

NEWS

CLASSIFICATION



Information from Det Norske Veritas for the maritime industry

No.3 September 2002

Optimising ro-ros

... the way to
real competitive advantage



Photo: Stephano Grasso Photosport



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EU addresses advanced ro-ro technology



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New MaK M43 proves efficient and maintenance friendly

Diverse services

When DNV was established in 1864, its main task was to safeguard life and property on board ships. Development of the offshore industry added a third principle for DNV: safeguarding the environment.

With the implementation of ISO 9000, DNV became involved in quality assurance for a broad range of industries offshore and onshore. This is one of many new areas that have contributed to widen the variety of DNV services.

The variety of services we offer the maritime industry today is illustrated in this edition of Classification News. We describe six new ro-ro vessels recently delivered from Flensburger Schiffbau-Gesellschaft shipyard in Germany, and the many services and parties involved in realising such a project.

Even though a large number of ships are being constructed in Asia, shipbuilding in Europe retains its specialties in ro-pax, ro-ro and passenger ships. DNV's long partnership with Meyer Werft in Germany and their advanced cruise vessels is a good example of successfully applying our three main principles.

DNV has played an active role in the German shipping industry for the past 120 years, with a close relationship to the shipbuilding and shipowners' associations, the Hamburg Port Authorities and the German Maritime Directorate. The SMM exhibition taking place at the end of September in Hamburg is evidence of the continuing technical development of European shipbuilding. DNV, too, is proud to be playing its part in this successful market.

Jörg Langkabel
Head of DNV Maritime Service Centre
in Hamburg, Germany



Photo: Flensburg shipyard

EU project highlights need for new technology

Short-sea coastal shipping is on the agenda in the EU as Europe attempts to decide how to handle the increasing transportation problems threatening to congest the system.

The demand for transport in Europe has been estimated to grow by 38% from now to 2010. If nothing is done road vehicle freight traffic alone might increase by nearly 50% and practically come to a halt.

The EU has therefore, among several initiatives, launched an *Integration* project as part of the 5th R&D Frame Programme. The project focuses on integrating land and sea technology to obtain efficient intermodal door-to-door transport, based on the most promising and advanced ro-ro technologies available today. DNV is part of the project and will be responsible for classifying the proposed new ro-ro vessels, among other items.

DNV's representative, Dr. Per Olaf Brett, emphasises the technology and

design challenges that lies in such a project: 'The main problem to be solved is how to increase the competitiveness of European short-sea shipping to effectively compete with land-based traffic. The plan is to develop new vessels with speeds of 40 knots and higher, which will involve evaluating existing and new designs of propellers, engines and hulls.'

On a global scale ships are responsible for the carriage of 97% of the world's goods, but in Europe trucking dominates freight transport. Compared to truck transport, multimodal transport by water and railway is much more sustainable. But the latter must become more competitive with regard to total transport time, flexibility and costs. The *Integration* project looks into these aspects, and new alternative solutions are expected to be launched.

The project has a time frame of three years with a total budget of six million Euros.

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In today's challenging business climate ro-ro owners and operators, ports and logistic providers are all looking for new opportunities to improve business performance. Here we take a close look at new technology applied for ro-ro ship design, construction and operation of a series of six sister vessels built at the Flensburg yard in Germany for the Turkish owner UND RoRo Shipping Company.

Flensburg extends ro-ro boundaries

Flensburger Schiffbau-Gesellschaft (FSG) shipyard in Germany is speeding up the production of ro-ros by making use of sophisticated design tools. In 2001 the yard achieved the ShipPax Award for its "outstanding ro-ro concept" on the new vessel *UND Ege*, one of six sister ships built for Turkish shipowner UND.

In order to maintain its position as one of the leading shipyards in the ro-ro sector, FSG makes use of design tools based on first principles, complemented by an efficient research network. By adding a fourth deck and fine-tuning the hullform of the *UND Ege*, FSG managed to build a very economic and functional trailer carrier.

New solutions

Says Wolfgang Bühr, head of design and development at FSG, 'By adding a simple steel deck we managed to increase capacity from 2,700 to 3,200 lane metres, an additional investment that has turned out to be less expensive than estimated.'

Ships of this type have few or no transverse bulkheads, which reduces the racking stiffness. It is a challenge for the yard to design a proper connection between slender mainframe structure and the rigid ramp structure. FSG performed Finite Element (FE) analysis for these areas, which was verified by DNV.

The 4-deck version was specified with one design draft, enabling the designers to optimise the hullform at that particular draft. A stern trim wedge has been fitted as a result, boosting the speed by about 1/2 knot compared to earlier 3-deck vessels.

