Germanischer Lloyd

nonstop

The magazine for customers and business partners

EDITION 1 · 2005

Cruise industry

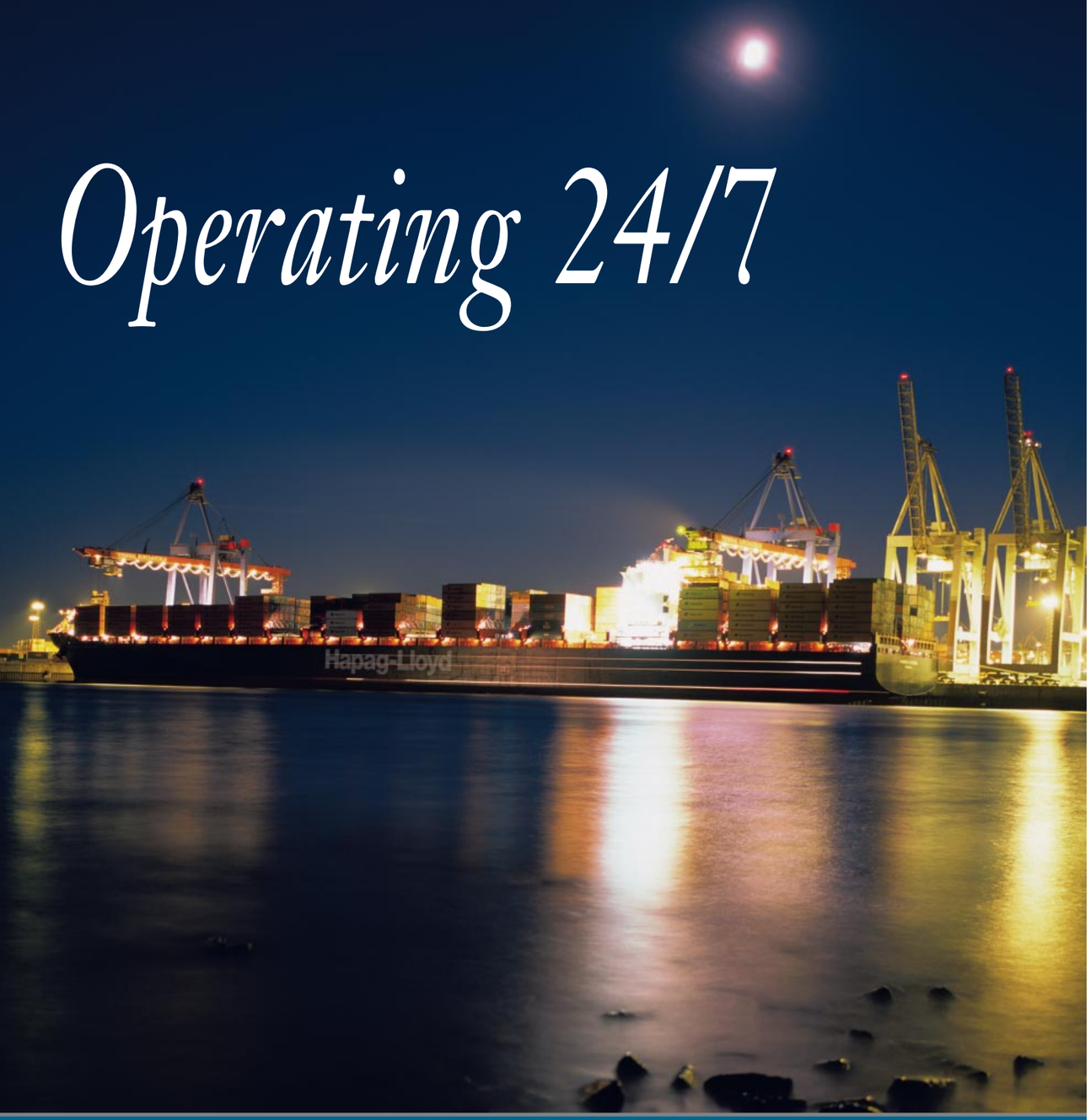
On the right course

JAPAN Shipbuilding industry remains competitive

CORROSION The never-ending battle

BENCHIJIGUA EXPRESS New trimaran sets the pace

Operating 24/7



24 hours a day, 7 days a week, all through a ship's life. An economically viable vessel has to stay in service day and night. That's what our motto "Operating 24/7" is all about.

PHOTO: STEPHANIE BRINKKOETTER

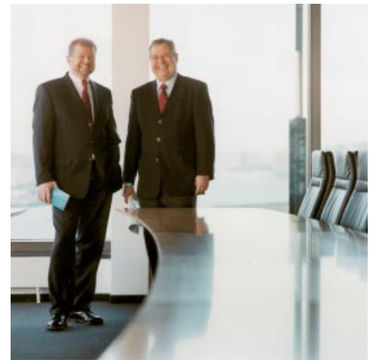
Germanischer Lloyd Aktiengesellschaft
Vorsetzen 35 · 20459 Hamburg/Germany
Phone +49 40 36149-0 · Fax +49 40 36149-200
headoffice@gl-group.com · www.gl-group.com

Germanischer Lloyd
OPERATING 24/7

Dear Readers,

CUSTOMER MAGAZINES are one of the oldest instruments of corporate communication. Of late, they have also been enjoying increasing attention, as the growing number of titles amply demonstrates. For the companies publishing them, customer relations magazines offer a host of possibilities for communicating effectively "off the beaten track" of normal advertising.

As a classification society and technical supervisory organization with business relationships worldwide, we can offer a broad spectrum of technical topics that are unparalleled in their depth and diversity. So, to keep you even better informed and more up to date, we have revised our customer magazine. It will now be appearing four times a year. The texts are shorter and more incisive. And the new name fits our corporate philosophy of "Operating 24/7" perfectly.



Dr Hermann J. Klein (l.), Rainer Schöndube

For topical reasons, the first issue of "nonstop" is dedicated to a ship type that meets the interest of holiday-makers everywhere: cruise liners. At present, Germanischer Lloyd is providing technical support at the Meyer Werft in Papenburg for two new AIDA cruise ships with the mysterious working title of "Sphinx". For our naval architects, this is not just another project; it has generated a certain air of excitement. They will now immerse themselves for months in all those design details that make vacations on the ocean wave an experience to treasure. Starting with the plan approval, through construction supervision and up to the acceptance trial trip, a team of experts is accompanying the entire technical process of creating a dream boat. The most modern forecasting methods are used to register, evaluate and compensate for all the influences which could impair the well-being of the passengers, such as engine noise and vibration. With the class notation "Harmony Class" and the "Environmental Passport", we demonstrate our claim to quality. It is our declared goal that all this effort must pay off: for the yard, for the shipowner and of course for the passengers.

The Seatrade Cruise Trade Show in Miami offers an excellent opportunity for highlighting our technical expertise in the construction of cruise liners. And we show our Industrial Services customers what GL has to offer in matters concerning risk minimization management at both the Middle East Oil Show in Bahrain and at the Gastech in Bilbao. All three exhibitions make March the trade show month of the year. Where can we welcome you to GL?

Yours sincerely,

Dr Hermann J. Klein
Executive Board Member

Rainer Schöndube
Executive Board Member

IMPRINT nonstop Issue No. 1/2005, March 2005 **Circulation** nonstop is published four times a year with a printing run of 6,500 copies in German and 8,000 in English. **Published by** Germanischer Lloyd Aktiengesellschaft, Hamburg **Edited by** Germanischer Lloyd AG, Press and Information **Editor-in-chief** Dr Olaf Mager **Concept and production** Gordon Schacht, Büro für Kommunikationsdesign, Elbchaussee 19, D-22765 Hamburg **Authors of this issue** Eckhard-Herbert Arndt (EHA), Christian Göldenboog (CG), Christoph Hinz, Ministerialdirektor a.D. (CH), Lutz Laubenstein (LL), Dr Olaf Mager (OM), Stefanie Normann (SN), Simone Heidenreich (SH), Axel Stamm (AS) **Translations** Eugen Klaussner, Ritterhude **Publishing house** Selbstverlag des Germanischen Lloyd **Litho** Hamann+Kölling, Hamburg **Printed by** Gutenberg Beuys, Hanover. Printed on glossy white paper, woodfree, bleached without chlorine **Subscription service** This magazine can be obtained free of charge from pr@gl-group.com **Reprint** The contents may be reproduced free of charge, on condition that an acknowledgement is sent to Germanischer Lloyd. Please direct your correspondence to: Germanischer Lloyd AG, Press and Information, Postfach 11 16 06, D-20416 Hamburg, phone: +49 40 36149-4509, fax: +49 40 36149-250, e-mail: pr@gl-group.com

COVERPICTURE: GETTY IMAGES

News from Maritime Services

SAFETY

Kick-Off for EU Research Project SAFEDOR

Towards the middle of February, the most extensive research project thus far at Germanischer Lloyd commenced operations. The European Union is supporting SAFEDOR with 12 million euros. Apart from Germanischer Lloyd, more than 50 project partners from all sectors of the maritime industry in Europe are participating. Over the next four years, the project will conduct research into new forms of ship safety. The name SAFEDOR is made up of SAFE for safety, D for design, O for operation and R for regulation. SAFEDOR is directed by a management committee composed of representatives from shipping companies, yards, components manufacturers, flag states, classification societies, seafarers and universities. The project is chaired by Germanischer Lloyd.

Under the motto "Safety through Innovation", SAFEDOR is investigating risk-based ship design. Here the aim is to enhance the safety of ships and at the same time increase the international competitiveness of the European maritime industry. SAFEDOR signifies a radical departure from the traditional "Titanic" approach. Until now, ship casualties led to new rules and regulations for the prevention of accidents, or to modifications and extensions of existing provisions. In future, safety will, from the very start, be regarded as the dominant design objective which must be optimized for a certain structure, together with the usual properties such as speed, cargo or passenger capacity, and handling times. This integrated approach follows the method of quantitative risk assessment already used successfully in other industries. For further information: www.safedor.org, Dr Andreas Baumgart, SAFEDOR Project Manager, Phone +49 40 36149-668, abau@gl-group.com

EARLY WARNING SYSTEM

Shipboard Routing Assistance (SRA) Steaming Ahead

Parametric rolling is something the masters of large container ships fear like the devil hates holy water. The sudden and violent rocking between starboard and port can rapidly lead to injuries amongst the crew and appreciable damage to the cargo and the ship. With the innovative "Shipboard Routing Assistance" system, there is now a warning system to alert the bridge crew to dangerous wave-related situations in good time. GPS is used to check the ship's position, a bow-mounted radar observes the wave motions, and the present loading condition is used to compute the probability of sudden rolling for the ship, after which this is displayed on a monitor on the bridge. The shipping companies are showing great interest in this new early warning system, developed by Germanischer Lloyd. For further information: Helge Rathje, Head of the Hydromechanics Department, Phone: +49 40 36149-957, rje@gl-group.com

ATHENS

Tanker/Bulker Expert Team Starts Work in Athens

A distinct intensification of customer contacts is the top priority for the four new colleagues of the East Mediterranean Division in Piraeus. Greater closeness, together with faster service and comprehensive advice in all technical matters for new tankers and bulk carriers and also for ships already in operation, will be offered by the new expert team to our customers in the Mediterranean region. For further information: Agamemnon Apostolidis, Business Development Manager Area East Mediterranean, Phone +30 2104290373, apo@gl-group.com

PORT STATE CONTROL

Important Questions Raised

After the 2nd Joint Ministerial Conference on Port State Control (Paris and Tokyo Memoranda of Understanding) at the beginning of November 2004 in Vancouver had decided on a new direction for port state control, the specialist conference in London lasting several days in mid-February gave the maritime sector an initial platform for discussion. Peter Graaf, Deputy Head of the Flagstate Affairs Department, took part in the conference for Germanischer Lloyd. The objective of both international control regimes – namely to intensify the targeting of high-risk ships and to adapt the inspection density and intensity to the individual risk profile of each ship – is welcomed unanimously by GL. At present, a group of PSC experts under German management is developing a new inspection regime for the European port states. Apart from the flag and the class, the age and the business practices of the shipping company as well as results of the surveys play an important role for the risk profile of a ship. For further information: Peter Graaf, Deputy Head of the Flagstate Affairs Department/IACS, Phone +49 40 36149-189, grf@gl-group.com

