

Maritime Professional

3Q 2015 | www.MaritimeProfessional.com

Ship Builders

*Retooling Recruitment
& Retention*

PORT TECHNOLOGY
AUTOMATION IMPACTS LABOR

INTERVIEW
CAPTAIN KATE MCCUE,
CELEBRITY CRUISES

UNMANNED SHIPS
THE HUMAN ASPECT

CAREER PROFILE
CAPTAIN TIM TRETHERWAY,
MERCY SHIPS

+ TOP 10 SHIPYARDS



Maritime risks are vast. So is our team to see you through them.

Whether you provide marine services or transport goods, people or cargo, you face countless property and liability risks. When you work with Travelers Ocean Marine, you'll be working with a team that has deep knowledge of the maritime industry – backed by the financial strength of the #1 commercial property writer in the U.S.* We're dedicated to helping you understand how to protect against the unknown. But if the unfortunate should occur, you'll be ready with the power of Travelers. That includes a 12,000-person claim organization – with a catastrophe response team, ready to be deployed at a moment's notice – and the financial strength to handle major claims. You can rest easy knowing you're not going it alone.

*Reported by SNL Financial

TRAVELERS 
It's better under the umbrella®

travelers.com

© 2015 The Travelers Indemnity Company. All rights reserved. Travelers and the Travelers Umbrella logo are registered trademarks of The Travelers Indemnity Company in the U.S. and other countries.
15-OM-1837 Rev. 8-15

BUILD HERE. LIVE HERE.



At Seaspan, we enjoy the great fortune of having both a new world class shipbuilding facility and being located in one of the world's top three most livable* cities. Vancouver is a beautiful and progressive urban centre prizing the West Coast values of healthy living, diversity, outdoor adventure, and a strong and stable infrastructure for healthcare, education and raising a family. Join us in building a legacy of excellence on the largest shipbuilding project of our era. Be part of the story, based here – in Vancouver, British Columbia.

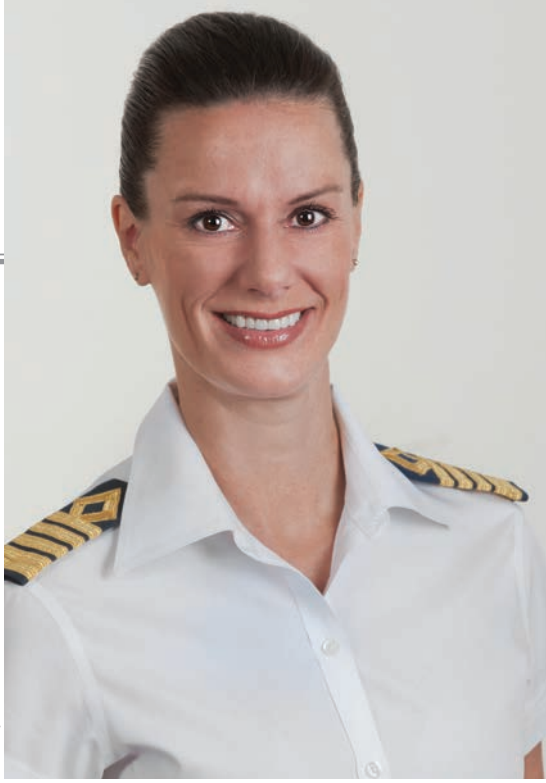
*The Economist's 2014 annual ranking of the world's "most livable" cities.