Doubled throughput

FSG spends more than 10% of its turnover on research and development (R&D) annually. 25 engineers

are permanently engaged on R&D projects inhouse or in close cooperation with universities, developing new design tools and improving productivity. They have developed low-cost automation tools such as welding tractor machines instead of standardised welding robots, which have increased efficiency and doubled throughput during the past ten years. They have resulted in a 50 % reduction of individual operations. One production line has reduced manpower from 24 to 14 with the same throughput.

'Building vessels based on a risk-based approach should be a prime goal for all involved in construction,' says Bühr. 'It is not enough to follow the classification rules only. We have to extend their scope and take a look at the consequences to find out how to handle them. It is a matter of optimising the whole system. A good example is a rudder type utilised by FSG, but not completely covered by the DNV Rules. Consequently some modifications had to be made to the rule formulas, after thorough discussion between FSG and DNV.'

FSG is now able to simulate the whole steel production process with original design data up to three months before building starts. This has a two-sided effect, according to Bühr. New layouts can be tested before any

investments are finalised; also employees are involved in the early stages of simulation, which increases their familiarisation with the product before building starts. FSG has recently commenced simulating the behaviour of passengers evacuating a ship. The studies are expected to be finalised by the end of this year.

Future 5-decker

FSG is now in the process of designing a new 5-trailer deck concept for ro-ro vessels. Arrangement of the deck heights and ramp layout makes possible simultaneous loading and unloading of four different cargo areas. Simulation studies have shown that the same amount of cargo can be handled via each ramp. The harbour turnaround times have thus been minimised, despite the amount of cargo to be handled. A completely new concept of internal and external watertight integrity ensures and extremely high safety standard. The new 14,100

dwt ro-ros have a capacity of 6,100 lane metres. Their operating speed is 23 knots.

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*Wolfgang Bühr,
head of design
and development
at FSG.*

Caterpillar engines benefit ro-ro operators

The new UND ro-ros from Flensburg are powered by MaK M 43 engines, produced by Caterpillar Motoren GmbH & Co. KG in Germany. They are proving to require only simple maintenance, fulfil the IMO Emission requirements and have low fuel consumption.

Caterpillar Motoren has cooperated closely with DNV during the production of these engines since their introduction to the market in 1998. More than 180 engines of this series have been sold so far, and a 12 cylinder Vee-type will be launched at the SMM 2002 Exhibition in Hamburg. The cooperation with DNV involves certification of materials and components, and testing the assembled engines during testbed runs.

According to Wolfgang A. Sprogis, senior manager for quality, modular construction has been consistently employed in these engines. A philosophy of 'intelligent simplicity' underpins their design, with maximum reliability, minimum operating costs, simple maintenance and consistent reduction of exhaust emissions by measures internal to the engine.

Electronic approval

DNV recently introduced computerised approval of drawings. 'Changing from paper-based to electronic approval has given us valuable benefits, says Sprogis. 'We have reduced the workload and can concentrate on the important issues. Comments are being put directly on the screen and we can communicate online with the classification society instead of waiting for the papers to be sent back and forth.'

Controlling product quality

A Manufacturer Product Quality Assessment (MPQA) has been carried out by DNV, measuring the ability to control product quality.

Continues Sprogis: 'The MPQA has enabled us to improve work processes and has added value to our present internal system. The assessment gave us a complete overview of work processes in our organisation and

pointed out specific areas of improvement, such as the need for greater focus on employee requirements and how to fulfil them.'

Reducing inspection and testing

As a result of the MPQA Caterpillar Motoren has also implemented a Manufacturing Survey Arrangement (MSA), which is an agreement between DNV and the manufacturer describing to what extent inspection and testing can be carried out by the manufacturer without the presence of DNV. 'The MSA contract has helped us to become more process oriented, and reduced the need to certify each part of an engine,' says Sprogis. 'We have also implemented MSA for certain sub-suppliers, which has increased efficiency for both parties.'

