

Managing IHM-Information

in the
maritime Industry



GSR Services

Experts for compliance with HKC and EU-SRR in the maritime industry

- IHM development for new and existing ships
- IHM-Maintenance
- MD-Management & Development
- 1st Aid for incoming MD-requests
- Compliance & Improvement Projects
- Sustainable Ship Recycling Planning
- Trainings and Workshops

2021-08-30



Global IHM-Network

EU: Antwerp, Bremen, Bremerhaven, Cadix, Gibraltar,
Sijon, Hamburg, Piraeus, Tallinn
China: Shanghai
Chile: Caldera / Valparaiso
Egypt: Suez
Estonia: Tallinn
India: Alang / Bhavnagar
Malaysia: Kuala Lumpur
Singapore
South Korea: Busan
Turkey: Istanbul
UAE: Dubai
USA: Houston, New Orleans

Legislation

Ships \geq 500GT need to have a ship specific certified and maintained IHM – Part I if:

- EU flagged
- Visiting an EU-port (regardless of flag)

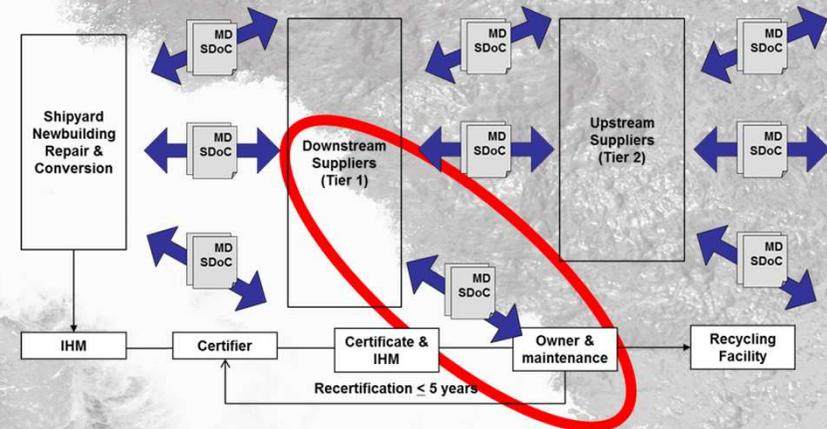
Shipowners have to

- Nominate a “Designated Person”
- Establish a maintenance system



Responsibilities for IHM – Part I

- IHM-Development:
 - Newbuilds: shipyard
 - Existing ships: owner
- IHM-Maintenance:
 - By owners
 - On hand of Supplier documents



Legislation for IHM Maintenance

EU-SRR Art. 5.6 & 12.4

4. The inventory of hazardous materials shall be properly maintained and updated throughout the operational life of the ship, reflecting new installations containing any hazardous materials referred to in Annex II and relevant changes in the structure and equipment of the ship, taking into account the exemptions and transitional arrangements applicable to those materials under international law.

HKC Reg. 5

3 Part I of the Inventory of Hazardous Materials shall be properly maintained and updated throughout the operational life of the ship, reflecting new installations containing Hazardous Materials listed in Annex 2 and relevant changes in ship structure and equipment, taking into account the exemptions and transitional arrangements applicable to those materials under international law.

EMSA IHM-Guidance Reg. 5.5.1

It should be noted that the IHM should be updated according to the requirements for new ships as stipulated in the relevant provisions of the IMO Guidelines and in chapter 5 of this guidance. The respective changes to the IHM should be made accordingly. All the relevant documentation (e.g. MD and SDoC in case of machinery or equipment is added or replaced or sampling reports in case of random sampling) should be collected and maintained in the ship's archive.

IHM-Guidelines 4.3.2

4.3.2 Updating of part of the inventory in the event of new installation

If any machinery or equipment is added to, removed or replaced or the hull coating is renewed, part of the inventory should be updated according to the requirements for new ships as stipulated in paragraphs 4.1.2 to 4.1.4. Updating is not required if identical parts or coatings are installed or applied.

IHM-Guidelines 5.2

4.2 to provide related documents as required for the survey or sale of the ship.

IHM-Guidelines 6.1

6.1 General

Suppliers to the shipbuilding industry should identify and declare whether or not the materials listed in table A or table B are present above the threshold value specified in appendix 1 of these guidelines. However, this provision does not apply to chemicals which do not constitute a part of the finished product.