Photo Credit: Tourism Vancouver

BORN TO BUILD

www.seaspan.com/careers
hr@seaspan.com





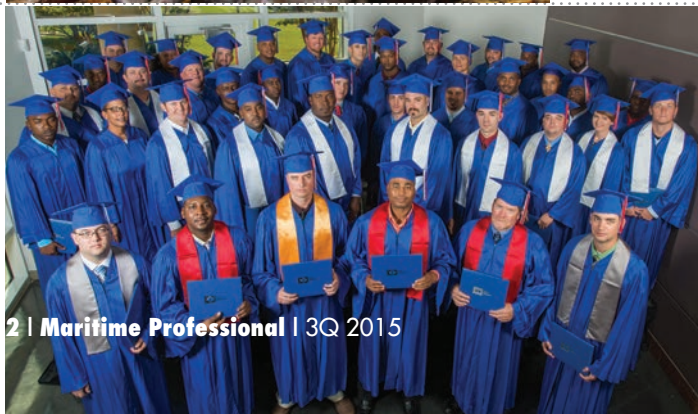
Courtesy: RCI



Courtesy: Mercy Ships



Frank van Hoom



10 Captain McCue

Captain Kate McCue is the Cruise Industry's first-ever American female captain. While groundbreaking, Captain McCue ascended to the top with hard work and talent.

By Joseph Keefe

14 The Human Touch

With the advent of truly autonomous marine operations arguably some ways off, MarPro examines the Human Aspect of the Autonomous Ship.

By Barry Parker

18 Mercy on the Water

Captain Tim Tretheway's selfless journey at sea spanned almost 30 years and helped to change literally hundreds of thousands of lives – for the better – in the process.

By Joseph Keefe

28 Man v. Robot

As demands for port efficiency grow and automation on ship and shore comes of age, robotic solutions and labor are seemingly on collision course on the waterfront

By Patricia Keefe

34 Shipyard Work

Shipbuilding is no stranger to hard cycles. MarPro discusses tips and tricks to retain top talent during times good and bad.

By Joseph Keefe

ON THE COVER

Finding and keeping good people is paramount to long-term success in the shipbuilding sector. Companies like Ingalls Shipbuilding run vibrant Apprentice Schools, accepting more than 200 apprentices per year.

Read how the "Top 10" recruit & retain, starting on p. 43.

Image: HII Ingalls Shipbuilding

It's a digital world, even at sea. Do you have what you need to succeed?



Introducing mini-VSAT Broadband 2.0

A new approach providing the most complete maritime communications solution available, and giving you the power to deliver the bandwidth your operations demand, keep your crew happy, and manage your budget, all at the same time... and *all* from a single global partner.

Get the details on the *new* mini-VSAT Broadband rate plans, tools, and services at:

kvh.com/one_mp





24



61

career profile

24 | Parker Harrison

Crowley's VP of Procurement discusses her winding path to a career in maritime.

By Joseph Keefe

insights

56 | Contract Labor

A 'win-win' for employers and skilled trades.

By Eric Peters

software solutions

58 | The New Generation

Career development means company support for the new generation mariner.

By Murray Goldberg

shipyard labor

61 | The Balancing Act

A means for shipyards to decrease labor-related costs while meeting production challenges.

By Joseph Keefe

8 | Editor's Note

9 | The List

54 | Statistics

64 | Advertiser's Index



Top 10 Great Shipyards for Work

In terms of human resources – the backbone of any successful manufacturing operation – the retention of today's key employees to power tomorrow's work environment will arguably determine the pecking order for future backlogs.

43 | Royal IHC

staffing@ihcmerwede.com

44 | Damen Shipyards

recruitment@damen.com

45 | N-KOM

commercial@nkom.com.qa

46 | NASSCO

amanda.thomas@nassco.com

47 | Austal USA

www.austal.com

48 | Vigor Industrial

info@vigor.net

49 | International Ship Repair & Maint.

jaslanian@internationalship.com

50 | Metal Shark

sales@metailsharkboats.com

51 | Bollinger

www.bollinger.com

52 | Ingalls Shipbuilding

www.buildyourcareer.com



Capital One[®]
Commercial Banking



OUR MARITIME EXPERTS CAN HELP
take your business anywhere you want it to go.

