seatec

International Maritime Review

Meyer Turku and RMC team up with Aalto University

Finding new ways to power vessels more sustainably

Costa Smeralda – one of the most beautiful ships ever built at the Turku shipyard

seatec.fi/magazine

Listen to the sea

Posidonia

1-5 June 2020

Metropolitan Expo, Athens Greece

Posidonia Ποσειδώνια

The International Shipping Exhibition

Organisers: **Posidonia Exhibitions SA,** e-mail: posidonia@posidonia-events.com

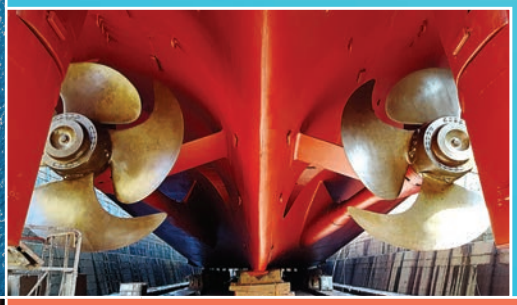
www.posidonia-events.com

SeatradeCruiseGlobal

Shipwrights Know Where the Real Beauty Lies

The time is now. This very moment—when the growth of the cruise industry has never been faster. And it presents a tremendous opportunity for those tasked with managing the record orderbook that lies ahead. From shipbuilding and ship fittings to electrical and ship operating systems, all the way through talent acquisition and sourcing, we're planning the creation of the most revolutionary megaships the world has ever seen at Seatrade Cruise Global.

Build and retrofit your ships with efficiency and cost-effectiveness. Save your spot at the only event to bring the entire cruise industry together.



Save an Extra 10% on Your Pass with Code SEATEC10

Register Now!
seatradecruiseglobal.com/register

20–23 April 2020 | Expo: 21–23 April 2020
Miami Beach Convention Center | Miami Beach, FL USA

#STCGlobal · For more information call us at +1 212-600-3260

By Informa Markets

SIGN OF THE TIDES

The re-emergence of Finnish marine cluster is leaving a very positive impact on Finnish economy. Leading the pack, there is the Turku shipyard which is a very important local operator in Southwest Finland. The regional impacts of the shipyard extend to the whole country because three-fourths of its direct supplier companies are domestic.

Meyer Turku has been experiencing remarkably smooth sailing, with order books extending to the year 2025. The shipyard also expects growth to continue beyond mid-2020's.

Presently, Meyer Turku is the fourth largest employer in Southwest Finland, employing about 4,100 persons directly and 4,000 employers indirectly.

There is fresh data available on the over-all impact of the shipyard, since City of Turku and Meyer Turku ordered a survey from the University of Turku in autumn 2019, focusing on the regional economic impacts of the shipyard and its supplier network.

According to the survey, the combined turnover related to the production of the shipyard and to the production of its direct supplier companies is about EUR 1.9 billion which corresponds to a growth of 46% compared to the financial statement of the year 2016.

The value of supply orders to the shipyard has grown very strongly: it has almost doubled in two years (+ 84%). The value of the supply orders was approximately EUR 933 million in 2018 when the corresponding figure in 2016 was approximately EUR 508 million.

The value of domestic supply orders of Meyer Turku increased by 64% to approximately EUR 638 million; the value of foreign supply orders increased by 150% to approximately EUR 295 million.

The survey reveals that despite the differences in the values of the supply orders, the amount of supplier companies has remained nearly unchanged. In 2018, the shipyard had a total of 1,246 direct supplier companies (927 domestic; 319 foreign).

Ship-making is a business that is not restricted to the coast: in fact, the companies which belong to the subcontractor network represent 109 municipalities all over Finland. The survey finds that an increase in the production of the shipyard benefits the companies of all sizes and in different fields, regardless of the territorial boundaries.

Correspondingly, there are foreign subcontractors around the world, with Germany snatching 72% of the value of the foreign supply orders. This is explained by the fact that the shipyard has received FERUs (Floating Engine Room Unit) from the Meyer shipyard in Rostock.

Rising tide lifts all boats? – *It would appear so.*

PETRI CHARPENTIER

seatec
2020

PUBLISHER
Publi*Co* Oy
Pälkäneentie 19 A
FI-00510 Helsinki
Finland
Phone +358 20 162 2200
info@publico.com
www.publico.com

EDITOR-IN-CHIEF
Petri Charpentier

PROJECT MANAGER
Jaakko Lätti

EDITORIAL COORDINATOR
Mimosa Raitamaa

GRAPHIC DESIGN
Riitta Yli-Öyrä

CONTRIBUTORS
Sami J. Anteroinen
Ari Mononen

COVER PHOTO
Meyer Turku Oy

PRINTED BY
Printall AS

www.seatec.fi/magazine

Ensto Marine

Full service electrical solution provider for marine industry

We have over 20 years of experience in electrification and lighting projects of marine industry.

Better life.
With electricity.

ensto.com

ENSTO

Ensto Group
P.O. Box 77
06101 Porvoo, Finland
ensto@ensto.com

Contents

08

16

04 Editorial

08 Picking Up the Pace

Turku shipyard is hard at work making the most awe-inspiring cruise ships in the world – and wants to pick up the pace even more. With seven cruise ships in the orderbook – that stretches to 2025 – the shipyard has started to rethink the way it conducts in business. To accommodate the bulging orderbook, the shipyard has a strategy to significantly increase its production within the next few years.

16 Green Marine Sets Sail

Marine sector stakeholders need to unite in tackling air pollution and greenhouse gas emissions from shipping – as well as finding new ways to power vessels more sustainably.

24 Helsinki shipyard makes a big-time comeback

30

30 Positive progress for Rauma shipyard

Established in the summer of 2014 to continue the shipbuilding traditions in the city of Rauma on the southwestern coast of Finland, the RMC shipyard (Rauma Marine Constructions Oy) has recently received quite a few orders for new RoPax ferries and government vessels, including four corvettes for the Finnish navy.

36 Science pushes shipyards

Future maritime expertise goes hand in hand with quality research and education. Finnish shipyards seek collaboration with universities in order to boost innovations and profitability via academic means. Another key concern is making sure that the maritime sector will continue to benefit from academically trained experts. Aalto University recently announced two significant collaborations with the shipyards of Turku and Rauma.

42 Race for the Finnish Line

48 New on Board

53 Company Directory

36


Costa Smeralda

Picking Up the Pace

TURKU SHIPYARD WANTS TO DELIVER A VESSEL EVERY EIGHT MONTHS

by: SAMI J. ANTEROINEN

Turku shipyard is hard at work making the most awe-inspiring cruise ships in the world – and wants to pick up the pace even more. With seven cruise ships in the orderbook – that stretches to 2025 – the shipyard has started to rethink the way it conducts in business. To accommodate the bulging orderbook, the shipyard has a strategy to significantly increase its production within the next few years.

photo: MEYER TURKU OY

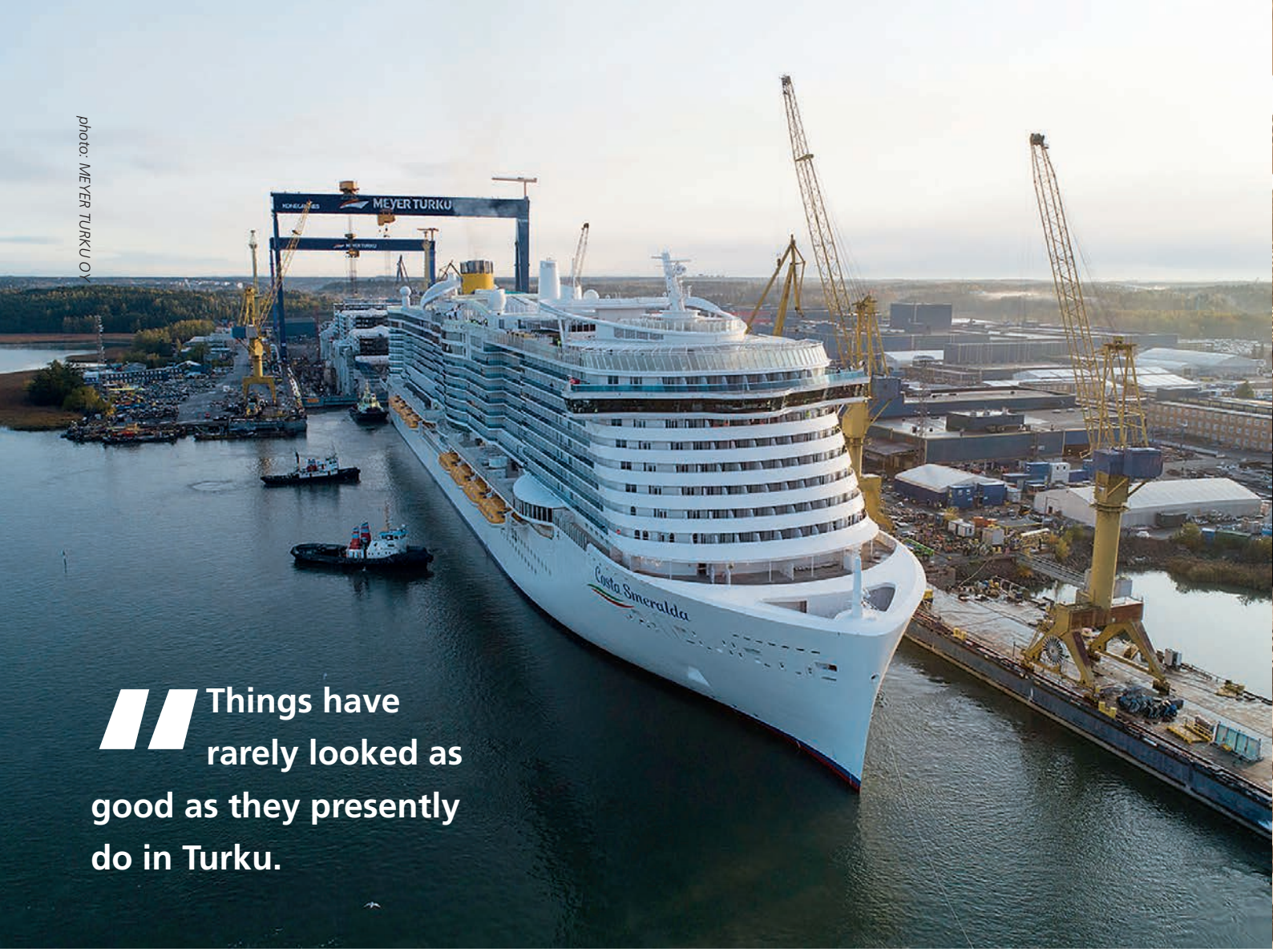


photo: MEYER TURKU OY

"Things have rarely looked as good as they presently do in Turku.