= Tracking changes of the Hazardous Materials onboard

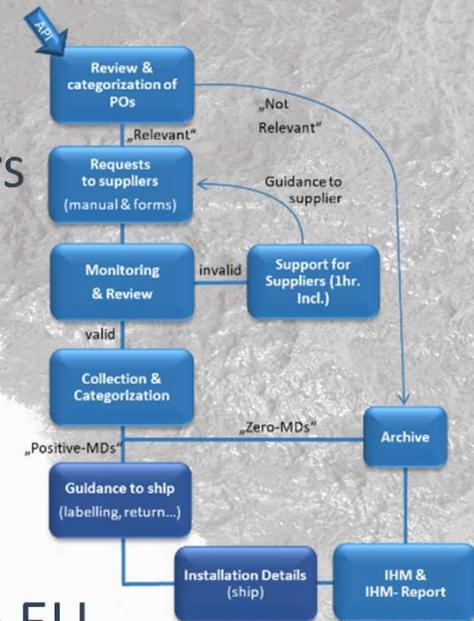
IHM Maintenance

- Tracking of changes of Hazardous Materials in structure and equipment of a ship ...
... on hand of documents from suppliers
... for the whole life of a ship.
- Validity of IHM as long as the ship exists
- Validity of supplier documents as long as product exists onboard



Maintenance-Process

- Requesting documents from relevant suppliers
- Review of documents received
- Tracking of Hazardous materials onboard
- Making changes in certified IHM (copy)
- Updating of IHM-Maintenance report
- Provision of documents for PSC-inspections in EU
- Re-certification of IHM ≤ 5 years by class / flag

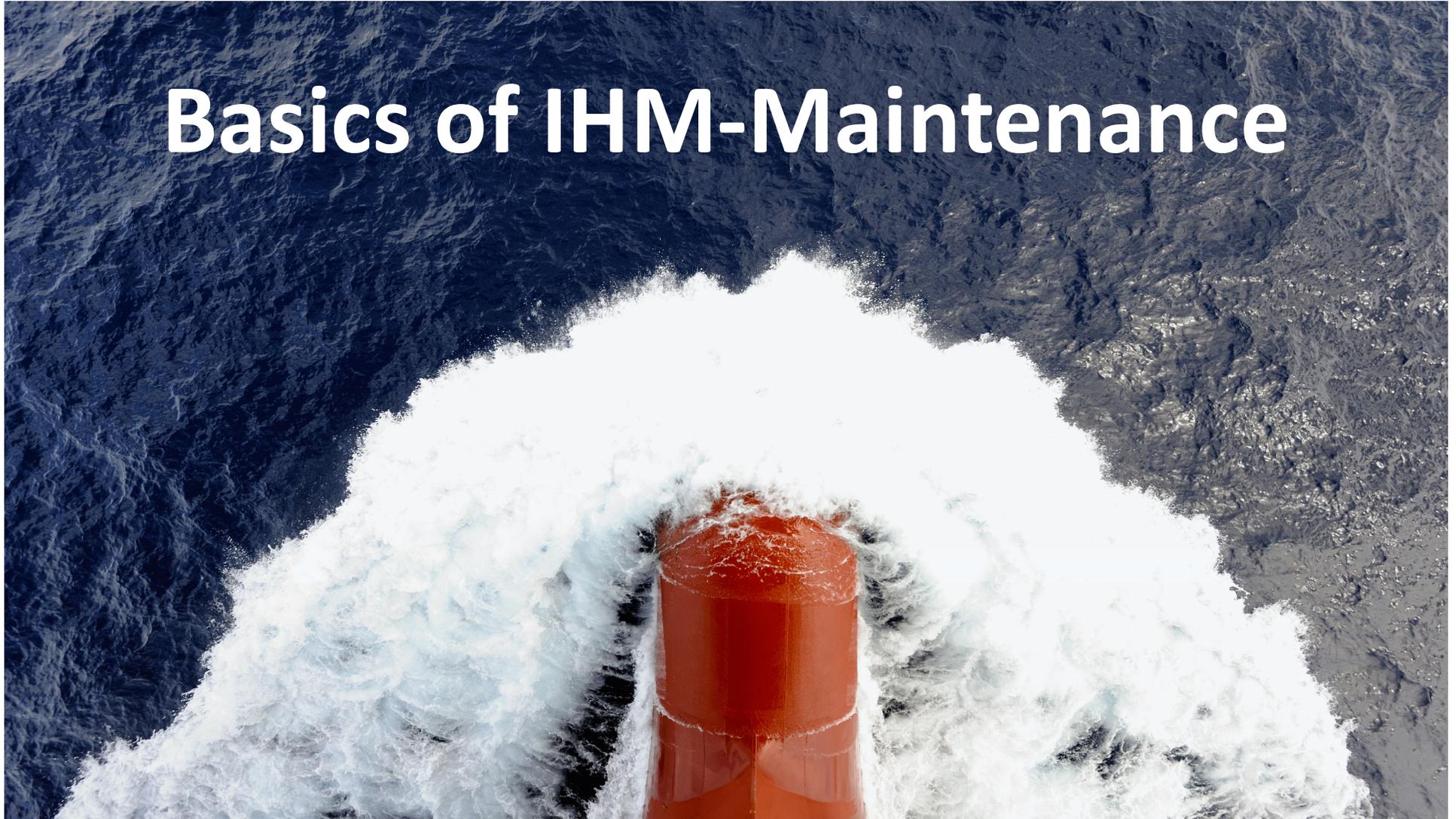


Incompliances & Penalties

- IHM-incompliance of ships:
 - no IHM
 - not certified or re-certified
 - IHM not reflecting materials onboard
 - not properly maintained
 - no procedure for maintenance
- Penalties
 - France: 100k EUR or 1-year imprisonment (Code des Transports, Art. L5242-9-2)
 - UK: “financial penalty” and up to 2 years imprisonment (Ship Recycling Regulation 2018, Reg. 11)
 - Norway: “fines” or imprisonment not exceeding two years (Ship Safety and Security Act, Sec. 33 and 64)