GL Container Forum on the Topic of "Mega Carriers – Technical and Logistical Requirements"

What requirements do mega carriers pose for the technology and logistics of the handling facilities in the ports? This question is becoming more and more relevant, since the ordering behaviour of shipowners is continuing to shift in the direction of larger ships. More than 80 participants attended an event at the head office in which the current and future parameters for large container ships were presented in detail by Lutz Müller, Director of the Ship Technology Division. In keeping with the topic, the contribution by Dr Klaus Meyne, a propeller design engineer, was concerned with propeller design for container ships with extremely large propulsion power. This was followed by a paper delivered by the MAN executive director Dr Peter Sunn Pedersen on two-stroke engines with outputs of over 70 MW. The logistical challenge of the growing container ships for container terminals was examined by Heinrich Goller of Containerterminal Altenwerder using the port of Hamburg as an example. Simply lengthening the quay wall and increasing the container bridge capacity would not be enough to keep the lay times short and ensure rapid delivery and collection of the import and export containers. For further information and invitations to the forums: Hans Albers, Commercial Manager Central Europe, Phone +49 40 36149-5551, alr@gl-group.com

MELBOURNE

Technical Committee for Naval Ships Inaugurated

The classification of naval ships is increasingly in demand all over the world. To achieve a stronger focus for the area of "Naval Projects", Germanischer Lloyd inaugurated the Technical Committee for Naval Ships in Melbourne at the beginning of March. High-ranking navy representatives from Europe, Africa, Asia, South America and Australia took part in the inaugural meeting. In future, the committee will meet regularly once a year to discuss topical matters concerning rules and regulations for naval vessels. The Australian port city was chosen because frigates of the ANZAC class and other naval ships are being built to GL's new construction rules at the shipyard TENIX Pty. Ltd. in Williamstown. For further information: Lorenz Petersen, Head of the Naval Projects Department, Phone +49 40 36149-254, lpet@gl-group.com

PHOTOS: IMAREST, LAIF, GL (2)

FUEL TANKS

Regulations on Preventing Collision Damage

With the establishment of a working group, the IMO has reacted to the necessity of achieving better protection for fuel tanks against damage by collision. The correspondence group "Protection of Fuel Tanks" is to develop a new draft MARPOL regulation on the structural requirements for new ships. Under the chairmanship of Henrik Bruhns, Head of the Stability Department at Germanischer Lloyd, the correspondence group presented the draft in February at the 48th session of the IMO Subcommittee on Ship Design and Equipment. The correspondence group is currently pursuing two approaches which both yield a comparable degree of shipping safety. On the one hand, the draft regulation contains descriptive provisions regarding the width of the double hulls of tanks, independent of their structural arrangement in the hull. On the other hand, alternative oil outflow probabilities are defined, as propagated in particular by Germanischer Lloyd. On the basis of probability calculations regarding the oil outflow and the quality spilt, as must also be performed according to MARPOL when dimensioning the tanks of oil tankers, the arrangement of the double-hull tanks is to be carried out in a flexible manner, to minimize the economic consequences of the increased space requirement, especially for container ships. Germanischer Lloyd is in favour of a regulation that meets the safety requirements without seriously limiting the innovative design process for modern container carriers. For further information: Hendrik Bruhns, Head of the Stability Department, Phone +49 40 36149-635, hb@gl-group.com

MARKETING

Learning from Formula One?

The pole position is the key, not only for motor racing. In the shipping world too, the best starting position is also of decisive importance for economic success. Without technical excellence coupled with high-quality execution, without the innovative implementation of the latest findings on the performance parameters of the main engine, and without a dynamic and experienced support team that is available day and night, it is neither possible to operate seagoing ships optimally in the hard grind of everyday business nor to win points in the race for the best charter rates. As for all motorized competitions, it is imperative to field the best technology, the best team and the most sophisticated logistics. In the next customer magazine, we'll tell you more about Germanischer Lloyd's new marketing campaign.

Dr David Bartle, Manager of Library & Information Services, IMarEST, with the first consignment of the GL Guidelines

ENDOWMENT

IMarEST Receives Complete Germanischer Lloyd Rulebook

London's Institute for Marine Engineering, Science and Technology (IMarEST) has now received the Rules and Guidelines of Germanischer Lloyd to complete its collection of the rules of leading classification societies. The package comprises the printed and digital versions of the classification rules as well as a subscription to the updates which will be published in future. The library has over 10,000 volumes in stock and is available to both members and visitors of the institute. IMarEST promotes the development of maritime engineering disciplines as well as all aspects of science and technology related to the sea. Worldwide, its members include more than 16,000 engineers and students from all spheres of maritime activities.

See-BG: 110 Years of Partnership for Safety

Just how the cooperation between a flag state and a classification society can function over a long period of time is shown by the success story written by See-Berufsgenossenschaft (See-BG) and Germanischer Lloyd. For over 110 years now, the two organizations have been working together on the sound basis of a contract that has remained largely unchanged up to the present day. In the contract signed on 28.11.1894, Germanischer Lloyd undertook to advise See-BG in all technical matters, to provide technical expertise and to make its worldwide network of surveyors available for their statutory duties. From a very early stage, this teamwork bore fruit on an international scale with the development of globally valid design rules, for example through the bulkhead regulations issued after the sinking of the British cruise ship "Titanic". See-BG and GL also participated in the International Convention on Load Lines adopted in 1930. As the preferred classification society of the German flag, Germanischer Lloyd currently attends to over 800 seagoing ships with more than 7 million GT. In total, GL supervises more than 5,400 ships with almost 50 million GT. For further information: Klaus Jacoby, Head of the Department for Flag State Authorization/IACS/ISM/ISPS, Phone +49 40 36149-230, jb@gl-group.com

DIVING SIMULATION

When Divers Come Up Too Quickly

Because the pressure changes too quickly when a diver is surfacing rapidly, the air dissolved in the blood is converted into bubbles. This dangerous and painful effect can be treated in a diving simulator, or "hyperbaric chamber". One of Europe's largest diving simulators, located in the hospital of the Hellenic Navy in Athens, has now been certified by Germanischer Lloyd AG according to the EU directives for pressure equipment and medical products. That the safety of the diving simulator, from the individual valves to the entire installation, has been inspected is now documented by the CE mark. The three-chamber complex can simulate dives down to 250 metres. Besides medical treatment, the simulator can also be used for training purposes. In a special wet-diving chamber, diving equipment can be tested under operational conditions. For further information: Harald Pauli, Head of the Department for Pressure Vessels/Underwater Technology, Phone +49 40 36149-365, pau@gl-group.com

CUSTOMER SERVICE

Satisfied Customers Worldwide – GL Reorganizes Sales Structure

Customer satisfaction and client loyalty are the key factors for success in the market. These and other findings on the psychology of successful companies belong to the standard repertoire of sales and marketing departments. The systematic identification of customer needs and expectations is, particularly in growing markets, of decisive importance for the intensity and quality of attendance to the client. In view of a levelling of technical services by the IACS within the scope of the initiative "Common Structural Rules", customer service will be given even greater significance. The introduction of identical construction rules for all classification societies is likely to change the competitive situation thoroughly. Germanischer Lloyd is reacting to this development with targeted measures. Two competence centres began their operations at the beginning of the year. The "Project & Order Management" competence centre will be responsible for the entire offer management and order processing worldwide. The "Sales Management" competence centre will, amongst other things, handle customer support and the development of new business. For further information: Oliver Darley, Head of the "Project & Order Management" competence centre, Phone +49 40 36149-104, dly@gl-group.com, and Till F. Braun, Head of the "Sales Management" competence centre, Phone +49 40 36149-337, tfb@gl-group.com

ACCREDITATION

Under Water, Under Steam, Under Pressure

Germanischer Lloyd (GL) has been accredited a second time as a "notified body" for the certification of pressure equipment according to the EU Directive 97/23/EC (Pressure Equipment Directive, or PED). GL is thus additionally authorized to examine pressure vessels, steam boilers, items of equipment with safety functions and assemblies up to the size of complex chemical plants. Moreover, the re-accreditation as a notified body for personal protective equipment (PPE) according to EC Directive 89/686/EEC, with the key aspects of diving equipment including accessories and life jackets, was also achieved. For further information: Harald Pauli, Head of the Department for Pressure Vessels/Underwater Technology, Phone +49 40 36149-365, pau@gl-group.com

COASTAL PROTECTION

35 Fast Patrol Boats for the Persian Gulf

Saudi Arabia and Yemen are investing in coastal protection: over the next two years, the shipyard Guy Coach near Lorient, France, will be building a total of 21 small fast patrol boats (FPB: length 15 m, speed 30+ kn) for the Saudi border guard. Four identical vessels have been delivered for the Yemeni border guard, which has already received ten larger FPB newbuildings (37.5 m, 27+ kn) from Austal Ships in Henderson, Australia, that are currently being commissioned. The hulls of all 35 newbuildings comply with the rules of Germanischer Lloyd for high-speed craft (HSC). For the ships fabricated in France, not only the issuing of the class certificate, but also the entire construction supervision on behalf of the operator belongs to GL's range of tasks. For the Austal newbuildings, GL was entrusted with the classificatory construction surveillance and issuance of a construction certificate for the hull. Furthermore, a "Statement of Compliance" from GL documents that the engine, electrical installations and fire protection comply with the class-like regulations of the Australian Ministry of Transport. For further information: Justus Dennin, Naval Projects, Phone: +49 40 36149-493, den@gl-group.com

GL-Infomail

ALWAYS INFORMED AND UP TO DATE Through its electronic newsletter, GL provides rapid information about changes in international conventions, classificatory rules and statutory regulations. GL-Infomail is always issued whenever there is a topical need to report on news and views. You can subscribe to this free newsletter by contacting Philipp Westphal, Sales Information Systems, Phone +49 40 36149-6197, pwes@gl-group.com

HAMBURG

Goal-Based Standards – Specialist Conference

The significance of goal-based standards for the design of new ships was the focus of an event held by the "Thematic Network Safer EuRoRo" that took place towards the end of January at the Head office of Germanischer Lloyd. For months now, the development of goals has been at the centre of discussion in the maritime industry. Through its Maritime Safety Committee, the IMO had, in December 2004, already taken the first steps towards elaborating new goal-oriented provisions. Here it aims to stipulate goal-based standards for the design and construction of new vessels by 2010. The event in Hamburg was attended by, amongst others, representatives of the Danish Maritime Authority, Intertanko, CESA, Carnival and Atlantic Bulk Carriers. Safer EuRoRo coordinates ongoing development projects with the assistance of the EU Commission and provides support for over 100 organizations in 16 European countries.
For further information: Dr Pierre Sames, Head of Strategic Research, Phone +49 40 36149-113, pcs@gl-group.com.

MONSTER WAVES

Big Waves: Great Risk for Shipping?

Understandably enough, representatives of the media are currently showing heightened interest in "monster waves". However, the dangers for shipping are often overdramatized. There is no fundamental reason to paint an exaggerated picture of the dangers to international shipping. The manoeuvrability, structural strength and inherent safety of ships are important aspects in a sophisticated consideration of the wave problem. Helge Rathje, GL wave loads expert and a naval architect by trade, took part in the international conference "Design & Operation for Abnormal Conditions" at the Royal Institution of Naval Architects on 26–27 January in London and explained in his presentation what conceptual efforts are being made in calculating the structural strength with global design parameters. In particular, his comments on the SRA system of Germanischer Lloyd met with great interest.

