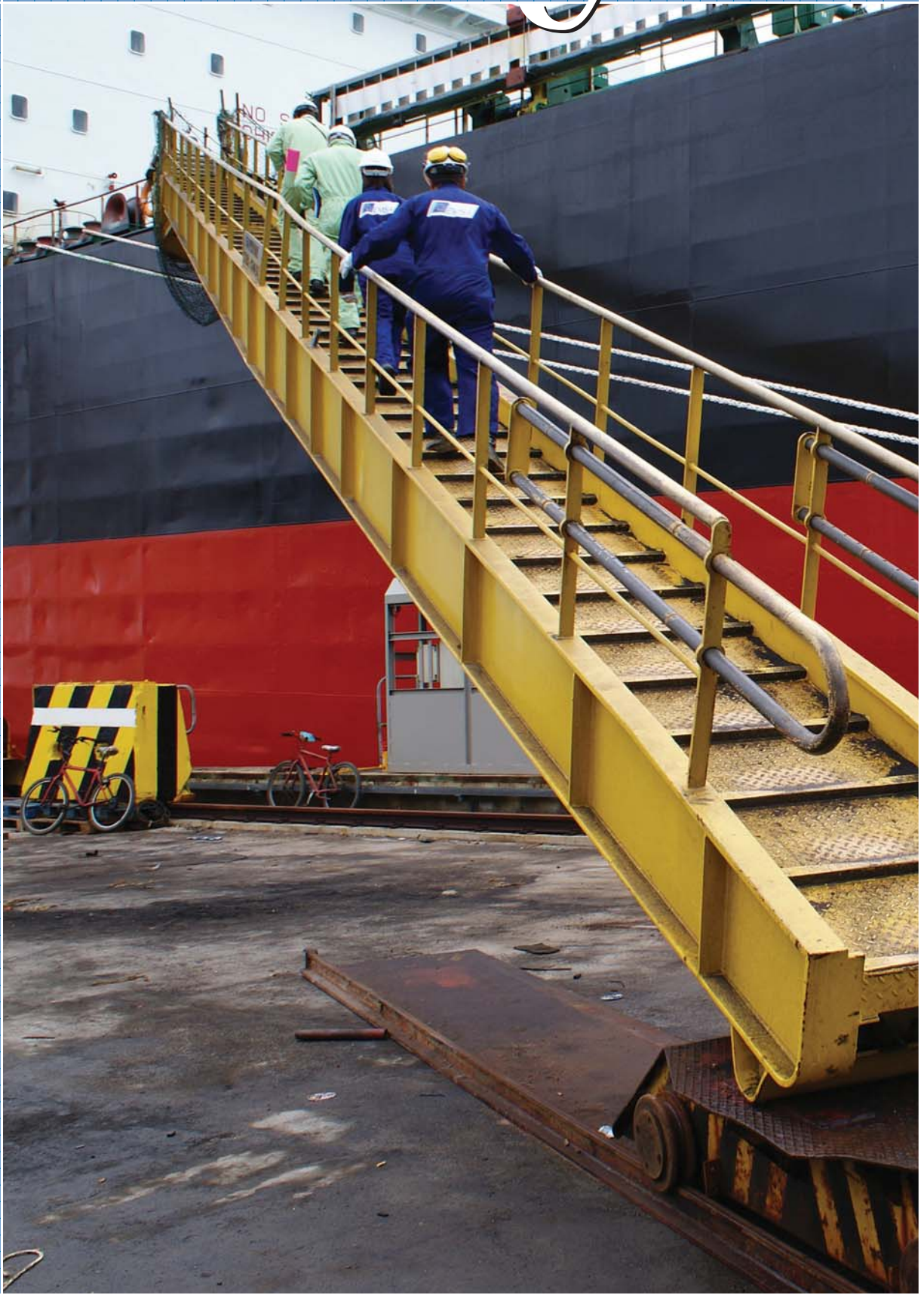




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SURVEYOR



ABS



COVER:

EMSA surveyors board a ship to start a safety inspection. This issue begins with a commentary on shared responsibilities for safety at sea and explores some of the emerging technical, operational and philosophical challenges posed by the industry's evolution.

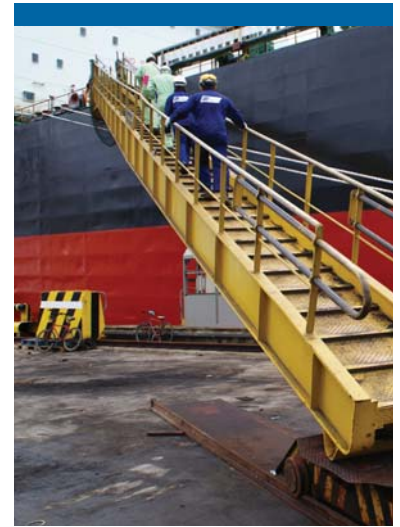
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EMSA and the Safety Chain

By Willem de Ruiter

How the European Maritime Safety Agency sees interlinked responsibilities for safety in the world of shipping.



Willem de Ruiter

Thankfully, catastrophic maritime events are rare today as measures taken by some sections of the maritime world against poor standards appear to have borne fruit. While the number of accidents causing casualties remains steady, the volume spilled in accidental oil spills at sea has decreased from 314,000 tonnes each year in the 1970s to 24,000 tonnes per annum since the year 2000. And for a number of years, European waters have registered nothing comparable to the *Erika* (1999) and *Prestige* (2002) accidents. Despite these encouraging developments, the EMSA Maritime Accident Review 2008 shows that the number of accidents in European waters decreased only slightly in 2008 compared to the previous year (670 accidents and 754 vessels involved in 2008, 715 accidents and 762 vessels involved in 2007). In fact,

the number and cost of accidents still remains significantly higher than three years ago.

Shipping accidents retain a fascination in the public eye. In today's image-dominated culture, we are all made aware of the grisly aftermath of accidents: injury or loss of life; huge scars of twisted metal on the bow; seabirds drowning in tarballs; ugly shipwrecks washed up against the rocks of a beautiful coastline. On those rare occasions when accidents do happen, not only are the consequences of a shipping accident clear, they gain enormous visibility. So despite the relative rarity of major accidents – in EU waters at any time there are over 20,000 merchant vessels carrying out their trade, mostly without incident – the public and their representatives remain acutely conscious that the consequences can be severe.

The challenge for those involved in maritime safety and prevention of accidents is that, unlike such gripping images, the precedents of an accident are rarely as clear-cut. Fingers

might be pointed in all sorts of directions: route planning, poor watchkeeping, crew competence, corners cut during maintenance, aging vessels, faulty equipment, navigational errors, unclear or incomplete charting, fatigue, bad decision-making, untimely emergency response, etc. Likewise, the liabilities involved can be difficult to attribute. To tackle the entire range of risk factors that affect shipping, a systemic, complex approach has evolved to improve maritime safety. Much of the work that is needed takes place away from the public eye: safety committees, technical inspections, developing best practices as regards the construction of ships, etc.

Today, a wide variety of actors share responsibility for the quality of shipping and most of their work on safety takes place behind the scenes. Together, these actors make up what the maritime industry increasingly refers to as 'the safety chain': owners, operators, charterers, crews, flag States, classification societies, hull and P&I insurers, shippers, cargo interests, Port State Controls, etc. There is no 'immaculate conception of disaster' – these actors must all play their individual parts and also cooperate if shipping's safety performance is to be improved. They must ask themselves questions, such as: what might exacerbate an accident situation; if timely action could have prevented an incident; and what precautions need to be put in place – for example, Rules, search-and-rescue resources, towage services, maintenance controls and so on.

This is the complex environment in which both the International Maritime Organization (IMO) and European Union Institutions – reflecting public opinion and pressure – have created and continually strengthened their legislation on maritime safety at international, regional and national levels. But maritime safety requires much more than just increased legislation. There is still a long way to go before the legislation in place is properly implemented by everybody who carries responsibility for maritime safety. There is a need for much



more transparency and accountability in the industry as a whole, and both these concepts are key foundations which must be in place for a genuine safety culture to be built.

Emphasizing a Safety Culture

Building a culture of safety and compliance with rules and standards requires the deployment of a variety of methods and incentives across the wide range of actors operating in the maritime sphere. From public to private, from the global giants of shipping to fledgling young companies striving to survive – all have an impact on the safety chain:

- Vessel managers: owner, ship operator, captains/engineers, seafarers
- Technicians and manufacturers: ship-builders, designers, maintenance technicians, marine equipment manufacturers
- Classification societies
- Insurers and P&I clubs
- Governmental and regulatory bodies: Port State Control, emergency services (Coast Guard, search and rescue), accident investigation, training providers

EMSA engages with all of these interlinked actors on behalf of the European Union, in order to enhance the quality of shipping and achieve safer seas and cleaner oceans. The need to properly implement international rules and standards in order to advance these goals is clear. Through its maritime safety legislation, the European Union has set up

a series of measures based on cooperation, quality, transparency and accountability:

Cooperation at the EU level has shown results. For example, at the beginning of this century, several EU coastal States were reluctant to select 'places of refuge' for vessels in distress. They are now better prepared and more willing to respond to vessels in distress. Member States cooperate to continuously improve the effectiveness of their Port State Control.

Quality in all areas of the maritime sector is an important objective for the members of the safety chain. Bad luck cannot be to blame for any of the 670 accidents recorded in the *EMSA Accident Review 2008*. Despite the good intentions of most players, maritime safety remains vulnerable to human error, technical failures and careless risk-taking.

It is commonly accepted nowadays that the human element is the major factor in most accidents. Not all training schools around the world are up to scratch; not all maritime certificates are genuine. Commercial pressures encourage some shipowners to reduce crews to minimum levels. The EMSA accident review has underlined fatigue as a cause of accidents: seafarers make mistakes under difficult circumstances.

The safety chain is sometimes ineffective in preventing technical failures. Technical failures rarely 'just happen'. They are normally the result of poor design, operation or maintenance and as such are preventable

Vigilance serves safety not only on the bridge, but also in the offices of the world's maritime service organizations.



A core part of the EMSA mission is hands-on inspection.

by several actors in the safety chain, including those responsible for survey and certification systems. When EMSA became operational in early 2004, one of its first tasks was to carry out monitoring inspections of Recognized Organizations. Since that time, EMSA has carried out over 100 inspections. The inspections focus on the implementation of rules and requirements of the international conventions to verify that ships are built safely and remain safe during their operational life. An important part of checking implementation is to verify the quality and quantity of surveying staff.