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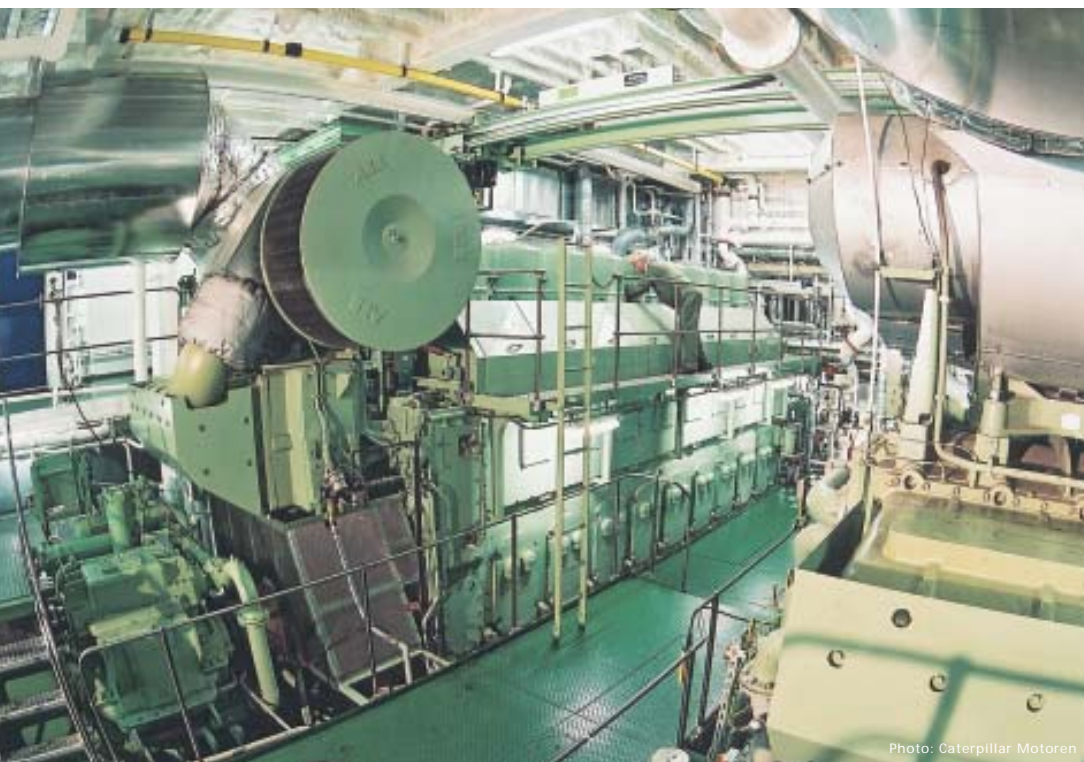
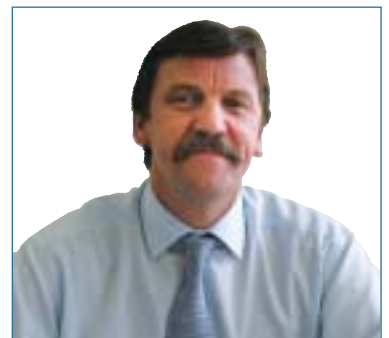


Photo: Caterpillar Motoren



*Wolfgang A. Sprogis,
senior manager for
quality, Caterpillar
Motoren*

*MaK M 43 engines installed in
UND Akdeniz.*

Building for the future

Technical Manager for the UND ships is Bluewater Marine, which has participated in their design and building. The company stresses the importance of building for long-term operation.

Bluewater's aim is to build a vessel which they can manage and maintain for the next 20 years. Together with FSG, DNV and the owners, Bluewater has worked very closely to produce the best possible vessels.

According to Ian Buchanan, managing director at Bluewater Marine, all parties have learned much from the series of vessels, to such an extent that the sixth ship is better than the first, with more lane metres of cargo space and half-a-knot faster speed for the same fuel consumption. The vessels are operating well and in line with expectations.

Maintenance system

One of the main tools during the building process was the DNV-approved Planned Maintenance System (PMS), which started when the

first steel was cut and will continue throughout the lifetime of each vessel.

PMS is a survey of machinery based on annual audits of the planned maintenance system onboard. It is very flexible for the operators as the surveyor bases inspection of machinery components on documented maintenance history. Opening up of components simply for class survey can then be avoided. Annual surveys are carried out in order to verify correct use and proper follow-up of the system.

Teething problems

There have been some teething problems with the fuel pumps in the main engines. Bluewater Marine has worked closely with Caterpillar, manufacturer of the MAK engines, to solve this problem. The fuel pumps have been redesigned and modified, and the new final design was to be fitted to the first ship at the end of August 2002. The problem, and its solution, has given the ship engineers a great deal of valuable experience, according to Buchanan.

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Operating according to plan

According to Hasan Pehlivan, technical manager of the UND RoRo Shipping Company, the vessels are operating according to plan.

The new design of ro-ro was chosen to improve service quality and competitiveness.

All six vessels are now operating the Istanbul-Trieste service in the Mediterranean, handling a total of 300 to 350 trucks each day.