Capital One[®] Commercial Banking knows your maritime business requires unique solutions. Our dedicated team of experts has over 50 years of maritime lending experience and provides the responsiveness your business needs. With the financial strength of a top 10 U.S. bank, consider Capital One your hardest working crew on dry land.

CONTACT US

Robbie Naquin

Robbie.Naquin@capitalone.com

(985) 857-2658



Source: SNL Financial 4/30/2015. Subject to credit approval. Additional terms and conditions apply. Products and services are offered by Capital One, N.A., Member FDIC.
©2015 Capital One. All rights reserved.

The Contributors



Parker

Barry Parker

of bdp1 Consulting Ltd provides strategic and tactical support, including analytics and communications, to businesses across the maritime spectrum.



Goldberg

Murray Goldberg

Murray Goldberg is CEO of Marine Learning Systems (www.MarineLS.com). An eLearning researcher and developer, his software has been used by 14 million people worldwide.



Keefe

Patricia Keefe

is a veteran journalist, editor and commentator who writes about technology, business and maritime topics.



Peters

Eric Peters

is the Managing Director of Faststream USA. Contact him at 954 626 6893 or via E-mail at: eric.peters@faststream.com

Maritime Professional

HQ 118 E. 25th St., 2nd Floor
New York, NY 10010 USA

Tel +1 212 477 6700
Fax +1 212 254 6271

URL www.maritimeprofessional.com
Email trauthwein@marinelink.com

ISSN - 2159-7758
USPS # 005-893

Editor

Joseph Keefe
keefe@marinelink.com
+1 704 661 8475

Bloggers & Contributors @ MaritimeProfessional.com

Lead Commentator	Joseph Keefe
U.S. East	Dennis Bryant
Brazil	Claudia Paschoa
Mumbai	Joseph Fonseca

Publisher

John C. O'Malley
jomalley@marinelink.com

Associate Publisher/Editorial Director

Gregory R. Trauthwein
trauthwein@marinelink.com

VP Sales

Rob Howard
howard@marinelink.com

Production

Nicole Ventimiglia
nicole@marinelink.com

Corporate Staff

Vladimir Bibik, IT
Mark O'Malley, Public Relations
Esther Rothenberger, Accounting

Subscription

Kathleen Hickey
marprocirc@marinelink.com

Advertising Sales

Terry Breese
breese@marinelink.com
+1 561 732 1185

Frank Covella
covella@marinelink.com
+1 561 732 1659

Mitch Engel
engel@marinelink.com
+1 561 732 0312

Mike Kozlowski
kozlowski@marinelink.com
+1 561 733 2477

Dawn Trauthwein
dtrauthwein@marinelink.com
+1 631 472 2715

Jean Vertucci
vertucci@marinelink.com
+1 212 477 6700

Copyright © 2015 New Wave Media. Maritime Professional (ISSN 2159-7758) volume 5, issue 2 is published quarterly (4 times per year) by New Wave Media, 118 E. 25th St., 2nd Floor, New York, NY 10010.

POSTMASTER: Electronic Service Requested. Publishers are not responsible for the safekeeping or return of editorial material. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means mechanical, photocopying, recording or otherwise without the prior written permission of the publishers.