Project Director Tom Degerman says that in the coming years, the shipyard will put out a large cruise ship every eight months. There are still ways to go before that target has been reached, however.

"Further upgrades and investments are needed to fully realize 'a ship every eight months' process," Degerman notes.

"For instance, there has been large scale investments to our block production. We are now seeing the effects of those investments."

Nevertheless, things have rarely – if ever – looked as good as they presently do in Turku. In December 2019, a significant milestone was reached as the 180,000 GT Costa Smeralda was delivered to the client, Costa Cruises. Smeralda sailed to Barcelona where she promptly started making the rounds in the Mediterranean.

BIG & BEAUTIFUL

Many industry veterans have commented that Smeralda is one the most beautiful ships ever built at the shipyard. The cruise ship is also the single biggest ship Turku has produced, since the Allure of the Seas back in 2010.

"It's almost as big as Allure, and, in my mind, truly a technological marvel on the seas," comments Degerman who has 20 years of experience from calling the shots in such projects.

What makes her so special in the hi-tech department, then? – First of all, the newcomer showcases "the green wave" of the industry as it's being powered by LNG. The usage of LNG as fuel cuts down all small particles and sulfur oxide emissions and significantly reduces nitrogen oxide and CO_2 emissions of the ship. For Costa Group, Esmeralda is a part of an entire agenda as the company has invested in the construction of five new LNG ships.

SMART SAILOR

One could also call Costa Smeralda a sensational seaborne "smart city". Apart from LNG, the ship incorporates a series of cutting-edge innovations designed to further reduce environmental impact. The daily water requirement is achieved directly from the sea, thanks to the ship's desalination systems. Energy consumption is reduced to minimum by using LED lights, recovering the heat generated by the engines, the particular shape of the hull designed to significantly reduce drag in the water, and new generation elevators that recover energy by re-introducing it into the electricity system.

photo: MEYER TURKU OY

photo: MEYER TURKU OY

photo: MEYER TURKU OY

"The sustainability issue is really a key question for all industry players," Degerman says, adding that in the 2020's, the green mindset will only get stronger.

"The cruise goers, for instance, are increasingly environmentally-conscious."

BROADWAY UPON THE WAVES

According to Degerman, a whole lot of knowledge, skill and imagination went to designing and building the ship's entertaining features, also. Among the highlights: the Colosseo, a three-deck open area in the middle of the ship with state-of-the-art audio-visual technology inside which required truly specific capabilities to pull off.

There's no doubt that the passengers appreciate the design, quality and features of the ship: for example, the exceptional

photo: MEYER TURKU OY

upper deck areas and the Spanish stairs in the aft of the ship are a real treat in warm Mediterranean weather.

"The shows and performances onboard the ship are something to see," says Degerman who has already received reports from Costa about the ship's performance: everything is in fine working order and cruise patrons are really enjoying themselves.

"Starting March-April, the cruises on Smeralda have been sold out, as the season really kick off," he says.

The only hitch so far came in January 2020, as Smeralda experienced a brief coronavirus scare. The vessel and its 6,000 passengers were quarantined at the Italian port of Civitavecchia following two suspected cases of coronavirus infection. This

photo: KARI PALSILA

photo: MEYER TURKU OY

photo: KARI PALSILA

photo: MEYER TURKU OY

proved to be a false alarm and passengers were allowed to go onshore the next day.

JUST IN TIME FOR THE PARTY

Meanwhile, the work never stands still in Turku – and another ship already commenced hull assembly at the shipyard. On 24 January, the hull assembly phase of Carnival Mardi Gras, a 180,000 gross tonnage cruise ship, was celebrated with the traditional coin ceremony at Meyer Turku shipyard.

Degerman explains that Mardi Gras is the second LNG powered cruise ship being built at Meyer Turku and will have many interesting attractions, including six themed zones. 'Ultimate Playground', for instance, will have water slides, a ropes course and the world's very first rollercoaster onboard a ship.

"Putting a rollercoaster on a ship is certainly a new feature and guaranteed to make a big impact," Degerman grins.

> **"The work never stands still in Turku.**

The 'French Quarter' will have New Orleans-inspired cocktail bars and restaurants, at Lido pool area passengers are able to enjoy fun in the sun… and at the heart of the ship there is Grand Central, a large open three-deck space for entertainment and relaxing. A special feature of Grand Central, one that will really connect the passengers to the sea, is its floor-to-ceiling glass front, a complex feat of design and engineering skill.

EXPERIENCE IS STILL KING

Named after the legendary New Orleans carnival, "Mardi Gras on seas" should be as lively as the party back on land in Louisiana.

" After all, it's the big experience that people are after, ranging from good food and great service to various special entertainment features."

In addition, Carnival Mardi Gras is benefiting from Meyer Turku's 200-million-euros investment program. The steel halls at the shipyard are going through a major rebuilding phase with new machines and IT systems, but also new processes to build the ships with newly trained employees.

Already the shipyard's automated steel pre-treatment facility and storage have been up and running for some time and supporting the steel construction of Mardi Gras. More of the benefits will materialize later this year. ■

ISOVER and Weber offer the market extensive experience in lightweight, great quality and high performance solutions. We offer our partners qualified technical assistance and provide a ready-made, optimal solution for your project.

SAINT-GOBAIN LIGHT SOLUTION

ISOVER SeaComfort Floor Slab

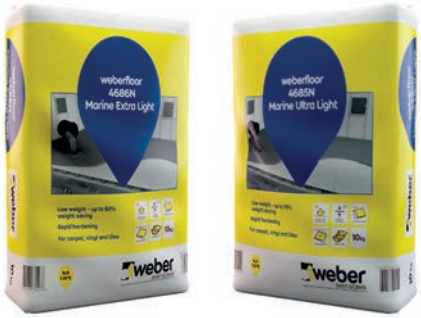
ISOVER SeaComfort Floor Slab is mainly used for sound insulation in the floating floor solutions. It can be used also for thermal insulation. The product is over 40% lighter in weight compared to the traditional solutions.

Properties:
Excellent compressive strength and dynamic stiffness values give outstanding sound insulation properties. Light-weight glass wool slab has also very good thermal insulation properties.

Weber is more than just a range of superior floor screed solutions.

Weber is a variety of superbly engineered systems and ideal solutions designed to meet each individual requirement. Weber has a complete portfolio consisting of both lightweight and regular solutions, covering most requirements.

These are solutions for outfitting in cabin and public areas, floor coverings, resins and more. Weight savings are becoming increasingly important. Our lightweight products and solutions ensure high quality design, time-saving installation and more efficient and profitable operation.



For futher information, please contact:
Saint-Gobain Finland Oy, Herkko Miettinen, herkko.miettinen@saint-gobain.com

For international contacts, please visit:
www.isover-tekniset-eristeet.fi
www.weber-marine.com

Green Marine Sets Sail

by: SAMI J. ANTEROINEN

Marine sector stakeholders need to unite in tackling air pollution and greenhouse gas emissions from shipping – as well as finding new ways to power vessels more sustainably.

photo: CRUISE LINES INTERNATIONAL ASSOCIATION

photo: INTERNATIONAL MARITIME ORGANIZATION

IMO Secretary-General Kitack Lim

International Maritime Organization's (IMO) strategy is to reduce sector-wide emissions by at least 50% by 2050. To deliver this, significant numbers of zero-carbon ships, or ships that can be easily adapted to use low or zero carbon fuels later in their life, will have to enter the fleet as early as the 2030s.

Appearing at the World Economic Forum in Davos in January 2020, IMO Secretary-General Kitack Lim commented that as some parts of the world are flooding while others are burning, there can be little doubt that addressing climate change must be "humankind's major priority". According to Lim, ambitious regulatory targets will act as the catalyst for technology, triggering research, development and innovation.

"Now is the time to start developing the vessels, the fuels, the delivery mechanisms and all the other necessary infrastructure to support zero-emission shipping", he stated.

> **"Planning for a zero-carbon shipping industry cannot be done in isolation.**

Turning specifically to the need for a collective approach throughout the entire global supply chain, Lim added that collaboration in this area is likely to include developing and testing low or zero-carbon fuels; better communication and planning over berth availability to help with speed-optimization and just-in-time arrival; and supplying cleaner on-shore power for ships in port.

Planning for a zero-carbon shipping industry, however, cannot be done in iso-

lation, he noted. "Infrastructure developments and investment decisions also need to be made collaboratively," he said, calling for cross-sectorial R&D initiatives as well as new transferable and scalable technologies.

CRUISE LINES ANSWER THE CALL

While cruise ships comprise far less than 1 percent of the global maritime community, cruise lines have been at the forefront in developing responsible environmental practices and innovative technologies. In December 2018, the Cruise Lines International Association (CLIA) announced a historic global cruise industry commitment to reduce the rate of carbon emissions across the industry fleet by 40 percent by 2030. Furthermore, CLIA very much aspires to the IMO's vision of a carbon-free shipping industry by the end of the century.

