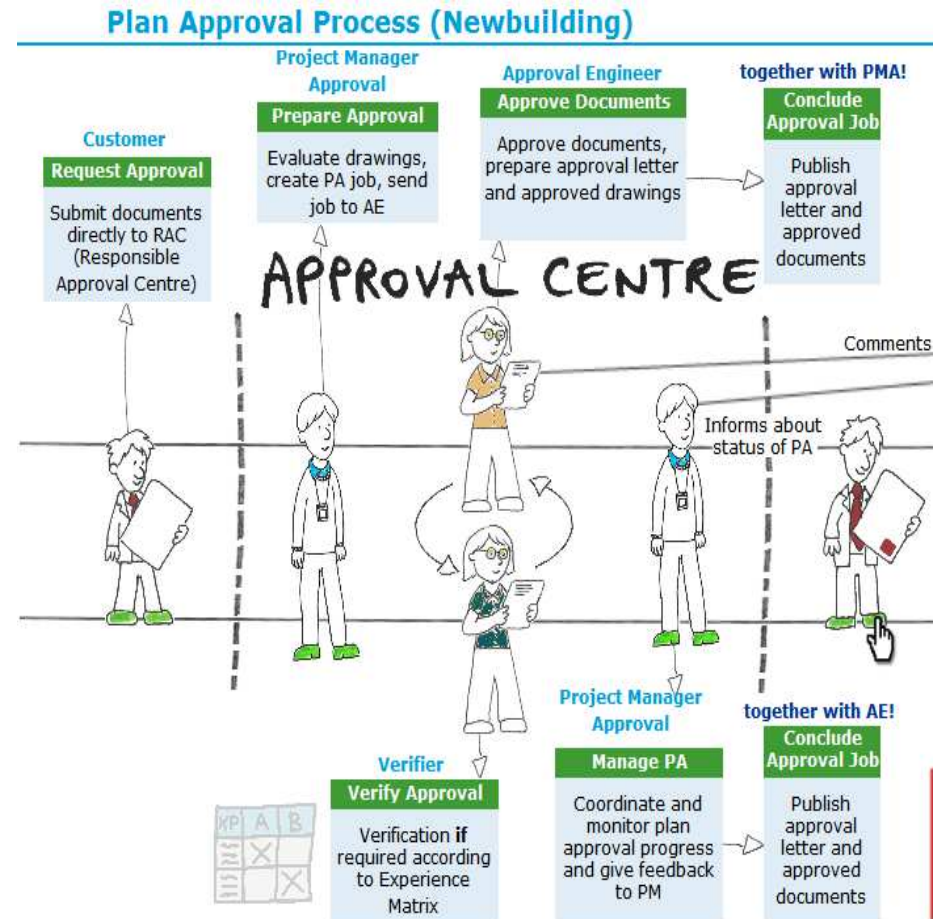
IGS life-cycle concept

IGS is a web based software application which enables shipowners to manage their IHMs for the fleet during the life cycle of the ships. IGS provides integrated and transparent IHM processing for shipyards and hazmat experts.



IHM approval process and survey

- ❑ We use Nauticus Production System (NPS) and IHM Green Server (IGS)
- ❑ VSCP, IHM and HazMat Report will be checked and approved after the HazMat Expert has finished his work and submitted the documents to DNV GL
- ❑ Initial IHM Class survey will be conducted after the documents are approved and stamped
- ❑ The Class surveyor uses unified checklists for the on-board verification



Document requirements for IHM approval

Object	Document type	Info code
Material use	M080 - Inventory of hazardous materials (IHM)	AP
	Z250 – procedure, maintenance manual, update form for IHM	FI
	M120 – hazardous material location plan	FI
	Z268 – assessment report, hazmat inspection report incl. Scope, methodology, lab accreditation, lab results, hazmat amount estimations, expert qualification, findings and conclusions	FI
	M085 – hazardous material documentation, visual sampling check plan, hazardous substance list (13/15)	FI
	Z281 – vessel certificate, AFS certificate	FI
	Z010 – General arrangement plan	FI
	Z100 – document as specified in the IHM guidelines Appendix 5, chapter 2.1	FI



Green Passport

- ❑ The previous "Green Passport" as referred to in the IMO Guidelines on Ship Recycling (Resolution A.962(23)), differs from the IHM as referred to in the Convention. The main differences are that the Convention includes enforcement tools such as surveys, sampling, certificates and port state control.
- ❑ New control measures are in place for; asbestos, PCB, ozone depleting substances and antifouling compounds (ref. Appendix 1 SR/CONF/45)) and an initial survey is required before a Statement of Compliance is issued.
- ❑ There are also changes to the hazardous materials to be declared (ref Appendix 1 and 2 SR/CONF/45), that were not part of Resolution A.962(23).
- ❑ In the industry, Green Passport is used as a common term for both old (A.962(23)) and new (MEPC.269(68)) standard.