Trade Fairs

MARCH

14–17 March 2005, Miami, Florida, USA
Seatrade Cruise Shipping
Booth 443, Hall D
Germanischer Lloyd Maritime Services

APRIL

10–13 April 2005, Athens, Greece
Intertanko Tanker Event
Hotel Divani Apollon Palace & Spa, Athens/Vouliagmeni
Germanischer Lloyd Maritime Services

19–21 April 2005, Singapore
Naval Surface Ships/ Submarine & ASW Asia
Germanischer Lloyd Maritime Services

MAY

17–20 May 2005, Singapore
International Maritime Defence Exhibition & Conference Imdex Asia
Germanischer Lloyd Maritime Services

JUNE

7–10 June 2005, Oslo, Norway
Norshipping
Booth D03-21, Hall D
Germanischer Lloyd Maritime Services

21–23 June 2005, Amsterdam, Netherlands
Underwater Technology Europe
Germanischer Lloyd Maritime Services

BERLIN

Workshop on Container Safety

The safety of the international container supply chain was the focus of attention for a two-day conference at the Foreign Office in Berlin. Experts discussed the threats, challenges and possible solutions to a core question of security policy: how can an improved degree of security be achieved without forfeiting the benefits of container transport – reliability, speed and cost-effectiveness? In his paper "Security of the international container supply chain: threats, challenges and solutions", the Secretary-General of the International Maritime Organization (IMO), Efthimios Mitropoulos, outlined the current problems, after which four working groups were formed. The first working group examined the field of conflict between upholding safety and the associated hindrances to the free movement of goods in the international container supply chain. The second working group looked at further improvements in the selection and inspection of containers on the basis of the statutory monitoring procedures (ISPS, CSI, C-TPAT, 24-hour rule, etc.). Case studies on intelligent safety technologies were examined in the third working group. The question as to how far the development of global standards has progressed was discussed in the fourth working group, in which Dr Pierre Sames, Head of Strategic Research at Germanischer Lloyd, explained the development of a "Container Transport Security Index". Here the spotlight is on the systematic assessment and weighting of all transport phases, with a view to obtaining reliable parameters for later benchmarking. For further information: Dr Pierre Sames, Head of Strategic Research, Phone +49 40 36149-113, pcs@gl-group.com

GL Exchange Forum: "Ballast Water Management – Treatment Technology"

On 9 February, shipping company customers were able to inform themselves at the head office of Germanischer Lloyd about the spectrum of treatment options for ballast water. Within the scope of the "Exchange Forum" lecture series, leading manufacturers of treatment technologies were invited, from both within Germany and abroad, to present their technical and design-related solutions for meeting the requirements of the "International Convention for the Control and Management of Ships' Ballast Water and Sediments".

This IMO convention has been in force since February 2004 and is due to become mandatory from 2009. Today, some countries are already demanding verification by means of a ballast water record documentation. Some 60 representatives of shipping companies took part in the information event, and entered into intensive discussions on the cost implications of the D-1 exchange standard – the permanent exchange ballast water on the high seas – and the D-2 performance Standard – treatment by heating, filtration or chemical processes. Shipbuilding experts at GL pointed out the necessity to take account of the ship size and also its stability and strength limits as well as the range of trade when designing newbuildings. This applies especially for container ships, in order to prevent stability problems as a result of ballast water exchange with strongly fluctuating loading conditions.

For further information: Hendrik Bruhns, Head of the Stability Department, Phone +49 40 36149-635, hb@gl-group.com

GL Academy

MARCH

8 March 2005, Hamburg
Internal Auditor ISPS for Shipping Companies
This seminar is concerned with the execution of internal security audits on board, based on the International Ship and Port Facility Security (ISPS) code.

10 March 2005, Hamburg
Basics about Port State Control (PSC)
The seminar addresses the topic of Port State Control (PSC) with regard to background, preparation and prevention.

10 March 2005, Hamburg
Port State Control and the ISPS Code
Deals with the interrelation between port state controls and the International Ship and Port Facility Security (ISPS) code.

15–16 March 2005, Hamburg
Internal Auditor (DIN EN ISO 9001:2000) for Industry and Service Providers
The seminar provides knowledge and skills on the planning, conducting and evaluation of internal audits. Based on the ISO 19011 standard, in which recommendations for the qualification of auditors are defined.

16 March 2005, Piraeus
MARPOL Annexe VI
This seminar addresses the requirements arising from MARPOL Annexe VI – Regulations for the Prevention of Air Pollution from Ships. MARPOL Annexe VI will come into force on 19 May 2005. The requirements are outlined, and instructions and pointers are given on their implementation on board with regard to technical installations and the periodic inspections to be performed.

21 March 2005, Hamburg
Basic Principles of Environmental Management Systems (DIN EN ISO 14001)
Seminar on the requirements of the DIN EN ISO 14001 standard. Possible ways of structuring and building up an environmental management system.

22–23 March 2005, Hamburg
Internal Environmental Auditor (DIN EN ISO 14001) for Industry and Service Providers
The seminar provides knowledge and skills on the planning, conducting and evaluation of internal audits. Based on the ISO 19011 standard, in which recommendations for the qualification of auditors are defined.

22–23 March 2005, Hamburg
Internal Auditor ISM/DIN EN ISO 9001:2000 for Shipping Companies
The seminar provides knowledge and skills on the planning, conducting and evaluation of internal audits on the basis of the ISM code as well as the ISO standard. Practical case studies from the shipping sector are used to illustrate the auditing process. Based on the ISO 19001 standard, in which recommendations for the qualification of auditors are defined.

24 March 2005, Hamburg
Information seminar on the new Cool Chain Quality Indicator (CCQI) standard
The seminar introduces the new Cool Chain Quality Concept with comprehensive information on the application area and the requirements of the Cool Chain Quality Indicator (CCQI) standard, together with instructions and pointers on implementation. A model plant and the "CCQI Master Tables" are used to illustrate the importance of the standard and how it works.

APRIL

5 April 2005, Hamburg
ISM for Ship Management Personnel
Seminar on the ISM code with particular consideration of the responsibilities of the master and the ship's officers. Furthermore, this seminar serves to promote the acceptance of safety management systems by disseminating knowledge and emphasizing the benefits of ISM.

12 April 2005, Hamburg
Introduction to Crewing
The seminar introduces the responsibilities of personnel management in shipping companies and crewing agents, as well as the qualification requirements for the maritime personnel.

18–22 April 2005, Hamburg
Lead Auditor DIN EN ISO 14001
The seminar provides knowledge and skills on the planning, conducting and evaluation of external and internal audits. Based on the ISO 19001 standard, in which recommendations for the qualification of auditors are defined.

19–20 April 2005, Hamburg
Company/ship Security Officer Training Course
Seminar on the requirements of the International Ship and Port Facility Security (ISPS) code. The aim of the seminar is to provide Company and Ship Security Officers (CSO/SSO) with the detailed knowledge, understanding and proficiency required to undertake the duties and responsibilities as defined in the ISPS code.

MAY

3 May 2005, Hamburg
Internal Environmental Auditor (DIN EN ISO 14001:2004) for Shipping Companies
Seminar provides knowledge and skills on the planning, conducting and evaluation of internal audits of environmental management systems (acc. DIN EN ISO 14001:2004) in shipping companies. Based on the ISO 19011 standard, in which recommendations for the qualification of auditors are defined.

17 May 2005, Piraeus
Internal Auditor ISPS for Shipping Companies
This seminar is concerned with the execution of internal security audits on board, based on the International Ship and Port Facility Security (ISPS) code.

18 May 2005, Hamburg
Internal Auditor ISPS for Shipping Companies
This seminar is concerned with the execution of internal security audits on board, based on the International Ship and Port Facility Security (ISPS) code.

24–25 May 2005, Hamburg
Internal Auditor (DIN EN ISO 9001:2000) for Industry and Service Providers
This seminar provides knowledge and skills on the planning, conducting and evaluation of internal audits. Based on the ISO 19011 standard, in which recommendations for the qualification of auditors are defined.

JUNE

7–8 June 2005, Hamburg
Internal Auditor ISM/DIN EN ISO 9001:2000 for Shipping Companies
This seminar provides knowledge and skills on the planning, conducting and evaluation of internal audits on the basis of the ISM code as well as the ISO standard. Practical case studies from the shipping sector are used to illustrate the auditing process. Based on the ISO 19001 standard, in which recommendations for the qualification of auditors are defined.

For further information: Ulrike Schodrok, GL Academy, Phone +49 40 36149-195, usc@gl-group.com or visit http://www.gl-group.com > Maritime Services > GL Academy

"Sphinx" – The Evolution of the AIDA Concept

New concepts are attracting an increasing number of holidaymakers to today's ultra modern ships.

THE CRUISE INDUSTRY is growing from year to year, with new routes and trends being added all the time. The fascination of the sea is something few passengers can resist, and the cruise ship company AIDA Cruises has its finger on the pulse of tourism today. After ten years in the cruise business and with a market share of 35 per cent in Germany, this ambitious firm has worked its way up into the top 5 of the European market with four vessels. And now, with two club ships belonging to an entirely new generation – with the working title of "Sphinx" – AIDA Cruises aims to strengthen this position further. The newbuildings were ordered in autumn 2004 from the Meyer shipyard in Papenburg. Some 315 million euros and a lot of innovative concepts have been packed into each "Sphinx" newbuilding. The ships are considerably larger than the previous units and offer attractive accommodation for some 2,030 guests. More than two thirds of all outer cabins have balconies, offering undisturbed sunbathing. With a theatrium – a combination of atrium and theatre stage – a retracting glass roof and the largest floating wellness zone in the world, the AIDA concept is providing an exciting environment for active passengers. For the coming year, AIDA is expecting an annual growth of ten per cent. One thing is sure: with these new club ships, the cruise operator is sailing into a whole new trend. AS/OM

TECHNICAL DATA

The Sphinx ships (68,500 GT, length 249 m, beam 32.2 m) will be delivered in early 2007 and 2009.

GL class character: ⊞ 100 A5 Passenger Ship IW/MC ✣ AUT RP3 50%/Environmental Passport

Propulsion: diesel-electric

Propulsion motor: 2 x synchro-converter drive 24,800 kW

Main diesel engine: 4 x main diesels 36,000 kW

Fuel capacity: 2,200 cbm

Feeling Fine!

Travelling tips for cruise passengers.

WHEN YOU BOOK a cruise trip, it's good to familiarize yourself with "your" ship. When was it built? How many passengers can it accommodate? Who is the ship operator and who is the owner? When was the vessel last overhauled? Where are the life-saving appliances? And, since an ocean voyage does not always lead through shallow water, it can't do any harm to have a look at the phenomenon of "seasickness".

Seasickness can, but does not necessarily, manifest itself in stormy waters, with symptoms such as headaches, dizziness, a quickening of the pulse, and the pressing feeling in the tummy area which heralds the "reversal" of your digestion, also known as "reverse peristalsis" in medical jargon. Just how far medicines which act on the hormone cycle can actually prevent the outbreak of motion sickness differs from person to person. The ship's medicine cabinet will be able to offer you several effective remedies.

Should you prefer not to take any medication, it is possible to fall back on conventional methods: try eating a small meal, low in fat and high in carbohydrate, before the voyage begins and remaining on deck during the trip, to let the fresh sea breeze into your lungs, instead of waiting for the nausea in the cabin. Then again, others regard this as the best recipe against queasiness: lie in your darkened cabin until the worst of the swell has subsided. Special glasses with an artificial horizon have also been invented to help people get over that unsettling feeling.

If none of that helps, it may at least be a consolation to know that seasickness usually vanishes after 2 or 3 days, after which the rest of the voyage can generally be enjoyed without further discomfort.

In any case, the risk of getting seasick on a cruise ship in normal seas is much lower than, for example, on a small sailboat. As a rule, the sea regions chosen for cruises have waters that are soothingly emerald-green with almost no swell. Atlantic crossings or the passage around South Africa, where the Atlantic and Indian Oceans meet, are the notable exceptions. However, it is then possible to extend stabilizers which steady the hull surprisingly well against the rolling movements. OM

PHOTOS: MAURITIUS IMAGES, AIDA

"Smooth Cruising without Seasickness"

Key aspects for the classification of passenger ships as well as current considerations on safety and technology were at the centre of our discussion with GL experts Jens Schreiter and Andreas Ullrich.

NONSTOP: Just how long have you been concerned with the Sphinx project?
ULLRICH: We have been engaged in discussions with the shipping company and the architects for over two years now. For all participants, it is always useful to involve the class in the early stages of such a project. Important safety matters – especially the escape routes, fire protection and damage stability – can then be clarified in good time. Another important aspect is the arrangement of the watertight bulkheads and also the main fireproof bulkheads. And with the Sphinx project, we were able to continue our intensive cooperation with AIDA Cruises.

