



Ensuring Maritime Compliance

Henning Gramann's Vision for GSR Services



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Join us in an insightful conversation with Henning Gramann, Managing Owner of GSR Services, as he discusses the complexities and challenges of IHM compliance in the maritime industry. Henning sheds light on the strategic innovations and technological advancements that GSR Services employs to streamline IHM maintenance, enhance compliance accuracy, and minimise risks for shipowners. He also offers valuable advice for companies navigating IHM compliance and shares his vision for the future of sustainable practices in maritime operations. Discover how GSR Services is leading the way in ensuring safe and environmentally sound ship recycling while promoting industry-wide improvements and collaboration.

IHM Compliance and Challenges:

Given the complexities of IHM compliance, what are the most significant challenges that shipowners and suppliers face today in maintaining compliance?

Generally, the complexities are not well understood. If IHMs would help save fuel or reduce emissions, it would be taken much more seriously and time would be spent digesting the rules and required actions.

Since the end of 2020, a certified and maintained Inventory of Hazardous Materials (IHM) contained in the structure and equipment of ships (IHM Part I) is required for EU-flagged ships above 500GT and all ships regardless of flag when visiting an EU-port. In the summer of 2025, the International Hong Kong Convention on safe and environmentally sound recycling of ships of IMO will enter into force, affecting more ships with mostly similar requirements than already with the EU regulation.



IHM is generally a quite exotic topic in the maritime industry. While getting the IHM developed and initially certified is a single effort, the maintenance of IHM applies for the entire ship's life. This is often seen as a "necessary evil" without adding value. Various inconsistent practices for development and maintenance of IHMs have developed, also by service suppliers. The maintenance is sometimes even totally forgotten or ignored.

Due to lack of control, such incompliances remain undetected so far! The IHM is also to be re-certified at least every five years and as most have been developed in 2019 and 2020, the wave of re-certifications is coming. It will be interesting to see what will happen if an IHM is found not to have been properly maintained.

The core aim of IHMs is to support the planning of safe and environmentally sound recycling of ships by the recycler. If the IHM is faulty, incomplete, or too vague, either due to poor development or maintenance, this goal can't be achieved and potentially even more risks are created than without any IHM. The IHM is not just a report but a technical file belonging to the ship. That means if it is of poor quality, substantial claims may be initiated against the seller by future owners or recyclers besides hefty fines for detected IHM incompliances during Port State Control Inspections.

In addition, recycling planning is also not part of daily operations as ships have a long lifespan. As such, related activities, including the development of IHM Part 2 (hazardous wastes onboard) and Part 3 (hazardous materials in stores), often happen spontaneously and without a proper strategy at hand. The outcome is either a top-dollar/low-quality approach, using greenwashing solutions, or trying to do it right but risking falling short on considering all relevant aspects and evaluating the options at hand.

Strategies for Efficient IHM Maintenance:

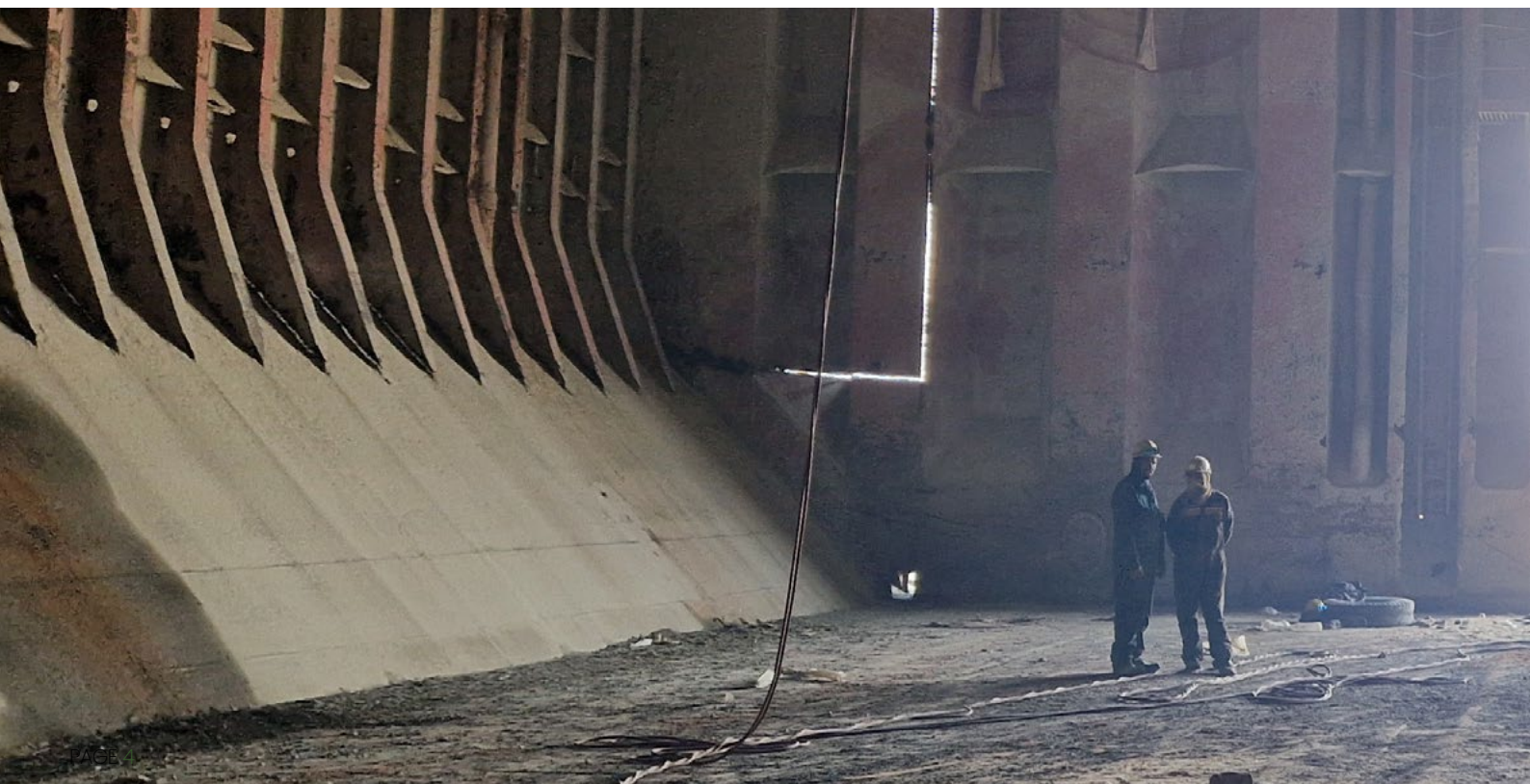
You've emphasised the need for efficient IHM maintenance. Can you elaborate on the strategies GSR Services employs to minimise risks and costs for shipowners while ensuring compliance?

Most importantly, we carefully review all order data of a ship to identify the "IHM-relevant order items." This creates a focus and prevents unnecessary workload for suppliers, shipboard crew, and service suppliers like us.

The challenge is that applicable rules are scattered across various regulations in the Hong Kong Convention, EU Ship Recycling Regulation, and IHM Guidelines of IMO. These regulations describe the general approach to "properly maintain and update the IHM Part I throughout the operational life, reflecting new installations and changes in structure and equipment containing hazardous materials of ships according to requirements for new ships." This means activities causing a change in hazardous materials onboard need to be documented. Related details, such as hazardous materials contained in a product (i.e. Table A & B of IHM Guidelines for non-EU flagged vessels, Annex 2 substances for EU-Vessels), must be provided by suppliers in the form of a general "Suppliers Declaration of Conformity" (SDoC) and product-specific "Material Declarations."

In addition to "causing a change," various exclusions apply, such as loosely fitted items, metal and metal alloys, consumables, identical spare parts and coatings, items falling under the scope of IHM Part 2 or 3 (Table C of IHM Guidelines), and regular consumer products (Table D of IHM Guidelines) like TV sets, light bulbs, and furniture.

Due to these exclusion rules, it must be emphasised that always an order item counts, not an entire order, and the entire process has to reflect this. If an IHM Maintenance report only reflects PO numbers, it is cumbersome, and often nearly impossible, to identify the IHM-relevant order items contained therein. This causes an unacceptable level of intransparency, making recertification much more difficult and creating risks during PSC inspections. Unfortunately, this approach is more common than many think. As the wave of re-certifications is ahead of us, let's see how this will be handled.



