

Container Ship Update



Presenting E.R. Schiffahrt

- Ship seminar in Hamburg
- Sharing DNV experience
- Container securing

Bridge Instructions

Taking the initiative

The class societies' traditional function has been to ensure conformity with class and international rules. We have been doing this for more than a hundred years. Plan approval, surveys and certification will continue to be important in the years to come, and there is still room for improvement in the quality of these services.

Should our clients expect more than that?

The fire in the containers onboard the *CMA Djakarta* some years ago was the topic at the recent container ship seminar in Hamburg. Stefan Heinrich of Reederei Gebr. Winter gave an account of the experience as seen by the ship owner. Can we as class make a constructive contribution to preventing these fires? Could cost-effective initiatives developed together with the industry be the way forward? The answer to both questions is that class can definitely contribute to reducing the likelihood of such mishaps occurring.

Our front page picture shows Jörg Langkabel in dialogue with one of our clients, in this case E.R. Schiffahrt. We need to do more of that. Listen to what is on his agenda, and seek to do something about it.

DNV's aim is to promote reliable and cost effective container ship operation.

Knut A. Døhlie



Container ship seminar in Hamburg

"Fires in Containers" was highlighted at the DNV Container Ship Seminar. The severe consequences of fires in containers and the fact that they are difficult to extinguish have given rise to concern.



Mr. Jost Bergmann presented an overview of the many incidents over the past few years, with the *Hanjin Pennsylvania* fire in November 2002 as the latest.

Mr. Stefan Heinrich of Reederei Gebr. Winter gave a very interesting and thorough account of what happened during the *CMA Djakarta* fire some years back. It was made clear to the audience that the fires often get out of control and may rage for weeks. The ability of the crew to put the fire out is limited without outside help. In fact, the fires have a tendency to spread to the extent that the crew has to abandon ship. Dangerous cargoes, especially oxidising agents, and the way they are stowed and handled onboard seem to be critical factors.

It is no surprise that the cost of the fires is tremendous, due to the extensive repairs necessary and the high value of the cargo.

Possible measures were introduced and discussed, focusing on the prevention, detection, separation and extinction of fires. There is a need for a sys-

Above: Participants at DNV's container ship seminar in Hamburg.

Right: Firework containers caught fire on the *Hanjin Pennsylvania* off the coast of Sri Lanka in November last year.

tematic study of the various alternatives within these categories in order to gather know-how. An FSA approach to the problem may be the way forward. According to the FSA method, the effectiveness of a solution is to be balanced against the cost of its implementation, in order to select the best alternative.

DNV has established a working group looking into this problem. We hope to come up with a set of possible measures to discuss with the industry.

A summary of the presentations made at the conference is available from DNV. Please contact containership@dnv.com



Design and operation of container ships

DNV is sponsoring the Royal Institute of Naval Architects' container ship conference to be held in London from 23–24 April 2003.



The container ship fleet has shown the fastest growth of any ship type. Today, roughly 70% of general cargo is already containerised, and this figure is expected to grow to more than 90% by 2010.

Economies of scale have led to a rapid increase in the size of all types of vessels. The trend towards larger container ships presents unique challenges for owners, designers, operators, ports and classification societies. To meet demands for this new generation of container ships, naval architects and operators are constantly striving for innovation.

With this in mind DNV will be presenting a paper on "Strength Assessment of Ultra-large Container Carriers by Direct Load Calculation". The paper focuses on the fact that the yards are now looking ahead to sizes of up to 10,000 TEU and even beyond, and on all the numerous challenges this represents for designers. The paper is the result of a Joint Development Project between DSME and DNV regarding ultra large container carriers of 9,200 TEU.

Please visit the RINA web page – www.rina.org.uk – to register for the conference.

*For more information, please contact
Lisbeth Aamodt, Lisbeth.Aamodt@dnv.com*

DNV Container customer presentation: E.R. Schiffahrt

E.R. Schiffahrt is one of the largest charter owners of container ships worldwide, operating 54 vessels – including 18 newbuildings on order – with a capacity of around 237,000 TEU. We talked to the company's Chief Operating Officer, Albert Schumacher, about future scenarios.



Albert Schumacher, Chief Operating Officer, E.R. Schiffahrt.