With which yards have you worked in the passenger ship sector?
ULLRICH: Well, Germanischer Lloyd has worked with almost all the big names in this market segment, including Kvaerner Masa, where the "AIDA Cara" and the "Europe" were built, Fincantieri, where the fast ferries for Minoan Lines were constructed, and now the Meyer shipyard for the Sphinx project.

What do cruise operators expect from the class?
ULLRICH: In the project and newbuilding phase, the shipowners, architects and naturally also the yard need rapid access to competent partners at all times. For the ongoing attendance to the ships, a worldwide surveyor network with bases in the typical cruising regions is simply indispensable.

"A shipping company decides in favour of GL because of its many years of experience with technically sophisticated ships."
Andreas Ullrich, Deputy Head of Ship Safety

When a shipping company decides in favour of GL, then this is often due to our many years of experience with technically advanced ships. Passenger ships and cruise liners are technical references for us.

What services are actually provided?
SCHREITER: Our service portfolio covers all the aspects of classification relevant to safety. We have developed a whole range of sophisticated tools and procedures to meet the technical requirements of this ship type in the best possible way. Apart from the topics of fire protection and escape routes, all other safety issues – particularly the global strength and damage stability – are of course in the centre of attention.

"We are supporting the design and construction of the new ships with our broad stock of technical know-how."
Jens Schreiter, Head of Safety Systems

Other very important fields include environmental protection and matters relating to comfort, such as noise, vibration and the seakeeping behaviour of the ship. Any "cruisader" who becomes seasick is not likely to book a second voyage. And that cannot be in the best interests of the cruise operator. With the "Shipboard Routing Assistance" system developed for container shipping, the route planning can take account of the present wave conditions and the weather forecast through course changes or a reduction in speed.

To what extent do the Sphinx ships profit from all this?
SCHREITER: We are supporting the design and construction of the new ships with our broad stock of technical know-how. For cruise ships in particular, we have developed the class notation "Harmony Class"; this involves acoustic and vibration analyses that are decisive for the level of shipboard comfort. The Sphinx ships will receive the notations "RP" – redundant propulsion – for the dual-propulsion plant and "Environmental Passport" in their character of class.

What future topics are you working on in the passenger shipping sector?
ULLRICH: A high standard has been attained with the central safety aspects, i.e. fire protection and damage stability. But that doesn't mean our work is done. We are working intensively on the subject of "alternative" fire protection. At present, the IMO is discussing how far SOLAS regulations can suffice in ensuring an adequate level of safety on the ever larger passenger ships. We certainly see a need for action in the area of life-saving appliance technology. Here the objective is "the ship itself is the lifeboat", which calls for the development of risk-based rules. But the defined risk varies greatly, depending on the range of trade and the ship's size; for instance, the requirements for the Caribbean differ from those for Arctic waters.

Will new propulsion concepts, like the fuel cell, gain acceptance in the long run?
SCHREITER: The use of new technology always depends on its profitability and reliability. Two points speak in favour of a long-term implementation of fuel cells in shipping: firstly, environmental aspects, and secondly, the costs per kilowatt. As the first classification society to do so, GL has developed its own guidelines for the use of fuel cells on waterborne craft. In 2003, we certified this innovative propulsion system on a sailing yacht. With well-known partners, we are working towards applying the benefits of this technology to other areas in shipping.

Thank you very much for this interview!

PHOTO: STEPHANIE BRINKKOETTER

For further information: Jens Schreiter, Head of Safety Systems, Phone: +49 40 36149-321, str@gl-group.com and Andreas Ullrich, Deputy Head of Ship Safety, Phone: +49 40 36149-454, ull@gl-group.com

BRIEF PROFILES

Jens Schreiter
- 1970–1972 Studies at Kiel Polytechnic (naval architecture)
- 1972–1979 Studies at the University of Berlin
- 01.04.1979–31.07.1981 Project development engineer at Blohm + Voss, Hamburg
- Since 01.08.1981 at GL

Andreas Ullrich
- 1984–1989 Studies at the University of Rostock, graduating as a naval architect
- 01.04.1989–30.04.1991 DSRK Zeuthen in Berlin
- Since 01.05.1991 at GL

"Well Made by Meyer"

Specialization and reliability as the keys to success: amongst the German yards on the North and Baltic Seas, the family-run yard in Papenburg occupies a very special place. Worldwide, it has an enviable reputation for excellence.

Bird's-eye view of the yard

F. l. t. r.: Bernard Meyer, Werner Lundt and Dr Hermann J. Klein

Delivery of an engine weighing 165 t for the "Norwegian Jewel"

THEY BELONG TO the major landmarks in the otherwise flat landscape surrounding the East Frisian district town of Papenburg on the River Ems: the two huge production halls of Meyer Werft, Germany's second-oldest shipyard after Sietas in Hamburg-Neuenfelde. Since 1982, Bernard Meyer has been at the helm of a company which can look back on an unbroken line of shipbuilding activities extending to the closing years of the 18th century. On 28 January 2005, this traditional medium-sized enterprise was still family-owned after exactly 210 years of existence. Amongst the German yards on the North and Baltic Seas, the firm occupies a very special place. Worldwide, it has a reputation for excellence.

AN ANCHOR FOR THE REGION Strangely enough, the name the yard bears today is quite a coincidence. The rich treasure of anecdotes the corporate annals have to offer includes this little gem. When the ship's carpenter Heinrich Jansen wanted to set up shop in the town in 1795, he had to pay a courtesy call to the local church minister. This priest, a man of the Catholic faith, attached a condition to this request of Jansen, a declared Protestant. He said tersely: "I already have enough Jansens. From today, you will be known as Meyer and will be Catholic." More than 200 years after this remarkable incident, religious denomination no longer plays a role for the employees at the Meyer shipyard. What does count, however, is valuable character traits such as professionalism, industriousness, loyalty and flexibility. The "Meyerians", currently numbering some 2,100, are proud to work in a company that not only gives the regional industry a high degree of stability. As the largest German shipyard in private hands, Meyer is also an important customer for many equipment supply companies scattered deep into the country's interior. With shipowners all over the globe, the name "Meyer Papenburg" enjoys a high standing. Over 670 ships to date have left the production facility, which lies more than 50 km from the open sea in what is effectively Germany's "southernmost seaport".

WEATHERING A HEAVY STORM The Meyer shipyard belongs to those companies in its sector, national as well as international, that have made shipbuilding history in many fields. And it is also making every effort to uphold this proud tradition. Early in 2002, Meyer opened the second large production hall, a covered building dock of gigantic dimensions, namely a length of 362 m and a width of 45 m. At the same time, the hall represented the largest single investment in the annals of the firm: 200 million euros. It was also a year in which another structure essential to the yard's continued existence at the Papenburg location was inaugurated – the Ems barrier. This river barrage makes it possible for Meyer to fabricate ships up 100,000 GT, because it safeguards the draught of 7.30 m (at high tide) needed for the passage from Papenburg to the open sea. Bernard Meyer declares his unreserved confidence in the town as a shipbuilding location: "In Papenburg, we have the right product, the right facilities and the right team."

Today, the Meyer crew consists of 2,100 skilled workers. Owing to a lack of follow-on orders, it had been necessary to trim the workforce by 550 employees in the spring of 2002. The reasons were to be found on the world market: the terrorist attacks of 11 September 2001 and the SARS epidemics in Asia resulted in a painful downturn in the number of cruise passengers. Since then, the company has also weathered this heavy storm. For the current business year, the yard's management is again predicting a 100 per cent workload for the manufacturing facility. Furthermore, the basic workload is assured "up to the end of 2008", as yard manager Meyer stated recently. And yet resting on its laurels is out of the question for this agile company. Nothing has changed since the statement Bernard Meyer made in a radio interview on 1 May 1999: "The Asians are making every effort to take even the last markets and market shares away from the European yards."

MAJOR MILESTONES IN SHIPBUILDING TECHNOLOGY Bernard Meyer sees the opportunities for German shipbuilders as lying above all in two segments: in the construction of passenger ships and the container carriers needed to meet the strong growth in feeder traffic. As far as the topic of passenger shipping is concerned, the company has several important shipping milestones thus far: from ferries up to the most luxurious cruise liners. A glance at last year's order list reflects the impressive workload of the yard. In mid-October 2004, AIDA Cruises signed up two cruise newbuildings with 68,500 GT in Papenburg – to GL class, by the way. An order which Bernard Meyer stated was "a strategically important contract" for which they had "fought for a long time". Only a few days before Christmas 2004, Norwegian Cruise Line (NCL) ordered a 93,000 GT newbuilding for delivery in spring 2006.

FAMED FOR THEIR INNOVATIVE ENERGY At Meyer, the newbuildings are built whatever of the weather in the largest covered building docks worldwide. The yard is renowned for being especially innovative. Not only does it participate in numerous international research projects, it also belongs to the sponsors of the Internet-based procurement portal "e-Euroship" which was established in January 2003 and in which more than 1,000 suppliers have joined together to date. For years now, the Meyerians have been banking on special group work concepts; they have reduced the vertical range of manufacture in certain areas to the absolute minimum needed. To put it in a nutshell: cost-optimized production is the key. It is one of the guarantees that the yard will be able to stand up against the tough worldwide competition.

This innovative energy is also reflected in another current shipbuilding project: four container carriers with a freight capacity of 1,600 TEU each are being fabricated for the account of the Hamburg-based shipping fund issuer Hansa Hamburg Shipping International. The first vessel of this series was christened on 29 January in Hamburg with the name "Eilbek". With these vessels, two technical titbits are liable to produce raptures of delight with industry experts. On the one hand, the vessel has the world's highest ice class for a cargo ship, the much sought-after "Finnish-Swedish 1A Super". On the other hand, the special arrangement of the hatches offers open-top hatches in the midship section, while hatch covers are provided at the forward end as well as on both sides. Such triple and longitudinal division of the cargo hold is an absolute novelty. The sister ships of the "Eilbek" are scheduled to follow by the summer.

Although the "Eilbek" was able to complete the voyage from its "birthplace" of Papenburg to the naming location in Hamburg in a rather unspectacular fashion, the undocking of the passenger and cruiseliner giants is always an event that excites far more than local interest. Thousands of people line the dykes from Papenburg to the Ems barrier at Gandersum to experience these stirring occasions first-hand. For the transfer of the ocean-going leviathans, a certain procedure has been developed in the course of the years: the ships float sternwards to the open sea. At the Meyer shipyard, it is clear that some things are special and many things are certainly different – and that applies not only to the unusual, but no less true, origin of the name. Nonetheless, one thing has stayed the same for Bernard Meyer up to the present day. It is this very special feeling he associates with running his company: "The work at a shipyard is both fascinating and a source of great satisfaction for me." EHA

PHOTOS: ECKHARD-HERBERT ARNDT, MEYER WERFT (2)

The "Benchijigua Express", not yet in its element.

PHOTO: AUSTAL

Comfort the Australian Way

A trimaran is setting the pace: the "Benchijigua Express" is the world's biggest aluminium ship to date. Completed at the end of 2004 in Australia, this fast ferry will transport passengers and motor vehicles between the Canary Islands.

IT WAS A GRAND DAY for the Spanish shipping company Fred Olsen S.A. On 5 November 2004, the high-speed trimaran "Benchijigua Express" was christened after having been built as the world's largest aluminium ship at Austal Ships in Henderson, Australia. Its freight capacity is nothing less than impressive: 1,350 passengers and 350 cars or 450 truck-loading metres and 123 cars. Propelled by four diesel engines acting on three water jets, the fast ferry can attain a speed of over 40 knots. The ship will be in service in the waters around the Canary Islands. Under the conditions prevailing there, the trimaran is able to bring its structural strengths into play: its particularly smooth response in a seaway makes for great passenger comfort, even at high speeds in rough waves.