Supplier documents are required for all “IHM-relevant order items,” including non-hazardous products. Even for IHM maintenance, only hazardous material-containing products need to be tracked onboard. Without supplier documents, neither presence nor absence of hazardous materials can be verified. Related Maintenance Reports of the IHM should reflect changes, including locations and quantities, and provide related documents for both “non-hazardous” and “hazardous order items.” Otherwise, there is no transparency, and potential questions about why an item is not reflected due to either the absence of hazardous materials or the lack of documents from the supplier will be more difficult to answer over time.

A proper understanding and application of these rules and exemptions to individual order items are necessary for efficient IHM maintenance. If done properly, less than 5% of all order items are identified as “relevant,” for which only about 1% of Material Declarations state that a hazardous material is contained and the item requires tracking onboard. All this must be reflected in reports, and the crew only needs to track 0.05% of all order items for IHM maintenance. Such performance cannot be achieved with half-hearted approaches or when a purchasing system only has generic rules for categorisation integrated.

What we see is that suppliers are first confronted with many unnecessary requests, making it more difficult to maintain focus. Despite this, the required information is not always at hand and needs to be gathered from their own supply chain. Sub-suppliers might not be focused on the maritime market or even aware that their products are sold to ships. As such, maritime requirements like Material Declarations (MDs) are unknown to them, and they are unprepared or unwilling to spend time and accept liabilities for this specific market. Consequently, related tasks can be as time-consuming for maritime suppliers as IHM maintenance is for ships.

Besides unnecessary requests creating more efforts and costs for all, they also increase the risk of documentation gaps. Even when artificially created by various shortcomings, they must be documented black on white in the reports, a great source for questions and trouble during recertification and PSC inspections.

GSR puts a lot of effort into careful relevancy checks, smooth processes, and supportive follow-up activities. Our motto is that “we’re all rowing in one boat,” and it doesn’t make sense to make compliance aspects bigger or more cumbersome than necessary. Smart solutions and the right attitude help all of us, reduce risks, and save costs for everyone.



Role of Technology in IHM Maintenance:

How does GSR Services incorporate technology and digital tools, such as NautilusLog, to streamline IHM maintenance and enhance the accuracy of compliance documentation?

IHMs are to be developed prior to the delivery of a ship by the building yard using supplier documents. After delivery, IHM maintenance is required for the entire operational life. This means tens of thousands of individual files must be collected, managed, kept, and described items tracked (new installations, relocations, removals), with the whole process certified at least every five years. This alone makes it clear that an Excel-based approach will not be sufficient.

On top of that, crucial tasks like evaluating order items, exchange with suppliers, sending reminders, controlling provided documents, keeping them available, following up onboard, updating IHM, and transparent maintenance reporting including item-specific histories make it obvious that only dedicated software can keep this task manageable. Updated IHMs must also be available in case of a PSC inspection. Manually, this task would be nearly impossible or at least extremely time-consuming and resource-intensive.

At GSR, we started looking into all these aspects in 2006 and developed the necessary processes for efficiently fulfilling the requirements, at that time still in the drafting stage at IMO. The managing owner was directly involved in the related developments at IMO and is familiar not only with the outcomes in writing but also with the discussions and considerations behind the rules. Seven years ago, GSR started collaborating with the startup NautilusLog, and all experiences have been incorporated into their software solution. We continue to learn and implement further improvements in the system to enhance efficiency.



Most order data from clients is automatically uploaded into the tool via API connections; others are manually imported. Each order item is cross-checked with the IMPA catalogue, which we have fully categorised, plus our more than 4,500 word rules carefully developed over the years. Whatever item is not categorised automatically is then managed manually by us. The results of categorisations are recorded, and for relevant order items, a request is sent out to the related supplier. GSR Services and Sinwa Singapore also joined hands to develop a freely accessible categorisation tool for order items to ease the process for all involved.