“There is scarce availability of large container ships and that is why we see that most ships currently on order are in the Panamax or post-Panamax category today. In terms of TEU, almost 80% of the worldwide newbuilding orders are for vessels in excess of 4,000 TEU. The big operators are adopting this trend for strategic reasons in order to optimise their trading. Since container freight rates have fallen dramatically during 2001 and 2002 and may not regain their previous heights, operators need to further improve the efficiency of sea transport. Fortunately, we have seen rates increasing since the beginning of this year. Maybe, some years into the future, we will see the 12,000 TEU container ship,” says Schumacher.

When asked about any technological obstacles involved in building such large ships, Schumacher points out that yes, there may be a need to consider two-engines, two-screw ships, and there may be a need to rethink the layout of container ports in order to accommodate wider container ships so that ships could be positioned centrally, with cranes gaining access from both sides. Apart from that, Schumacher is confident any technological obstacles can be overcome.

E.R. Schiffahrt's trade can best be described as long-term time charters that are not very

affected by any regional conflicts, apart from a few additional war premiums for some areas like the Suez Canal. “A USD70 million ship with a USD100 million cargo is a huge value to operate. Looking back just some six to seven years, such cargo values were quite high. To us, mastering logistics is the differentiator between the success and failure of a container operator.”

We asked Schumacher where classification societies can make a difference: “Specifically, the new ISPS Code is an area where I will expect class to provide input and advice on operational matters in order for us to comply with this code. This includes advice on our security officers and information handling as well as the training of our crews as regards ISPS. We will have to extend our quality management system to comply with the new code.

“Another area where I expect to receive considerable advice and input from class is on ship safety and design, specifically in connection with heavy weather damages and how to advise the masters and officers on ship operations in the actual situations which can arise. It is important to us that class can offer a good tool here.”

*For more information, please contact
Magne A. Roe, Magne.A.Roe@dnv.com*

APL Denmark arriving Bremerhaven.



Container EXPRESS: Sharing DNV experience

Principal Surveyor Helge Johannessen is in charge of the Container EXPRESS training programme, and has been a member of the development team. He has a long and broad experience in DNV, with a strong focus on ships in operation.

Container Ship UPDATE has asked him some questions about his experience with the Container EXPRESS training and development programme.

What is Container EXPRESS as you see it?

When we introduced it some years ago, we saw it only as an alternative survey arrangement for hull, much like the Planned Maintenance System (PMS) for machinery. The owner's staff could do part of the job which DNV had done before.

What has changed?

Now we see it as much more than that. We are helping the owners to look after their ships by sharing our experience. The people that operate the ship will to a large extent decide the ship's quality over the years. Class has some influence, but it is the owner's policy and how the owner decides to do its job that really determines the condition of the ship.

Has it not always been like that?

Yes, but with the advent of the ISM code, it has been explicitly stated in Chapter 10 that inspections are to be held at appropriate intervals, records are to be kept and corrective actions are to be taken. So now it has become more like a requirement.

How can Container EXPRESS help the owner?

You could say that ship operation is a process of continuous risk management. Controlling the risk of hull and structural breakdowns is one part of the owner's total risk management. The idea is that potential problems should be discovered as early as possible in order to avoid unexpected incidents. That allows time and opportunity to plan remedial actions. If you leave it up to class to discover your problems, then conditions of class may be the result. We encourage owners to be pro-active rather than to be "policed" during the reactive phase. So when we say in our presentation that companies

should "be in control" we are really telling them to be proactive. We believe this is a cost-effective policy.

How is this risk management scheme implemented?

The owner needs to have a planned inspection and maintenance system (PIMS) in place, and must ensure that the people performing the inspections know what they are doing. DNV can assist with both.