A NOVEL CONCEPT In the development of this ship type, the shipping company and yard blazed a new trail. Joint research projects led to the concept of this exceptional vessel. For the classification society too, the design and construction presented a challenge in many respects, since the internationally valid construction rules had not necessarily been conceived for fast trimarans. "It was necessary to use the available experience of the yard and the class to interpret the existing regulatory framework for high-speed craft," says George Spiliotis, Area Manager of Germanischer Lloyd in Australia. Their early involvement in the project made it possible for the GL engineers to be available on the spot with their expertise. Not least because of the tight time schedule, plan approval took place primarily at the yard itself. To determine the wave-induced loads for this trimaran, GL made good use of the experience it had gained with own research and development as well as the hydrodynamic computations proven by testing.

GREATER INTEREST IN MULTI-HULL SHIPS Now that a large number of high-speed monohulls and catamarans have set sail, the fast multi-hull designs are in the limelight. Their advantages makes them attractive not only for passenger and ro-ro traffic but also for military purposes. The US Navy is also interested in Austal's trimaran design. Several civilian projects are even looking at fast cargo transport over the Atlantic. Small wonder that the new Austal concept has already attracted international attention. If this trend continues, the yard is planning on building an increasing number of trimarans in future.

Serious deliberations and finished concepts are already in place for pentamarans, which offer benefits comparable with those of trimarans. They too are suitable wherever slender, fast ships with good seakeeping behaviour and a large deck area are needed to accommodate passengers and motor vehicles. For instance, a pentamaran concept by Nigel Gee intended for container transport has been taken up by IZAR, who adapted the design for ro-ro and passenger conveyance. Both studies were supported by GL with comprehensive calculations on the structure and hydrodynamics.

SPECIAL CONSTRUCTION RULES? The question arises as to whether specific construction rules will be needed to serve the growing number of multi-hull newbuildings in future. Karsten Fach: "One may expect that multi-hulls will remain a rather unusual species of ship. Their highly optimized designs will always call for individually detailed considerations. We are working on harmonizing the international regulations in this field." AS/OM

TECHNICAL DATA

LOA: 126 m

Width: 30.40 m

Max. speed: 40 knots

Engines: four 20 V 8000 M70 diesel engines, three 12 V 2000 M40 diesel engines

Class: ⊞ 100 A5, OC3 SOLAS II-2, Reg. 19 S7D22 HSC-Passenger B, ro-ro type

Final assembly on Lake Constance

Lightweight but Heavy-Duty

Fast catamarans are being built of aluminium nowadays. In the US and in Germany, shipping companies are relying on the speedy yet safe twin-hulled craft.

THE AUSTRALIAN YARD Austal Ships is one of the world's biggest manufacturers of high-performance aluminium ships. At its American branch in Mobile, Alabama, the first of two catamarans for the shipping company Hawaii Superferry is currently under construction. The innovative design originates from Austal Australia.

The Austal catamaran can carry 870 passengers and 282 cars, is 105.3 m long, has a width of 23.8 m and reaches a top speed of 40 knots. Propulsion is by four diesel engines, each generating 8,000 kW. For the classification of these catamarans, the yard continued the teamwork with Germanischer Lloyd that had been proven for the 101 m high-speed catamarans "Euroferrys Pacifica" and "Westpac Express". Germanischer Lloyd has been working together with Austal Ships since 1995. Together they have expanded their know-how and expertise in the design, construction and inspection of high-speed passenger ships and fast ferries made of aluminium for both passengers and motor vehicles.

On the largest inland sea in Europe, Lake Constance, two catamarans will begin passenger transport from July 2005. The identical fast ferries each offer space for 182 passengers. The operators decided to use this ship type in order to achieve a relatively high speed with low washing of the waves and good manoeuvrability. Final assembly of the catamarans will take place at the Bodan shipyard in Kressbronn, in cooperation with the Damen yard from Netherlands. The aluminium ship sections were fabricated in Singapore under the supervision of Germanischer Lloyd. Besides issuance of the hull construction certificate, the ship monitoring equipment, the controls and the fire-fighting system are also being classified. SH

Design for Hawaii catamarans

No More False Modesty, Please?

German political debate on the sea transport industry.

THE FOURTH National Maritime Conference in Bremen brought it all to light: there is an overwhelming lack of personnel and ships, the latter especially under the German flag. And yet things are not going all that badly for the German maritime industry. On the contrary, the bottom line is fairly good at present.

In 2004, the German ocean shipping industry had one of its best years ever, with a turnover of 14.1 billion euros. What's more, an increase in the total turnover to 16.1 billion euros is predicted for 2005. The merchant fleet operating from Germany is expected to increase to 2,800 units with 50 million GT by the end of 2005. Not only that, the yards in Germany with their 20,000 jobs are fully booked for the next two to three years.

Despite these reports of success, there is an acute shortage of staff. The willingness of the shipping companies to have more and more ships sailing under the German flag is obstructed by the need for qualified junior personnel with a German nautical licence. To change a ship back to the German flag, it is necessary to hire German officers and masters.

At the Third National Maritime Conference, which took place in Lübeck in May 2003, the German shipowners pledged to re-flag "100 ships" by the end of 2004. Just how many captains and ship's engineers are needed in Germany at present cannot be stated exactly. The shipping organization BIMCO has presented a study on the global situation, according to which there is an "officer vacuum" of 16,000 worldwide. And it is feared that this number will swell to 46,000 by 2010.

On this front, the Bremen conference regarded the "Alliance for Training and Employment in Sea Shipping" as being a special success story. With its combination of tax relief measures and sociopolitical agreements, this partnership has made a major contribution to the significant upturn in the German merchant fleet. Moreover, it has proved possible to halt the outflagging trend in Germany; after all, more than 45 additional seagoing vessels are now sailing under the German flag. The shipping companies will keep their promise by the end of 2005. In his reply, the Federal Chancellor gave the assurance that the tonnage tax would remain in place. However, the shipbuilding subsidies expiring on 31 March would be replaced by "programmes for promoting innovation". Here his political objective was to "get the maritime industry out of its corner of false modesty".

This was the daunting task considered by the 800 participants in five workshops addressing the topics of shipbuilding, sea shipping, ports, research and development, and the offshore wind energy sector.

Since their inception in 2000, the National Maritime Conferences have usually taken place at 2-year intervals. They contribute towards an intensive dialogue between the sea transport industry and the world of politics, with a coordinator for the maritime industry to maintain the exchange between the individual conferences. CH

Politics and industry in dialogue at the Fourth National Maritime Conference in Bremen

PHOTOS: AUSTAL, MESSE BREMEN (2), GL

Shipbuilding in Asia – Japan Remains Competitive

The order books of Japanese yards have stabilized on a high level. Purchasing of components is increasingly taking place through Japanese branch offices in China.

A YEAR AGO, international economic experts and analysts predicted a gloomy future for the Japanese shipbuilding industry. The talk was of a general decline, especially in view of the growing activities of its rival, China. And since the Japanese shipbuilding industry is the second-strongest in the world after Korea, a downward trend there would have negative effects on the entire economy of the Pacific region.

However, Werner Enning, Area Manager of Germanischer Lloyd in Japan, never views his working environment from such a pessimistic standpoint: "It has always been the case," says Enning, who has been active in South-East Asia for many years, "that the Japanese economy, particularly the shipbuilding industry, is characterized by its ability to gain fresh momentum. Many people outside Asia think that the Japanese economy is organized in a dirigiste manner and therefore tends to be slightly ponderous in nature. But the opposite is true: Japan has a modern economy which is surprisingly individualistic and competitive, so the diverse sectors of trade are able to reinvent themselves whenever necessary."

"Japan remains an exciting market – continued rapid growth must be expected."

Werner Enning, Area Manager Japan

And that is precisely what happened: Back in June of last year, Enning was gratified to note that the so-called Tankan index, the decisive indicator for business sentiment in the Japanese shipping industry, was reflecting a record increase. This index, issued by the Bank of Japan and based on the expectations of over 9,000 major companies, predicted growth rates of over five per cent in shipbuilding. Despite all the previous prophecies of doom, this forecast has come to pass; Japanese firms such as Tsuneishi are even expanding into China, setting up their own production facilities and profiting from an immense newbuilding boom triggered by the rising Chinese demand for raw materials and finished products. And this trend is continuing: in 2004, Enning explains, the orders for Germanischer Lloyd have increased considerably, and an end to this development is not in sight. In the course of the year, Germanischer Lloyd was involved in the construction of, amongst others, four 8,500 TEU container ships with four options, two 2,500 TEU container ships and a 31,300 dwt bulk carrier. What is more, the number of "ship in service" surveys and material and component inspections has increased appreciably – thanks, above all, to varied newbuilding activities in Korea and China. All in all, says Werner Enning, a pronounced growth market can be seen in the areas of ship newbuildings, material and component inspections as well as the fleet in service. Accordingly, Germanischer Lloyd will be hiring new staff for its branch offices in Kobe and Yokohama, to keep on offering its customers the professional and quality-oriented service for which it is renowned worldwide. CG

GERMANISCHER LLOYD IN JAPAN

GL has been active in Japan since 1965, and the first office in Kobe was opened in 1971. Further Maritime Services branch offices were opened later in Yokohama, Kure and Nagasaki. At present, 16 GL surveyors are working in the field, with 15 ships being constructed to GL class at four yards. Germanischer Lloyd Oil and Gas GmbH (GLO) has been represented in the country since 2003 with an office in Tokyo. Within the scope of the Dolphin Project – development of a natural gas field in the Gulf of Qatar – GLO has been entrusted by the Japanese prime contractor Japan Gas Corporation (JGC) with processing the technical documentation for the examination of natural gas treatment plants.

Werner Enning, Area Manager
Phone +81 823 262482, enn@gl-group.com

Area Office Japan, Kobe
Phone +81 78-322 0500 / 0388, gl-kobe@gl-group.com

Station Yokohama Phone +81 45-7719630

Site Office Kure Phone +81 823 262481

PHOTO: GETTY IMAGES

First Mega Carrier Delivered

With the "P&O Nedlloyd Mondriaan", IHI Marine United Inc. in Kure is strengthening its position in the top league of the world's leading yards.

FOR JAPANESE SHIPBUILDING, the construction of very large container ships with a stowage capacity of over 8,450 TEU is a significant turning point. Until now, only Korean yards had received orders of this size. But Japan is catching up: the "P&O Nedlloyd Mondriaan" is the biggest container ship to have been built in Japan to date. Hull No. 3191 of IHI Marine United Inc. in Kure stands for a super-size post-Panamax newbuilding offering a number of superlatives. This 94,724 GT vessel is 335.48 m long and 42.80 m wide, with a depth of 24.40 m and a draught of 14 m. Moreover, the short building time is setting standards: keel laid on 5 April, launched on 17 September and delivered on 14 December. For GL Japan too, fabrication of this ship presented a challenge in view of the tight schedule. And for Werner Enning, Area Manager Japan, a newbuilding of this size is an "experience". "When you are working shoulder to shoulder every day – from the first steel-cutting through keel-laying, launching, trial voyage and finally the delivery – with the dock workers, the designers, the QCs, the shipowner's construction supervisors and your own colleagues, a special feeling of unity is created."

The port of Hamburg was visited by the vessel on 18 January in the course of its maiden voyage. The mega carrier is propelled by a 12-cylinder diesel unit generating 61,900 kW (84,160 hp), built by Diesel United Ltd. This engine belongs to a new type, the Wärtsilä Sulzer 12 RT-flex 96 C, and drives a fixed-pitch propeller to give the vessel a service speed of 24.5 kn. A special feature of this drive set with a length of over 22 m is the common rail technology, which injects the fuel into the combustion chambers at a pressure of 700 to 900 bar. The outlet valves are opened hydraulically; a camshaft is no longer necessary. The type testing of the propulsion plant was carried out with integrated functional tests of the entire system.

The ship design complies with the GL conditions for "Rational Ship Design" (RSD). As a result, it is possible to waive the intermediate docking of the ship which would otherwise be obligatory after two and a half years. With a "one-man control console", the navigating bridge provides for extensive automation of the ship-handling functions. Strongly loaded structural details, e.g. the longitudinal hatch covers, were made of special higher-tensile steel. OM/AS

P&O NEDLLOYD MONDRIAAN

The character of class is: ⊞ 100 A5 with freeboard 5.474 m, IW, NAV-OC, RSD, SOLAS II-2, Reg. 19 C2P67, container ship, ✣ MC AUT. All the requirements of the German flag are thereby fulfilled.