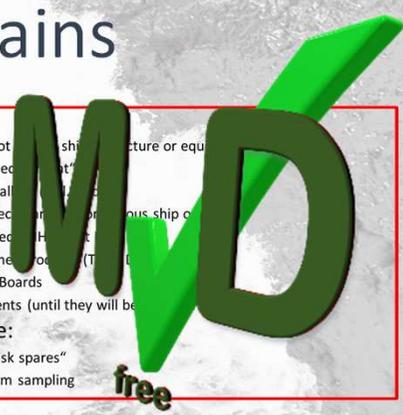
Basics of IHM-Maintenance



Basics of IHM-Compliance

- Knowledge required:
 - Scope of IHM-maintenance & legal aspects
 - Utilization of exclusions is key to efficiency
 - Compliance data exchange principles
 - Ensuring liabilities throughout supply chains

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- Exclusions:
 - Components not in ship's structure or equipment
 - „Loosely fitted equipment“
 - Metal & metal alloys
 - Components necessary for previous ship operation
 - Items to be listed in HIR
 - Regular consumer goods (TV, etc.)
 - Printed Circuit Boards
 - Spare components (until they will be used)
 - Good practice:
 - include „high-risk spares“
 - Targeted-random sampling

Workload vs. Exclusions

- IHM-scope and exclusions on all levels ensures efficient compliance
 - Purchaser – Supplier
 - Supplier – Sub-Supplier
 - Manufacturer - Supplier



Item	Quantity
1.000.000.000	1.000.000
1.000.000.001	1.000.000
1.000.000.002	1.000.000
1.000.000.003	1.000.000
1.000.000.004	1.000.000
1.000.000.005	1.000.000
1.000.000.006	1.000.000
1.000.000.007	1.000.000
1.000.000.008	1.000.000
1.000.000.009	1.000.000
1.000.000.010	1.000.000
1.000.000.011	1.000.000
1.000.000.012	1.000.000
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1.000.000.014	1.000.000
1.000.000.015	1.000.000
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1.000.000.097	1.000.000
1.000.000.098	1.000.000
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1.000.000.100	1.000.000

No selection = no performance!



An aerial, high-angle photograph of a ship's wake in the ocean. The water is dark grey, and the wake is a bright white, turbulent trail of water that curves from the bottom left towards the top right. The text of the slide is overlaid on the left side of the image.

A comparison

- 1 Owner

- Same ship type
- Same period

- 2 different Service Suppliers

Difference in numbers



Order Items for ship	4.841	
MD-Requests sent to suppliers	2.893 (59,8%)	228 (4,7%)

Difference in numbers



Unnecessary MD-Requests	2.665	0
MDs collected	36 (relevant = 4)	226 (2 missing)
Compliance Level	1,76%	<u>99,42%</u>

Conclusions



Conclusions

- Selection of PO-items & support = main efficiency factor
 - IHM Experts are not Maintenance Specialists
- All ships need documents from suppliers
- Penalties and risks are severe
- Digitisation only way to manage data volumes
- Be aware of the many shiny solutions!

IHM Expert



Maintenance Specialist

Conclusions

- Compliance Data Management is a new for the industry
- Constant efforts are required
 - Suppliers, shipyards, shipowners / crew
- No common understanding and approach established
- Selective approach essential for compliance
- Suppliers struggle most due to avoidable workload caused by „IHM Experts“

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Responsibility. In Business.

Thank you!



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Contact

GSR Services GmbH

Auf dem Brink 1

21394 Südergellersen

www.gsr-services.com

henning.gramann@gsr-services.com

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IHM-KPIs



Our KPIs for IHM-Maintenance

- Average of relevant order items: 4,7%
- Average „Positive MDs“: ~ 1 to 2%
 - Only 0.05% to 0.09% of items to be tracked by crew onboard!
- Our clients' advantages
 - Clients risk & liability: for onboard activities only
 - True costs = service fee + clients time + risk

The magic behind every outstanding performance is always found in the smallest of details

Gary Ryan



Our experience in numbers

- IHMs developed: 600+
- IHM maintenance projects: 400+
- IHM-categorized Line Items: 65.000+ (supplier catalogues)
- Evaluated Line Items (IHM-Maintenance): 1.8mio+
- Automatic categorization rules: 2.000+

- Certified IHM Experts: 52 (globally)
- IHM Experts trained: 100+
- In-house IHM Maintenance Specialists: 8
- Claims: 0
- Years of experience: 35+

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