The commitment to reduce the rate of global fleet emissions by 40 percent is the outcome of a collaborative process designed to build consensus among cruise line leadership. Progress toward the 40 percent target will be measured against a 2008 fleet baseline, and emissions rates will be calculated based on the industry fleet's total carbon emissions, total ship berths and total distance traveled.

According to CLIA, the reduction will be fueled by innovative technologies for energy efficiency in ship design and propulsion. The industry's first liquified natural gas (LNG)-powered ship was launched in 2018, and some 25 such ships could be operating by 2025. While LNG ships principally address pollution, there is also a corresponding benefit for carbon emissions reduction.

BILLION DOLLAR QUESTION

At present, cruise lines work with scientists and engineers to develop cutting edge, sustainable environmental innovations and practices, investing $1 billion in new technologies and cleaner fuels. Among these advancements, the industry has designed and installed exhaust gas cleaning systems (EGCS) on ships to reduce emissions by as much as 98 %.

Cruise lines will also implement Ship Energy Management Plans for route planning and maintenance to reduce fuel consumption and carbon emissions. According to plan, energy efficient design standards will reduce CO_2 emissions by 30 percent by 2025.

> **Shipping plays an important part of the global economy.**

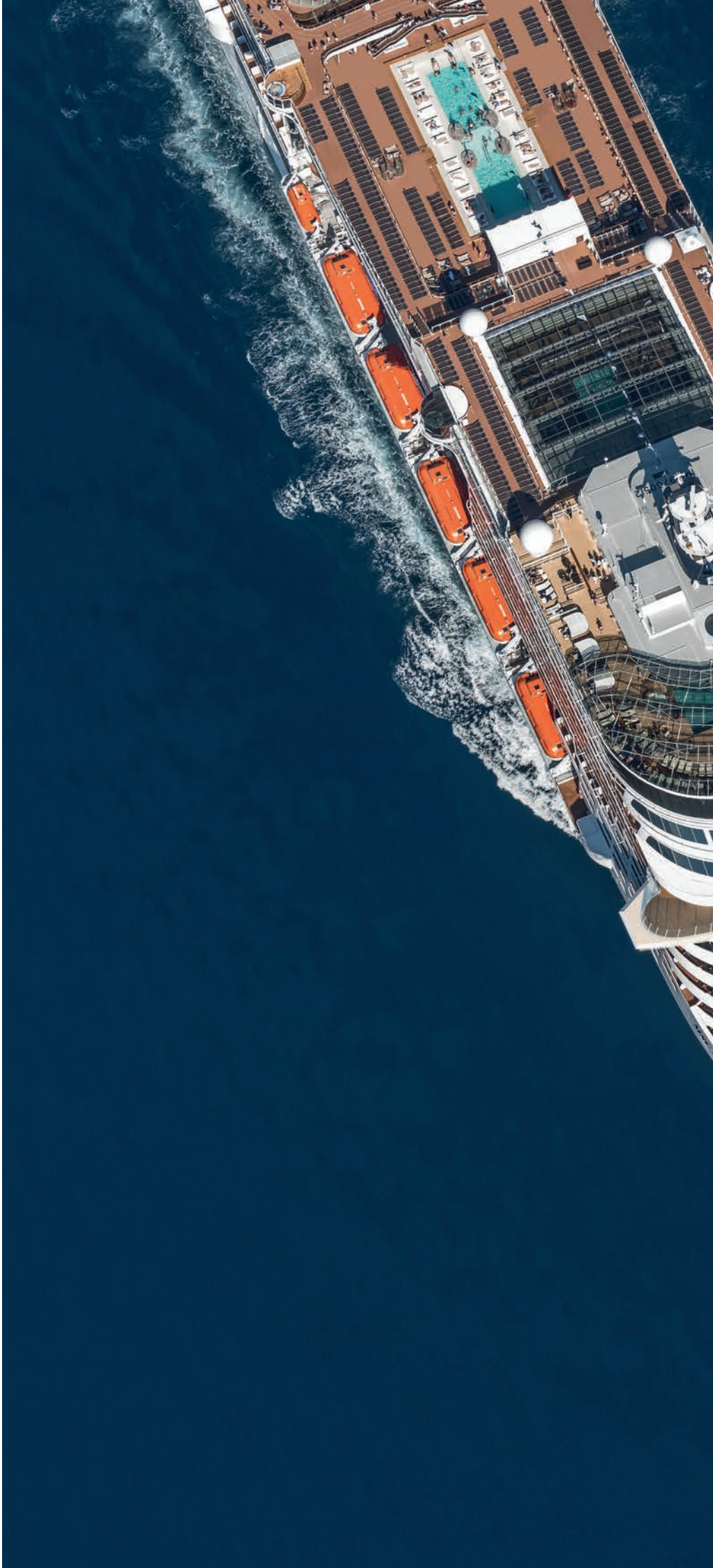


photo: CRUISE LINES INTERNATIONAL ASSOCIATION

In addition, cruise lines prioritize energy efficiency as part of their environmental protection programs. Investments include energy-efficient engines and hull coatings that reduce friction and fuel consumption, as well as energy-saving LED lights and higher efficiency appliances.

CHALLENGE ACCEPTED

Olli Kaljala, Marine Chief Executive for Finland and Baltic States at Bureau Veritas, points out that shipping plays an important part of the global economy, transporting more than 80 % of world trade by volume.

"What's more, shipping manages to do this while releasing the least amount of greenhouse gasses per transported unit. Still, approximately 3 % of global greenhouse gas emissions are caused by shipping," Kaljala says.

According to Kaljala, the use of alternative fuels is regarded today as "a key area" of technological development for sustainable transport.

"In shipping, there is today a consistent focus given to the potential appli-

photo: INTERNATIONAL MARITIME ORGANIZATION

Green Voyage 2050 – agreement signing.

> **"Ship owners have a long list of alternative clean fuel options to choose from.**

cation of different cleaner fuel solutions, with some of them posing substantial challenges to ship design," he assesses.

ALTERNATIVES EMERGING

Kaljala observes that today, ship owners have a long list of alternative clean fuel options to choose from on the road to a carbon-free future, each with their own advantages and challenges.

"From increasingly common LNG solutions, via fuels that could play a role in the future such as Liquefied Petroleum Gas (LPG), electricity, methanol and biofuels, to less developed options such as carbon free hydrogen and ammonia," Kaljala lists, while advising not to forget about wind power, either.

"Wind propulsion is a leading decarbonization technology. However, it receives limited consideration in sustainable shipping discussions," he says.

Classification societies such as Bureau Veritas are playing a significant role in supporting the development of IMO regulations, as well as industry standards for design, operation and bunkering.

"We are involved in various joint industry projects to assess technical feasibility and safety risks of alternative fuels – considering both thermal engines and fuel cells. We also support forerunners in developing and completing projects," says Kaljala. ■

MARITIME TRAINING

by Experienced Instructors

Simulation and innovation are cornerstones of our R&D and training success

- Polar Code: Basic and Advanced
- IGF Code: Basic, Advanced and Simulator *
- DP: Induction, Simulator and Revalidation
- Arctic Polar Code Survival Training - NEW!
- Maritime Cyber Security Introduction - NEW!
- ECOTRAIN workshop

*** Increase your profit by saving costs and time with Aboa Mare's IGF Training**

The Finnish Maritime Authorities (Traficom) have approved Aboa Mare's 5-day IGF simulator training that corresponds to 30 days of seagoing experience required by STCW. The training includes 2 of the 3 required bunkering operations.

Aboa Mare Maritime Academy and Training Center, Juhana Herttuan puistokatu 21, Turku, Finland

ABOA MARE 18 MARITIME 13 EDUCATION

www.aboamare.fi

Helsinki shipyard makes a big-time comeback

by: SAMI J. ANTEROINEN
photos: ARCTECH HELSINKI SHIPYARD OY

During its 150+ year history, Helsinki Shipyard has become a strong brand in international shipbuilding. Icebreakers and other arctic vessels have been built at the shipyard for more than a century and the 2020's have started with a bang as well: the shipyard crew is currently working on a project featuring two Luxury Expedition Vessels.

The vessels are intended to operate both in the Arctic and Antarctic waters as well as in the tropical waters during the spring and autumn seasons. The first vessel is planned to be delivered in August 2021 and the second vessel in January 2022.

Helsinki Shipyard and Russia's largest river cruise company Vodohod Ltd signed a contract for these Luxury Expedition Vessels last summer. Interestingly enough, the deal links directly with the recent ownership change at the shipyard: Algador Holdings Ltd. purchased the shipyard from Arctech Helsinki Shipyard in May 2019, and Vodohod is under the same ownership.

Basically, this means that the Russian owners of Algador – businessmen Rishat Baugatdinov ja Vladimir Kasjanenko – have a need for shipmakers due to their cruise business and other marine interests. Now they've added in-house muscle to produce those ships.

NEXT CHAPTER

Helsinki Shipyard CEO Carl-Gustaf Rotkirch says that shipyard is very proud and happy for the first order of the shipyard.

"This proves to everyone that we have started a new chapter in the operation of the shipyard. We will strengthen especially our design department in the near future and in connection with the start of production, also our production department," he says.

As operations at the shipyard continue, a collective sigh of relief can be heard from industry insiders. Helsinki came pretty close to losing its trademark shipyard, since the previous operator, Arctech Helsinki Shipyard, was owned by the Russian state company USC – and, as such, subject to US sanctions. Due to that state ownership, Helsinki shipyard had to live under a dark cloud for years – but now the sky is clear again, Rotkirch believes, since Algador Holdings is a privately owned company that is not sanctioned in any way.

"The slate has been wiped clean and we can move on," he says, adding that 'business as usual' is now very much the mentality at the yard.

OVERCOMING ADVERSITY

Rotkirch credits the former CEO Esko Mustamäki for having an extended dialogue with the American authorities and finding out just what will it take to escape the shadow of the sanctions. The US Office of Foreign Assets Control (OFAC) stated that at least half of the ownership must be in the hands of some entity that is not subject to sanctions. As Algador Holdings

> **"We have started a new chapter in the operation of the shipyard.**

is now the sole owner, the problem has ceased to exist, leaving the shipyard free to plot its future.