The EMSA inspections have revealed serious shortcomings. There were cases of new ships, shortly after delivery, being detained with serious class-related deficiencies. There were also cases of aging ships in operation that sailed with recent clean certificates but were found to be in substandard condition.

There were other cases when the Recognized Organizations that are authorized by flag States did not properly apply the requirements and did not obtain the agreement of the flag State as required in such circumstances. Examples of this are hydraulic testing of tanks and testing of steering gear for newly-built ships, which was rarely carried out in accordance with SOLAS and normally without the flag State being aware. As a result of EMSA's inspections, these issues are now subject to discussions at IMO and, although there are good arguments of practicability behind the common practices adopted, a true safety culture should have identified these problems and defined alternative solutions much earlier.

There were also cases where there was a serious shortage of qualified staff. This problem may now have been 'solved' by the economic downturn, at least temporarily, but it is a vulnerability that will return; and it will remain an important area for attention.

Evolving a Culture of Prevention

A system of fines has been introduced in the new EU Regulation on classification societies, aiming at sanctions for non-fulfilment of legislative requirements. I hope that this system will never be used but I fear that there is some way to go yet before I can be confident that it will not be needed.

EMSA has, in general, seen a positive response from Recognized Organizations to the findings identified by its inspectors. They are an important element in the safety chain and should be encouraged to use their expertise not just to apply the regulations but to continuously improve them, acting independently or through flag States and regional and international bodies as appropriate.

Transparency and accountability should also be key goals for the safety chain. Transparency is important because actors operating in a glass box are less likely to adopt bad practices. Port State Control plays a crucial role, by rewarding high performance ships and targeting low-performance ships, and the process will be enhanced further through the New Inspection Regime to be implemented by 1 January 2011.

Infringing laws on maritime safety and environmental protection will become even more difficult thanks to high tech systems of tracking and surveillance set up by EMSA, such as SafeSeaNet (monitoring vessels) and CleanSeaNet (spotting oil spills from a reliable satellite source). As a result of CleanSeaNet action, EMSA became the first authority to alert the Irish government to a 500-tonne oil spill off Fastnet Rock on 14 February 2009 which occurred when the Russian aircraft carrier *Admiral Kuznetsov* was taking bunkers from a tanker. EMSA is also proud to have set up the EU Long Range Identification and Tracking Data Centre (EU LRIT DC), the biggest in the world, used by 32 States.

Among the array of maritime safety and environmental protection provisions deployed by EMSA, the most original is the network of contracted oil recovery vessels covering all European waters. It is ready to be mobilized when prevention measures have failed. The contracting of these ships is the result of cooperation with member States, in order to supplement their national resources in the event of a major crisis. For example, in February 2009 an EMSA-contracted vessel based in Ireland was ready to help during the pollution caused by the *Admiral Kuznetsov* in the incident referred to above.

The current economic downturn is probably only momentary. In the future, worldwide maritime transport of goods will again experience continuous growth. The size of vessels (box ships, LNG carriers, cruise ships) and their cargoes have grown and are likely to continue to do so. New maritime routes are being opened, jeopardizing areas that had so far been protected. Emerging countries have already started to weigh more heavily in world maritime exchanges.

At the same time, the European general public and coastal populations in particular, demand – rightly – pristine sea waters. With coastal populations growing and an increasing number of economic activities linked to the sea, the need to protect coastlines will become more pressing

than ever. Issues that were already under the fledgling EMSA's remit when the agency was set up in 2003 will come very much to the fore:

- Better ship recycling
- Reducing air emissions from ships
- Improving port reception facilities for ship-generated waste

And new issues may be added to the list:

- Studying new ways to improve security as piracy activities have increased.
- Studying new concepts of 'green' ships. Unlike the aviation industry, we do not yet have standardized green ships.

More shipowners and operators will use the safety and environmental friendliness of their ships as a sales pitch, to improve their company's profile. While some have already started, others have been slow to understand that these changes would be good for their business.

Meanwhile, the 'greening' of sea transport is in tune with the times and the shipping industry has no choice but to respond. And here, the users of sea transport – that is, shipowners' customers – have a key role in ensuring that ships not up to standards are not in demand. Safety concerns should not be compromised for profit. Again, this responsibility, from client as well as supplier, underlines the need for cooperation across the industry. We are all links in the safety chain, and we all need to pull our weight.

The CleanSeaNet service spots oil spills around the world using satellite data.



Looking Forward THROUGH THE LENS OF HISTORY

For one young shipowner, shipping's future is written in its past.



“The banking crisis saved the shipping industry from hurting itself too much,” says Albert Frangoulis, Director of S. Frangoulis (Ship Management) Ltd. “Shipowners had seven wonderful years in which they made tons of money and reinvested it in shipping – until things got out of hand,” he says. “People all around the world were ordering ships, some contracting with shipyards that didn’t even exist at the time, and the banks were supporting this activity with financing of up to 90 percent. If not for the world banking problem, they would have gone even further and created a huge problem. The crisis put the whole mess on hold and gave everybody a reality check, the banks included.”

Not the usual view of things, but the kind of stimulating thought heard from shipping’s youthful voices ever since the generational waves began rolling in just over a decade ago. At age 30, Frangoulis is at the forward edge of the latest wave, running a family-held shipowning company that, he says, ‘is about as traditional as it gets.’

Today S. Frangoulis owns a small fleet of three dry bulk carriers and has two more on order in South Korea, coming down from a fleet of seven ships just a few years ago. In its present form the company dates to 1992, but its roots lie in the early 1980s and another time when crisis and opportunity walked hand-in-hand. As a number of big firms of the time failed or divested assets, many of their captains, who knew the ships better than anyone, saw a chance to pool resources and give the business a shot. One such was Captain Stamatis Frangoulis, who began the shipowning adventure in partnership with several friends in 1981 and founded his own firm a decade later.

Quite a lot has changed for shipowners in the nearly 30 years since his father started the business, with the industry subject to so much more outside control as to make it an entirely different world. Although challenging, the changes themselves are neither good nor bad, says Frangoulis – merely history.

“Shipping, like many other things, grows and transforms and becomes something new; it’s in constant change,” he says. “Today there is much more external scrutiny of the industry and a lot more regulation regarding safety and the environment than in the past. At the same time, there also appears to be a little more public understanding of shipping. When I was a student ten years ago, I would tell people I studied shipping and they wouldn’t know what



Captain Stamatis
Frangoulis

I was talking about; today I read articles about shipping in the *Financial Times*,” he explains. “There are new trade routes, new trade partners, new ship designs, new technologies and new opportunities that didn’t exist before – in just the past 15 years there’s been a revolution in the shipping industry. So, I wouldn’t characterize things as having changed for better or worse. It is, simply, the future.”

As the shipowner’s world has changed, so has his tools, he says. “I would say the biggest change between my father’s generation and my own is the availability of information,”



Albert Frangoulis,
Director,
S. Frangoulis
(Ship Management) Ltd.



Lifeboat drills are an important component of safety on board.

he says. “It’s easy to forget how different things must have been back then. A great deal of world trade was regulated, there were two superpowers in tension and the global economy had its inflows and outflows pretty much set in specific directions. With communications technology as it was, I think people back then were not exactly aware of what was happening in the world as it was happening. There was more guesswork. Today, we have an immense flow of current information from all over the planet. Now the crucial thing you have to do is to focus; you try to focus on the proper segment, or the proper idea, in order to educate yourself so that you can give it a good shot.”

MISSING MEMORIES

One thing the information superhighway can’t deliver, however, is hands-on experience. Probably the plainest difference between the changing generations of Greek shipping is that most older shipowners had been captains, unlike most of the newer ones. While the young generation has more education and better information, its learning can’t replace that special something the old shipowners got from having lived the nautical life.

“Comparing the new and old generations in shipping, I would say that my generation’s biggest disadvantage is that we don’t know the ships and the life on board the way they did,” says Frangoulis. “Like many of us, I sailed on board when I was younger and have visited the ships many, many times; unfortunately, this is not enough. I’m not a mariner. I don’t know the seaman’s life. We who don’t know this life have to make the extra effort to remember that this whole business we’re in depends on people – the people living on the ships and sailing them across the ocean.”

“If your whole life is spent on the commercial side of the business, you can easily forget about this part,” he observes. “If you fail to pay good attention to the people who are, actually, the center of your universe, then you set yourself up for a lot of trouble in the future. Instead of building new shipyards, we should be building new seafarer schools,” he adds.

Another part of the experience gap involves understanding the extent of the industry’s cyclicity. Although Frangoulis has been an office regular for 15 years and directly involved in the business for the past eight – making him

well-trained in running a shipping business – for a person of his age, the difficult times of the late 1990s are a memory in shadows and the often talked about crisis of the 1980s might just as well be written on the Rosetta Stone.

“I do my best to inform myself about shipping’s past, but it’s one thing to read about a situation or to hear about it, and quite another thing to have lived it,” he says. “I experienced a market downturn for 18 months; it was hard, but I have to say that I really don’t know a crisis, not like the previous generation experienced in the 1980s. I think a lot of the young people in the business today, from bankers to shipowners, have never been through a major crisis themselves. I know that, up to two years ago, there were a lot of bank officers that hadn’t,” he adds.

Among the things that don’t change, he says, is history’s habit of speaking to deaf ears. “Shipping is a strange business that, from a certain point of view, does not make sense,” says Frangoulis. “There are tons of articles and theories about the shipping markets, but the way it works out is that, even if you are hardworking and smart, it’s often a matter of luck that you take the right decision at the right time. An S&P broker I know sent me an article about shipping from the August 1974 issue of *Fortune* magazine. If you just change some of the references – for example, substitute ‘capesize’ for ‘supertanker’, ‘panamax’ for ‘tanker’, ‘Chinese’ for ‘Arabs’ and ‘Greek’ for ‘Norwegian’ – virtually the same story could be published today,” he observes.

REALISTIC OPTIMISM

At the moment, history’s insight touches one particular concern on his mind, that there’s a potentially dangerous combination of hard cash and high hope on both the buying and building sides of the shipping equation.

“One really amazing thing about this business is the power of wishful thinking,” he says. “When the market goes up everybody feels up and starts talking about how it’s time to invest; then the ship orders start and the excitement subsidizes more investment than the market can bear, supply outstrips demand and the market collapses. It has happened before and will happen again. In shipping, I think, the answer to the future is in the past.”