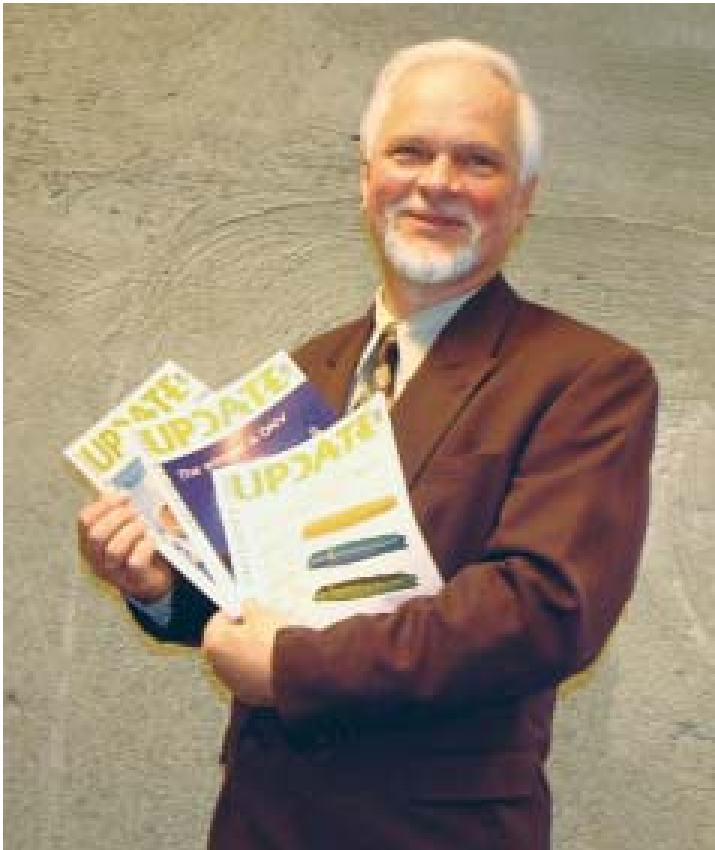
How can you assist?

For the PIMS part, we have a model procedure for setting up the system, including a flow chart with descriptive notes and advice on points to be considered. Model modules are included, with suggestions for inventory lists, time intervals, acceptance criteria and so on. A full fledged model manual is also there. All of this is on a CD which is used in consultation with the DNV expert giving advice.

What about training?

Our training course has been running for some years now. It consists of a two-day course that we give at the owner's premises. It follows the process of inspecting ships from start to finish, focusing on the preparations for and execution and documentation of inspections. The most popular parts deal with critical areas, discussing practical examples of coating and structure problems.

Crews change and new people are employed. How can you reach them all? This is perhaps the biggest challenge and one we are coping with in two ways. We have given courses at company training centres where a great number of people can be reached. However, we see that we have to cater for individual training needs. Together with a leading special-



Principal Surveyor Helge Johannessen answers questions about DNV's Container EXPRESS training programme.

ist in this field, we are therefore in the process of creating a computer-based training module (CBT) which we expect to be ready in the late summer of 2003.

Are you giving up the right to survey compartments on DNV classed ships?

No, we are not. The regime is described in detail in our Rules. We have the option of using the owner's inspection results as the basis for our class evaluation and this should be the rule rather than the exception. It is, however, subject to defined conditions. As a result of this, we find that ballast tanks are being inspected and documented once a year according to a system we know. Photos are available. The alternative is to survey them once every five years. And in dry dock, we may survey any compartment.

You distinguish between surveys and inspections, why?

In our terminology, "surveys" can only be done by a qualified DNV surveyor. "Inspection" means examining and testing compartments and discovering defects. This is something which any inspector can do well, depending on his qualifications. This is why we consider training to be so important. A surveyor will do the same, but, in addition, will assess and reach a conclusion in accordance with the DNV accept-

ance criteria. This job can only be done by a qualified DNV surveyor. So the crew cannot conduct surveys on behalf of DNV.

Do the people onboard have any acceptance criteria to work according to?

Yes, the PIMS must include the owner's acceptance criteria. We share most of the DNV criteria with the owner, so that the owner's criteria can "kick in" before class, leaving the owner time to plan and act without coming into conflict with class. It can be quite difficult for the owner to find appropriate criteria, but we see that the companies that put in an effort get their systems more readily accepted by the crew.

Will you introduce this system for other ship types?

Any such system must be suitable for the ship type it is to be used on. Enhanced survey ships require a different kind of attention than container ships, but the experience gained from Container EXPRESS may also be useful for these ships. The true value of the system is the risk management part of "being in control". That will always be valid for all ship types.

*For more information, please contact
Knut A. Døhlie, Knut.A.Dohlie@dnv.com*

Market growth 2002 faster than expected

Recently collected and updated handling statistics of major container ports around the world indicate a steep growth in port activities and hence container traffic in 2002. The top 20 ports reached average growth rates of more than 14% and the ten largest ports as shown in the table achieved even higher increases.