In the 2020's Rotkirch believes he will be running a sizeable shipyard with 500–1,000 employees. "The number of subcontractors is pretty big, reaching as much as 500 people at times."

Building these Luxury Cruise Expedition Vessels, there will be plenty of room for the Finnish marine cluster to come in and contribute, for example in furnishing the cabins. "The Finnish supplier network is world-class, so we're obviously looking to deploy that."

ARCTIC MUSCLE

Rotkirch explains that the shipyard playbook prefers landing a duo or trio of ships to single vessel orders: building a series of ships means that there is continuity in the business – and once you build the first vessel, the next one is much more simple to put together.

The shipyard believes that despite climate change, arctic expertise will be in great demand in the coming years.

"For example, there is need in the market for small luxury cruisers that sail the Arctic – as well as traditional 'work horses' with the ability to break through the ice."

CALL OF DUTY

If the comeback of the shipyard comes as surprise, CEO Rotkirch is experiencing a "second act" of sorts, too. The 70-year-old industry veteran was headed for retirement a couple of years ago, when he was approached about a new gig: how would he like to help Helsinki shipyard get back on its feet?

"I thought that it's definitely worth a shot," he laughs. This way an eventful career in marine – that started back in 1976 – moves into its sixth decade. Listening to Rotkirch, it is clear that he still has plenty of gas left in the tank:

"Going forward with our new operations, we will be in a tight spot for some time, but I believe that we can turn things around by 2021," he says. ■

MAKE IT A DOUBLE

Vodohod is a Russian cruise company and river cruise line operator, founded in 2004 by the Volga Shipping Company. The company has its headquarters in Moscow and Saint Petersburg, Russia. Vodohod operates more than 50 passenger ships along rivers of Volga, Don, Kama, the Moscow and Volga-Don canals, the Volga-Baltic Waterway, Northern-Western rivers, lakes Ladoga and Onega. The company is owned by Rishat Baugatdinov and Vladimir Kasjanenko who also own numerous other marine assets.

"The roots of Helsinki Shipyard Oy date back to year 1865.

BUILDING ON TRADITION

Helsinki Shipyard Oy is centrally located in Hietalahti, Helsinki and the shipyard is specialized in demanding marine technology and shipbuilding. The shipyard has long experience in designing and building passenger and cruise vessels. It is known as a world-class builder of icebreakers and other special vessels for arctic conditions.

The roots of Helsinki Shipyard Oy date back to year 1865 when Helsingfors Skeppsdocka was established. Vessels have been thus built at the same location for more than 150 years, including over half of the operating icebreakers in the world.

In August 2019, the icebreaking arctic tanker Yuriy Kuchiev was delivered from the shipyard. In February 2020, construction of two Luxury Expedition Vessels kicked off.

THE SHIPYARD'S PRODUCTION FACILITIES INCLUDE:

- a 280 meters long covered graving dock
- covered outfitting halls
- covered painting halls
- three outfitting quays

VODOHOD LUXURY EXPEDITION VESSELS: FAST FACTS

Length – 113 m
Breadth – 20,2 m
Draught – 5,7 m
Cruising speed – 14 knots
Ice class – PC5
Capacity – 157 passengers
Classification – Lloyd's Register


smm-hamburg.com
the leading international maritime trade fair
SMM
53° 33′ 47″ N, 9° 58′ 33″ E
hamburg
setting a course
8 – 11 sept 2020
hamburg
see what makes SMM the #1
smm-hamburg.com/trailer
Hamburg Messe + Congress
ufi Approved International Event
linkedin.com/company/smmfair
twitter.com/SMMfair
#SMMfair
facebook.com/SMMfair
youtube.com/SMMfair

Positive progress for Rauma shipyard

by: ARI MONONEN

photos: RAUMA MARINE CONSTRUCTIONS OY

Established in the summer of 2014 to continue the shipbuilding traditions in the city of Rauma on the southwestern coast of Finland, the RMC shipyard (Rauma Marine Constructions Oy) has recently received quite a few orders for new RoPax ferries and government vessels, including four corvettes for the Finnish navy.

Rauma Marine Constructions' order book surpassed 1 billion euros in 2019. Business is booming at the Rauma shipyard. Other sections of the Finnish marine industry are also doing pretty well, with the revenue increased by nearly 10 percent in 2018.

Currently, the Rauma shipyard is in the process of constructing car and passenger ferries, as well as government vessels. Even further projects are on the horizon.

> "Wasaline's new ferry is under construction at RMC shipyard.

MULTIPURPOSE CORVETTES ORDERED FOR THE NAVY

In late September of 2019, the Finnish Defence Forces and RMC shipyard in Rauma signed a contract for building four new navy corvettes. The contract is worth almost 700 million euros.

The new vessels will eventually replace seven other naval ships. Their final design is already underway in Rauma. Shipbuilding work will be started in 2022, with deliveries to the Finnish navy to be completed by 2028.

Multipurpose corvettes are by definition capable of combat against surface vessels and submarines, as well as of anti-aircraft activity. They can also take command of various types of naval operations.

RMC will also oversee the integration of the combat systems and propulsion equipment for the vessels, in cooperation with the system suppliers Saab and Aker Arctic Technology Oy.

> **"The vessel will have a hybrid power generation system.**

ENVIRONMENTALLY FRIENDLY CAR AND PASSENGER FERRY

Furthermore, Wasaline's new ferry – to be named 'Aurora Botnia' – is under construction at RMC shipyard and will be delivered to the operator in the spring of 2021. The keel laying of this vessel was celebrated in February 2020.

After delivery, the new ferry will operate between Vaasa in Finland and Umeå in Sweden. The construction of the vessel will have a substantial positive effect on employment, totaling some 800 person-years.

The new car and passenger (RoPax) ferry was ordered by Kvarken Link, a company co-owned by the city of Vaasa and the municipality of Umeå. The ferry will be able to carry 800 passengers and will have a freight capacity of 1,500 lane metres for cargo. The ferry will replace the Wasa Express, now operating between Vaasa and Umeå.

The construction of the ship started at Rauma shipyard in September 2019. The launching of the ship will take place in the autumn of 2020. The whole shipbuilding project is worth around 120 million euros.

The new ferry will be the first ever RoPax ferry with a Clean Design class notation. The vessel will have a hybrid power generation system, as well as an electric propulsion system rarely used in car and passenger ferries. These innovations make the ship an exceptionally environmentally friendly RoPax ferry.

The four main engines supplied by Wärtsilä will run on both liquified natural gas and liquefied biogas. With the aid of this technology, emissions in the Kvarken region of the Gulf of Bothnia can be decreased.

NETWORKED OPERATIONS ENHANCE PROFITABILITY

Rauma Marine Constructions considers the main cornerstone of Rauma shipyard's success to be RMC's current operating model, with enhanced project management and extensive cooperation with the shipyard's network of partners.

This network model is based on long-term strategic partnerships in the marine industry chain. Many of the cooperative partner corporations are strategically located at the industrial park close to RMC shipyard. This type of operating model ensures flexibility and keeps fixed expenses at a reasonable level.

In accordance with the operating model, a team of experts from the shipyard's network of partners is hand-picked for each project. RMC is then responsible for project management, finances and quality assurance.

In RMC's view, innovativeness is the Finnish marine industry's best asset in the export markets. The industry's environmental targets – to reduce carbon emissions, for example – have created a high demand for innovative thinking in shipbuilding and ship design. ■

Science pushes shipyards

MEYER TURKU AND RMC TEAM UP WITH AALTO UNIVERSITY IN A QUEST FOR FUTURE INNOVATION

by: SAMI J. ANTEROINEN

Future maritime expertise goes hand in hand with quality research and education. Finnish shipyards seek collaboration with universities in order to boost innovations and profitability via academic means. Another key concern is making sure that the maritime sector will continue to benefit from academically trained experts. Aalto University recently announced two significant collaborations with the shipyards of Turku and Rauma.

photo: AALTO UNIVERSITY

photo: AALTO UNIVERSITY

Professor Pentti Kujala

In December 2019, Aalto University and Meyer Turku Oy signed an agreement that will strengthen and develop multidisciplinary research and education collaboration as well as give a boost to expert co-operation. In connection to the agreement, Meyer Turku CEO Jan Meyer commented that the shipyard is constantly looking to attract new talent and therefore there is a need to be present at Aalto campus and in the academic lives of the students.

According to Ilkka Niemelä, President of Aalto University, the agreement forms another link in "a long chain" of co-operation between the Turku shipyard and the university, which brings together cutting-edge research, high-quality education and stakeholders from the marine technology sector.

NEXT LEVEL

What does the collaboration mean in practice, then? – The key idea is to increase

multidisciplinary student projects, master's and doctoral thesis projects as well as joint seminars and workshops. Meyer Turku's career paths and marine technology employment opportunities will also be made visible at the Otaniemi campus, explains professor Pentti Kujala from Aalto University.

"Research collaboration will continue and expand in several areas, including materials research and steel structures, information and communications

photo: UNSPLASH

"Research collaboration will continue and expand in several areas.

photo: UNSPLASH

technology and digitalization, hydrodynamics, ship safety, energy efficiency and solutions that support sustainable development," Kujala lists.

In addition, Aalto University's brand new MarineX project will be developed into a new research forum and collaboration platform for the maritime industry and marine technology. This will serve to strengthen the university's leading position in marine technology research, Kujala believes.

"With MarineX, we are trying to figure out what that unknown factor – or X – could be that will be the future difference-maker for the marine sector," he explains the ideology of the project. With strong trends such as sustainability and digitalization shaping also the fortunes of marine, it is vital to keep searching for the "next big thing".

"When we talk about experiences that cruise ships provide in the future, for instance, it makes sense to tap into the imaginations of the younger generations. Our students can certainly help in discovering totally new perspectives."