The philosophy behind their concept is to provide a high-quality service for customers, to improve service standards, and to help a dynamic company capture future business. UND itself has been involved in the design of the vessels. For example, loading and unloading operations are very simple due to fixed

ramps between the decks, and a wide stern ramp. Hence the required time for port operations is much reduced.

The UND RoRo Shipping Company is a joint venture of several international transportation companies in Turkey. It is located in Istanbul and currently owns ten ro-ro ships; all are operating the same route between Istanbul and Trieste in Italy.

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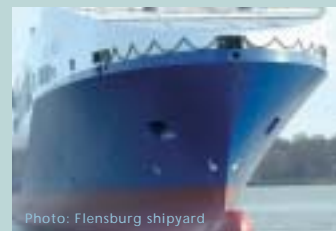


Photo: Flensburg shipyard

From top: Details of sister vessels UND Akdeniz, Karadeniz, Ege, Adriyatik, Atilim and Birlık.

The UND Ro-Ro series are DNV classed.

They comprise the following two categories of vessels:

- | | |
|---|---|
| UND Akdeniz and Karadeniz are of type Ro-Ro 2700: | UND Ege, Adriyatik, Atilim and Birlık are of type Ro-Ro 3200: |
| • 3-trailer-deck concept | • 4-trailer-deck concept |
| • about 22 knots | • about 22 knots |
| • 2,700 lane metres | • 3,200 lane metres |
| • 22,900 gross tonnage | • 26,496 gross tonnage |
| • 12 truck drivers | • 12 truck drivers |

Shipowners: UND RoRo Shipping Company, Turkey

Technical management: Bluewater Marine, England

Yard: Flensburger Schiffbau-Gesellschaft (FSG), Germany

Engine Manufacturer: Caterpillar Motoren GmbH&Co.KG, Germany

DNV Class: ✱1A1 General Cargo Carrier RO/RO E0 DG-P ICS W1

Choosing the right safety measures

Safety at sea concerns everyone, but preventative measures lie in the hands of yards, shipowners, authorities and classification societies.



Photo: Beate Ørbeck

Formal Safety Assessment (FSA) is a technique that can help choose the most appropriate and cost-efficient safety measures. DNV has used the methodology – first developed to assist IMO in regulating marine safety – as a risk-based foundation in the development of DNV's Classification Rules and Procedures. It has been applied to structural design and machinery systems/equipment to help prevent operational interruptions, and safeguard humans and the environment.

Over time, incidents at sea have decreased gradually, but transporting goods on water still involves risks. Historically, safety measures have been implemented retroactively. FSA techniques allow for a more proactive approach, as the methodology is designed to identify and evaluate risk areas, and then perform cost-efficiency analysis of potential measures.

For the shipyard – and hence

shipowner – such additional measures come at a cost. But through statistical and risk-based calculations of existing data, the FSA technique provides a quantitative rationale for why a certain measure is the best choice in terms of cost, risk prevention, and compliance with rules and regulations.

Classification societies and authorities can explain the rationale behind rules, regulations and consequently appropriate measures. Yards and shipowners can therefore more readily see their use and value. The result is a more transparent, traceable and cost-efficient system that ultimately improves safety at sea for everyone. DNV is committed to the use of risk-based methods as a basis for future rule development.

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Growing call for supplier evaluations

The volume of DNV's new product Manufacturer Product Quality Assessments (MPQA) has more than doubled over the past 12 months. Assessors worldwide have carried out a total of 112 such assessments.

Global trends in shipbuilding indicate that centres of construction shift constantly. Owners go to new countries and unknown yards with their new-building contracts as part of their efforts to minimise costs. This, in addition to yards' increased use of sub-contractors, leaves owners exposed to unknown risks. A professional yard and

supplier evaluation using MPQA in the pre-contract phase will contribute to substantial risk reduction.

MPQA is a tool to measure a manufacturer's ability to control product quality by using a rating assessment methodology. An MPQA will quantitatively document the operation's capability level measured against specific criteria.

MPQA has been introduced to add value to DNV's traditional services such as certification of materials and components. In about 20% of all assessments carried out, DNV has acted as consultant to owners, yards or makers of critical components and materials for the shipping and offshore industry. We are strengthening our efforts on yard and concept evalua-

tions, and selection of manufacturer or maker.

25 skilled and experienced surveyors located in 12 countries have completed a dedicated training programme to become MPQA assessors. DNV is the only classification society to offer this type of service to the industry so far.

For more information, see <http://one.dnv.com/mpqa>

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An MSA is an agreement between DNV and a manufacturer, describing to what extent the manufacturer without the presence of DNV can carry out inspection and testing.

Surveyor attendance during gauging

The quality of thickness measurements on board ships has long been questioned. IACS has now taken action to introduce new procedures requiring the attendance of a surveyor during gauging.