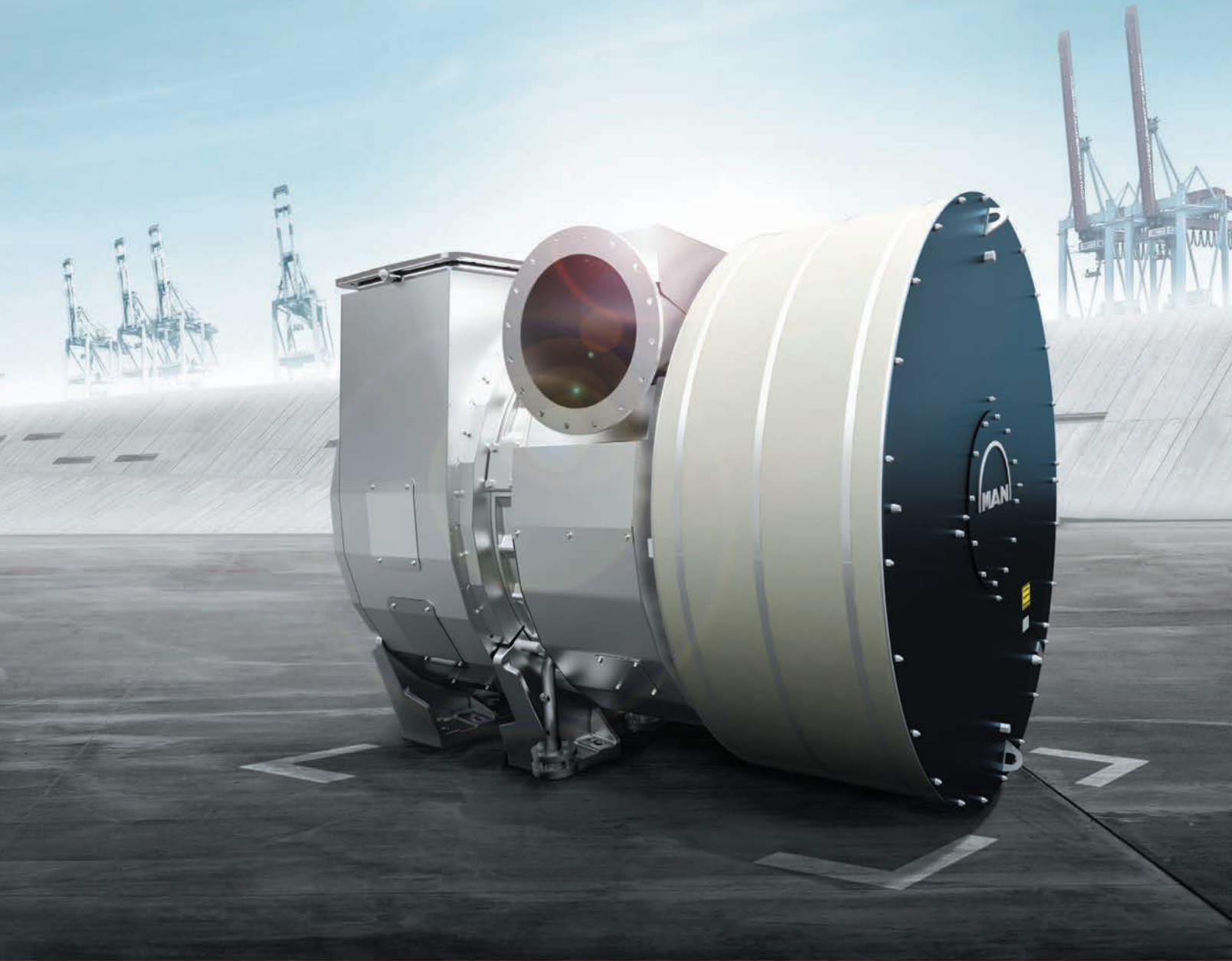
Member



Business Publications
Audit of Circulation, Inc.

MAN Turbocharger

On top of engine performance



MAN Turbochargers TCA TCR TCX

Since 1934, MAN Turbocharger reliably has set the pace for pioneering innovations. It was MAN that first introduced the plain bearing design for large turbochargers in 1940, the prevailing design concept until today. Again, in 2008, MAN was a pioneer with the introduction of the variable turbine area VTA for heavy fuel oil operated engines. With TCA and TCR Turbochargers MAN has more than 100 million operating hours of experience and by that proves to have one of the most reliable series in the market. Find out more at www.mandieselturbo.com

Engineering the Future – since 1758.