BUILDING ON TRADITION

In February 2020, Aalto University concluded a new collaboration agreement with Rauma Marine Constructions Oy (RMC). The two partners will start planning a long-term joint program on research and development this year. The program will focus particularly on developing technologies that can improve the environmental and safety aspects of maritime transport, resulting in reduced carbon footprints, utilization of new fuels and further developments in vessel safety.

Jyrki Heinimaa, President and CEO of RMC, says that the Rauma shipyard wishes to remain at the "forefront of new development" with regard to the construction of passenger car ferries, multipurpose icebreakers and government ships. "The environment and safety are absolutely important to us," says Heinimaa.

Professor Pentti Kujala comments that this agreement will continue the close collaboration between the Rauma shipyard and the Otaniemi scientific community that began roughly 40 years ago.

"The confidence we have built over the years in our joint development work can be put to good use, as we seek solutions to problems related to ship safety and the environmental impact of ships," says Kujala.

NORTH REMEMBERS

Aalto University has always placed major emphasis on marine technology and research, investigating, for example, the responses and strength of ships in a complex physical environment where ice and wave induced loads are present. The Aalto research teams also look deep into system-level issues at the scale of shipping systems and fleets as well as individual ships and their subsystems. The focus is – in addition to passenger ships – on ice-going ships and, more and more, impacts of autonomy into shipping.

Around the world, marine tech solutions are developed in various universities, but Aalto adds a powerful "Northern Dimension" to the mix, studying the behavior of ships and structures in ice. Arctic marine research focuses on ice loads on ships and structures, on ship performance and on ship safety, explains Kujala.

"We can conduct extensive full-scale trials onboard ice-going ships and we can also utilize the Aalto Ice Tank which underwent a 8 million euro upgrade last year," he says, adding that the need for ice-going vessels has not diminished due to climate change.

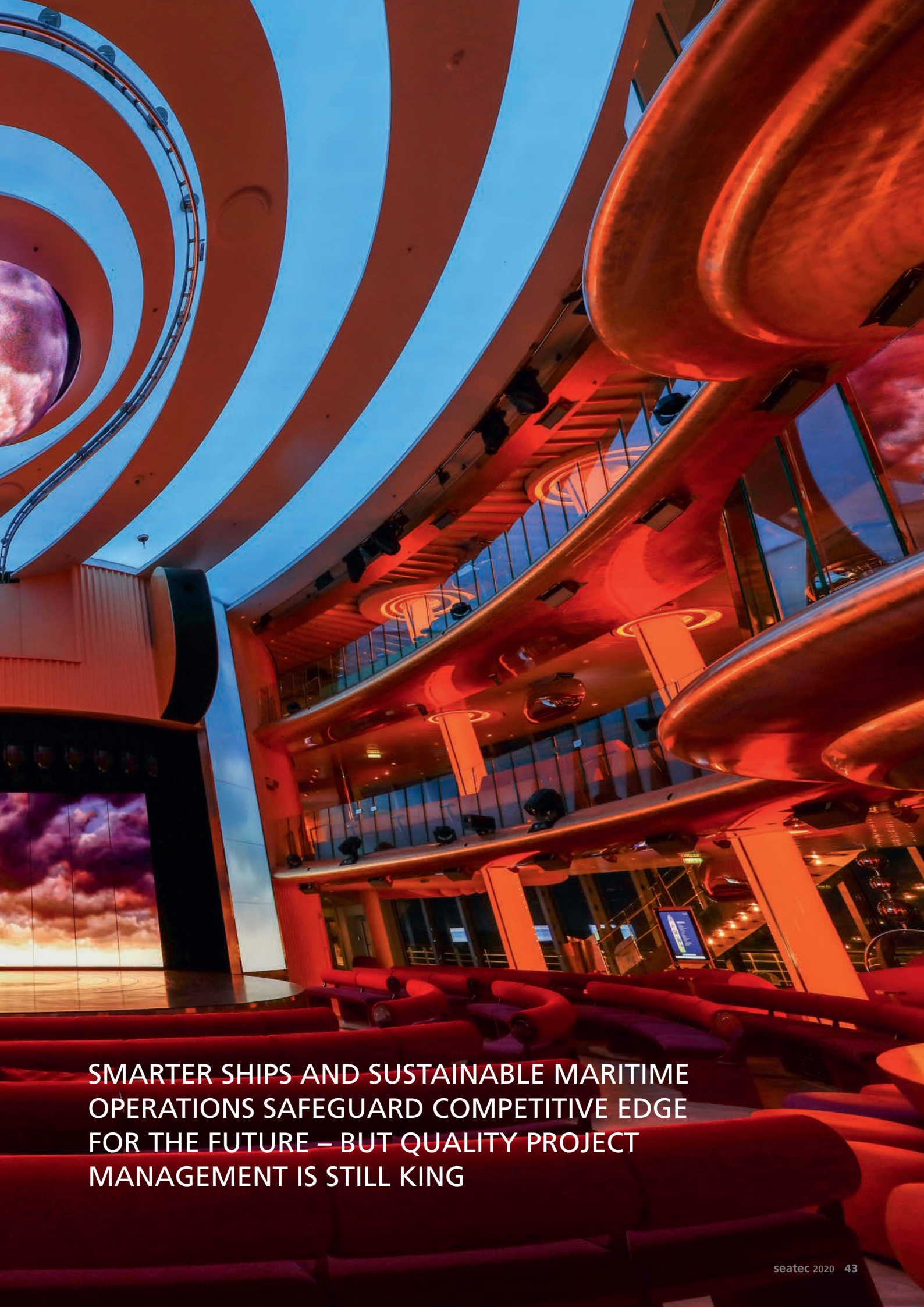
"As there is less ice, activity in the Arctic seas can increase." ■

photo: INTERNATIONAL MARITIME ORGANIZATION

photo: MERIMA OY

Race for the Finnish Line

by: SAMI J. ANTEROINEN



SMARTER SHIPS AND SUSTAINABLE MARITIME OPERATIONS SAFEGUARD COMPETITIVE EDGE FOR THE FUTURE – BUT QUALITY PROJECT MANAGEMENT IS STILL KING

The vision of the Finnish maritime industry is to make every ship smart by 2025. By applying digital technology, the marine cluster has vast opportunities to e.g. raise the level of safety in maritime operations and support sustainable transport at sea.

The marine prowess is, of course, is linked to the digital development of the surrounding society. Finland is already a global forerunner in developing digital solutions with world-leading capabilities in artificial intelligence, sensoring and wireless technology – and during the 2020's, the e-volution should only increase its momentum.

The track record so far is pretty solid: for example, in 2017, the Digital Economy and Society Index ranked Finland as the EU's second most advanced digital economy. The companies in the Finnish marine cluster have both the experience and the expertise to steer the global industry into the future.

DELIVERING THE GOODS

Elina Andersson, Secretary General of the Finnish Marine Industries, says that the competitive edge of the Finnish maritime has a lot to do with perfecting the processes:

"We have real project management excellence in the industry. This means that even big and demanding projects are able to finish on time – which is something that the customers have really come to depend on and appreciate," she says.

The other thing Andersson mentions is the decades-long culture of working together to achieve the best results. "Collaboration in the marine industries has always been of great importance, and the role of broad cooperation has only increased recently," she believes. As the Finnish marine cluster features around 1,000 companies – big and small, from all around the country – this really is a remarkable ecosystem with a dynamic mindset.

"From this ecosystem, we see that new startups are emerging, bringing forward innovations which benefit the entire industry," she adds.