Thickness measurements are a key element in the renewal survey of ships. DNV requires a survey programme to be prepared well in advance of the survey of oil and chemical tankers and bulk carriers, including required areas for close-up surveys and thickness measurements.

IACS has recently adopted the Procedural Requirement No19 and the associated Recommendation No 77 Guidelines for the Surveyor on how to control the thickness measurement process.

Procedural Requirement 19 is mandatory and includes:

- Thickness measurements required in the context of hull structural classification surveys are to be witnessed by a surveyor
- This requires the surveyor to be on board while the gaugings are taken to the extent necessary to control the process.

The Guidelines in Recommendation 77 contain items that should be addressed at the survey meeting prior to the survey. It is to be attended by a

surveyor, owner's representative and thickness measurement firm's representative, to ensure safe and efficient execution of the surveys and thickness measurements.

The following guidelines should be addressed:

- Schedule for thickness measurements
- Provisions for thickness measurements (personal safety, means of access, cleaning and de-scaling, illumination, ventilation)
- Planned scope of surveys
- Availability on board of drawings with original scantlings
- Allowable thickness diminution
- Representative readings in general
- Readings where uneven corrosion/pitting are found
- Procedure for additional readings of areas with substantial corrosion
- Communication between surveyor, thickness measurement operator and owner's representative.

The guidelines contain items related to monitoring the thickness measurement process on board, such as:

- Selection of locations so that readings represent an average condition of the structure
- Special consideration of structures where protective coating is found to be in good condition



- Additional measurements of areas with substantial corrosion or excessive diminution.

Upon completion of the thickness measurements the surveyor should verify and sign the preliminary thickness measurement report.

DNV strongly recommends that the measurements required in association with close-up surveys are executed simultaneously in order to facilitate a meaningful survey.

For more information, see www.iacs.org.uk (under Procedural Requirements)

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DNV retains No1 position in PSC rankings

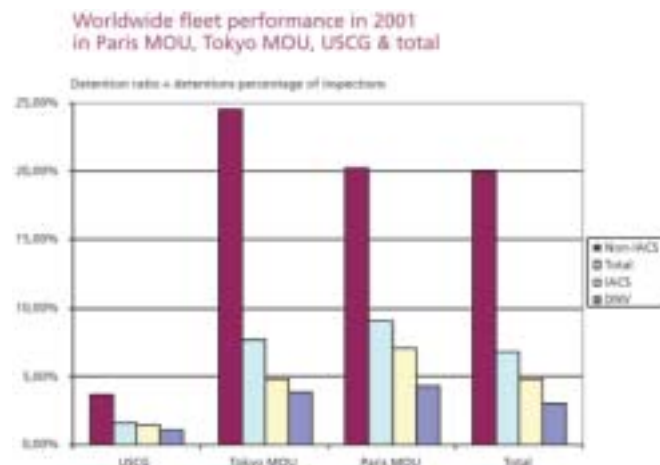
The performance of DNV-classed vessels in Port State Control (PSC) continues to be the world's best.

Accumulated statistics from the 2001 Annual Reports of the Paris and Tokyo MoU's, and of the U.S. Coast Guard, show DNV to have the best record of all Classification Societies in terms of vessels detained following Port State Control inspection.

Based on total detentions throughout 2001, DNV's detention rate as a percentage of vessels inspected was 3.1%, compared to the average of 6.9% (all Class Societies) and 4.9% (IACS Members).

Says DNV's Magdy Shehata, 'The combined figures from these three Port State Control regimes represent some 90% of total 2001 detentions worldwide, and are regarded as a reliable indication of the performance of each Class Society. DNV has retained its No1 position, in terms of the least total detentions as a percentage of PSC inspections, for the past three years.'

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Web technology enables competitive advantages

The shipping industry can benefit from the Internet. The MariNet project, a cooperation of Norwegian companies dealing with shipping, is challenging technology suppliers to show the benefits web-based solutions can bring.

New business opportunities are opening up as the emerging world of the Internet is forcing the industry to rethink the way ships are operated. As satellite communication becomes more cost effective, a wider use of web-based systems is possible. The MariNet project will provide guidelines to how to develop maritime internet solutions. In this respect, a test lab has been set up - as a showcase, and to simulate real ship-to-shore communication to test prototypes developed by the project partners.

The project has looked closely into a docking scenario and a logistics scenario, where ships communicate via the Internet like floating office buildings. The details of these cases were given by technology suppliers, who developed the prototypes and demonstrators to illustrate how best to use

web technology in a maritime business environment. Experience gained from the development of these prototypes will be offered to the industry through the MariNet partners.