Each supplier gets an individual landing page showing all open requests, where documents can easily be uploaded. Once this is done, a task appears in the system for us at GSR to review the document. If found to be inaccurate, it is not accepted, and the supplier is notified with our individual message explaining the reasons for rejection. If the document is accepted, parameters are set regarding the presence of hazardous materials in the specific product. If absent, the document is archived; if present, the system generates a task for the crew to label and track the item by specifying locations and quantities stored or installed. Then, a new or modified entry in the ship-specific IHM and maintenance report is generated.

An up to date maintenance report can be generated on demand 24/7 with a simple click in the system by any of the registered users. We suggest finishing all tasks and generating a report prior to arrival at a port. As we don't charge for this, it comes at no extra cost, and ships are always well prepared for inspections and audits.



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Green Ship Recycling

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Bansal Group, a trailblazer in the ship recycling industry, operates two state-of-the-art facilities in Alang: Bansal Ship Breakers Private Limited and Bansal Ship Recyclers LLP. Under the visionary leadership of Chairman Kapoorchand Bansal and his two sons, Rubal Bansal and Bharat Bansal, the group has set new benchmarks for sustainability and responsibility in ship recycling.

Their foresight and dedication to environmental stewardship have positioned Bansal Group as a leader in the industry. They are committed to sustainable practices, ensuring that the ship recycling process minimises environmental impact while maximising resource recovery. By embracing the highest Health, Safety, and Environmental (HSE) standards, they prioritise the well-being of their workforce and the surrounding community.

They strictly adhere to international standards, including the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships. This commitment ensures that all operations are conducted with the utmost regard for environmental protection and worker safety. Moreover, Bansal Group places a strong emphasis on Social Accountability and the well-being of their workers. They provide comprehensive training programs in Inventory of Hazardous Materials (IHM) management, asbestos abatement, and other critical safety practices. The group boasts an in-house IHM expert to ensure the highest standards of safety and compliance.

Recognising the importance of worker welfare, Bansal Group is constructing a labour housing quarter for over 300 workers. This facility will include all essential amenities, addressing the living conditions of migrant workers who come from various parts of India to work in the ship recycling industry. Bansal Group is also renowned for their Corporate Social Responsibility (CSR) activities in the locality of Bhavnagar, contributing to the community's development and well-being.

Kapoorchand Bansal's leadership, combined with the innovative approaches of Rubal and Bharat Bansal, has established Bansal Group as a beacon of responsible ship recycling. Their unwavering commitment to sustainability, safety, and social responsibility sets them apart as industry pioneers, leading the way towards a greener and safer future for ship recycling in Alang.

JRD is a ship recycling yard in India certified by Class NK and LR as compliant to both HKC and EU SRR. The yard has always strived to take the lead in creating innovative solutions to the increasingly demanding sustainability requirements of ship recycling in India.

JRD was the first yard to have a 100% impermeable floor for all the ship recycling activities taking place in the facility. They were again the first yard to create an App which would record in real time all HSE parameters and could be accessed by the ship-owners/managers from their bases itself.

The current photograph showcases another one of a kind initiative taken by JRD. This is a double layered steel structure cladding the entire intertidal zone of the facility (for JRD vessels) thus ensuring all the recycling activity done onboard the vessel is carried out on this impermeable steel structure. This ensures easy capture and thus minimal possibility of any debris, slag or any other material to escape into the intertidal zone or the sea.

Such sustainability initiatives are fuelled by JRD's unique perspective; they do not consider themselves as ship recyclers selling the recycled materials to make profits but as providers of quality ship recycling services to owners who demand such services.



State of the Art Ship Recycling Yard

The Ship Recycling Industry has moved from buying a ship, recycling at the lowest possible cost, and then selling the materials at a higher cost TO providing world-class Ship Recycling Services to owners and regulators who demand such services.

This is a paradigm shift and we intend to remain in the forefront of this shift.

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Impact of Incorrect Material Declarations (MDs):

What are the potential consequences for shipowners and suppliers when incorrect MDs are submitted, and how does GSR Services work to prevent these errors?

If suppliers do not take proper care when developing and providing MDs to their customers, they can be held liable for false information for as long as the product exists onboard. That is a long time, and liability means that any subsequent damage caused by false documents, for instance, the presence of a heavy metal in a product, must be compensated for. Over time, ship-specific IHMs become more inaccurate if suppliers fail to perform their duties. As mentioned, an IHM is a technical file and may lead to disputes between buyers and sellers of ships when it is not accurate. It is also important to remember that the aim of IHMs is to support the planning of safe and environmentally sound recycling of ships. The risks and potential consequences are most significant in this context.