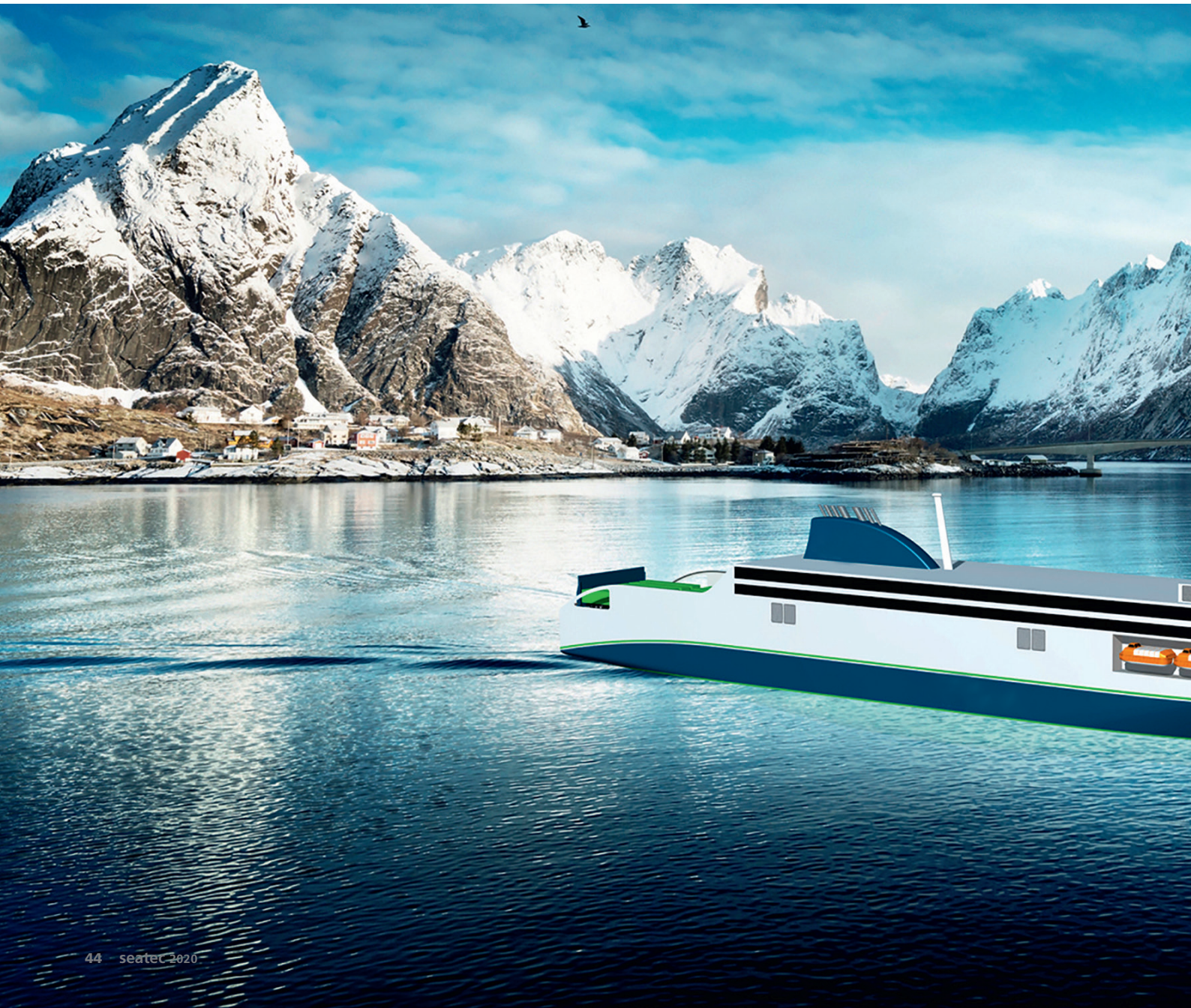


photo: DELTAMARIN LTD

"We have real project management excellence in the industry.

DIGITAL DEPTH

Presently, competitiveness arises from e.g. rapidly developing digital technologies which are connecting people and machines in novel ways, minimizing human error and providing new revenue and value-adding opportunities. Digitalization leads to more efficient operations, user friendliness and effective, streamlined services.

Naturally, part of this digital transition is automation – in forms that may surprise you. For example, the world's first autonomous and remotely controlled ferry journeyed from Turku, Finland, to a Finnish archipelago destination in December 2018. Developed by Finnish companies, the new technology aboard the ferry is showing, in part, the way of the future for autonomous vessels.

Autonomous shipping is attractive from the point of view of the global play-

> **Digitalization leads to more efficient operations.**

ers, since it tends to increase safety and makes the shipping business more economically viable. Digital connections allow the ship to be steered from a land-based control room, while a captain can take over under demanding circumstances.

DECARBONIZING THE SEAS

And then there is the sustainability angle. Finnish companies have gained a global reputation for creating smart, green innovations: among these are advanced energy management and fleet performance systems which reduce emissions and increase fuel savings.

Luxury cruise ships, for example, benefit from technology that allows them to sail into waters with strict emission limits or journey into fragile ecosystem areas. It is no coincidence then that 60% of all the world's largest luxury cruise ships are designed in Finland (and one third were built by Finnish shipyards) – the cruise lines are gravitating towards greener ships and nobody has a better reputation in this regard than the Finns.

BLUE GOES GREEN

The shipping industry will go increasingly green, once the EU's Green Deal policy really gets going. In December 2019, SEA Europe – the Shipyards' and Maritime Equipment Association of Europe – welcomed Green Deal as a very ambitious political engagement in support of a climate neutral society by 2050.

SEA Europe noted that the Green Deal for Europe offers "interesting challenges and great opportunities" for Europe's shipyards and maritime equipment industry. In addition, it will allow the sector to enhance its global competitiveness, whilst contributing in fulfilling the Commission's targets and in building a sustainable "blue economy" for Europe. ■

photo: VALMET

Antti Marine introduces e-hinge – the invisible ethernet cable system at sea

Antti Marine, a major producer of marine doors, has invented a new solution for online door cabling. The innovation is an ethernet-equipped hinge, dubbed "Antti e-hinge." E-hinge is part of the same system of service-free and adjustable hinges introduced by Antti in 2011 – but offers a different choice for online cabling. According to the company, reasons to switch include ease of installation, safety, and its low profile compared to previous options.

According to Markko Takkinen, Commercial Director at Antti-Teollisuus, e-hinge is the optimal ethernet cable solution:

"For ship owners and builders, e-hinge is the safest and easiest way to get all the features of their existing online system, without the lead cover. It's a completely hassle-free and invisible system and doesn't carry the same risk of damage as the exposed systems they have now."

E-hinge is identical to a standard door hinge but comes equipped with online access and data transfer. E-hinge simply takes the place of one or more hinges on a standard door – that is, it's completely invisible and a cinch to install.

Antti first introduced an online door cabling system in 2013, aboard the AIDAstella – but there were tradeoffs. Structural modifications to the door were necessary, and what's left is an obvious, surface-mounted lead panel on the door leaf and a cable – or cables – stretching plainly from door to frame.

According to Takkinen, the seed for what would become Antti e-hinge was planted by a customer in March 2017.

"A major ship operating company requested we replace the existing lead cover with something less visible and better looking. The idea started to grow immediately."

Antti chose a Swiss hinge manufacturer as their partner on the project. In close collaboration, e-hinge took its form and met validations for mechanical durability, electrical connectivity and data transfer capability. The final decision to invest in the product was made in early 2019, and Antti moved forward decisively with the final stage of development.

The result was a connected hinge as simple to install as a regular one.

"It worked just perfectly. For builders and maintenance, it's a return to the old days of offline systems, because the procedure with e-hinge is no different. Doors can be built, installed, or removed with no extra considerations – e-hinge is a service-free system, and even the height of the hinge can be adjusted," Takkinen says.

Takkinen is quick to point out that, although the standard use-case is to have one Antti e-hinge per door, additional e-hinges can be added for future applications.

"That kind of freedom is the most exciting thing to me."

E-hinge is now available worldwide, only from Antti Marine. ■

MORE INFORMATION
Markko Takkinen, Commercial Director
markko.takkinen@antti-teollisuus.fi, +358 44 774 4735

Valve control innovations for cruise ships and tugs

By: ARI MONONEN

Located in Naantali in southwestern Finland, ACM-Trading Ltd. has designed and supplied maritime automation and engineering solutions since 1969. The company's latest valve control innovations can be applied to ship instrumentation, as well as various types of tug and barge coupling systems.

First successful connection of Pusher Tug "CALYPSO" and Ice Breaker Bow "SAIMAA" on February 29, 2020.

The business idea of ACM-Trading is based on remote-controlled valves with electro-hydraulic actuators, manufactured by Pleiger Marinenbau in Germany.

"These types of valves are utilised for high-grade control systems for modern ships, including all cruise liners currently being built by Finnish shipyards," says Mr. Kari Laiho, CEO for ACM-Trading Ltd.

Valve control can be applied to modern marine instrumentation, such as measuring of tank contents. Interface units consisting of valve control modules can be operated by on-board computer systems.

Another innovation for electro-hydraulic valves is a coupling system for detachable ice-breaking bow assemblies, converting tugboats into temporary-duty icebreakers.

"A pilot project for this system will be tested at Lake Saimaa in Finland from March 2020 onwards. The bow assembly is coupled to the tug by utilising an electro-hydraulic system, plus connection rods of fortified steel," Mr. Laiho explains.

"After installation, the tugboat will be able to keep waterways open throughout the winter. Inside the bow assembly, two aggregates will generate power for twin propellers equipped with diesel-electric transmission."

Furthermore, ACM-Trading's range of ATB (Articulated Tug & Barge) coupling systems can be used for various inland, coastal and offshore applications, including mobile barge-based LNG fueling stations. ■

More information: www.acm-trading.fi

Know-how and competence needed for marine catering

by: ARI MONONEN
photos: KARI PALSILA

Catering systems for cruise ships need to be designed with special care. Marine catering is subject to strict international regulations related to health, hygiene, and fire safety.

Specialised in marine catering systems technology, SeaKing Ltd. designs and supplies complete catering systems for cruise ships.

"Our focus is on functionality, space usage, energy consumption, safety and cost-efficiency in catering operations throughout the entire lifecycle of ship," notes Mr. Pasi Suvanto, Vice President of Sales for SeaKing Group.

"Since most of today's cruise ships will be calling U.S. ports, catering systems have to be designed in accordance with the U.S. Public Health Service (USPHS) regulations."

Overall, the designs of cruise ship galleys in most cases are customised to fit into allotted spaces, and to conform to regional tastes and current dining trends.

"For instance, the tables, counters, and galley equipment for cruise ship use have to be designed and manufactured in a different manner than those used in land-based restaurants. There are additional requirements for heavy-duty constructions and easy cleanability," Suvanto recounts.

SeaKing's production facilities are in Poland and the U.S. The company's headquarters are in Switzerland.

According to Mr. Suvanto, every cruise ship project is different from any other. Even sister ships often have differences in their respective catering facilities. ■

More information: www.seaking.net

LESS WEIGHT IS MORE EFFICIENCY

ISOVER and Weber have extensive experience in the marine and offshore industry. ISOVER and Weber together offer the market extensive experience in lightweight, great quality and high performance solutions. The common values of ISOVER and Weber are to create great living spaces and improve daily life with sustainable solutions and services, also within the offshore- and maritime industry.

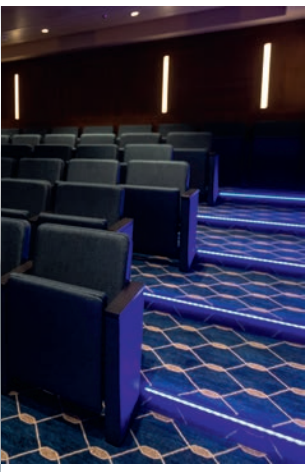
ISOVER supplies products and solutions for comfort, fireproofing and sound-proofing on board ships and platforms. ISOVER lightweight solutions reduce the weight of insulation by up to 40% compared to traditional stone wool. By selecting ISOVER lightweight solutions, our partners can reduce construction costs and fuel consumptions, while releasing capacity for payload throughout the service life of a ship. Lightweight solutions make an extremely positive contribution to vessels' energy output and environmental footprint

Weber is more than just a range of superior floor screed solutions. It is a variety of superbly engineered systems and ideal solutions designed to meet each individual requirement. Weber offers the lightest solutions, combined with the highest performance and best properties, to the market. Our solutions offer potential weight savings of 35–68%. With Weber's primary deck coverings and self-levelling compounds, weight can be reduced by up to 68%. Products are pumpable, with a capacity of up to 20 tons per hour. They are fast-setting and curing. Already within 1–3 hours after installation, the floors are ready for foot traffic and can be used so the general work and outfitting can continue.