The P&O Nedlloyd Mondriaan is sailing under the Liberian flag, with Monrovia as its home port. Seven sister ships are due for delivery to the P&O Nedlloyd subsidiary Blue Star of Hamburg by July 2007. With this new flagship, the number of ships managed by Blue Star has grown to 24.

New Life with a Holy Hatchet

Always a Hand's Breadth of Water under the Keel ...

EVERY SHIP HAS THE QUALITIES of a living thing, as the American writer Joseph Conrad (1857–1924) once put it; after all, the sounds of a steamer on the high seas may be likened to a mysterious rambling speech made to the crew. Creaking frames and groaning steel can be heard, perhaps also the flapping of a sail – all those familiar sounds through which the ship communicates with the seafarers, telling them in clear and simple terms that all is well. This fascinating analogy between a ship and a living being is characteristic of many seafaring nations, including the Japanese. In fact, this nation so steeped in the traditions of an island – a small tongue of land to the Asian continent was finally severed at the end of the last ice age – regards the naming of a ship to be synonymous with its birth.

SHIP NAMING ONLY AT FULL MOON Shipping as a trade between history and modernity, embedded in the Japanese culture: like any traditional seafaring nation, the Japanese are fully aware of the dangers of the heaving sea. In times of old, the depths of the Pacific contained giant sea snakes, monsters and mythical creatures, and these are then the deadly hazards for which a ship must prepare its at birth, as was the case almost 5,000 years ago, when the Egyptian priests began to consecrate their ships. It was these priests who, around 2800 BC, were first able to use their lunar calendar to accurately predict the regular flooding of the Nile delta, thus achieving incredible power over the people and the technology of the time. Ship christenings were therefore only carried out at full moon, by cutting a taut line connecting the ship with the shore. It is remarkable that this ritual has been upheld in the Japanese culture: traditionally, a woman uses a holy hatchet to cut the umbilical cord between Mother Earth and the vessel's new life afloat. A priest generally sanctifies the entire place of launching with hallowed branches beforehand. The general procedure for the ship-naming ceremony is no less festive: traditional Japanese costumes are often worn, dance groups present classical performances, and when the hatchet has finally cut the line and the ship is floating free on the water, white doves escape to the heavens from bursting paper spheres. Of course, the more earthly lucky charms are not neglected. Besides the rituals, the obligatory bottle of champagne also forms part of the naming, and after the ceremony the guests are treated to a festive banquet with sushi and sake. However, this very traditional launching from a slipway is no longer practised in this form nowadays at the large modern yards. Usually, the ship is named two or three days before it is handed over to its owner in a rather unspectacular way at the fitting-out berth.

Traditional naming ceremony in Japan: a very special experience

Consequently, the pleasure of the guests during the launching of the UBS Stavanger in August 2004 in Saiki on Kyushu Island was all the greater. For this 31,300 dwt bulk carrier classified by Germanischer Lloyd, the Saiki shipyard organized a wonderful old-style christening. The international guests were unanimous in their opinion: "A traditional Japanese naming has a certain style, and delights all the senses." CG

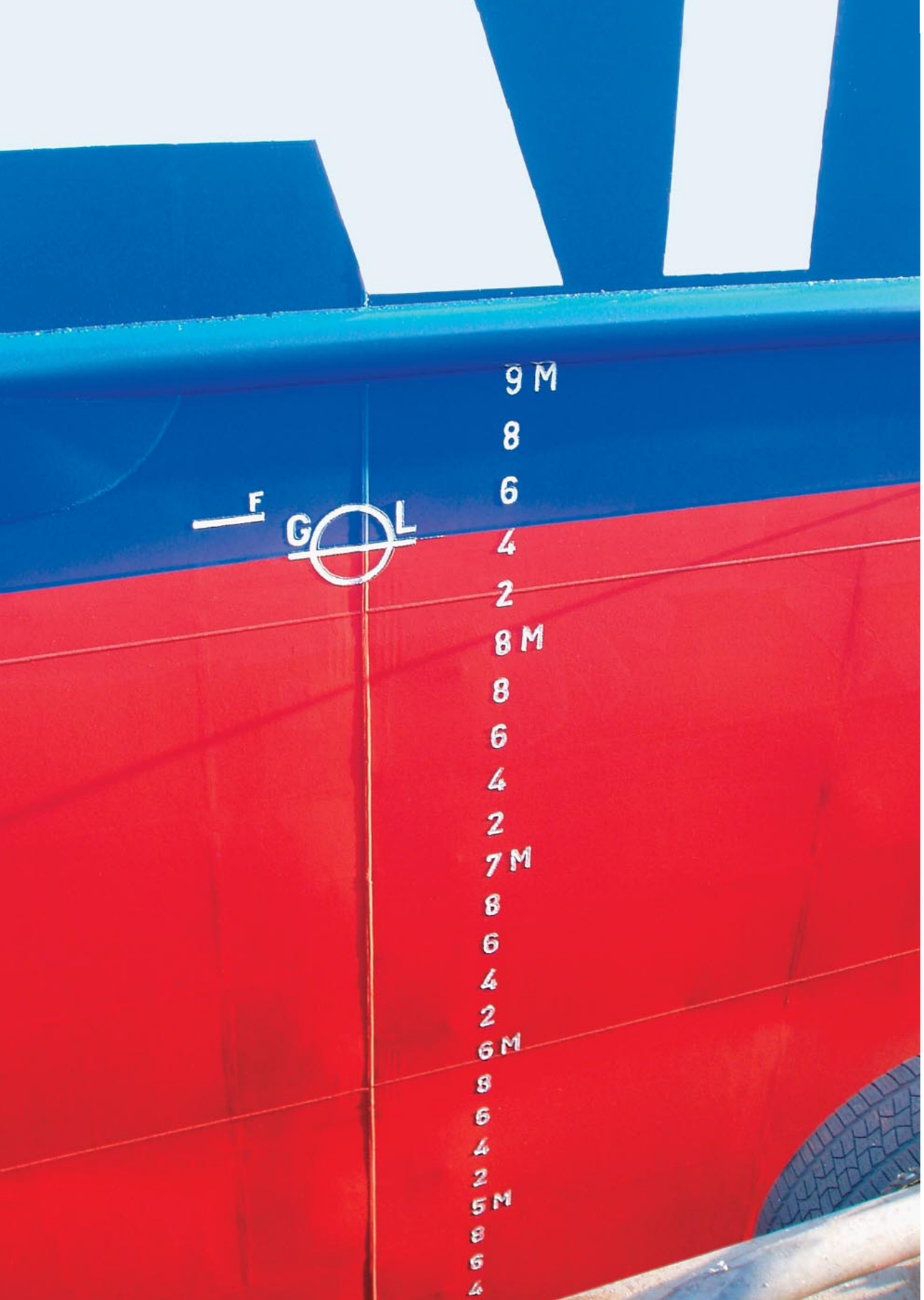


PHOTO: STEFANIE NORMANN

New Load Lines Convention Requires

Additional Reserves

Load line marks to prevent overloading have been in use since 1890. The first International Convention on Load Lines (ICLL) was signed in 1930. Since then, there have been continuous adaptations to account for changes in design. The Load Lines Protocol of 1988 was revised with regard to calculation and equipment.

SINCE JANUARY 2005, the new Load Lines Convention applies for all newbuildings, insofar as the relevant flag state has signed the protocol. In June 2003, the IMO Maritime Safety Committee ratified technical changes and integrated the latest findings at its 77th session. As the main change, major portions of the LL interpretations by the IACS were included in the technical annexe. For ships built according to the construction rules of IACS classes, this inclusion has no further relevance, as these interpretations were already being observed before the implementation of MSC.143(77). Amongst others, the following points which must be considered for equipment and calculation are more important:

NEW POINTS TO BE NOTED 1) The load assumptions for hatch covers have been increased considerably. In the foreship area, above all, the assumed loads have become greater. At the same time, the permissible stresses have been increased. In certain cases, this may result in higher hatch cover weights.
2) All doors and cargo ports in the outer shell must open outwards. However, this condition is in conflict with a SOLAS requirement which prescribes that pilot doors must open inwards.
3) The IACS Unified Requirement L4 (Closure of Chain Lockers, dated 01.07.2003) was incorporated: chain lockers and the associated hawse-pipes must now be watertight. All means of access must be closed by a substantial cover and secured by closely spaced bolts. The openings of anchor-chain hawse-pipes must be provided with closing appliances to minimize water ingress.
4) Guard rails must be fitted around all exposed decks.
5) Deck coverings are no longer considered when calculating the freeboard.
6) The calculation of the superstructure correction was revised.
7) The minimum bow height and reserve buoyancy are determined by means of a new formula. Through these new requirements, diverse structural challenges arise for ship newbuildings.

LOAD LINE MARKS CALCULATED DIFFERENTLY In applying the new Load Lines Convention, there will a number of interesting questions to be clarified for the classification societies and flag states. Take, for instance, the case of a ship that is built under a flag which is not a party to the convention, but changes to a flag which has signed the protocol. The freeboard would then have to be calculated anew. If the minimum bow height is not given or the reserve buoyancy is lacking, the freeboard is increased correspondingly. This can signify a loss of draught. But the other direction also leads to legal issues: a ship built according to the new Load Lines Convention changes to a flag which examines the freeboard by the old convention. The benefit of the new superstructure correction can then no longer be included in the calculation. Here too, draught may be lost.

Container ships of the Panamax or post-Panamax class with large depths have excess freeboard; they are least affected by changes to the new convention. Ships designed for minimal freeboard, on the other hand, must be recalculated with regard to the minimum bow height. However, these ships profit from the more favourable superstructure correction. Contacting the relevant classification society early on will also help in such cases to detect possible design difficulties and to identify the corresponding possible solutions. LL/OM

For further information: Lutz Laubenstein, Load Line and Tonnage, Phone +49 40 36149-3797, lla@gl-group.com

News from Industrial Services

Trade Fairs

MARCH

12–15 March 2005, Bahrain
Middle East Oil Show
Booth 565, Hall 1
Germanischer Lloyd Oil and Gas

14–17 March 2005, Bilbao, Spain
Gastech
Booth C22, Hall 1
Germanischer Lloyd Oil and Gas

MAY

02–05 May 2005,
Houston, Texas, USA
Offshore Technology Conference,
German Pavilion
Germanischer Lloyd Oil and Gas

JUNE

13–16 June 2005,
Kuala Lumpur, Malaysia
Oil & Gas Asia
Booth PS027, Hall 1/2
Germanischer Lloyd Oil and Gas

PHOTOS: STEFANIE NORMANN(2)/GL

LAYING THE FOUNDATION

WINDTEST Needs More Space

Not only the wind farms are getting bigger! On 15 December, the foundation stone was laid for the urgently needed extension building of WINDTEST Kaiser-Wilhelm-Koog GmbH. The new office will offer space for 20 more staff members and will be ready for use in summer 2005. WINDTEST has a total of 39 employees in Kaiser-Wilhelm-Koog, 25 of which are engineers belonging to various disciplines. The worldwide demand for experts in the surveying and expert appraisal of wind turbines is unabated. The main areas of activity for the Kaiser-Wilhelm-Koog office are project certification, prototype testing, site assessment and routine technical in-service examinations. The stockholders of WINDTEST are the state of Schleswig-Holstein, the district of Dithmarschen, the municipality of Kaiser-Wilhelm-Koog, Investitionsbank Schleswig-Holstein, the energy utility E.ON Hanse AG and Germanischer Lloyd WindEnergie GmbH. For further information: Christian Nath, Managing Director of GL Wind, Phone +49 40 36149-480, na@gl-group.com