Major savings

Within the maritime industry, focusing on the most efficient use of competence can make significant savings. Instead of complex systems that are used individually, web-based solutions can bring a streamlined system into the whole Norwegian Shipping Cluster. DNV Software is in a position to offer web solutions to the industry today, according to DNV Software's MariNet project manager Bjørn Berger. A satellite link is already up and running in the MariNet lab.

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MariNet project partners

- DNV
- Norwegian Shipowners' Association
- Iver Ships
- Interocean Ugland Management Corporation
- Wilh. Wilhelmsen
- Leif Høegh & Co
- Computas
- Telenor
- Nera
- Microsoft
- Xantic



'Our objective is to get the Norwegian Shipping Cluster to use web technology to gain competitive advantages,' says DNV Software's MariNet project manager Bjørn Berger.

New software to speed shipbuilding

8 August, DNV Software signed a multimillion dollar software licensing and distribution agreement with the American software house Intergraph. DNV Software will exclusively market and distribute Intergraph's next-generation shipbuilding design applications to the shipbuilding industry.

Elling Rishoff, Managing Director of DNV Software, says that DNV Software's ship classification and strength analysis software will be combined with Intergraph ship design software. It will provide an integrated suite of applications aimed at making dramatic improvements in shipbuilding design and manufacturing productivity.

'This is the first time such shipbuilding design software has been developed for and by the shipbuilders themselves in cooperation with a software-house', says Anita Krohn Thrane, Director of Global Strategy in DNV Software.

The solution is jointly developed by the Global Research and Development (GRAD) consortium, which represents worldwide shipbuilders such as Samsung, Hitachi and Odense, and Intergraph Process, Power & Offshore. 'The constellation is unique, and with DNV Software as the exclusive reseller, DNV now has a great opportunity to differentiate itself from the other class societies,' says Thrane.

The solution will be presented at ICCAS in Malmö, Sweden, in September.

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Seaspan container ships to DNV

Five Panamax container vessels under construction at the Samsung shipyard in South Korea are being transferred to DNV class upon delivery to the owners.

The owner is Seaspan Container Lines, a subsidiary of the Washington Marine Group of Vancouver. The company is expanding its management and ownership activities, and has recently entered into the container-ship management business, through Seaspan Ship Management Ltd.

Peter Curtis, vice president of SSML says: 'We chose DNV because we have good experience with the service level it offers. We enjoyed a good reception by the local office when moving to Vancouver, and coupled with an attractive offer and internal requirements, it was an easy choice for us.'

All ships will make use of the DNV Integrated Survey Programme (ISP) under the Container Express scheme. In addition to classification, DNV will provide safety management and fuel-quality testing services to SSML.

The Container Express scheme includes a training session given by DNV to the ship-board and shore-based staff on inspection and maintenance of container-ship hull items. The dedicated planned inspection and maintenance system developed by Seaspan in co-operation with DNV is an integral part of the training course. The course is scheduled to take place in late summer 2002 in Vancouver.

The five owner-managed vessels are on charter to the China Shipping Group of Shanghai, with ship management in Van-

cover. The first three ships have been delivered and the last two are in the process of being completed.

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Prepare for documentation

Owners are recommended to secure satisfactory documentation upon first docking due to the new Anti Fouling Systems TBT ban.

The IMO Convention on harmful Anti Fouling Systems (AFS) will not enter into force until 2004 at the earliest. However, individual flag states are free to implement it in their national legislation and make it effective from 1 January 2003.

DNV has prepared a survey and certification scheme to assist owners to comply with the requirements, consisting of:

- Documentation review
- Survey of AFS to be applied on the ship including sampling. Testing will only be carried out if deemed necessary

- Issue of Statement of Compliance (SoC), and when the Convention is adopted an International Anti-Fouling Systems (IAFS) Certificate.

The service is based on the same principles as outlined by the Norwegian Maritime Directorate, and founded on those outlined in the Draft Guidelines for Survey and Certification of Anti-Fouling Systems on Ships from IMO.

DNV also offers type approval of AFS compliant to the Convention.



More information, guidelines and price list will be provided upon request to your nearest DNV station, or:

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The International Convention on the Control of Harmful Anti-fouling Systems was adopted by IMO in October 2001.

The key elements for the shipping and offshore industry are:

- From 1 January 2003 the ban on application, re-application, installation and use of Anti-Fouling Systems (AFS) contain-

ing organotin compound acting as biocide (herein called TBT for short)

- From 1 January 2008 all AFS containing TBT must be removed or sealed with a barrier coat
- All ships of 400 grt and above shall carry an International Anti-Fouling System (IAFS) Certificate to document compliance with the Convention.