MAN Diesel & Turbo



Cycles & Strategies

There are probably few industries that experience more dramatic up and down cycles than the collective businesses of energy exploration, production and transportation. If so, then one of those that do is shipbuilding. That's because the most recent shipbuilding boom – at least the one on this side of the pond – was driven primarily by the now long-forgotten energy boom. With \$100 crude now but a distant memory and stakeholders pining for \$70 oil in the near term, you wouldn't think that shipyards would be looking to up their game on the human resources side of the equation. But, that's exactly what they should be doing.

Savvy boat builders are now looking even closer at their business models, especially from the employment side of the equation. And, the discussion is no longer just about 'head count,' although that's still a big part of the calculus. Increasingly, the use of so-called contract labor is becoming a larger percentage of shipyard skilled trades positions. That said; your grandfather's definition of casual labor no longer applies.

The complex world of offshore, longshore, Jones Act and worker's compensation issues now demands a far more esoteric look at how, when and under what conditions you should contemplate allowing contract labor to step even one foot into your shipyard. Within this edition, you'll learn why, and more importantly, how to do it. Make no mistake: how you handle this part of your operation during the doldrums, in the long term will define in what condition you emerge into the next upswing.

Beyond the question of how the next generation maritime professional – afloat, ashore or somewhere in between – is compensated and insured, the larger issue of technology is looming as the biggest wildcard for the maritime industry and its labor component. The possibility of autonomous ships is no longer a fantasy; no more so than the emerging reality of airborne drones impacting not only military applications, but everyday life as well. Technology is slowly automating the most dangerous of tasks, gradually dragging a reluctant labor component into the future. In this edition, Patricia Keefe's in-depth look at the world's rapidly developing, high-tech intermodal terminals doesn't necessarily foretell the end of labor as we know it. Instead, the story presages a time when the waterfront job of tomorrow will bear little resemblance to what happens today, even in the busiest of ports. The story begins on page 28.

More than just changing employment models in a way that enhances the bottom line, tomorrow's maritime professional is already emerging today in the form of a more diverse workforce. I look ahead to a time when that metric becomes the rule; rather than the pleasant exception. In order for that to happen, the maritime industry needs to do a better job telling – and selling – its story to the young people of today. When that day comes, the need to need to educate employers about how to attract the best and the brightest to the business of ocean commerce will all but evaporate.



A handwritten signature in black ink that reads "Joe Keefe". The signature is fluid and cursive.