Considering the risks involved, we strongly warn against using converter tools that transfer POs into separate MDs for each order item contained or signing “nothing contained-MDs” provided as attachments to the requests sent to suppliers. Such approaches only increase the risks of false MDs, even though they might seem like a convenient quick fix. Any supplier who wants to remain in the market should avoid these practices. Instead, and when known well, other regulations and standards can be utilised for evaluating the presence and absence of hazardous materials in products.

GSR Services works diligently to prevent these errors by ensuring suppliers understand their obligations and the importance of accurate MDs. We provide clear guidance and individual support to suppliers, emphasising the critical role that MDs play in maintaining accurate IHMs. Our processes include detailed checks and follow-ups to verify the information provided in MDs. By fostering a thorough and transparent approach, we help minimise the risks of incorrect MDs and ensure that all parties involved can rely on the accuracy of the IHM documentation.



Education and Support for Suppliers:

Given the intricate requirements of IHM maintenance, what support and education does GSR Services provide to suppliers to ensure they understand and meet these obligations?

We achieve a high return ratio of MDs on our requests, often well above 90%. Besides maintaining a clear focus on required documents, we also provide a hands-on manual on the landing pages for suppliers. Frequently, we offer workshops and webinars, including Q&A sessions, to raise awareness and find individual solutions within the legal framework. Additionally, GSR always provides personal support of up to one hour free of charge to all suppliers of its clients via phone, emails, and video calls. We also run a YouTube channel with webinars on demand.

We strive for cooperation and raising awareness, as this helps to lessen related efforts for all and increase compliance throughout the industry. This approach is far more helpful than threatening suppliers with reporting their “uncooperative behaviour” to their customers. As we also support suppliers by taking care of their MD management, we have experienced these challenges firsthand. In cases where we reject MD requests from shipowners or their service suppliers when supporting suppliers for items excluded from IHM maintenance by the rules, we inform the requester with a clear justification.

In instances where service suppliers do not understand the rules properly or interpret them differently, we have been pressurised and accused of bending the rules. This has even led to suppliers being reported as non-compliant to their customers risking damage to their reputation. In such cases, we had to approach the shipowner the service supplier was working for to clarify the situation and elaborate the rules.

Improvements in Industry Practices:

You’ve noted industry practices that complicate IHM maintenance. What improvements would you like to see implemented across the industry to address these issues?

A significant step towards unified processing and understanding are the industry guidelines for shipowners and suppliers on IHM maintenance. These guidelines have been developed by major associations such as ICS, BIMCO, ISSA, and others. Many of the same individuals active in the working group on ship recycling at IMO, which developed the IHM Guidelines and the Hong Kong Convention, also contributed to these industry guidelines.

When the associations discussed and reviewed current performance in regards to IHM maintenance, they jointly decided to develop industry guidance due to the immense demand and confusion. Henning Gramann of GSR Services participated in this development and was asked to share its process description. After a detailed review by the experts involved, including various lawyers from the associations, our process was fully incorporated. As such our understanding and practices have been independently verified and found to be fully compliant.

The most significant improvements can be achieved when all stakeholders – shipowners, their service suppliers, ship suppliers, as well as Port State Control (PSC) and classification societies – carefully consider the industry guidance and act in compliance with it. This collective adherence will help streamline processes, reduce confusion, and ensure a higher standard of IHM maintenance across the industry.

Compliance Data Management Approach:

Could you explain the concept of 'Compliance Data Management' and how it differs from the expertise traditionally found among IHM experts?

First of all, IHM experts are often class-approved specialists who go onboard ships to investigate the presence of hazardous materials. This involves visual checks and sampling. However, this approach is not suitable for newbuildings or IHM maintenance. As such, the related class approvals do not cover IHM maintenance, even though some claim to be approved for this as well.

Compliance data management, on the other hand, involves a transparent and traceable exchange of product data within supply chains, ideally down to raw materials, and the aggregation of such data for finished products. These products can be as complex as cars, electronics, medical equipment, and ships. The goal is to ensure traceability and automatic updates throughout entire supply chains, maintaining transparency and assigning related liabilities for those providing the information.