New Security Code

IMO has decided to perform an urgent review of the adequacy of existing instruments, measures and procedures to protect passengers, crews, ships and port facilities from terrorist acts.

The 75th Session of the Maritime Safety Committee has decided upon a structure for new legislation. The SOLAS Convention is being amended to provide for an *International Code for the Security of Ships and of Port Facilities*. Part A of the Code will be mandatory and part B recommendatory. A considerable number of issues are still to be settled and will be dealt with at an IMO meeting in September, all to culminate in an IMO Conference on Maritime Security in December 2002.

The new legislation will apply to ships on international voyages, and to port facilities serving such ships. It applies particularly to all passenger ships including high speed passenger craft and to cargo ships over 500grt, including high speed craft. The MS Committee decided that the new regulations should be applicable to MODUs in transit and in port, but not to fixed and floating platforms or MODUs on site.

DNV will verify implementation of the Code if authorised by Flag States.

Bulk carrier safety

IMO's Bulk Carrier Working Group has continued to monitor progress in five major formal safety assessment studies. Over the past year, the results and recommendations of four of these, including the IACS study into fore-end watertight integrity, were made available for the group. Certain interim findings of the fifth study, which concerns an international collaborative effort co-ordinated by the U.K., were also submitted to the group, including the outcome of a cost-benefit assessment. The final report is expected to be finalised by MSC 76.

The MSC 75 group has agreed to a preliminary list of recommendations justifying additional regulations. It will be considered at the next MSC meeting.

The listed recommendations are grouped under four functional requirements: hull envelope, closing appliances, evacuation and operational requirements. They further differentiate between new and existing ships, and three main ship sizes – handysize, panamax and capesize.

The group agreed to new SOLAS requirements for water ingress detection and monitoring. This led to the approval of draft texts originally proposed by the ship design and equipment subcommittee for two new SOLAS Chapter XII regulations. It includes installation on board SOLAS ships (500 grt and over, single or double-side skin construction) of audible and visible water ingress alarms in all cargo holds, ballast and dry or void spaces, and the availability of pumping systems. The IACS existing UR 24, concerning water ingress alarms for bulk carriers, applies solely to cargo holds.

The Maritime Safety Committee will decide on dates of entry into force in December 2002. 1 July 2004 has been proposed for new ships, while existing ships might be required to install alarms by their first annual survey after 1 July 2004. IACS is concerned about the proposed implementation for existing bulk carriers and will submit comments to MSC 76.

Improved means of access to ship structures

The amended SOLAS Regulation II-1/12-2 about improved means of access to internal structures of surveys and thickness measurements, and for ad-hoc inspections by ships' crews, was approved in 2001. However, the draft text of accompanying mandatory technical provisions has yet to be finalised.

Discussions at the Subcommittee on Design and Equipment 45 and MSC 75 has resulted in deciding to defer finalisation and approval of the technical provisions to MSC 76 in December 2002. This allows more time to consider the results of current oil tanker industry studies on internal corrosion and sloshing effects.

Provided the revised SOLAS regulation and associated technical provisions can be adopted as a total package in December, the deadline of 1 January 2005 can still be met.

Major outstanding issues include how to strike a balance between the provision of permanent and portable means of access, and whether existing ships and ships already under design should be treated with greater flexibility.

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Improved distribution of vessel status reports

All owners and managers have been informed that the paper-based distribution of *Listings of Surveys, Conditions and Memoranda* has been terminated. The new release of DNV Exchange on the web (<http://exchange.dnv.com>) has a new Survey and Certificate Status Report allowing users to view, save and print the report as preferred. The report can be received automatically by e-mail at defined intervals of one's own choice.



Rule changes July 2002

The most important changes are:

Rules for Classification of Ships

Ships in Operation

In order to obtain a uniform and simplified system for class survey systematics, the rules for ships in operation are restructured and partly revised, with respect to the following main issues:

- Consistency of survey intervals and windows.
- The structure of survey requirements related to main class.
- Definition of the requirements for survey arrangements, in particular related to machinery survey arrangements.
- Survey and certificate endorsements.
- Implementation of new IACS Unified Requirements.
- Alignment with development of the Nauticus product model.

The changes entered into force 1 July 2002.

Rules for Classification of High-Speed Light Craft and Naval Surface Craft

IMO has adopted amendments to the 1994 International Code of Safety for High-Speed Craft covering new requirements for existing craft.

The most important changes are:

Carriage requirement for:

- voyage data recorders (VDR).
- nautical charts and nautical publications.
- automatic identification system (AIS).