GREEN PASSPORT (GP) IMO Resolution A.962(23)	Inventory of Hazardous Materials (IHM) acc. MEPC 269(68)
<ul style="list-style-type: none">▪ List of all kind of wastes acc. to "Basel Convention"▪ Listing of wastes by Shipyard and Ship-owner based on best knowledge	<ul style="list-style-type: none">▪ Specific pattern for NB + FiS▪ Table A, B, C, D▪ Persistent definition of threshold levels▪ Legal statement by MDs and SDoCs of suppliers▪ RO - certified, verified, surveyed▪ Flag State / PSC - Control

Certification and reporting

- ❑ DNV GL checks and approves the ICIHM Part I
- ❑ Following successful completion of initial survey;
 - Preparation of the DNV GL survey statement
 - Issuance of the International Certificate on In (Statement of Compliance)
- ❑ ICIHM is valid for 5 years.
- ❑ ICIHM is sent to the ship-owner



DNV·GL
Statement No. 01 007 – 14 HM

**STATEMENT OF COMPLIANCE
ON INVENTORY OF HAZARDOUS MATERIALS**

The statement shall be supplemented by Part I of the Inventory of Hazardous Materials

Issued under the provisions of the
HONG KONG INTERNATIONAL CONVENTION FOR THE SAFE AND ENVIRONMENTALLY
SOUND RECYCLING OF SHIPS, 2009
(hereinafter referred to as 'the Convention')

by DNVGL

Name of Ship	District Number or Letters	Port of Registry	Gross Tonnage	IMO Number
JADRANA	DBNT	Monrovia	48338	9619385

Name and address of Shipowner	IMO registered owner identification number	IMO company identification number	Date of Construction
MS "JADRANA" Schiffahrtsgesellschaft mbH & Co. KG, Böckelallee 370, 22609 Hamburg, Germany	5182547	0030163	2014-02-15

Part I of the Inventory of Hazardous Materials identification/verification number: IHM 116001

Note: Part I of the Inventory of Hazardous Materials, as required by regulation 5 of the Annex to the Convention, is an essential part of the International Certificate on Inventory of Hazardous Materials and must always accompany the International Certificate on Inventory of Hazardous Materials. Part I of the Inventory of Hazardous Materials should be compiled on the basis of the standard format shown in the guidelines developed by the Organization.

THIS IS TO CERTIFY:

1. that the ship has been surveyed in accordance with regulation 10 of the Annex to the Convention, and
2. that survey shows that Part I of the Inventory of Hazardous Materials fully complies with the applicable requirements of the Convention.

This statement is valid until 2019-02-14
Completion date of survey on which this certificate is based: 2013-11-13
Issued at Hamburg, 2014-02-04

Gerhard Aubert Christian Franke

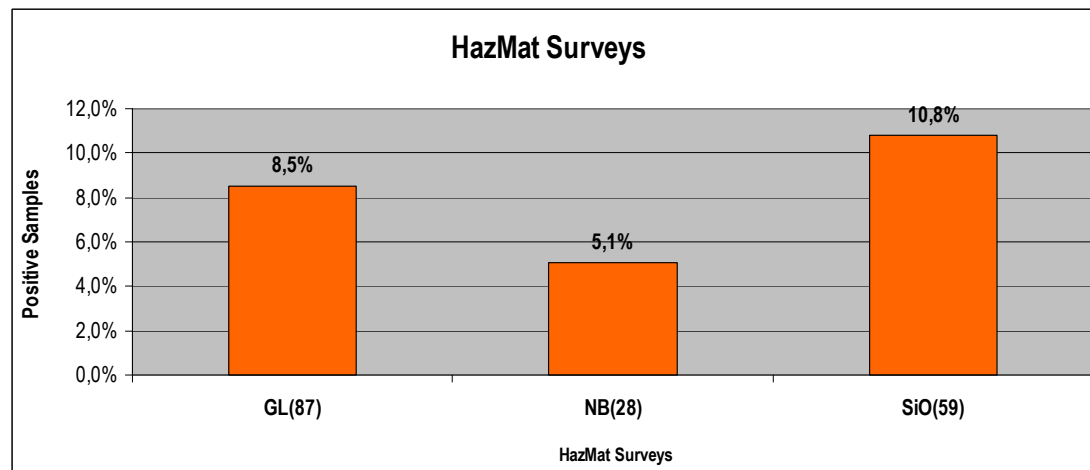
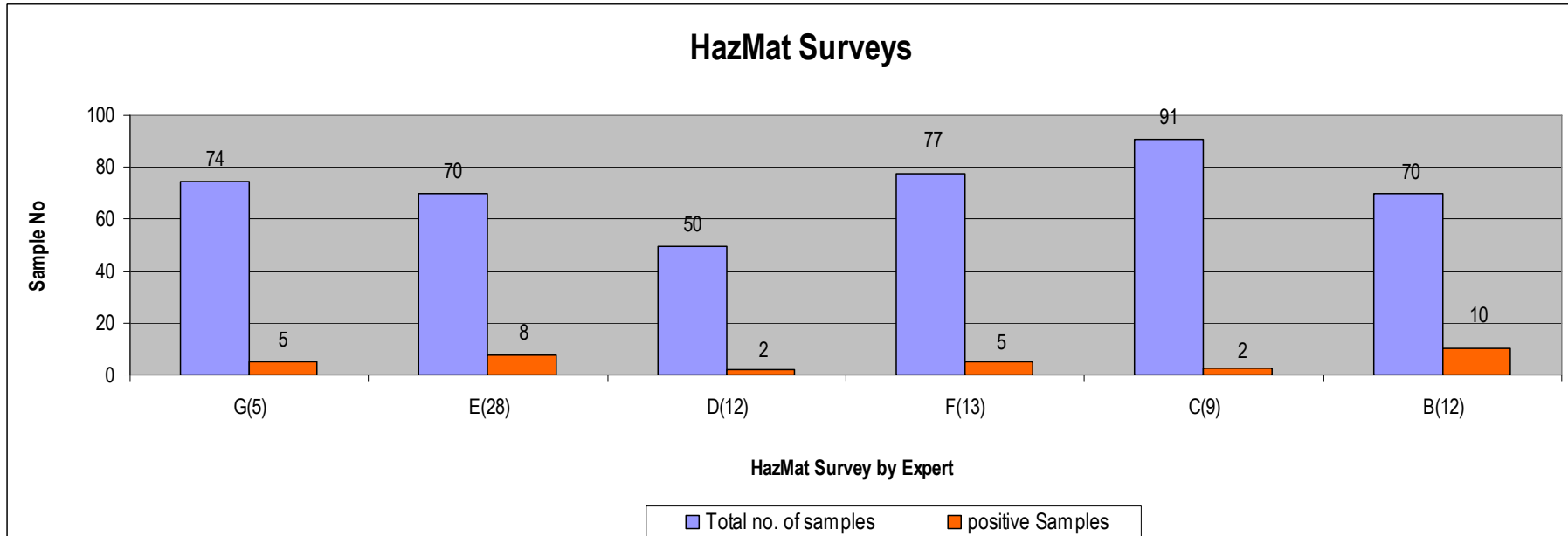
www.dnv.com Form No. 0001 (2015/01) Page 4 of 5