“It’s one thing having 100 capes on order and being able to cancel them, and quite another thing having all these new yards that

want desperately to build all these ships. The Chinese Government probably doesn’t want to see the kind of unemployment that results when shipyards stop building, and it has the power to keep them working – and to not mind if the ships don’t make a profit,” he explains. “This has happened before, when Japan was building ships in the 1980s; their production level was one reason why ships became very cheap at the time. If such a thing happens now it would be on a bigger scale and could cause a great tragedy for shipping. That’s why my concern today is not the actual orderbook, but the shipbuilding capacity, and why I say the banking crisis brought a reality check more than anything else,” he says. “For the dry sector especially, it delayed a crisis, or gave us an extension. For now, dry bulk has rebounded and is at historically good levels – but the big crisis will come, sooner or later.”

The prediction may sound gloomy, but it isn’t as if too much history has made him a pessimist. Rather, like many of his seniors he not only believes a shipping man needs to be an optimist, he even sounds like one.

“We’re a lucky generation,” he says. “We are well educated, our pockets are full and things are actually, good. We haven’t had world wars or worldwide depressions in our lifetimes. Trade is expanding and world GDP is growing. We get a banking crisis for 18 months and everybody panics and says it’s a world disaster. In the last real world disaster, 20 million people died; we have to maintain perspective here. As long as we don’t do anything stupid or too aggressive, we will be all right. It’s really a much better world that ever before.”





P rofit & R omance

Finding Room for Both

One of the wistful recollections arising as talk turns to the topic of 'traditional shipping' has to do with a vanished time when the average Greek-owned vessel was a close-knit enclave of folks drawn from the owner's birthplace; when no one doubted that ships were living entities with a female temperament; when captains were kings and when many shipowners, focused through the lens of tradition, were corporate godfathers who saw their seafarers as an extended family in whose lives they had a personal interest.

The era that spawned such images feels quite distant these days – a culture of impersonal professionalism, developed alongside corporatization under the past dozen or so years of expanding regulation and control, appears to have taken first place in a number of prominent new business models. While some successful operators assert that sentiment must be jettisoned if you are to fly today, plenty of others still view the old romantic ties as corporate assets, when properly updated and applied. In many such companies, tradition and romance seem to have adapted to changing times by finding new jobs in Quality Assurance and the Technical department.

"When I was a boy on the island of Andros, I remember everyone being at sea except the women, the children, the public servants and the priests," says Dimitrios Heliotis, Technical

Director of Piraeus-based Target Marine. "The shipowners from the island employed thousands of people from the island, from captains to firemen – like my grandfather, who began his career aboard a ship from Andros at the age of 16. Nowadays, not so many Greeks go to sea, most Greek-owned vessels have foreign crews and there are many new shipowners that do not have a seafaring background," he says. "One of the big challenges facing shipowning companies today is to find ways of re-creating the sense of belonging and loyalty that existed when the owners and the crews knew each other like neighbors."

There are many means to this end, just as there were many ways to express the old traditions, but most managers seem to agree that the common key is communication. "We have a very good combination of education and experience in the industry today," says Heliotis. "Ships at sea have very particular needs, and the commercial side must never lose its connection to them. In order to maintain this continuity, it is very important that the top management of a shipping company always include people who have hands-on vessel experience."

Maintaining a personal relationship with the vessels is a vital part of the shipping business, says Nikolaos Manias, Managing Director

of Athens-based tanker owner Arcadia Ship Management. "Arcadia is a traditional, family-owned shipping company," says Manias. "We build our ships to trade with them, so it is in everyone's interest that we do our best to take good care of the vessels and to look after their crews, which means paying attention to the details that affect their lives on board. For example: all the ships have satellite TV so the crew can stay in touch with home and with the world; we have good food prepared by a Greek cook aboard every vessel; we do many such things – they are investments, not expenses, because they give back a benefit that is greater than the cost," he says.

"We love what we do – which is not to say we are purely romantic," he adds. "We are professionals and we work for a profit; and I believe, we have done very well so far. Our retention rates are about 90 percent and our operating costs are in line with industry standards. Anyone can do what we do."

The folks at Piraeus-based Bright Navigation would agree. "Romance is a very positive force for quality – of the ships, of the service and of the company," says Costas Kotronis, Bright Navigation's Technical Manager. "When we say 'romance' and 'tradition', we mean doing more than necessary to make the ships run, and doing it out of love for the business. In practice, romance can have a negative impact on income. We could spend 30 percent less on maintenance and still satisfy classification and market requirements; we choose cargoes that are less profitable but which we believe are better for the ship; we go more than the extra mile in terms of crew services and vessel cosmetics. It's expensive, but we have decided to sacrifice some income to achieve the highest possible quality. That's what we mean by romance."

The founders of Bright Navigation, Captains George and Dimitris Stefanou, were seamen during the old days and still carry the old traditions very close to the heart. They started the company ten years ago, and even today attend the vessels' drydock inspections. For the Stefanou's, love is the motivating force that lets them re-create with foreign crews the relationships that, in their day, sprang naturally from cultural connections.

"The old shipowners had a special connection with their seamen; they knew them, they knew their families, they spoke with them, they helped them and they made them feel respected," says Dimitris Stefanou. "We try

very hard to maintain this exact connection. In 1994 we opened a crewing company in the Philippines, which today supplies crews to many clients. We lived in the Philippines for ten years when we started the business; we became close to the people then and we stay very close with them today.

"We have a commitment to care for the crew and we work very hard to keep it," he says. "You know the first thing I do when I go on board? I go to the salon and the mess room, and check to see that the TV is working, that the video is working, that the chairs are okay and so on. This is the Greek philosophy: to love the crew. We try to take care of them. I sleep easy knowing that I have safe ships and happy workers."

For his nephew Petros Stefanou, who at 26 years old is a company director and being groomed for a future leadership role, the feeling is much the same. He sailed in the Greek merchant marine and attained the rank of Second Officer, an experience for which he is forever grateful, he says. "We don't see the ships as assets only. Although they certainly are that, they are also part of our lives," says Petros. "True, romance can be an obstacle if, for example, sentiment stops you from selling a ship at the right time. So, when we talk about romance we mean that we are still committed to the old-fashioned ways – but with some changes, of course. After all, business is business."





BRIGHT SPIRIT

*Romance and tradition light the way
for one young shipping company.*

This year marks a decade at sea for Piraeus-based shipowner Bright Navigation, a company whose voyage to success shows that tradition, faith and romance are still strong stars to steer by. The company was founded by Dimitris and George Stefanou, both former captains – Dimitris with 12 years of sea service, George with 14 – who talk of their ships and their crews with a degree of love and affection that leaves no doubt as to why Greeks have become such an important shipowning community. As they describe it, the most important part of their business plan is to keep the vessels strong and beautiful and their people safe and content. Such is the familial feeling in the office and the joy with which they recount their story that, when George says, “For us, this business is more like a pleasure than a job,” he is merely confirming a conclusion you have already reached.

In a career path similar to that of many traditional shipowners, the brothers left the bridge about 20 years ago to take shoreside

jobs until the moment was right to start on their own. Dimitris worked as a crewing manager for two shipowners and George as a port captain and superintendent for Universe Tankers, professions that prepared them well for their first enterprise.

As the 1990s got underway they noticed an increasing use of foreign ratings among Greek shipowners. Seeing it as the start of a trend, the brothers decided to join forces and step out on their own with a crewing agency. They opened the Bright Maritime office and training school in Manila in 1994 and for the next decade divided their lives between Greece and the Philippines, where they lived and worked alongside the people who formed their labor pool. Today, Bright Maritime Corporation has offices in the Philippines and Romania, and currently has in place about 5,000 officers and ratings aboard the ships of some 65 international clients.

“It is very difficult for shipowners to trust you with the fortune of their vessels; they have to believe that you are a very serious and trustworthy person,” says George Stefanou. “I am proud to say that we have worked

hard and earned this trust – the people now know that what we say, we follow. I can also confirm that, today, we are among the top ten crewing agents in the world, and we have congratulations from the Filipino Government on this.”

By late 2000 the brothers had saved enough money to ‘try their luck with a ship’, as George puts it. To start Bright Navigation the Stefanous paid \$8 million for the 14-year-old, 68,000-dwt panamax bulk carrier *NOL Aldebaran* – a coincidence or cosmic humor, perhaps, that their first owned vessel bore the name of the night sky’s brightest star.

The move surprised many of their shipowning friends, for two main reasons: first, because it is uncommon to start out in the business with such a big vessel; second, because the low freight market at the time made the investment especially risky. The ship, which they renamed *Peter S*, had been purchased with a two-year time charter of \$7,100 per day. Two years later, when they bought their second vessel, a panamax bulk carrier they renamed *Popi S*, the market was even worse, at around \$6,000 per day. “Nearly everyone in the Greek shipping market was saying these two brothers are crazy and wondering how they will make it,” says Dimitris.

The enterprising brothers further astounded their friends seven months later when they bought their third panamax, *Georgios S*. People stopped questioning their sanity six months later when the freight market started to jump – perhaps they had started under a lucky star after all. By summer 2004 they were able to add a fourth panamax, *Dimitrios S*, to the fleet. Today the company has four vessels in service and is awaiting delivery of two newbuildings.

“It isn’t the money that is most important to us,” Dimitris says. “It is like a hobby to have this business. We love the ships; the money we earn from the present ships we save to invest in new vessels. Our aim is to improve the condition of the vessels as they age.” As proof of the assertion, he proudly produces a recent inspection report from Transport Canada honoring the 1990-built *Dimitrios S* with the observation that no

Bright Navigation, a family affair, from left: George Stefanou, Chrysanthi Stefanou, Dimitris Stefanou, Kostas Kotronis, Capt. George Sarris and Petros Stefanou.



other vessel of any age in the past two years has come through their strict Port State Control inspection without a single defect being found. "Our friends sometimes tease us for how much extra we spend on the ships: 'One million, two hundred thousand dollars just for cosmetics? No one gives you this back' they say. That's true – but the ship is beautiful," he says, smiling.

"We would like the fleet to reach ten ships, but only as long as the company keeps its high level of quality and earns the same kind of respect as the traditional owners from our island," he continues. "We are from Andros, an island from which have come many great shipping names that are famous all over the world. I want us to follow the same steps as they did to establish our name in the shipping market, so that everyone will say that these two brothers are very trustworthy and that their shipping company is very good.

"For me and for my brother, it is more important that people speak well of us and our company than it is to earn millions of dollars," he adds. "The shipping world is very big, but also very small. The Piraeus market is one of the biggest in the world, but, at the same time, everybody knows your name."

One of the things for which the Stefanou brothers are well known is an old-style, hands-on approach to the business. When their ships are in drydock, you can be sure at least one of them will be there accompanying their staff on the inspections – although, says George, chuckling and patting his stomach, they don't go into the double bottoms so much any more. "You need to have your hands on in this business," George says. "My brother and I are here all the time, not in Monaco or London or Geneva, but here, to be near our people and to work with them for the good of our ships.