Supervision Market: New Opportunities through Liberalization

Germanischer Lloyd intends to begin inspection activities in line with the German Plant Safety Ordinance. When the TÜV monopoly for the examination of installations subject to monitoring ends on 1 January 2006, another opportunity for the expansion of high-value services will open up in this area of business. At present, the necessary approval procedure is under way at the Central Authority of the Laender for Safety Engineering (ZLS) in Munich; it is expected that this will be concluded by October. For further information: Matthias Laatsch, Civil Works, Phone +49 (0)40 36149-7729, laa@gl-group.com

TECHNICAL SERVICE PROVIDERS

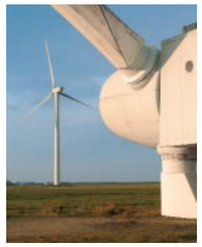
Germanischer Lloyd Industrial Services Participates in Trade Federation

14 companies and organizations from the fields of technical safety, quality assurance and environmental protection in Germany set about founding of a new trade federation for technical service providers in November 2004. The federation will represent its political and economic interests in dealings with decision makers in the worlds of politics, industry and federations at national and regional levels. The inaugural committee was chaired by **Bernhard Richter, Managing Director of Germanischer Lloyd Industrial Services GmbH**. New entrepreneurial challenges have arisen with the liberalization of the inspection markets. The technical service providers in Europe have a turnover of approx. 10 billion euros and employ some 100,000 people. Their spectrum of services ranges from the inspection and testing of industrial installations, products and technologies, through the research and development of technical safety in the transport sector, up to the certification of management systems. For further information: Dr Bernhard Richter, Managing Director of GL Industrial Services GmbH, Phone +49 40 36149-313, rt@gl-group.com

WIND TURBINES

Seminar on Project Certification

At the beginning of February, GL Wind was the organizer of a two-day seminar on the scope of project certifications for wind turbines, onshore and offshore. For the English-language event with 30 participants from Japan, India, Spain, Italy, Great Britain, the Netherlands, Denmark and Germany, the primary focus was on risk assessment and minimization, general recognition of technical safety, and safeguarding of the investment. In addition to all the project-related aspects, the seminar included a visit to the world's largest wind energy converter: the 125 m diameter turbine of the company RePower at Brunsbüttel. For further information: Peter Dalhoff, Head of the "Project Certification Off- and Onshore" Department, Phone +49 40 36149-117, dal@gl-group.com



GLO

Germanischer Lloyd Oil and Gas GmbH Repositioned

The strategic reorientation of the subsidiary of the Germanischer Lloyd Industrial Services holding company has been documented with a new company name. From now on, the company (formerly GL Offshore and Industrial Services) with about 400 employees and its headquarters in Hamburg will be known as "Germanischer Lloyd Oil and Gas GmbH" (GLO). In future, GLO will be concentrating on the requirements of the global oil and gas business. Its services will centre on risk analyses, certification of plants and components, expert appraisals on operational reliability, and the technical advisory services for production installations and pipelines, both onshore and offshore. In addition to feasibility studies, conceptual development, design approval and construction supervision, GLO offers the optimization of the technical and commercial operations of oil and gas plants all over the globe. One of the new aspects of its performance portfolio is technical surveillance of the controlled dismantling of plants and installations. GLO is active with 19 branch offices in 27 countries. For further information: Hartwig Schönbach, Managing Director of GLO, Phone +49 40 36149-515, hcs@gl-group.com

Conferences

APRIL

25–26 April, Hamburg
6th special seminar on "Welding in Shipbuilding and Civil Engineering"
Welded structures in shipbuilding, cases of damage and influences on the service lifetime of welding seams, cast steel in civil engineering, and product liability are amongst the topics for the 6th special seminar. It is directed at designers, representatives from and operators in the material processing industry, as well as authorities and scientists.
For further information and registration, please contact Bettina Alewell, Germanischer Lloyd Industrial Services GmbH, Phone +49 40 36149-3709, ale@gl-group.com or visit our website www.gl-group.com > GL Group > Events > Congresses

JUNE

8–9 June 2005, Hamburg
Conference on "Certification Rating"
Assessing companies from both a technical and a commercial standpoint will be in the centre of attention at the certificationrating conference. The procedures for quality assurance applied in shipbuilding and automobile manufacturing will be presented as examples.
For further information and registration, please contact Bettina Alewell, Germanischer Lloyd Industrial Services GmbH, Phone +49 40 36149-3709, ale@gl-group.com or visit our website www.gl-group.com > GL Group > Events > Congresses

14–15 June 2005, Hamburg
Symposium on Offshore Wind Energy
On the first day, the focus will be on the design of wind turbines according to the GL Wind offshore standard and the interplay with load assumptions and dimensioning values. The topics on the second day will include access techniques, grid connection and experience in operating such installations. The symposium is directed at plant manufacturers, operators of wind farms, investors and insurers.
For further information and registration, please contact Mirja Rathlev, Germanischer Lloyd WindEnergie GmbH, Phone +49 40 36149-7019, mrat@glgroup.com or visit the websites www.gl-group.com/glwind and www.windmesse.de/symposium

Fighting the Greatest Enemy of Shipping

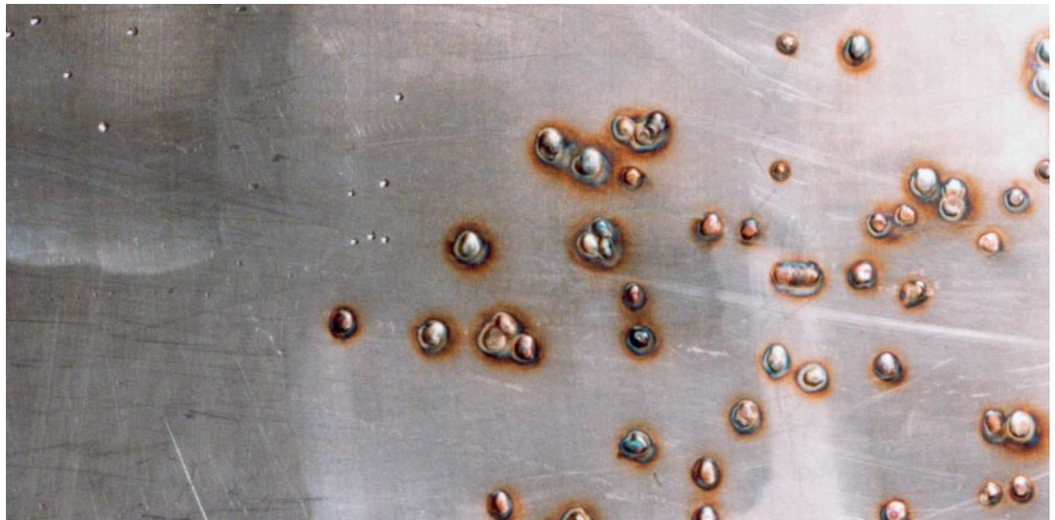
Corrosion protection is and remains the special challenge in the construction and operation of durable ships, offshore structures and port facilities. Without a scientific methodology and feedback from the users, there can be no innovations.

At the corrosion conference in Hamburg

RUST IS ABLE TO WRECK all calculations of profitability. Sooner or later, the corrosion margin has been exceeded and the maintenance costs rise exponentially. Corrosion attack does not differentiate between ships, drilling rigs and port facilities. Costly repairs are unavoidable if comprehensive preventive measures are not taken right from the start. Just which preventive measures are "state of the art" and what Germanischer Lloyd recommends its customers was discussed at the two-day special conference on "Corrosion Protection in Maritime Technology" held in Hamburg in January. 130 experts from science, industry and service providers sought to identify the most successful strategies in the never-ending battle against corrosion. In organizing the conference, GL was able to count on the help of trusted partners, like the Society for Corrosion Protection (GfKORR), the Society for Port Development Technology (HTG) and the Society of Naval Architects and Marine Engineers (STG).

Corrosion damage in the field of maritime technology leads to financial losses in the millions. Rust insidiously undermines the safety and reduces the useful lifetime of ships, offshore installations, bridges and other steel structures. The affected operators are united in the search for the ideal coating strategy. All pursue the aim of beginning the fight against corrosion as early as possible.

CORROSION – A PROBLEM INHERENT TO THE SYSTEM? Materials are engaged in constant "interaction" with their environment. Nothing can be done about this interdependency. Nevertheless, the rules affecting this chemical reaction between steel and salt water can be "bent" sometimes, thanks to new findings in scientific research. With many practical examples, the exchange of experience at the fourth corrosion protection conference showed how corrosion can be countered effectively, and by what means and in which stages. Here it rapidly became clear that the topic is quite impressive in its complexity: what influence does the surface preparation have on the behaviour of organic coatings? How can the effectiveness of antifouling paints be examined better? How can the VOC Directive on emission reduction be implemented most expediently? What possibilities are offered by modern diagnostics to get onto the track of biocorrosion by algae and fungi?



PHOTOS: STEFANIE NORMANN/GL

COATING: PROPER CARE IS THE KEY! Once again, human failure and suboptimal environmental conditions are the greatest weak points in defending against corrosion. Few people actually read the manufacturers' application instructions. The foundation for corrosion damage is laid at the beginning, i.e. the care taken in executing preventive coating measures is decisive. And here, as is so often the case, the devil is in the details. Surface preparation, treatment of the coating material and the application process form the most important working steps. The surface to be treated must be cleaned with utmost care, otherwise corrosion can already commence through dirt residues underneath the coating layer. Coating application itself is good old "hands-on" work. No machines are able to reach into the furthest corners of the structure, so the paintbrushes must sweep into action here. "The care applied in the work is the only guarantee of durability," as Gustav Eiffel, the French designer of the most photographed steel structure in the world, said about executing the passive corrosion protection.

However, the environmental conditions prevailing during application also play a decisive role: temperature, atmospheric humidity, dew point, ventilation and painting speed. Although there are codes governing the optimum processes, there is often room for improvement with the actual application work.

SURRENDER UNDER WATER? What you don't see is prone to constant attack: the underwater part of the ship providing the necessary buoyancy. Furthermore, the supporting structures of drilling rigs and steel installations located at and in the sea are also affected. The aggressiveness of saltwater is impressive and at the same time fearsome. Just coating the outer shell of the ship is simply not enough. Thanks to a cathodic protection system, the chemical reaction can be so reduced that the corrosion is reduced to an acceptable level or even averted entirely. By means of an impressed-current system or sacrificial anode, the ship is polarized negatively to halt the corrosion. A coating ensures that the consumption of protection current is low. "A combination of different metals – outer shell and propeller – can also be shielded effectively by an impressed-current system," explained Julia Höppner of Germanischer Lloyd in her paper. The GL class character IW (In-Water Survey) documents this combination of measures. An important operating aspect for the shipowner is the time factor: short docking periods and extended dry-docking intervals.

PREVENTION IS BETTER THAN CURE Preventive measures for guarding against corrosion have a bad reputation for being time-consuming and costly. The requirements also increase for application on the basis of environmental protection regulations. The effects of the corrosion on operating economy and safety over the entire life cycle of a ship can, however, make an investment in a well-functioning corrosion protection system profitable after all. In view of the high charter rates at present, unrestricted availability is of vital significance. Unscheduled corrosion-related visits to the repair yard are not at all welcome. The battle rages on. SN

The conference proceedings are available from Ms Bettina Alewell, Germanischer Lloyd Industrial Services GmbH, Phone: +49 40 36149-3709, Fax: +49 40 36149-1781, E-mail: ale@gl-group.com

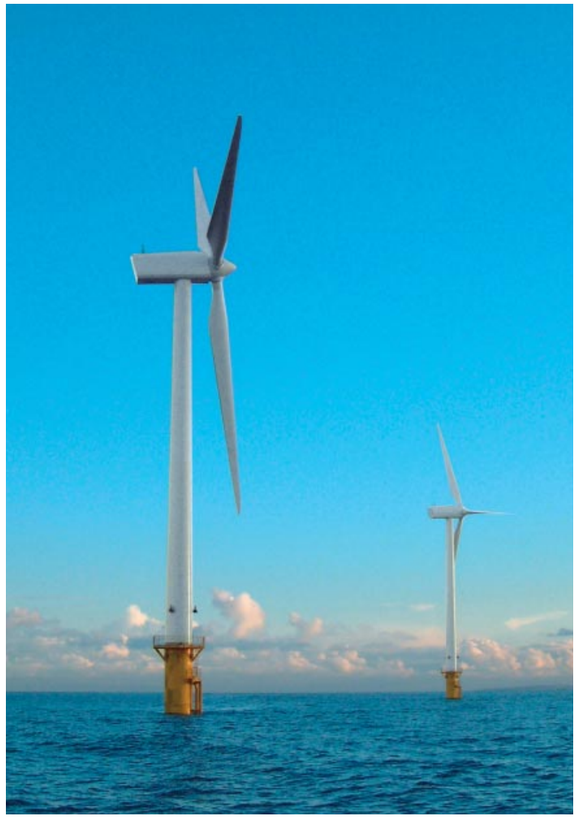
WHAT EXACTLY IS CORROSION?