During the past years, the general activity level of the top 10 or 20 ports has been very good indicators of the market's overall global development. These ports represent 35% or almost 50% respectively of the global container-port volume. Even if it is assumed that the actual growth rate on a global basis is only around 10%, this would be much more than was expected based on the economic trends and forecasts for international trade. The initial estimates for 2002 oscillated between 6% and 7%.

The significantly over proportionate growth of the Chinese ports is remarkable. On average, the Chinese container ports among the top 20 achieved an annual growth rate of more than 20%, while the Shenzhen ports, with a growth rate of more than 50% clearly took market shares from Hong Kong, which only had a growth rate of about 6%. These figures show that China's strong export orientation and the outsourcing of production processes to China and other Asian countries is a very important factor for demand in container shipping.

Steep rise in charter rates

The unforeseen dynamic increase in demand in 2002 at least partly explains the early and steep rise in charter rates observed since January last year. The recovery of the charter market was a major topic in the last Container Ship Update. Apart from a brief downturn in November/December, this trend has continued and even gained momentum in 2003. Meanwhile the market has fully compensated the small losses of the last quarter 2002 and is still on a steep upward path. Since last year's low of January, the overall Howe Robinson market index (HRCI) has risen by almost 60%, more than a quarter of this in February alone of this year. But the current level is still significantly (27%) below the peak reached during the summer of 2000.

Order records

The strong order activity during the last month must also be seen in the context of these very positive market indicators. Again, in January and February, a remarkable number of container vessels was ordered, including many of the Post-Panamax- and Super-Post-Panamax-Class. Even at 1 January 11 ships of 8,000 TEU and more were to be found on the order book, and this number has increased during the past two months. Ships for approximately 170,000 TEU, the highest volume ever for one single month, were ordered in February.

Outlook

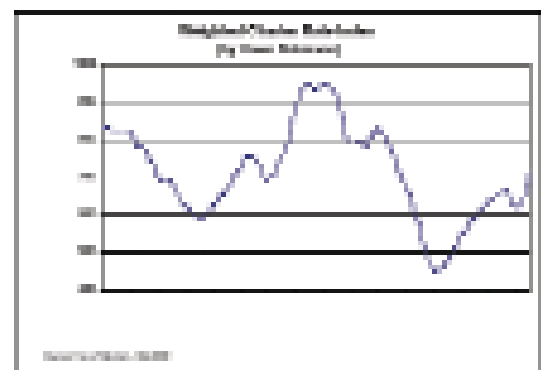
The current contracts and charter options point at a further recovery of the charter market. Despite the relatively pessimistic economic scenarios, the industry expects steep further container market growth and this obviously has to be supported by adequate fleet capacity.



www.isl.org

Handling Volumes of the Top 10 Container Ports available from 2000 to 2002

Rank	Port	2000	2001	2002	% Change
1	Shanghai	10,000,000	11,000,000	12,000,000	+20%
2	Shenzhen	8,000,000	9,000,000	10,000,000	+25%
3	Yokohama	7,000,000	7,500,000	8,000,000	+14%
4	Guangzhou	6,000,000	6,500,000	7,000,000	+17%
5	London	5,000,000	5,500,000	6,000,000	+20%
6	Los Angeles	4,500,000	5,000,000	5,500,000	+22%
7	San Francisco	4,000,000	4,500,000	5,000,000	+25%
8	Hong Kong	3,500,000	3,800,000	4,100,000	+17%
9	Seattle	3,000,000	3,300,000	3,600,000	+20%
10	Manila	2,500,000	2,800,000	3,100,000	+24%



DNV (Det Norske Veritas) is an independent, autonomous Foundation working to safeguard life, property and the environment.

DNV comprises 300 offices in 100 countries, with 5,500 employees.

Container Ship Update is a newsletter published by Det Norske Veritas, Business Area Maritime Industries.

It is distributed to DNV customers and stations worldwide.

Please direct any enquiries to your nearest DNV station, or Container Ship Update e-mail: containership@dnv.com

Editorial committee:
Knut A. Døhlie
Magne A. Røe
Lisbeth Aamodt

DNV
Head Office Norway
NO-1322 Høvik, Norway
Tel: +47 67 57 99 00
Fax: +47 67 57 99 11

Updated list of all regional offices at DNV's web site: www.dnv.com