“Success has come to this company not only because of us; we have worked hard, but success has come because we have the correct people around us, who feel as we do and, like us, who always try their best to put in place the stones that make the company rise higher,” he adds. “In order to keep a shipping company in your hands, you must not only know shipping and work very hard; you must also keep the correct persons near you. Most of all, to go forward, you must make your company like a good family. It must be that way if you want to stay in shipping. You must love this business; you must love the ships. There is no secret to success beyond that,” he says.

These days the brothers are preparing the next generation for its day at the helm. George’s daughter Chrysanthi works on the accounts and administrative sides and son Petros works in operations on a daily basis and as a marine superintendent during inspections, repairs and drydockings. “We will become old one day and our children will take over; so now we are training them in the shipping company and the crewing agency. They already love the shipping business and we are trying to make them love it more,” he says. “We have worked very hard to reach the position we now have. We left our country to live in another country for many years. We have been through many difficult times. Now we have established a

nice company that we hope to pass on to our children. For me, the real success of this business will be the continuation.”

“My father and his brother have built something wonderful, which we will help carry on,” says Chrysanthi. “It’s a very big challenge for my brother and me, but we are lucky because they are still very young and will be with us a long time; and we are lucky to have wonderful people in the office from whom we can learn. It’s very easy to lose what you have; you have to be learning all the time.”

“I feel confident about our future, as long as we remember to keep our foundations strong and our feet on the ground,” says her older brother Petros. “I started my career at sea myself, working in other shipping companies as a deck officer. If you start from the sea and love the ship, then you have nothing to be afraid of in this business.”

Dimitris hopes to see his 12-year-old triplets walking the same path one day. “My dream, and my brother’s dream, is, first of all, to have children who are good people in this life and, second, with the blessing of God, to pass this company on to them and to see them take it in their hands and make it better,” he says. “What else could a father wish for his children?”

ARCADIA

– RESPECTING & INVESTING IN PEOPLE



Nikolaos Manias,
Managing Director,
Arcadia Ship Management

“World trade depends on the competence, capability and professionalism of the world’s seafarers,” says Nikolaos Manias, Managing Director of Arcadia Ship Management. “That is why shipping cannot only be about numbers; shipping is also about people. For this reason we stay very close to our crews,” he says. “They are on the front line in this business and it is our duty to assist them in their work.”

As Manias describes the company, Arcadia has adapted the traditional shipowner’s philosophies to the needs of the modern tanker operator. Now 12 years in business, Arcadia’s track record shows that it is possible to be a successful tanker owner

while flying the Greek flag, maintaining the ships so that they resemble the models in the owner’s office, and caring for the crew with respect and encouragement – the last point being of critical importance.

Manias served 12 years at sea before coming ashore as a captain in 1974. Although much about life on board has changed dramatically, many of the basic needs remain the same. “Having been a seaman, I know about life on board and I know what the seafarers need,” he says. “They need their salary in full at the end of the month; they need contact with their families, which they now have through email and satellite services; they need good food; and they need to be respected.”



While basic needs on board haven't changed, some basic realities have. "These days, it is necessary for the ship to be in continuous contact with the office, which means the captains have lost some of their power," he says. "In my time at sea, first there was God and then there was the captain. Nowadays the captain is an employee, following the practices and instructions of the company. We used to get two weeks in port; now the ships have a day. So, some things about the profession are not romantic anymore, but many things are much better.

"Communications are better, the living quarters are better and the food is better," he continues, "but the pressure on the crew is tremendous. Regulations, terminal restrictions, oil major requirements, Port State Controls, industry requirements – all stress the crew and, just as they learn to adapt to the latest requirements, something new comes along. So the seamen need more support today than in the past," he says.

Among a shipowning company's competitive advantages are the quality and performance of its personnel, which makes a focus on the

human element in ship operations essential to corporate health and success, he says. For Arcadia, Manias says, this focus on the human element has both present-day and future components. Present-day components include development of a corporate safety culture and various initiatives like incentive pay and efforts related to shipboard morale. Future-oriented components include active support for Greece's merchant marine academies and a continuing program of carrying cadets on board – things one might think of as the historical responsibilities of traditional shipowners.

Following the philosophy of a traditional shipowner, Arcadia maintains a high-profile support of Greek shipping, with all 15 tankers in the company fleet flying the Greek flag and manned by Greek officers supported by Filipino ratings. It also maintains a strong quality-oriented program, through which 12 of its ships have earned Green Award recognition and every vessel trading to the United States has earned the US Coast Guard's Qualship 21 rating. Also, every Arcadia tanker has





Captain Takis Polyzogopoulos,
Operations Manager,
Arcadia Ship Management

five deck officers – three junior officers plus the captain and chief officer, with the additional officer dedicated to lightening the paperwork burden. Most important, says Manias, is that every ship in the fleet carries between two and four cadets at all times.

CADET SUPPORT IS CRITICAL

Arcadia has a growing number of officers who started with the company as cadets. In the first quarter of this year the company received 70 cadet applications from Greek academies and, says Manias, will employ at least 40 of them.

The effort and expense of training cadets who will go work somewhere else is not considered a waste but a duty, he adds. “Cadets are our future – not just Arcadia’s but the industry’s as well,” he says. “Training them is an investment in that future.”

Despite widespread agreement about a looming officer shortage, not enough is being done to cultivate the cadets that will constitute the industry’s future labor pool, says Arcadia’s Operations Manager Captain Takis Polyzogopoulos. “The shipping industry magazines are full of complaints about the officer shortage, about inadequate training, about all kinds of problems related to the sea

staff. But where, I ask you, is the industry support? Where are the cadets? Where do the shipowners of the world expect the officers of the future to come from if they don’t support cadets today?” he asks.

“True, you don’t have the same romantic situation today as you had in the days when shipowners employed the people from their islands and treated everybody like an extended family, but you do have the same love of the sea,” he says. “Unfortunately, love of the sea is not enough any more. Today you also have to act; you have to invest in the future.”

With the banking crisis affecting employment prospects in many industrial sectors, now is the time for Greek maritime companies to step up support for their merchant marine, he says. One way Arcadia invests in the future is through support of Greece’s merchant marine academies.

“We have seen an increasing number of students entering our maritime academies for two years now,” Polyzogopoulos says. “They are again looking to fight unemployment by becoming seamen. This is an opportunity for everyone – for young people, because maritime careers pay very well and offer





An ABS-classed double-hull tanker under construction for Arcadia.

many opportunities for advancement, and for the industry, which needs to prepare its next generation of officers, port captains, superintendents and managers.”

Arcadia runs a certified training center in-house that offers a curriculum of about 20 core courses, including simulator-supported classes in bridge resource management, engine resource management, cargo handling and the use of electronic chart (ECDIS) systems. The company spends considerable amounts on training and education for its people – not an expense, but an investment, says Captain Dimitrios Mattheou, Arcadia’s Designated Person Ashore. “We look to the future; everything we do is well-calculated,” he says. “We spend money on people, but, in the end, I believe we save money.”

“People like to work in the corporate environment we have created; we have no problem attracting and retaining good personnel,” says Manias. “I am frequently asked how we do it and told how hard it is to find good crews; it’s always a surprise when I say that we don’t do anything so special,” he says. “We treat our people with respect –it’s an uncomplicated, common-sense approach. You need good organization; you need good leadership; and you need good basic principles.

You also need a good team in the office. I am very happy, very proud, that I have a very good team in the office, all former captains and chief engineers.”

“Arcadia is known throughout the industry as a desirable place to work,” notes Technical Manager Haris Giantzikis. “Without any advertisement, people come to us, while, worldwide, shipping companies complain that they cannot find crews. In our office here in Greece the retention rate is almost 100 percent, while in our own manning office in Manila the retention rate is over 90 percent. On the ships, retention rates are nearly 100 percent for deck officers and nearly 90 percent for engine officers.

“Why is this so? Because of the quality of the company, the conditions aboard the vessels and the attitude of the management. The seafarers feel the company cares about them,” Mattheou says. “Our seafarers stay with us for the long term, and many end up working in the office. Most of them have old friends in our fleet because they have spent so many years with the company. They tell me they feel at home, like part of a family. This happens because the management and the owners respect the individual person,” he explains.



Captain Dimitrios Mattheou,
Designated Person Ashore,
Arcadia Ship Management



Haris Giantzikis,
Technical Manager,
Arcadia Ship Management

TARGETING GREATER EFFICIENCY

Reducing emissions is emerging as the maritime world's next major technical challenge.



Stavros Hatzigrigoris,
Managing Director,
Maran Tankers Management

Even if CO₂ and man-made global warming prove to be not the great demons that the climate bloc has projected, few people on either side of the carbon debate would disagree that practicing less-wasteful habits and making better use of resources are generally better ways to live and work. It is no less so in the maritime industry, where intensifying the focus on improved efficiency is revealing new paths to more effective operations for bridge and boardroom alike. Linking the new, old and developing ideas are acknowledged needs for a common-playing-field approach from the world's regulators, hands-on involvement of shipowners and top management and high-level support from a vessel's clients.

"In my opinion, the industry's major target today is efficiency," says Stavros Hatzigrigoris, Managing Director of Maran Tankers Management. "While I am not convinced that CO₂ is as damaging as the climate lobby claims, it still isn't good for the atmosphere and, thus, the industry should reduce its output. Ships carry close to 90 percent of all goods and are already

the most efficient transport methods in the world on a CO₂ per ton-mile basis, but we should still be able to improve further. For shipping, better efficiency means reducing fuel consumption," he says.

"If we take the position that oil is precious and that we have to use all that we get from the earth, then fuel efficiency becomes a very, very important issue; I believe this should be Target Number One for the shipping industry," he adds, pointing out that there are many paths to this goal, all illuminated by new strides in research and development.

"Improve hullforms, improve efficiency of the main engine, make better use of exhaust gases, use a slower propeller, de-rate the main engine – if we work to utilize the last gram of fuel on board we will consume less fuel tomorrow than we do today," he says. "In my opinion, the easiest and most immediate that can be done is speed reduction."

As a proposal, speed reduction makes sense, but as a solution it may be the least likely to come to pass, considering its impact on fleet utilization.

For a vessel with a service speed of 15 kn, a speed reduction of 15 percent means an approximately 25 percent reduction in fuel consumption and, therefore, in the emitted CO₂ for the voyage. Specifically, a typical VLCC sailing at 15 kn consumes about 100 tons of fuel a day; by slowing to 13 kn the same ship would consume about 66 tons. For the roughly 540 VLCCs currently in the world fleet that would mean about 18,360 tons less fuel burned daily – not a shabby savings, and even better if one adds the effect of slowing down today's 400 suezmaxes and 845 aframax.