Everyone involved is responsible only for the information they provide and combine, not for the details from others. This approach ensures that data is managed in a way that supports compliance with regulations and maintains the integrity of the information throughout the supply chain, differing significantly from the traditional methods used by IHM experts.



Partnership and Collaboration in Recycling:

Can you discuss a specific case where GSR Services successfully facilitated compliant ship recycling, and what were the key factors that contributed to this success?

Besides a few projects, there are two ships and their owners worth highlighting. With the owners of a New Zealand Navy Tanker and a Campaign Vessel of Greenpeace, we jointly developed their ship recycling policies and tender requirements. We identified ship-specific hazardous materials and set requirements for the recycling of their assets. Interested ship recyclers were requested to prove their capabilities to comply with international and individual requirements and show willingness to accommodate individual criteria. These facilities were then inspected by GSR experts.

The outcome of the due diligence inspection was a rating that ensured commercial aspects could not compensate for shortcomings in quality. We accompanied contract negotiations, planned the last voyage including certifications, and then supervised the entire process from the arrival of the ships at the ship recycling facilities until the last disposal of wastes. The Navy vessel was recycled in India, marking the first-ever recycling under full compliance with the Basel Convention, while the Greenpeace vessel was recycled in Spain under EU-rules. Both projects ensured full traceability of all materials and were completed without any pollution, accidents, or incidents. It's also important to mention the many projects we have carried out with ship recyclers since 2013. We were the first to achieve full compliance with the Hong Kong Convention for ship recyclers in India. Such facilities look and operate very differently from what others claim is common "beaching." Over the years, we have worked with more than 60 ship recyclers in various countries, helping them to substantially upgrade their practices.



Future of IHM Practices:

Looking forward, how do you see IHM practices evolving in the maritime industry, especially with potential new regulations and global standards?

The IHM, including its maintenance, is sometimes interpreted as a means to support material circularity—in other words, to increase the recycling of valuable materials. This interpretation is not entirely accurate as it only covers one aspect of material circularity, or Cradle2Cradle. As such, we challenge this interpretation.

What is true is that the basics, like gathering and tracking material information over the lifecycle of a ship, are helpful, but the scope of IHMs needs to be extensively widened. When properly combining material compliance data exchange and tracking for ships, not only Cradle2Cradle but also sufficient ESG-Reporting and compliance with CSRD can be achieved. Today, we often see only partial reporting, which is far from comprehensive enough to meet the new legal requirements in the EU and UK.

In other words, extended data processing can be utilised for substituting SVHCs (substances of very high concern), ensuring the circulation of materials and resources, preventing downcycling and wastage, increasing the efficiency of using resources, and elevating sustainability. New requirements on sustainability reporting and financing are based to a very great extent on this data, and we are soon to release a complete service to support companies in their sustainability efforts and fulfilling related requirements.

This is a complex topic that could fill many further pages, so let's keep it short for now.

Advice for navigating IHM Compliance:

For companies struggling with IHM compliance, what practical steps can they take to improve their processes, and how can engaging with a service like from GSR Services benefit them?

As a first step, the Industry Guidance is great for clarifying the required steps, roles, and responsibilities of the different stakeholders, including relevancy checks. Seeking advice from classification societies may not be as helpful, as many are not necessarily better informed.

Various service suppliers offer different approaches, and their methods should be evaluated. For example, check whether they report on an order item-level, provide a converter tool, or pre-filled documents and the percentage of "IHM-relevant order items" is an easy KPI to consider. It's also enlightening to ask suppliers about their experiences with the various service suppliers in terms of total costs, not just the service fees should be compared but also external costs and efforts generated for the owner and crew is important.

Additionally, we at GSR Services are always happy to share our information and experience through platforms like YouTube, our website, LinkedIn, and in articles like this one. Taking a few minutes to digest this information will help all to make the right decisions. Engaging with a service like from GSR Services can provide practical insights, ensure compliance, and streamline the entire IHM process, ultimately minimising risks and costs for shipowners and their supply chains.



Henning Gramann
Managing Owner

GSR Services specialises in comprehensive marine services, ensuring efficient and safe solutions for the maritime and energy sectors.



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