There are stringent requirements for thermal, acoustic and fire insulation on ships and offshore installations. Flexibility and weight are two extremely important characteristics. Our optimum solution is called ISOVER U SEAPROTECT. It is a preferred insulation material on board ships and offshore installations. Combined with Weber´s floating floors, it produces effective weight savings without compromising on quality, properties and performance. ■

For international contacts, please visit:
www.isover-tekniset-eristeet.fi
www.weber-marine.com

For further information in Finland, please contact:
Saint-Gobain Finland Oy, Herkko Miettinen,
herkko.miettinen@saint-gobain.com



High-grade furniture for the cruise ships

by: ARI MONONEN

photos: MEIN SCHIFF 1, LAVEA MEDIA

Established in 1988 and located in Lahti in southern Finland, Pedro Ltd is a leading manufacturer of specialised furniture for ship installations and other demanding applications.

For more than 30 years, Pedro Ltd has been known for combining Scandinavian design, high quality, and sustainable and ecological manufacturing principles.

"We manufacture furniture for ships – luxury cruisers in particular – but also for land-based applications," explains Mr. Juha Lehtonen, CEO for Pedro Ltd.

"Currently, we have started product deliveries for the 'Mardi Gras' cruise ship ordered by Carnival Cruises, scheduled for delivery in October 2020."

The 'Mardi Gras' is a 350-metre vessel, capable of carrying more than 5,000 passengers. The ship will be equipped with theatres, restaurants and show lounges.

"Typically, we deliver customised pieces of furniture designed by architects. In addition to upholstered furniture with metal frames, ships will need armchairs, bar stools, benches, sofas, and integrated TV and display screens. Designers are looking for unique and high-grade solutions for the interiors."

According to Mr. Lehtonen, shipbuilding is a world of its own, requiring specialised know-how – and the right attitude.

"Product quality is essential. Knowledge of fire-resistant materials is a must. Additionally, you need to deliver the products to the right place at exactly the right time, no matter what," notes Lehtonen.

Apart from onboard installations, Pedro Ltd has recently delivered specially designed furniture for the new terminal at Helsinki-Vantaa Airport, plus acoustic panels for Sibelius Music Academy's renovated classrooms. ■

Certified ceilings for shipbuilding

by: ARI MONONEN photos: KARI PALSILA / MS COSTA SMERALDA

The specialised manufacturing company Lautex provides ceilings – metal panels, cassettes, gratings, and decorative profiles – for the shipbuilding and construction industries, offering a wide variety of fire-resistant and also customised solutions.

Approximately 80 percent of Lautex's products are manufactured for use in the shipbuilding industry, to be installed mainly aboard cruise ships.

According to Mr. Jukka Vappula, Managing Director for Oy Lautex Ab, the company's turnover is on the increase.

"In 2019, our turnover was 12 million euros, which is some 30 percent higher than in the previous year," he says.

The company's newest product innovations include LTX-340 and Sandwich ceiling panels for B-15 -class.

"They are light weight and 0-join, screwless, with acoustic properties, and can be opened with no need for hatches."

"The Sandwich panels have a maximum span of 2.8 metres, with a height of just 32 millimetres. Such panels are ideal for space-saving onboard installations," Mr. Vappula suggests.

"Both types of panels have been utilised in the construction of the Costa Smeralda, the latest cruise ship manufactured by Meyer Turku shipyard."

The new types of metal panels can also be used for refurbishing and building construction applications.

Recently, Lautex has invested in new high-tech edging, shaping and perforating machines, as well as glue-joint presses, and performed the latest update at a paint shop.

"New personnel has also been recruited. The company now employs 57 professionals," Mr. Vappula recounts.

Lautex is also strongly involved in sustainability projects within the shipbuilding industry.

"We are currently operating with full capacity. Things are looking good." ■

MERITURVA IS SAFETY BY TRAINING!

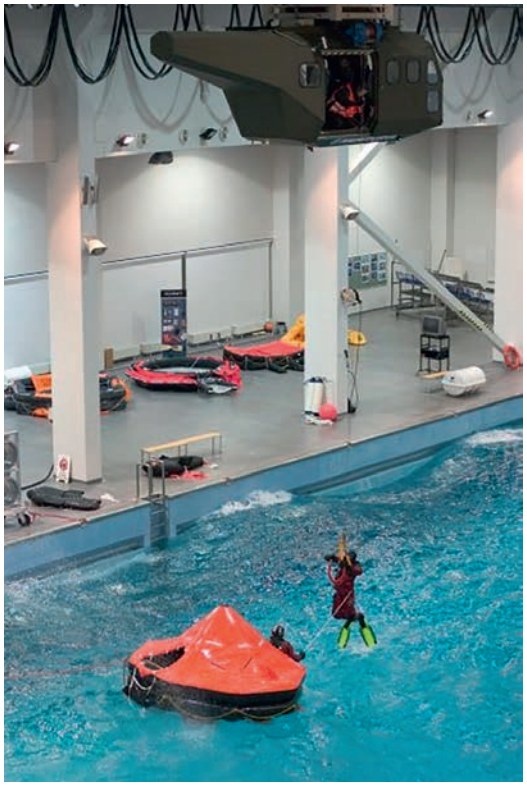
Meriturva Maritime Safety Training Centre aims at improving safety at sea by offering a vast selection of fire and survival training both for professional and amateur seafarers. Meriturva consists of two units, fire training unit in Upinniemi and survival training unit in Lohja.

At Meriturva we conduct STCW and GWO safety courses for maritime professionals and HUET for helicopter crews by highest standards. We train over 4000 people every year. Our learning facilities are among the finest in the world. We make the simulation even more realistic bringing the maritime disaster into a controlled process. That means training in a thrilling but always a safe way.

Our Fire Training unit offers certified basic and advanced fire training for mariners – our main clientele consists of professional seafarers. Some courses are tailor-made to match customer-specific needs.

The superb facilities and authentic equipment of Survival Training unit in Lohja offer a safe way to gain important survival skills. Our 43x27 meter training pool is equipped with adjustable wind, waves, lightning and sound effects, amazingly realistic and challenging. Our HUET and winching helicopter trainers have been a success, trainees coming from many countries like Sweden, Estonia, Latvia, Lithuania, UK and Norway. For GWO we have a full schedule of courses including new ART-modules. ■

More information: www.meriturva.fi



In the picture rescue diver training at Lohja unit.

IMO 2020 sulphur limit implementation – carriage ban enters into force

Consistent implementation of the IMO 2020 regulation which limits sulphur in ships fuel oil is enhanced from 1 March 2020, with the entry into force of a rule to ban the carriage of non-compliant fuel oil.

The IMO 2020 regulation limits sulphur in ships' fuel oil to a maximum 0.50%. The regulation has been in force globally since 1 January 2020, under IMO's MARPOL treaty, with benefits for the environment and human health from a reduction in sulphur oxides in the air.

The complementary International Convention for the Prevention of Pollution form ships (MARPOL) amendment prohibits the carriage of non-compliant fuel oil for combustion purposes for propulsion or operation on board a ship – unless the ship has an approved exhaust gas cleaning system ("scrubber") fitted.

The amendment does not change in any way the 0.50% limit which has been in force since 1 January 2020. It is intended as an additional measure to support consistent implementation and compliance and provide a means for effective enforcement by States, particularly port State control.

In designated emission control areas, the maximum sulphur limit in fuel oil is 0.10 % (the four ECAs are: the Baltic Sea area; the North Sea area; the North American area (covering designated coastal areas off the United States and Canada); and the United States Caribbean Sea area (around Puerto Rico and the United States Virgin Islands)). ■

Consistent implementation of the IMO 2020 regulation which limits sulphur in ships fuel oil is enhanced from 1 March 2020, with the entry into force of a rule to ban the carriage of non-compliant fuel oil.

company directory

photo: UNSPLASH

1 4 6 7

AB-MARINEL OY

Konsantie 30
FI-21260 Raisio
Finland
Phone +358 2 444 11
info@ab-marinel.fi
www.ab-marinel.fi

Contact Person
Tommi Niemi
Henry Lindström

Facts & Figures
Turnover: EUR 5 million
Personnel: 50
Established: 1986

Specialty Areas
• AB-Marinel Oy supplies comprehensive delivery of the electrical materials, -equipment and spare parts for all kind of ships and represents several manufacturers of the electrical control-, alarm and communication systems.
• Specialized in turn-key-deliveries for newbuilding ships, including design, installations, material and equipment.

8

ABLEMANS OY

Härjänkurkuntie 46
FI-21250 Masku, Finland
Phone +358 2 439 6500
ablemans@ablemans.fi
www.ablemans.fi

Contact Person
Marko Ruostekivi
Managing Director
marko.ruostekivi@ablemans.fi

Facts & Figures
Turnover: EUR 5 million
Personnel: 10
Established: 1987

Specialty Areas
Steel and Aluminium structures.
Shipbuilding – Shiprepairing – Conversions – Outfitting.

2

ANTTI-TEOLLISUUS OY, ANTTI MARINE

Koskentie 89
FI-25340 Kanunki, Finland
Phone +358 2 774 4700
Fax +358 2 774 4777
www.antti-teollisuus.fi

Contact Person
Markko Takkinen
Commercial Director
markko.takkinen@antti-teollisuus.fi

Specialty Areas
Antti Marine accommodation & interior doors for ships & offshore.
B and C-class fire doors.
Sound reduction doors up to Rw=48dB.
Designed features e.g. patterns and digital printing.
E-hinge for online doors to replace conventional lead cover system.