That's all well and good, but it does come at a price. Having all ships travel at slower speeds would reduce fleet availability, resulting in higher freight rates and consumer costs, at least for a while. It would also make room for more ships, a fact leaving many industry observers mystified as to why the world's shipowners are not showing organized support for slow steaming. Such reluctance may be based in historical experience:

shipowners voluntarily undertaking costly burdens for the public good are seldom rewarded by the market for the expense. In a competitive industry like shipping, where speed has value, only a global mandate supported by absolutely effective policing would make slow steaming stick.

NEW FUELS ON THE HORIZON?

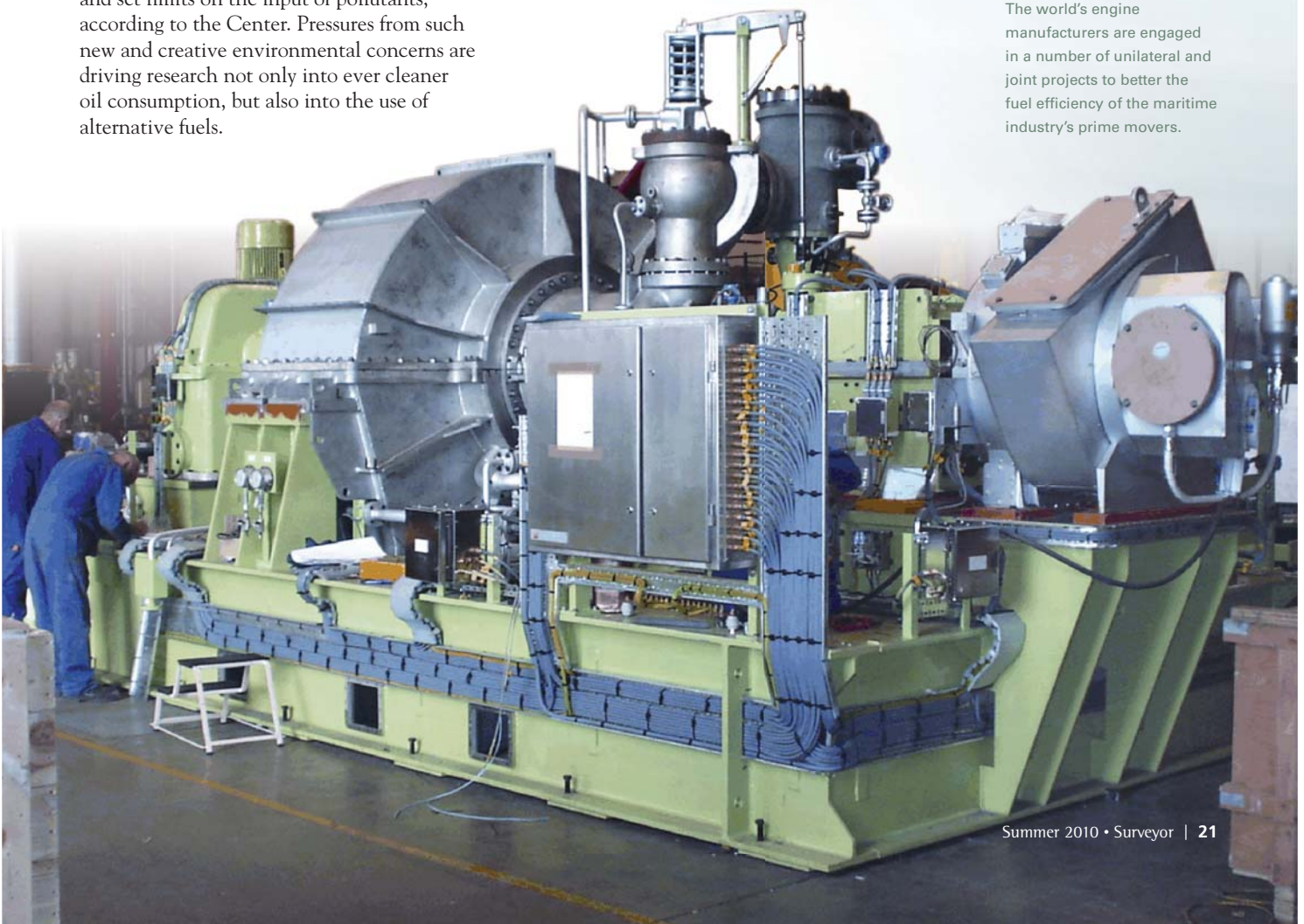
Meanwhile, the call for emissions reduction continues to increase. A lawsuit in the US recently forced the Environmental Protection Agency (EPA) into an investigation of ways that states can combat 'rising acidification of regional waters.' Brought by the San Francisco, California-based Center for Biological Diversity, the action turned on the idea that the oceans are absorbing excessive atmospheric CO₂ and undergoing acidification, with resulting deleterious effects on marine life and the overall marine environment. Under the settlement, the EPA will initiate a public process to develop guidance on approaching the issue via the Clean Water Act and 'will consider a provision of the Act that requires States to identify threatened or impaired waters and set limits on the input of pollutants,' according to the Center. Pressures from such new and creative environmental concerns are driving research not only into ever cleaner oil consumption, but also into the use of alternative fuels.

One clean-burning technology gaining momentum is the use of natural gas as a fuel for vessels other than LNG carriers. Both MAN B&W in Denmark and Wärtsilä in Finland have dual-fuel diesels for LNG ships that burn gas and oil; now the focus is shifting to a 100-percent gas version applicable to all vessels. Wärtsilä, for example, recently announced it would cooperate with Samsung Heavy Industries on an initiative to develop gas-powered merchant ships. (MAN Diesel has a similar project with Daewoo.) The engine manufacturer will focus on the technical issues around making a gas-only diesel and the shipyard will investigate such vessel questions as fuel storage, since a gas-powered ship would, most likely, have to carry the fuel as LNG.

"Switching to LNG as a fuel for merchant ships would mean a huge improvement in NO_x and SO_x emissions, a 20-30 percent reduction in CO₂ and a big reduction

in particulates," says Hatzigrigoris. "LNG ships already run on gas; for an oil tanker, for example, it would only be a matter of switching oil tanks for LNG tanks. A bigger

The world's engine manufacturers are engaged in a number of unilateral and joint projects to better the fuel efficiency of the maritime industry's prime movers.





Dimitrios Heliotis,
Technical Director,
Target Marine

problem for making this happen will be establishing a system of re-fueling stations.”

For now the industry is dealing with a program of lowering the sulfur content of the fuel oils already in use. By 2010 the sulfur content of heavy fuel oil (HFO) is to be 3.5 percent (it can be as high as 4.5 percent today), where it will remain until a reevaluation of refining sector capacity in 2018 determines whether a further worldwide reduction in 2020 is practical. More immediately, as mandated by MARPOL Annex VI, emissions control areas (ECAs) throughout the world will require 1-percent sulfur fuels as of 1 July this year. On 1 January this year, EU Directive 2005/33/EC took effect. It requires that ships berthed in EU ports use marine fuels with a sulfur content no greater

A Maran Tankers crew
inspects and repairs a
tanker's main engine.



than 0.1 percent, and that all passenger ships on regular service between EU ports use fuels with less than 1.5 percent sulfur (marine fuels with more sulfur content cannot be marketed in the EU). The cumulative result of such legislation is that many ships may now carry up to four different fuels on board: traditional HFO for the sea voyage; a low-sulfur HFO for the ECAs it will encounter; normal MDO for worldwide use; and an additional low-sulfur gas-oil for ports in the EU and California.

While most people agree that switching to a single environmentally-friendly fuel would make the most sense, there is no practical contender yet for the position. The hottest debates have surrounded ideas about an industry-wide switch to low-sulfur marine diesel oil (MDO). The MDO discussion has circulated for some time, bringing compelling arguments for greatly reduced SO_x emissions, eliminating carriage of hazardous wastes (like those produced by scrubbers) and sludge needing disposal, better and cheaper operation and a cleaner, healthier engine room. Like slow steaming, it too is a benefit with a price tag for the more expensive, cleaner fuels.

PURSuing HOLISTIC EFFICIENCY

Another take on improving efficiency is to save energy and cut costs through organizational improvement. “Efficiency is not only about ships, but also about how you manage the infrastructure of the company, from the supply department to the operations department to the technical and chartering departments,” says Dimitrios Heliotis, Technical Director of Target Marine. “The key is to optimize the way the company works, so as to maximize energy efficiency and minimize operating expenses. For example, the way you manage spares can influence efficiency – a spare part can be delivered to the ship by fast, expensive, energy-intensive ways or by slower, cheaper means,” he says.

“Introducing an efficiency index for your corporate activities, the way you manage operations, for instance, helps streamline the company’s internal efficiency. The better things are done internally, the better your company will operate,” he explains. “We don’t have an explicit efficiency index like that, but we achieve the same result through constructive inter-departmental meetings – the good, old practical way of being an efficient company.”

Part of the organizational approach to efficiency is hands-on project involvement by the shipowner, says Heliotis. Target Marine has built some 40 ships in the past 20 years and has developed its own standards for operations, safety and materials protection, which it upholds with the shipyards. "To achieve what we want from the shipyards, we intervene in their construction in a significant way. Because of this, at least as far as structures are concerned, we rely heavily on the support of our classification societies," he says.



Working for an operator of bulk carriers and tankers, Heliotis is particularly concerned by one issue arising from the connection between ship structure and fuel efficiency. "We find it disturbing that the Common Structural Rules for bulk carriers are far from being harmonized. You have a design approved by a certain classification society that has a lightship weight about 1,000 tons less than a design approved by another society, yet both are CSR," he points out. "If I have to carry a thousand tons of steel because it is really needed, that's fine. But if it isn't, then I am consuming more fuel and releasing more emissions for no reason. How do we know which design is right? If the CSR is to have any meaning, the class notation should read 'CSR-Direct', or something to that effect, when that method is used. If this issue isn't sorted out we will end up with two tiers of CSR bulk carriers."

Shipowners taking a hand in the construction of their ships is, in itself, nothing new, but with advanced technologies now producing designs that require high-precision building and coating techniques, it may be more of a necessity than ever. "If you want quality, you have to be involved in the building of the ship," says Dimitrios Korkodilos, CEO of Athens-based Andriaki Shipping.