Joseph Keefe, Editor | keefe@marinelink.com

THE LIST People & Companies in This Edition

A, B, C		Harrison, Parker.....24, 25, 26	Parker, Barry14
ADP Terminals.....28	IACS.....14	Peters, Eric.....56, 57	Port of Los Angeles.....30
Advanced Weather Technologies.....19	ILWU.....28	Port of NYNJ.....31, 32, 33	Port of Virginia.....31
Alabama Industrial Development and Training.....47	IMO.....30, 53, 56, 57, 58, 62	QinetiQ.....14	Rifkin, Jeremy.....14
Alabama Technology Network.....54	Ingalls Shipbuilding.....52	Rolls-Royce.....14, 16, 17, 19	Rooney, Beth.....32, 33
Alcon.....19	Inmarsat Maritime.....14	Royal Caribbean.....13	Royal IHC.....43
Alliant Insurance Services.....56	International Ship Repair.....49		
American Club.....24	ISM.....21		
APMT.....29, 31, 32, 33	Johnson & Johnson.....19		
Austal.....34, 36, 37, 38, 39, 40, 41, 47	Jones Act.....8, 57		
Balcraft Foundation.....18	Joyce, Jeff.....58		
Bdp1 Consulting.....17			
Bollinger Shipyards.....51	K, L, M, N, O		S, T
British Columbia Ferry Service.....58	Keefe, Patricia.....28, 33	SOLAS.....21, 22	Southampton, University of.....14
California Maritime Academy.....10	Keeler, Don.....34, 36, 37, 38, 39, 40, 41	Spithout, Ronald.....14	Stahre-Janson, Karin.....13
Geci, Richard.....29, 31, 32, 33	Lauritzen, Lis.....13	STCW.....20, 21, 22	Suez Canal.....17, 33
Celebrity Cruise Line.....10, 12, 13	Levander, Oskar.....14	Thomas, Amanda.....46	Tradesman International.....62
Chaffe McCall.....24	Liu, Tina.....30	TraPac Terminal.....29, 30	Tretheway, Tim.....17, 18, 20, 21, 22, 23
Christiansen, Mike.....62	Lloyds Register.....14, 17	Tulane Law School.....24	
Crowley Maritime.....24, 25, 26	Lutoff-Perlo, Lisa.....10		
	Maersk.....28, 31		
D, E, F		Marine Learning Systems.....60	
Damen.....34, 36, 37, 38, 39, 40, 41, 44	MARPOL.....29		
de Vries, Arold.....34, 36, 37, 38, 39, 40, 41	McCue, Kate.....10		
Dimitry, Ted.....56, 57	Mercy Ships.....18, 19, 20, 21, 22, 23		
DP World Rotterdam.....29	Metal Shark.....50		
Drewry Shipping consultants.....30	Mississippi Gulf Coast Community College.....52		
Faststream USA.....56, 57	N-KOM.....45		
First Hanjin Shipping Co.....28	Nardi, John.....30, 31		
	NASSCO.....46		
G, H, I, J		Navisworld.....30, 33	
General Dynamics NASSCO.....53	New York Shipping Association.....30		
Global Container Terminal.....29	Oak Foundation.....18		
Goldberg, Murray.....58	OSHA.....46		
Gulf States Shipbuilders Consortium.....54			
Haley, Sue.....34, 36, 37, 38, 39, 40, 41	P, Q, R		U, V, W
Hapag-Lloyd.....28	Pacific Merchant Shipping Association.....28	United Auto workers.....32	University College London.....14
Harris, Joe.....31	Panama Canal.....33	U.S. Coast Guard.....19, 20, 21, 50, 51, 52	U.S. Department of Labor.....36, 37, 47
		U.S. Marine Corps.....52	U.S. Maritime Administration.....20, 21
		U.S. Navy.....19, 20, 46, 47, 50, 52	Vigor Industrial.....34, 36, 37, 38, 39, 40, 41, 48
		Virginia, University of.....24	WISTA.....26



Advancing Safety Driven by Innovation

Building on a rich legacy in marine and offshore classification, ABS is driving the next generation of safety standards. We make the world a safer place, and nothing is more important.

Safety | Service | Solutions





Five Minutes with **Captain Kate McCue**

The Cruise Industry's **First-Ever** American Female Captain

By Joseph Keefe

Continuing Celebrity Cruises' dedication to advancing the role of women in leadership, Captain Kate McCue's elevation to command of the *Celebrity Summit*—a 91,000-ton, 965-foot ship follows that of Lisa Lutoff-Perlo, who was named President and CEO of Celebrity Cruises in December 2014. But, talent is talent – regardless of gender.

For her part, McCue has managed ship logistics while sailing worldwide itineraries and played a notable role in the revitalization of ships in Singapore. A graduate of the California Maritime Academy, as Captain, she will be responsible for the safe navigation of the ship and the on board experience of its 2,158 guests and 952 crew members. McCue began her new role on board *Celebrity Summit* in August. As that was kicking off, we sat down with her to talk. Listen in as she weighs in on the multiple roles of being a pioneer, a woman on the water, and, of course, a *Maritime Professional*.

Your promotion to Master is well deserved and representative of how Celebrity not only regards competence, but also how it values the impact that an individual can have on the 'brand.' What do you see

as your impact – so far – and then in the future as you step into the "center porthole" cabin?

The brand has provided me with an incredible opportunity, and I intend to take full advantage. It has been extremely gratifying to be recognized by the crew on every ship I visit because they are my second family. Their support and excitement are contagious. Many have told me how incredible this promotion is and how they would jump at a chance to sail as my crew.