Port state control measures for EU SRR and HKC

- PSC inspections are limited to verifying that there is on board either an IC IHM or an IRRC. (EU SRR Art.11, HKC Art. 8)
 - If a ship does not carry a valid IHM or IRRC, or;
 - If there are clear grounds for believing that:
 - the condition of the ship or its equipment does not correspond substantially with the particulars of the certificate, and/or Part I of the IHM; or
 - there is no procedure implemented on board the ship for the maintenance of Part I of the IHM;
- a detailed inspection may be carried out taking into account relevant IMO guidelines.



Status of IHM business - HazMat report analysis



HazMat expert company

List of approved HazMat expert companies						
	1	2	3	4	5	6
Group	AoSS	AoSS	AoSS	AoSS	AoSS	AoSS
Approval/Cert.no	AOSS0000BDN	5958712 HH 3697212 HH	9547214 HH	3697412 HH	1144214 HH	1395615 HH
Company	Environmental Protection	Centre Testing International	Oesterbaal B.V.	Grieg Green AS	BK Ingenieurs B.V.	SGS-CSTC Standards Technical
Country	Greece	China	Netherlands	China	Netherlands	China
City	Piraeus	Shanghai	Rotterdam	Shanghai	Ijmuiden	Shanghai
Service	IHM preparation	IHM preparation and laboratory services	IHM preparation	IHM preparation	IHM preparation	Laboratory services
Contact	f.ploumitsakos@epe.gr ; i.kondylis@epe.gr	pengyong@cti-cert.com	clemens@oesterbaal.nl	allan.gao@grieg.no	Andrew.Cameron@bkgroup.nl	rocco.hua@sgs.com
	7	8	9	10	11	12
Group	AoSS	AoSS	AoSS	AoSS	AoSS	AoSS
Approval/Cert.no	5957912 HH	3775312 HH	AOSS0000BGA	AOSS0000BGC	AOSS0000BG1	AOSS0000C05
Company	Fortune Stone (FLZS) Co., Ltd.	Wilhelmsen Ship	AB - Dr. A. Berg GmbH	Maritime Asbestos Solution B.V.	Poly NDT Pte. Ltd.	Metizoft Asia Pte. Ltd.
Country	China	Malaysia	Germany	Netherlands	Singapore	Singapore
City	Shanghai	Kuala Lumpur	Hamburg	Rotterdam	Singapore	Singapore
Service	IHM preparation	IHM preparation	IHM preparation	IHM preparation	IHM preparation	IHM preparation
Contact	rf201010.flzs@hotmail.com	pick.power@wilhelmsen.com	berg@buero-drberg.de	joostal@ma-solutions.nl	rendi@cti-cert.com	clement.chang@metizoft.com

	13
Group	AoSS
Approval/Cert.no	AOSS0000CKB
Company	Suzhou FALAB Test Technology Co. Ltd.
Country	China
City	Suzhou
Service	Laboratory services
Contact	yang.chen@falab.cn



HazMat training and approval scheme



IHM approval by Class

Thanks for your active listening!

MARITIME

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[Recycling and HazMat](#)

www.dnvgl.com

SAFER, SMARTER, GREENER