"If you have the knowledge and experience, you can insist on changes and influence the specifications of the vessel. We do have that knowhow because we've been building ships since 1953," he says. "If you don't have that knowhow and you just accept the basic specification, you will find some points in your ship that could be improved upon. My

concern is for the ships that were hastily built for inexperienced owners by greenfield yards during the recent boom. As these vessels age, I expect we will see some real lemons showing up," he warns.

"I would say the truly serious shipyards are discussing design with shipowners and honestly trying to find out what the industry needs. That said, the basic offering sometimes leaves you wanting something better," he adds. "The basic specification is a foundation upon which you can build. You can ask for structural improvements over the basic design and request fatigue analysis to be sure the vessel is fit for your purposes. With bulk carriers you can request grab notations. There is a huge scope of aspects the owner can influence: better machinery, redundancy, more efficient engines, you can do a lot – it all comes down to the question, what are you prepared to do?"

FORWARD THROUGH DESIGN

In the end, improving vessel efficiency through design may be the most effective way to go, says Hatzigrigoris. "In my opinion, there is more optimization that should be done, especially for the tanker sector. My estimate is that fuel consumption and environmental efficiency improvement of 20 percent is feasible over the next decade, excluding slow steaming," he says.

One of the things he suggests is development of improved hullforms and the use of hydrodynamic efficiency devices, improved paints and other technologies. A sleeker tanker hullform would improve efficiency, but is

Investing in crew competence and a planned maintenance program are key parts in the efficiency drive.



another advance that would come at a cost. In this case the move would cut into not only the vessels' signature fat bodies – a hape optimized for capacity – but also into a traditional shipowning practice.

Most of the world's big tankers don't sail with full cargo tanks most of the time, as they incorporate 10 percent or so extra capacity to take advantage of booming markets. For example, a parcel of crude oil in Saudi Arabia is two million barrels, but VLCCs are generally designed with a capacity for about 2.2 million, and suezmaxes for about 1.1 million. If tanker hullform optimization is to become a reality, it will likely have to be a joint effort involving owners, oil majors and charterers.

"Optimization is not something shipowners can do alone," says Hatzigrigoris. "Independent tanker owners are like minibus drivers. The charterers, including the oil majors, on the other hand, know how much oil they want to transport, and they know the timing; they can plan it all or even adjust their schedules to designs that will improve efficiency. So, better use of ship capacities can be planned, but has to be done through the cooperation of all participants in the market," he explains.

Other suggestions for feasible improvements include developing lower-rpm main engines, redesigning propeller blades for optimal performance with specific hullforms, and the use of sequential turbocharging and other advanced technologies. Manufacturers are hearing the same tune and are embarking on their own initiatives, announcing energy efficiencies for technologies ranging from new silicone antifouling paints to new shaft generators and turbocharger technologies. For

example, B&W has been using its electronic ME series engine as a platform for emissions advances, and Wärtsilä recently announced a joint venture with ABB Turbo Systems to develop a new two-stage turbocharger designed to lower fuel consumption and engine emissions.

The big question, as always, concerns the cost of progress; will the market reward the quality operator who invests in opening the frontiers of efficiency? In the tanker sector, there are signs that the more efficient and safety-minded operators are receiving extra considerations like a slightly reduced waiting time for charters or, more rarely, slightly better freight rates. "I cannot tell you that there is yet a clear difference in the revenues between prestigious and everyday shipowners," says Hatzigrigoris. "Some indications say yes; on the other hand, people are still getting cargoes for their single-hull tankers."

There does, however, appear to be encouraging news from leading charterers. "Today, there are several major charterers that, when chartering a VLCC long-term, use a matrix to calculate speed, capacity, deadweight, fuel consumption and other factors for the ship and then tell you how much they are able to pay. If your ship consumes ten tons less fuel than a competitor's, they will offer more money," he says. "They do not offer more because we are considered a good operator – they know we are, as they know others are – but because they know that we are trying to reduce consumption and become more fuel efficient," he explains. "This is progress. If the shipowner can get more revenue for better ships, he will have the incentive to build them."

From the Front Lines:

MORE RELIABLE ENGINES – LESS EXPERIENCED CREWS



A surprising revolution has occurred on board the world's commercial fleets, greatly changing the work experience of the crews and bringing new challenges for the industry's technical departments, says Dimitrios Heliotis, Technical Director of Piraeus-based shipowner Target Marine. Over the past ten years, he says, safety and security considerations have squeezed the ability of crews to do maintenance aboard in port, and mean times between overhaul have increased dramatically for most equipment and require much less maintenance at sea. The combined effect, he says, is that modern crews have lost the opportunity to gain much of the problem-solving experience that was once commonplace.

He points out that, although different vessels have different experiences in port, the general effect on engine maintenance is similar. "A container vessel has maybe eight hours in port; there is no way you can lift your nearly one-meter-bore engine and replace a liner in that time. Tankers are not allowed to have a dead engine at the terminal, so their crews cannot do maintenance either. Neither can a bulk carrier have a dead engine at a terminal anymore. And, even if you are at the roads somewhere, you have to be sure that it is safe and it is allowed to have a dead engine," he says.

"We used to have to open the old Sulzer and MAN engines every 3,000 to 4,000 hours for cleaning and de-carburizing, or else we would get piston or cylinder liner cracks," he recalls from his days as a young engineer 20 years ago. "Nowadays the mean time between overhauls of a cylinder liner and piston is 18,000 to 30,000 hours, or about five years, which means you overhaul the whole engine when the vessel is in the shipyard. Because of these advances, crews today have limited contact with the machinery – some people have been on board a new vessel for years without ever seeing a cylinder overhaul, unless they had to open it up for guarantee purposes.

"Overall, the job of the crew has changed over the last ten years into a more supervisory role," he notes. "Sure, if a pipe bursts you still have to clamp it but, mostly, the crew just start, stop, monitor and report on the equipment. Operationally, the job is much more demanding but, in terms of problem-solving ability, a chief engineer who is just retiring and one who just got his certificate are two entirely different species. The theoretical knowledge from school is not a substitute for that which used to come from an older, experienced man," he explains. "This means the next big challenge for the industry is to duplicate the onboard continuation of experience that you had in the old days."

One looming challenge for the industry's technical departments is how to pass on the accumulated troubleshooting knowledge of a retiring generation of chief engineers.

A large industrial ship, likely a tugboat or supply vessel, is shown from a low angle. The ship's hull is painted a vibrant blue, and the upper sections, including the bridge and superstructure, are white. The words "SPANOPOULOS GROUP" are prominently displayed in large, white, sans-serif capital letters on the blue hull. The ship is equipped with various maritime features, including a complex network of pipes, a blue vertical exhaust stack, and a white mast with multiple navigation lights. In the foreground, the ship's bow is visible, featuring a white cabin with several windows and an orange lifebuoy. Thick, dark rubber fenders are mounted on the bow, and heavy-duty mooring ropes are secured to the ship's structure. The background shows a clear blue sky and the upper portion of another ship, suggesting a harbor or port setting.

SPANOPOULOS GROUP

ENTREPRENEURIAL SPIRIT

Put simply, Ignatios and Michael Spanopoulos are entrepreneurs. They started with small seeds and a vision of success and, over the course of some 30 years, built a broad sphere of marine activity throughout the Mediterranean region that includes: development of harbors and marinas; building and repair of tugs, barges and specialty vessels; cable, pipe laying, salvage and diving operations; and shipbuilding and ship repair services.

This wide variety of duties is performed using the company's own fleet of 16 tugs, 14 barges (flat-top, hopper and split), two floating excavators, five floating cranes (capacities from 40-210 tons) and an assortment of other workboats and specialist equipment. Today the marine construction and service equipment owned by the Spanopoulos Group can be seen at work throughout Greece and the Mediterranean. The small shipyard they opened on the island of Salamina, just outside Piraeus, is also making a name for itself as a place to get small vessel work accomplished. With headquarters on Salamina, the company also has a base on the island of Crete, which provides ship services to US Navy and NATO vessels, and a base in the northern region of Thessaloniki, which delivers spill response services and offshore support to Hellenic Petroleum.

There is a classic story of hard work leading to success. The brothers started out offering vessel services with a launch and a tugboat in Piraeus harbor. Although they started working very young – Ignatios was 16 years old at the time and Michael just nine – the brothers proved to be not only good workers, but also men of vision. With savings from their harbor service, they bought a floating crane and branched out into barge building. As that business prospered they bought larger cranes and branched out further into salvage and construction. Making themselves available around the clock, they soon developed a reputation for dependable service on difficult assignments. In the roughly three decades since, the Spanopoulos Group has taken part in over 4,000 construction projects in Greece and abroad.

Four years ago, the brothers opened their New Hellenic Shipyard in Kato Pounta-Ampelakia on Salamis Island. Today the yard has 120 skilled employees supported by a network of subcontractors and is able to build vessels up to 80 m in length. Presently occupying an area of 20,000 square meters, the yard has four slipways and facilities including a 4,000-ton floating dock, two mobile boat haulers of 820 tons and 50 tons capacity, a 300-ton capacity mobile boat trolley, a covered building shed and steel cutting and panel shops presently under construction. A lively place, the brothers rent its workspaces to other entrepreneurs and are already expanding it through a 15,000-m² slipway project. Spanopoulos expects to have the new facility finished within two years. Once all equipment is in place, he says, the yard will be able to build six vessels of up to 120 m in length.

In 2008, the Spanopoulos Group began its Quality journey with certification to ISO 9001 standards by ABS Quality Evaluations, an affiliate of ABS. Today the shipyard has a welder qualification program underway and the company has begun looking towards environmental certification under ISO 14000 and health and safety certification under ISO 18001. It is a demanding vision, considering that such efforts will run parallel with an expanding program of construction activity and vessel building and repair projects.



Ignatios
Spanopoulos



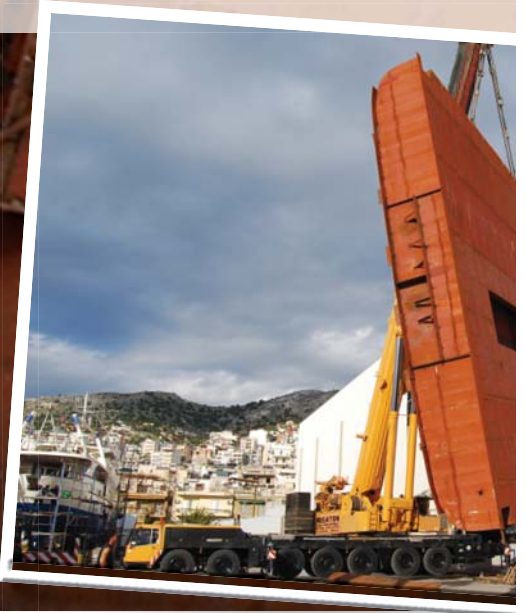
Michael
Spanopoulos



A Day in the Life of an ABS Surveyor:

Surveyor Dimitris Siatras joined ABS as an engineer, but it wasn't long before he found his true love in surveying. He had sailed as a marine engineer, worked ashore as a shipping company superintendent and earned a master's degree in naval architecture from Newcastle University. He came to classification at the age of 30 in 2002, starting his career in the Offshore Engineering department of ABS' London office but, after a few years, traded the shirt, tie and calculator for the boiler suit, helmet and hammer.