I also see this as a platform to educate young women about the opportunities the industry has to offer. The president of California Maritime Academy contacted me directly after the promotion announcement, and I intend to assist in any way possible to guide all interested in this career path.

What's the best part of working with and on the commercial 'waterfront' on a daily basis? What brought you there? And what keeps you at it today?

Traveling the world is what really intrigued me. The lure of the places cruise ships visit and the time the ships spend in those ports provide ample opportunities to really enjoy the destinations.



LAUNCH YOUR CAREER AT AUSTALJOBS.COM



ARE YOU READY TO STEP UP TO THE CHALLENGE?

JOIN OUR TEAM AND ADVANCE YOURSELF INTO *THE FUTURE OF SHIPBUILDING*



“The maritime industry is an amazing opportunity to see the world and make a positive impact on it. The maritime academies in the U.S. can be perfect places to start out because maritime still is a relatively growing industry with many opportunities.”

Which part of your daily routine at Celebrity do you find the most interesting, and why?

“Routine” is one thing this position is not, and there are great advantages to that. Nearly every day you’re in a different place at different times, with conditions never being the same – it’s fascinating, and you’re always on your toes. Also, with arrivals and departures occurring frequently – most times on a daily basis – maneuvering a cruise ship is an experience second to none.

Talent is talent – regardless of gender. Tell us what got you promoted up the chain in the first place.

Becoming captain is a marathon, not a sprint. Experience is one of the most important traits a captain can possess. My advancement occurred over a period of nearly two decades and through all ranks – from dreamer to deck cadet, third officer, second officer, first officer, chief officer of safety, and staff (deputy) captain – prior to my promotion to captain. I have always been surrounded by supportive peers and remarkable captains who took the time and energy to mentor me along the way.

As Captain, you will be responsible for the safe navigation of the ship and the onboard experience of more than 2,100 guests and almost 1,000 crew members. How different is the role of Master on a cruise ship than that of Master of perhaps a bulker? Why?

The responsibility for the safety of our guests and crew is



not new when you get to the position of captain, as one has spent many years on watch, in the conning chair with that responsibility. When transitioning to the cruise sector and prior to becoming a cruise ship captain, even the most experienced cargo ship captain would benefit from putting in the time in other ranks on cruise ships because it is a bit of a different world altogether. I highly recommend experiencing different sectors of the maritime industry, you can appreciate firsthand the diversity and responsibility each has to offer.

They have a saying in air freight: The advantage of flying for a freighter as opposed to a passenger jet is that “freight doesn’t complain.” That’s true enough. But how does the Master impact and “make happier” paying customers?

It is paramount to be a visible captain and to lead by example. It also is the captain’s and the crew’s responsibility to be present and accessible, making for happy guests and crew.

On your way to your current role, what was your biggest challenge? How about your biggest success?

The biggest opportunity is to establish myself in the brand and position. The position naturally warrants authority, and that



comes with the respect earned through proven performance. The biggest success is the actual promotion to captain itself.

What advice would you give aspiring women who want to get into the maritime industry?

The maritime industry is an amazing opportunity to see the world and make a positive impact on it. The maritime academies in the U.S. can be perfect places to start out because maritime still is a relatively growing industry with many opportunities; and my motto about the unknown is: You never know if you want it until you try it. So, when you see an opportunity, seize it. When you spot a problem, fix it. When you want something, ask for it.

The role of women in the maritime industry is growing, but is not yet representative of the numbers of women professionals in business. What can be done about that?

Times are changing and I believe there will be a much more visible presence of women in the maritime industry. The increasing demand for qualified officers, men and women, is there. Also lending to the growth of the industry are technological advancements – they are eliminating some of the ste-

reotypes previously associated with the seafaring trade. For example, 10 years ago, it was challenging to keep in constant contact with family and friends. Just the advancements in social media over the last decade have brought communication to the tips of our fingers. This only will continue to progress and make the transition from land to sea easier for everyone.