2 6 7

AT-MARINE OY, AUTROSAFE

Uranuksenkuja 10
FI-01480 Vantaa, Finland
Phone +358 9 5494 2600
sales@atmarine.fi, www.atmarine.fi

Contact Person
Antti Pihlajamäki, Jussi Kujanpää
antti.pihlajamaki@atmarine.fi, jussi.kujanpaa@atmarine.fi

Specialty Areas
Services:
• Sales, maintenance, manufacturing, commissioning and planning.
Equipment:
• Navigation and communication systems
• Machine and fire alarm systems
• Engine room equipment, sound and light alarms, alarm panels and centers
• Temperature and pressure sensors
• Machine automation
• Escape and emergency lighting including special signs for exterior and interior decks
• LED lamps, searchlights and window wipers
• Liquid Handling Equipment
• Special Electronic Devices.

9

FERRAL COMPONENTS OY

Valulantie 1
FI-85100 Kalajoki, Finland
Phone +358 8 464 0200
sales@ferral.fi
www.ferral.fi

Contact Person
Timo Suni
timo.suni@ferral.fi

Specialty Areas
STEEL AND ALUMINUM FLANGES ISO/NS/ANSI/JIS/SFS/DIN/EN…
• Welding plate flanges
• Separately sold flanges
• Exhaust pipe flanges
• Flange collars
• Blind flanges
• Pipe collars
• Chuck flange
• Through flanges
• Threaded flanges
• Special flanges
OTHER SPECIAL COMPONENTS AND CONTRACT MANUFACTURING

3 9

LAIVAKONE OY

Uranuksenkuja 1 C
FI-01480 Vantaa, Finland
Posenerstr. 1 a
D-23554 Lübeck, Germany
Phone +358 20 763 1570
Fax +358 20 763 1571
laivakone@laivakone.fi
www.laivakone.fi

Contact Person
Harri Elonen

Facts & Figures
Personnel: 20
Established: 1969

Specialty Areas
Ship engine repairs and services.
In-Situ machining.

1. Consulting
2. Equipment
3. Machinery
4. Materials
5. Safety
6. Systems
7. Turnkey Deliveries
8. Yards
9. Other

2 3 6 7

MARINE DIESEL FINLAND OY

Eteläkaari 10
FI-22420 Lieto, Finland
Phone +358 20 510 6900
Fax +358 2 253 9121
marine.diesel@wihuri.fi

Contact Persons
Markus Hjerppe
Mika Aaltonen

Facts & Figures
Turnover: EUR 6 million
Personnel: 45
Established: 1992

Specialty Areas
Main- and auxiliary engine repair and service. Total overhaul of all type of engines. Turbocharger service and repair. On-site machining. Fuel injector testing also for solenoid operated devices.
Well-equipped workshop in Lieto. CAT authorized service and repair, Kemel seals and bearings

4

ONNINEN OY

P.O. Box 109
FI-01301 Vantaa, Finland
Phone +358 20 485 5111
Fax +358 20 485 5500
www.onninen.fi
www.onninen.com

Contact Person
Martti Lehti
Area Sales Director
martti.lehti@onninen.com

Facts & Figures
Personnel: 3 000
Established: 1913

Specialty Areas
Onninen provides comprehensive materials services to contractors, industry, public organisations and technical product retailers. Onninen is member of Kesko Group. We have 3 000 employees in our Finnish, Swedish, Norwegian, Polish, Russian and Baltic operations.

3

PARKER HANNIFIN MANUFACTURING FINLAND OY

Salmentie 260
FI-31700 Urjala As., Finland
Phone +358 20 753 2500
Mobile +358 40 740 2394
filtration.finland@parker.com
www.parker.com

Contact Person
Tarmo Mäkelä
tarmo.makela@parker.com

Facts & Figures
Personnel: 65
Established: 1964
Parent Company: Parker Hannifin

Specialty Areas
Filtration: Lubrication oil filtration, fuel oil filtration, hydraulic filtration, gas filtration. Condition Monitoring

2 9

POCADEL OY

Korpelantie 229
FI-21570 Sauvo, Finland
Phone +358 50 435 2638
pocadel@pocadel.fi
www.pocadel.fi

Contact Person
Maria Perrakoski
maria.perrakoski@pocadel.fi

Facts & Figures
Established: 1997

Specialty Areas
Light weight B15 – A60 fire rated glass doors and partitions for marine and offshore use. Product range includes hinged doors, sliding doors, extra wide tandem doors, glass walls and partitions.

2 7

PORKKA FINLAND OY

p.o. Box 127
FI-3310 Tampere, Finland
Phone +358 20 555 512
Fax +358 20 5555 360
contact@porkka.com
www.porkka.com

Contact Person
Petri Hiilloste
petri.hiilloste@huurre.com

Facts & Figures
Turnover: EUR 30 million
Personnel: 170
Established: 1962
Parent Company: Huurre Group Oy

Specialty Areas:
Provision stores. Walk-in rooms in galleys/pantries. Insulated doors. Insulated fire doors A60, for cold stores. Marine cold cabinets and counters.

2

SAAJOS OY

Puistokatu 21
FI-08150 Lohja, Finland
www.saajos.fi

Contact Person
Tomi Riittiö, Sales Manager
M. +358 400 811 591

Facts & Figures
Turnover: EUR 7 million
Personnel: 30
Established: 1949

Specialty Areas
Firedoors A-class. Saajos AS. B- and C-class

1. Consulting
2. Equipment
3. Machinery
4. Materials
5. Safety
6. Systems
7. Turnkey Deliveries
8. Yards
9. Other

2 4 9

SBA INTERIOR LTD

Hållsnäsintie 99
FI-10360 Mustio, Finland
Phone +358 19 327 71
sales@sba.fi
www.sba.fi

Contact Persons
Thomas Pökelmann, Sales Manager
thomas.pokelmann@sba.fi
Johan Fagerlund, Technical Director
johan.fagerlund@sba.fi

Facts & Figures

Turnover:	EUR 20 million
Personnel:	130
Established:	1985

Specialty Areas
SBA Interior is specialised in accommodation panelling and different types of beds for marine applications.
Latest development is an only 16mm B-0 class panel and a 50 mm A-60 class light weight box; wall and ceiling as well as a B-15 class Extension Screen.
Another branch of SBA is subcontracting for metal industry.

7

SEASIDE INDUSTRY PARK RAUMA

Suojantie 5
FI-26100 Rauma, Finland
www.seasideindustry.com

Contact Person
Timo Luukkonen
+358 40 550 1942
timo.luukkonen@seasideindustry.com

Specialty Areas
Seaside Industry Park is the hub of the maritime cluster in Rauma. Successful principal companies in shipbuilding and marine production with wide and efficient supplier network operate in the park. The region is utilizing versatile infrastructure and comprehensive common services. Seaside offers an efficient manufacturing environment and cooperation network that also enables smaller companies to participate in major projects and achieve competitive advantages and added value.
Additional information: www.seasideindustry.com

7

S.A. SVENDSEN OY

Särkiniementie 3 B
FI-00210 Helsinki, Finland
Phone +358 9 681 1170
Fax +358 9 6811 1768
www.sasvendsen.com

Contact Person
Kimmo Räisänen
Managing Director
kimmo.raisanen@sasvendsen.com

Facts & Figures

Turnover:	EUR 5,7 million
Personnel:	5
Established:	1981

Specialty Areas
Complete turnkey deliveries for cruise ships and ferries. Interior materials and custom-made interior modules. Refurbishments and refits for cruise ships and ferries

2

TEBUL OY

Luumäentie 2
FI-21420 Lieto, Finland
Phone +358 50 540 6031
sales@tebul.fi
www.tebul.fi

Contact Person
Jussi Uusitalo
Managing Director
sales@tebul.fi

Specialty Areas
TEBUL OY has been designing and manufacturing watertight bulkhead sliding doors since 1961. Our self-tightening 24VDC fully electric watertight bulkhead sliding door is a fourth-generation product. The primary self-tightening is based on metal to metal contact with rubber seals for initial tightening. The higher the pressure, the larger the force exerted on the door. Tebul doors are approved to be installed into A-60 bulkheads.
Tebul doors are available also in the Eex-version, for Explosion Hazardous areas.

NOTES

1. Consulting
2. Equipment
3. Machinery
4. Materials
5. Safety
6. Systems
7. Turnkey Deliveries
8. Yards
9. Other

Visit seatec.fi/magazine

airways wall and ceiling materials shipbuilding yards new
ılsion all about maritime industry systems engines systems
s audio and video systems communication equipment lightnin
vigation ship management systems ship operation and automa
ering educatic software prod
and ventilatic ems environme
ne extinguishi systems wire
s & fittings i urnishing & f
s new all abou fit repairs t
ystems materia arine technol
ghtning systen ology monitor
omation systen ion design an
oducts survey ipment air-co
ntal technolog ystems pumps
e & cable ship rs and window
floor coverir terials shipb
prime movers about maritim
nology electro mmunication e
ing systems r ms ship opera
and engineering education and research interior design so
ditioning and ventilation cleaning systems cooling systems
safety & fire extinguishing systems waste & waste water s
all about maritime industry furnitures & fittings insulat
d ceiling materials shipbuilding yards new building refit

BUSINESS RESIDENTIAL SERVICES

BUSINESS LEVEL APARTMENT HOTEL IN CENTRE HELSINKI
FROM 51 EUROS/NIGHT

Citykoti.com
Downtown City Apartments

Leading expertise to maximize safety and optimize energy

Entrust your passenger vessels with Bureau Veritas

www.veristar.com

www.bureauveritas.com

Move Forward with Confidence

BUREAU VERITAS