"What I like about being a surveyor is that you actually see the structure represented in the drawings become a real object: you're not just thinking about it anymore – you're seeing it take shape and grow; you're not just looking at lines on paper anymore – you're climbing on it, touching it and getting dirty; it's not just a concept anymore – you're participating in its construction. With certain ships you also get to see them working and see their progress as they age, because their owners bring them





Dimitris Siatras

back to Greece or some other port where the surveyor might be for inspections or modifications and repairs.”

Another part of the job that drew him in is its place on the front lines of safety, where the individual leaves his mark on the quality of the world fleet. “As a surveyor, I do more than inspect and assess,” he says. “I guide them through the Rules and regulations. Some of them might not like what I have to say, but in those moments I tell them it’s nothing personal, it’s just the Rules.”

The photos on this page are from the construction of *Harmony A*, a 70-m passenger vessel being built by Apollo Victory Marine, the owner/operator, at the Psarros shipyard in Perama, just outside Piraeus. With the ability to approach most ports and islands, *Harmony A* will make weekly cruises in the Aegean sea during the summer and in the Red Sea during the winter, and is expected to be completed by spring 2011.



Passion Puts Greece on the Yacht-]



Captain Paraskevas
(Paris) Dragnis,
CEO,
Goldenport Holdings

Captain Paraskevas (Paris) Dragnis, CEO of London-listed Goldenport Holdings, has a passion for yachting that has not only sparked a profitable side business for the longtime shipowner, but also has helped make a place for Greece on the world map of luxury yacht builders.

Involved in shipowing activities since 1978, Captain Dragnis established his privately-held Goldenport Ship Management in 1992 and took his activities to the capital markets in 2005 with Goldenport Holdings, which now operates a mixed fleet of 25 tankers, bulk carriers and containerships. When success came, it brought him the opportunity to indulge his passion for

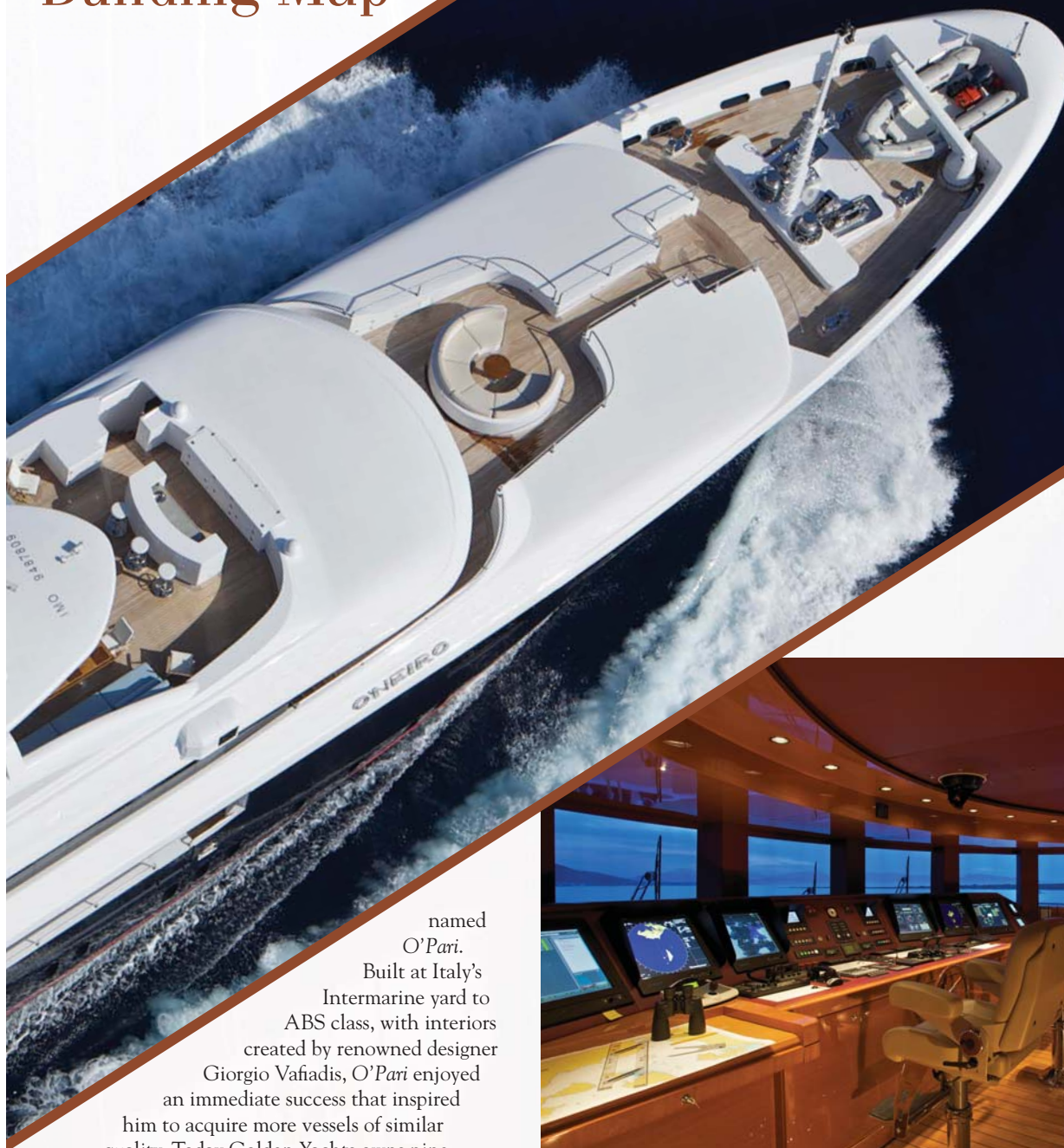
sailing by building his own yacht, as it has for many shipowners. Fortune also brought him a rare chance, the opportunity to turn his passion

into a business. One day his boat caught the attention of a very wealthy Greek family, which began making offers to rent it. When the figure reached 20 percent of the vessel's construction cost he could resist no longer. "It was an offer I couldn't refuse," he says. "This gave me the idea that, I might be able to make a business of it. So I built another yacht."

Noting an absence in the rental market of luxury yachts in the 40-meter range, Dragnis founded Golden Yachts in 1997, offering the services of a newly-built 42-meter treasure



- Building Map



named O'Pari. Built at Italy's Intermarine yard to ABS class, with interiors created by renowned designer Giorgio Vafiadis, O'Pari enjoyed an immediate success that inspired him to acquire more vessels of similar quality. Today Golden Yachts owns nine elegant yachts, which, through partnership in an operations and chartering company named Atalanta, it offers for hire all around the world. Its latest vessels, the ABS-classed 53.5-m luxury yacht O'Rama and 40-m fastboat O'Pati, will enter service this summer.

The trademark O' in the name of every Golden Yachts vessel came about by accident. When Dragnis built O'Pari, its intended name was *Pacify*, but for ease of reference during construction he wrote a short version



of his name – *Pari* – on the contract. When he informed the builders that he wanted it named *Pacify*, he was told that the yard had already advertised the boat by the contract name all over the world and a name change at this late date would incur an additional charge of \$300,000. Declining that particular luxury, Dragnis simply added an O from



the name of his partner in the project and christened the yacht *O'Pari* – and thus a brand was created.

As the success of Golden Yachts continued, Dragnis acquired an interest in a shipyard in Perama and began building his yachts in Greece. “What tells you something about the quality of work that can be done in Greece is that we put *O'Ptassia* in the water only 2.5 days before taking clients aboard,” he says. “They were very satisfied and, since then, the yacht has earned quite a lot of repeat business.”

Still, the future of yacht building in Greece remains uncertain – not for lack of talent, but for labor issues. Strikes delayed the construction of *O'Rama* for 90 days last year, causing the vessel to lose an entire season of work.

“There are many challenges to building in my country,” he says. “It’s very disappointing to think that you might not be able to provide

jobs in your own country. If I could find the right agreements with the unions that would allow us to work freely, we could build great yachts in this country in less time than anyone else. I am sure of it. We could work in shifts around the clock – I would gladly pay in full accordance with the rules – and we would be able to do in 18 months what the other yacht builders do in 2.5 years. This is possible. We have the workers, we have the skills and we have the desire. Greece is the right country for yachting, and we could build excellent yachts here. It would take time to reach the level of the best builders, of course, but we could do it.”

His future plans include acquiring an interest in a marina and, possibly, an established yacht builder that could accelerate the buildup of his enterprise. “We have been successful so far, thank God, but the best thing about this business is the friends that I have made because of the beautiful yachts we offer,” he says. “It is a great blessing to be able to make money from your hobby.”

SNAPSHOTS FROM ABS PIRAEUS

ABS Piraeus is an office in evolution. Last August a personality was pinned to that evolution, when Demetri Stroubakis was assigned there as ABS' Regional Vice President for Eastern Europe. The move, which brought him from ABS headquarters in Houston, where he had been Executive Assistant to ABS President and COO Christopher J. Wiernicki, capped a series of major steps through which Piraeus has been reshaped as a powerful regional center for the classification society's European activities.

The metamorphosis began in 2006 with the transfer from Dubai of the Safety, Environment and Security Certification (SESC) department led by Captain Steve Blair. Two years later Piraeus became the site of the second ABS Academy outside of Houston, operated by ABS affiliate Maritime Services Hellas under Lefteris Karaminas. In the two years since, the Piraeus office has become ABS' Engineering headquarters for Europe, under Divisional Vice President Dimitrios Kostaras, and the regional headquarters for ABS Nautical Systems, headed by Regional Director Lefteris Maistralis. Last August, ABS relocated the headquarters of its Survey department for Europe and the Middle East from London to Piraeus. Assigned the chair of that new office was Stroubakis' long-serving predecessor, Dimitri Houliarakis, who returned to his technical roots as Divisional Vice President and Assistant Chief Surveyor.