Corrosion is the – unwanted – change in a usually metallic material through a chemical reaction with surrounding substances. This leads to an impairment in quality and properties, and the required function of the material may also be diminished. The term can also be applied to non-metallic materials, such as glass or plastic.

In the maritime technology field, corrosion is primarily caused by seawater. Contaminants in the air, such as SO_2 or salts, have a corrosive effect too. The so-called "fouling" caused by bacteria and fungi is also a corrosion-related problem.

Offshore Wind Energy – The New Standard

Germany is the strongest market for wind energy worldwide, but 58 per cent of the value is added overseas. Here, the trade expects a 60 per cent growth in turnover for 2005. North America is regarded as a favourable investment environment for wind turbines.



Vision of tomorrow: offshore windfarms

THE OUTLOOK FOR WIND ENERGY is promising. According to Jürgen Trittin, a new era is dawning for the wind energy sector. Germany's Environment Minister intends to have 25,000 megawatts of output capacity installed in wind farms off the German coast by 2025. An ambitious target! In Europe alone, over 100 offshore wind energy projects are currently in the preparation phase. The main reason for building wind farms in coastal waters lies in the fact that there is almost twice as much wind available off the coast as there is inland. According to the rules of physics, this promises eight times as much electrical power.

All wind energy projects share the common necessity that the site-specific conditions must be examined from the safety viewpoint in the widest possible sense. For owners, investors, banks and insurance companies, a reliable project certification is the decisive prerequisite for the official approval procedure.

EASTING GUIDELINE With the "GL Wind Offshore Guideline", there is now a comprehensive regulatory framework that reflects the current state of the art, is based on the experience of the past years and, in conjunction with the "Guideline for Condition Monitoring Systems", complies with the requirements of the European EN 61400-1 standard, amongst others.

This English-language guideline is subdivided into 13 chapters in which all assessment-relevant aspects are treated in detail, from the foundations through the machinery components up to regular maintenance and central environmental aspects. For instance, the guideline includes a complete description of the modules for project certification, a presentation of the essential IEC and CENELEC standards, and a large number of practical operating and safety instructions for the turbine. AS/OM

For further information: Jens-Dieter Schneider, GL Wind, Phone +49 40 31106-609, shd@gl-group.com or **www.gl-group.com/glwind**

PHOTO: GETTY IMAGES/STEFANIE NORMANN/GL

Goodbye *to Snail Mail*

No more wading through mounds of paper. The new GL Internet portal "global exchange" makes transferring of drawings and approval results so much easier.

TIME IS MONEY – this is true worldwide. And Fortune smiles on those who are agile. The globalized markets of today demand constant workflow optimization. Speed is becoming an ever more important criterion in deciding for or against a certain supplier. The boom in shipping calls for efficient planning and working procedures, timekeeping and reliability – all wrapped up together with the same requirement for high quality. In view of the enormous worldwide demand for shipping tonnage, the fabrication of ships is becoming ever faster. A pure construction period of about eight months still requires half a year of lead time. The shorter the lead time, the sooner the actual production can begin. The contribution a classification society can make to accelerate the workflow is demonstrated by an exemplary new method for the electronic transmission of drawings and for the efficient administration of the associated project documents.

NEW INTERNET PORTAL IN ACTION Since February, yards and equipment suppliers have been able to use GL's new Internet platform called "global exchange" (or "globe" for short) to submit their documents for approval much more rapidly and economically. Not only that, they can then access the examination results in the same efficient manner. "Thanks to the valuable feedback given by our pilot users, we were able to make the new platform available for live production after only nine months of development and testing," says Wolfhard Sengler, Director of the Information Technology and Organization Division. These "test drivers" included the engine manufacturers MAN B&W Diesel A/S (Copenhagen), MAN B&W AG (Augsburg), Caterpillar Motoren GmbH & Co. KG (Kiel) as well as the turbocharger maker ABB Turbo Systems AG (Baden, Switzerland) and the gearbox producer RENK AG (Rheine works). But was not such a platform already long overdue in this digital age? "An understandable question. However, in contrast to the aircraft or automobile industry, for instance, shipbuilding is governed by the principle of external plan approval by a classification society. So the processes involved also have a different structure. And for each newbuilding project, you always have new partners coming together in fresh constellations," Jan-Olaf Probst, Ship Type Manager for Container Ships, points out. The requirements posed by all participants regarding the functionality and security of an electronic exchange medium for design and construction plans are correspondingly high. During the project phase of a ship newbuilding, an average of some 1,500 different documents submitted by yards, engine manufacturers and other suppliers must be examined. Some detailed drawings have to be calculated through several times over. For technically sophisticated ships, the computation and examination work is much more complex.

"To ensure absolute security, the data exchange is protected by SSL technology, as for home banking."
Tobias Vorberg, IT specialist/project manager

The paperless exchange of drawings, reports, certificates, etc. via "globe" makes time-consuming postal transmission unnecessary. There are no longer "mountains of paper" to be sorted and processed. Our customers are able to submit their drawings directly in the common PDF format. Following the examination, they receive the documents in the same way. An additional aspect of this procedure is especially useful: all participants are automatically and rapidly informed about the current state of approval. Legal certainty is ensured through the hard-copy version of the file.

HIGHEST LEVEL OF SAFETY "To ensure absolute security, the data exchange is protected by SSL technology, as for home banking," says Tobias Vorberg, IT specialist and project manager at GL. "In addition, the platform runs in isolated mode on its own server. Access is protected by password, i.e. each user can only view his own data. On request, customers can obtain an extra degree of security by using the RSA token system, which generates six-digit codes every minute and thus, in conjunction with a PIN, creates a constantly changing password. Another benefit is that "globe" can be reached through a standard browser without the need for any additional software. AS/OM

For further information and registration, please visit: **www.gl-group.com/globe**

One fine day in the Caribbean: cruise ships talk shop

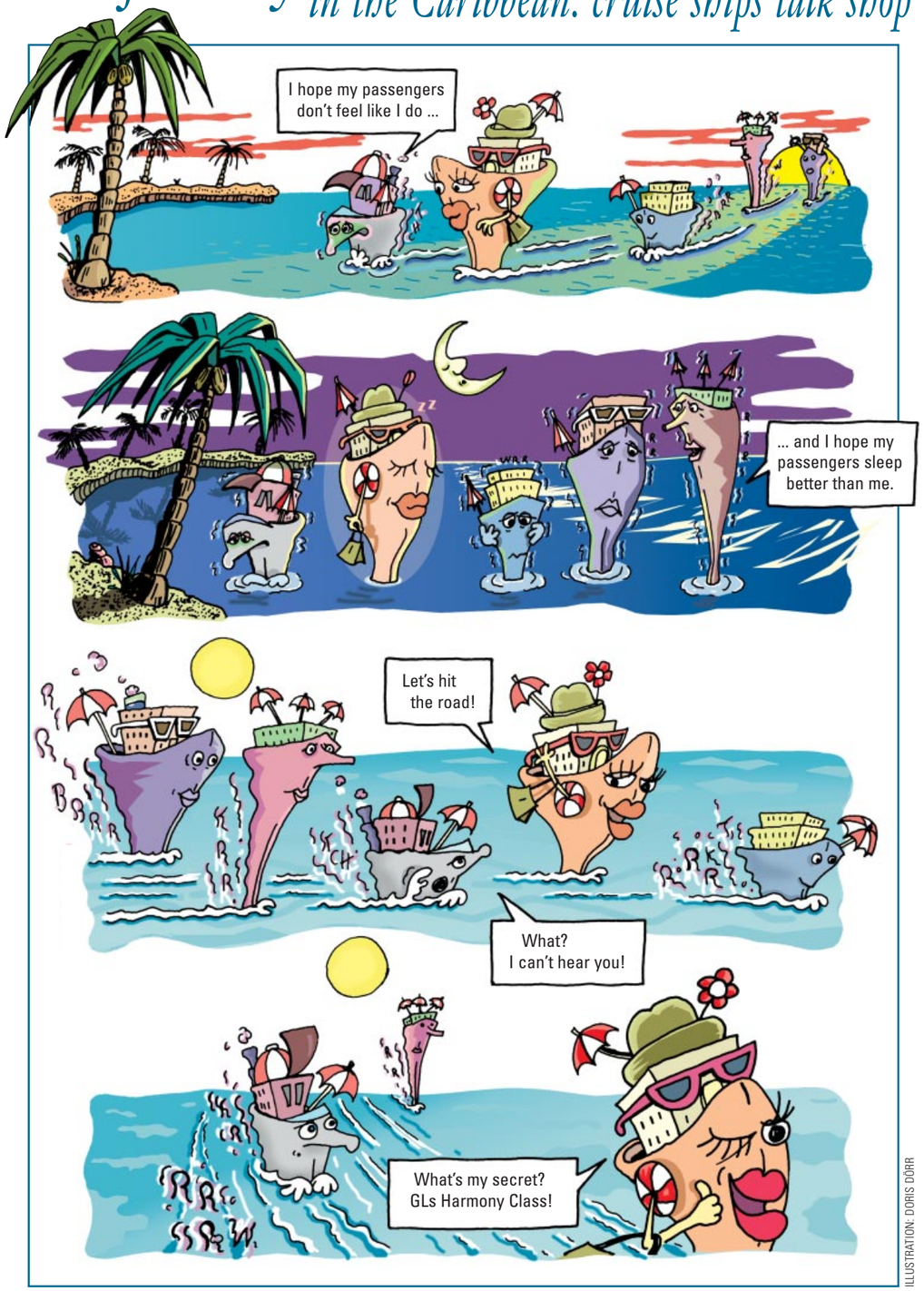


ILLUSTRATION: DORIS DÖRR

More information at www.gl-group.com > Maritime Services > Consulting Services > Vibration

Rules for Classification and Construction

We will be happy to send you our latest brochures, rules and guidelines.
Order forms are available on the Internet at www.gl-group.com > Client Support > Rules & Guidelines

MAIN GROUP 1 – SHIP TECHNOLOGY		
Part 0	Classification and Surveys	2005-02-01
MAIN GROUP III – NAVAL SHIP TECHNOLOGY		
Part 1	**Surface Ships**	
Chapter 1	Hull Structures and Ship Equipment	2004-08-01
Part 2	**Preliminary Rules for Sub-Surface Ships**	
Chapter 1	Submarines	2005-03-01
Chapter 2	Remotely Operated Underwater Vehicles	2005-03-01
Chapter 3	Guidelines for Air-Independent Power Systems for Underwater Use	2005-03-01
MAIN GROUP V – ANALYSIS TECHNIQUES		
Part 1	**Strength and Stability**	
Chapter 2	Guidelines for Fatigue Strength Analyses of Ship Structures	2004-08-01
MAIN GROUP VI – ADDITIONAL RULES AND GUIDELINES		
Part 7	**Guidelines for the Performance of Type Approvals**	
Chapter 1	Procedure	2004-11-15
Part 9	**Materials and Welding**	
Chapter 6	Guidelines for Corrosion Protection and Coating Systems	2005-02-01

New Technical Publications

Paper 04-1	Recommendations for Rudder Design Preventive Measures to Decrease or Avoid Rudder Cavitation	2004-11-01

Germanischer Lloyd Aktiengesellschaft

Head Office
Vorsetzen 35, D-20459 Hamburg
Phone: +49 40 36149-0
Fax: +49 40 36149-200
headoffice@gl-group.com

www.gl-group.com

OE003 · 2005-03-01