The changes in the Rules for Classification of HSLC and NSC will enter into force 1 January 2003.

Additional information may be found under Publications > Rule Changes at:
<http://exchange.dnv.com/>

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Faximile IACS Press Release September 2002

IACS introduces tougher surveys for general cargo vessels

A major initiative to reduce general cargo vessel casualties has been taken by IACS. On June 17, IACS' Council adopted a new Unified Requirement (UR Z10.6) which introduces, to certain general cargo vessels, requirements for close-up surveys and more extensive steel thickness measurements along the lines applied already to oil tankers, chemical tankers and bulk carriers. But some ship types with relatively favourable casualty records, such as containerships, pure car carriers, ro-ro cargo ships, reefers, wood chip carriers and cement carriers are excluded.

IACS Permanent Secretary Robin Bradley says: "This is an important measure designed to improve safety within the world's substantial fleet of general cargo vessels. It should be seen as part of a wider programme, introducing more demanding requirements to improve safety, reduce the number of casualties and curb pollution. The poor casualty records for certain types of general cargo vessel justify a much tougher survey regime. Member societies of IACS will incorporate the new UR into their own rules within the next 12 months."

The reports are pre-produced at shorter intervals than previously, giving an updated status of the ships.

Many of DNV's customers, who are subscribers to DNV Exchange, are already using this improved distribution of the vessel status report.

Please contact your local DNV office to receive your logon name and password if you are not a DNV Exchange subscriber and want to receive the new reports as e-mail from DNV Exchange.

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Casualty during handling of gas cylinders

SHIP TYPE: Any SIZE (grt): Any YEAR OF BUILD: Any

Course of events

During handling of four apparently empty Halon gas cylinders on deck, one was damaged and gas escaped with considerable pressure. Due to this the cylinder started rotating on deck, hitting and injuring three crew members in the vicinity.

The casualty took place while the vessel was at anchor.

Extent of damage

All three persons were brought to hospital. One died on the way and the two others were hospitalised under serious conditions.

No material damage was recorded.

Probable cause

The probable cause was that the valve head of the one bottle was damaged during landing on deck thus allowing gas under pressure to escape.

The gas cylinder is normally filled with Halon of pressure of approximately 25 Bar. The cylinder is topped up with Nitrogen, resulting in a final pressure of approximately 42 Bar, see Fig. 1.

The four apparently empty Halon gas cylinders had been picked out based on the low gauge level on the cylinders.

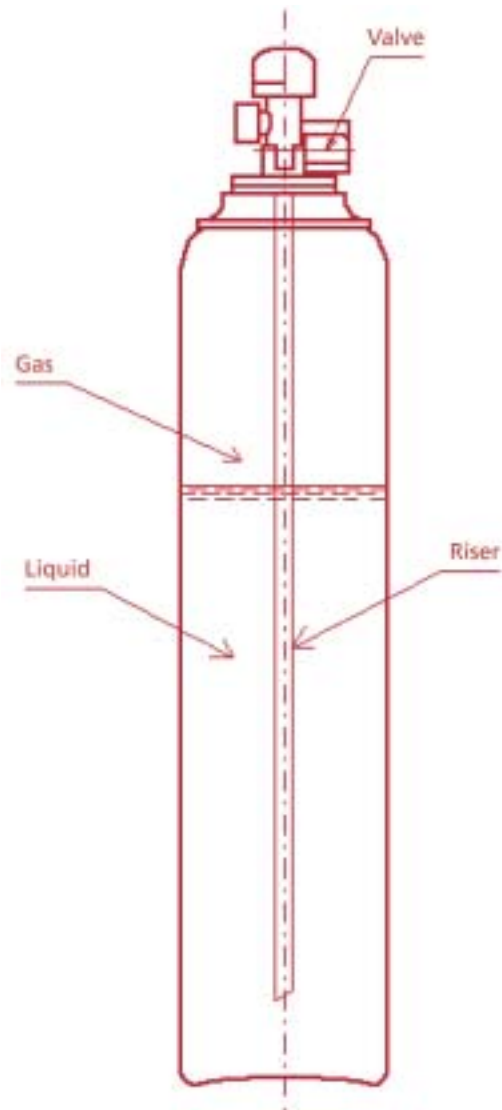
Lessons to be learned

- A cap is to be put on the head assembly, which is normal practice while transporting any cylinder.
- Gas cylinders should always be handled as being full of gas under full pressure.
- The gauge should be subject to regular calibration. This is normally undertaken by approved service suppliers ashore.

For more information, see www.dnv.com

(Classification – DNV Exchange – General Information – Service Experience)

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