"The very experienced generation of surveyors and engineers that staffed ABS so far in Greece is beginning to gradually retire," says Stroubakis, "As they do we are bringing in new faces, highly motivated people who will continue that effort, and restructuring the office to give them the best atmosphere in which to do it."

Stroubakis was born in Philadelphia, but his family hails from the island of Chios. He spent much of his youth in Greece and developed interest in things maritime through admiration of an uncle who was a shipowner in the 1980s. A graduate of the King's Point Merchant Marine Academy and a veteran of the US Navy's Amphibious Forces in Operation Desert Storm, Stroubakis joined ABS in 1992 and began his survey career with the construction of ships for the US Navy. During the next eight years, he worked in various US ports and surveyed numerous vessel types ranging from small vessels such as tugs, OSVs and barges to tankers – and shook hands with his future, though he didn't know it at the time.

In September 2000, Stroubakis was sent to Sri Lanka to meet a tanker whose US owner had requested a Special Survey and to be one of the two surveyors to attend its condition assessment (CAP) survey. The other surveyor was Vassilios Kroustallis who was assigned to Dubai at the time. The two colleagues, then strangers, picked up the vessel as it was passing the tip of the island and rode it to Fujairah, performing the surveys underway. Somewhere



Demetri Stroubakis,
Regional Vice President,
Eastern Europe,
ABS

Members of the ABS
Piraeus team, from left:
Lefteris Karaminas,
Luiz Motta, Vassilios Kroustallis,
Demetri Stroubakis,
Lefteris Maistralis,
Dimitri Houliarakis
and Dimitrios Kostaras.



between the rafting, the gauging and the close-up inspecting, the adventure sparked a friendship.

When Stroubakis was transferred to Korea in 2000, the two found themselves teammates once more. After laboring together four years they went their separate ways, advancing through the organization. Stroubakis served as Principal Surveyor for the Black Sea region before being posted to headquarters; while his friend, Kroustallis, went on to become Country Manager of Greece. Today the great maritime mandala has turned another circle and they are again teammates.

"Vassili did a fantastic job in Koje, with the staff and with our Greek clients," says Stroubakis. "He was dynamic in the office,

setting up sports teams and arranging soccer games and mentoring younger surveyors. Everybody looked to him as a team leader. He brings the same strong spirit and positive dynamics to Greece as Country Manager."

"A team leader is nothing without a team, so I am a very lucky man," says Kroustallis. "We have a great team. In Greece ABS has many different clients, a number of whom are entering new areas of activity and have very particular needs. In the Piraeus office we have been able to create a perfect mixture of experienced people who can understand and work all of them. ABS has a good name and has had great success so far in Greece; with Demetrios providing his energetic team spirit, I believe, we can go as far as we can imagine ourselves able."

SURVEYOR SNAPSHOT:

IOANNIS ARMENAKIS

Senior Lead Surveyor

Many details of the surveyor's job have changed since Ioannis Armenakis joined ABS in 1992, but many of the basics and much of the advice remain as they have always been. "To read and understand the Rules is not the difficult part of the job – we are engineers, after all," says Armenakis, who recently became ABS' Principal and Lead Surveyor for the Port of Piraeus. "The difficult part is that the surveyor has to make decisions on the spot, under pressure, where everything is urgent and everyone is awaiting an answer. To handle such a situation takes confidence, which only comes with experience. Getting that experience is what takes time."

"There comes a moment for every one of us when we feel, inside, I can do this. You have to ask questions and discuss; but there is a point where we feel, now I am okay," says Armenakis. "I remember that moment clearly. It was in 1997 in a shipyard in Dubai. I had a very difficult case that I finally managed to solve; later, during the discussion, when I proved I made the correct decision, I knew that I was okay," he says.

"On my first day on the job, our Principal Surveyor Nicolas Bessis gave me a very valuable piece of advice: 'In this job you

must be specific,' he told me. 'When you find a problem and everybody is pressing you to make a decision quickly, sit back. Take your time.

Think before you talk and, once you make your final decision, stick with it,'" he recalls. "Be 'specific' is the key word. You tell them they have to do this specific thing in order to fix the problem, not maybe this or maybe that. You cannot leave doubt. And you must have evidence to support your conclusion."

"To this day I thank Nick Bessis for that advice. I think it is the most important thing a surveyor has to do: think before you talk and, when you talk, stand your ground."

"It's a great job. You board the vessel, you find problems and you help fix them. Yes, you have to face the owner or representative all the time; he is always with you, there, on the spot – but this is one of the services we offer: to have an experienced surveyor, a professional, by his side to help him through the process. Now, as Lead Surveyor, I help other surveyors as well as the owners."



A MOMENT WITH:

LUIZ MOTTA

Director, Technology & Business Development



“Exploration of sophisticated structural evaluation criteria in conjunction with construction-friendly concepts has become a very common practice in shipbuilding today, producing new designs that allow ships to reduce weight by increasing the use of high-tensile steels,” says Luiz Motta, Director, Technology and Business Development at ABS Piraeus. While the Rules permit high-tensile steel to be used in ship structures, the material must be applied with care because it experiences higher overall stress levels that can make it more prone to cracking and buckling than mild steels, Motta says.

“Fatigue criteria must be checked very closely for optimized, new-generation ships built with high-tensile steel. Not only do the ships need to be carefully designed in their details, they also need careful observation and checking

during construction,” he advises. “With mild steel structures, misalignments and poor details have less impact on the fatigue life because the material experiences lower stress levels. With high-tensile steels, construction misalignments over permitted tolerances may induce stress concentration levels in the section beyond what the material can withstand, causing the steel to crack in-service,” he explains.

“ABS developed its Construction Monitoring System and associated class notation AB-CM to facilitate the enhanced monitoring of identified critical areas in vessels designed using the more sophisticated approaches. The beauty of it is that, at the same time, we can also pay much more attention to the construction. That’s why shipowners have received this methodology so well,” he says. “Shipowners know there has been great development in design tools and construction practice, but they also know there needs to be very careful control during construction to be sure the vessel is built in accordance with the design, particularly with respect to the tolerances.”

BUILDING A FUTURE ON SOFTWARE:

LEFTERIS MAISTRALIS

Regional Director,
ABS Nautical Systems



“The future of the maritime industry will depend increasingly on software,” says Lefteris Maistralis, Regional Director, for Europe, Middle East and Africa for ABS Nautical Systems (NS). “We see this in the growing popularity of our fleet management tools and in the high-level feedback from clients at the annual Nautical Systems user conferences where the users meet the developers and share their experiences, applications, challenges and suggestions.”

When ABS launched its Newbuild Program in the fall of 2009, Nautical Systems introduced its Newbuilding Initiative (NBI), an effort centered on the idea that no company today should be without a solid, software-based planned maintenance program for its new vessels, says Maistralis. “Under the Newbuilding Initiative, owners honoring us by having their new vessels built to ABS class are offered,

free of charge, three NS software modules: Planned Maintenance, Hull Inspection and Maintenance and Vessel Drawings,” he says.

“Clients find our Hull Inspection module valuable because it can influence budget control when a ship goes to drydock by, for example, organizing inspections, scheduling events and by having a very specific set of criteria on which to do the vessel assessment,” Maistralis explains. “One issue between owners and surveyors is the subjectivity of assessment. Our purpose in developing the Hull Inspection module was to give owners a set of six criteria to follow, with specific directions on how to do ship assessments from a risk-based approach. This helps shipowners hit the drydock without surprises. This is done within the boundaries of TMSA as well, so as to cover tanker operators,” he adds.

“Our aim is provide the owner with a guide as to what criteria surveyors look for. This will be a means of training for the owner, to help him understand the way the surveyor does the survey and, based on this, to help him plan his own inspections more effectively.”

Encouraging Shipboard Initiative

**Dimitrios Korkodilos, CEO,
Andriaki Shipping Company Ltd.**



The maritime industry has experienced tremendous evolution during the 31 years that I have been part of it; in fact, it is a completely different world, particularly in terms of technology and regulation. Much good has been accomplished but, on the other side of the coin, some human issues are emerging that must be addressed.

Ships today are better, more comfortable and safer places to work than ever before, far less maintenance needs to be done at sea and the ships have far fewer problems than in the old days. This is all very good, but when you don't get problems you don't get problem-solving experience – experience that is very valuable in the professions that often follow a sea career. While there has been great progress in education and training, exactly how the industry is to retain its accumulated practical knowledge into the future is a problem that remains to be solved.

Our evolving regulatory environment has raised quality levels in the industry, increased safety and helped prevent pollution, but has come hand-in-hand with heavy burdens for the crews like endless paperwork and excessive inspections that take place during critical cargo operations. Whoever has a romantic impression of shipping as going to foreign ports, seeing the world and having fun will be disappointed by the reality. Still, conditions on board are better than ever and, although the crew doesn't get 15 days in port any more, neither are they on board for 18 months at a time.

The young generation growing up in this regulated environment has, for the most part, absorbed its intent and begun believing in it. That is a positive step. But I am concerned that we may be evolving into an industry that is so regulated and so focused on doing things by the book as to discourage people from developing initiative.

In the past, you knew that your seamen would, in difficult situations, invent solutions and take initiative to solve

problems. Today, it seems people are increasingly afraid to take actions that are not prescribed in the manual, fearing that if they do, and something goes wrong, they will suffer for it. We should be able to combine the positive aspects of the regulations and the positive aspects of what we can call human nature into a system that provides industry control, allows the shipowner flexibility and encourages seafarer initiative. We need to maintain a good balance between these things.

It doesn't help that, in the current climate of seafarer criminalization, even if the crew performs perfectly they may still be penalized. While the industry's success in rescuing the officers of the *Hebei Spirit* sent a positive message to seafarers that they are not alone, I couldn't say it raised the consciousness of port authorities and governments around the world regarding the crime of criminalization. It did, however, focus worldwide attention on the problem and remind us all that the industry itself must remain vigilant and intolerant of such actions.

Similarly, the mere fact that industry reached the point where classification societies could get together to pursue the ideal of a common baseline for ship structures is very good, even if the Common Structural Rules themselves turned out to be below expectations. Indeed, there should be a minimum starting point to build on, one that is the same for all: a ship that is truly sound in every aspect. From there, companies can distinguish themselves through service delivery, vessel performance and crew quality.

That last item is most important. The people at sea should know for certain that, if they need help, the people on shore are there to help them. The industry must neither forget to help its seafarers keep pace with regulatory and technological developments, nor allow their spirit and initiative to become casualties of progress.

“It is during our darkest moments that we must focus to see the light.”

– Aristotle Onassis
1906-1975