Your organization actively recruits women for maritime and management roles. Beyond yourself and the current CEO, briefly tell us about one or two other success stories at Celebrity.

Our parent corporation, Royal Caribbean Cruises Ltd., was the first in the industry to promote a woman to captain for our sister brand, with Swedish mariner Captain Karin Stahre-Janson in May 2007. She was followed by Captain Lis Lauritzen in 2008. Both women are extremely well respected by their peers, guests and crew.

You are the Industry's First-Ever American Female Captain. That said; tell us about your most valuable mentors who helped you get there. Can you choose one to talk about? What did they mean for you, and why?

I was fortunate to have found my life partner, who provided me unconditional support – personally and professionally. My husband, Nikola, is a chief engineer. He is a very patient man and loves to share his knowledge of all the technical aspects. We were able to sail together, and – for example – after I would perform arrival or departure maneuvers, he would provide unbiased feedback about my ‘driving’ ability based on the use of power and overall finesse. Several peers have since accredited my maneuvering to a soft “woman’s touch,” but I like to think that it was a bit of an inside advantage being married to a very skilled and honest chief engineer.

During your climb to the top, you have managed ship logistics sailing globally and led several repositioning cruises. What other jobs did you enjoy along the way and which one was the most valuable in terms of preparing you for your current role?

I thoroughly enjoyed drydocks and newbuilds in the shipyards. You gain an appreciation for the standard maintenance, design, naval architecture and hard work!

Finally – you began your new role on board Celebrity Summit in August 2015. What one thing do you hope to bring on board with you that will put a unique stamp on your own brand of leadership?

Everyone I have worked with has a slightly different leadership style based on their backgrounds. I hope to offer a unique experience for my team, and I look forward to pleasantly surprising some!



By Barry Parker

The Human Aspect of the Autonomous Ship

Arguably a long way off, the autonomous ship is likely coming. What that means for labor, the stakeholders that prepare mariners to go to sea and the firms that will operate these futuristic vessels is another thing altogether.

According to Dr. Jeremy Rifkin, a Wharton professor who has advised the European Union on Sustainability, among other things, we are in the midst of a 'Third Industrial Revolution.' It is here where information technology and new energy sources are upending business models that have thrived since the second iteration – the era of electricity, fossil fuels and mass production in central locations. The maritime world has seen numerous glimpses into the future, with technologists offering their visions on ships of the future, often driven by both economics and the emissions of energy.

Though the implications for shipping are profound, there has been much less thought given to the human aspect of the autonomous vessel.

The Autonomous Ship – a Revolution

A refreshing change comes in a new report, *Global Marine Technology Trends 2030*, authored by the IACS member Lloyds Register (LR), in conjunction with the UK-based consultancy QinetiQ, and University of Southampton. Commercial shipping is one of three segments examined in the report, which also looks at naval vessels and Ocean Space, which also delves into natural resources extraction. The authors delve into the 'fourth industrial revolution,' not yet upon us, but coming, which they say describes how "... 'smart devices' will replace the role of humans for the management, optimization and control of machinery."

It is a telling coincidence that the release of the LR report coincided with an announcement by Rolls Royce that it will be utilizing bandwidth supplied by Inmarsat as it further advances its Advanced Autonomous Waterborne Applications Initiative (AAWA). Plainly speaking, this project is about developing vessels that would be remotely controlled from the shore. Oskar Levander, Rolls Royce Vice President of Innovation, Engineering and Technology, asked rhetorically, "Given that the technology is in place, is now the time to move some operations ashore? Is it better to have a crew of 20 sailing in a gale in the North Sea, or say five in a control room on shore?" Ronald Spithout, President of Inmarsat Maritime, explained that: "Fleet Xpress (the platform being deployed in AAWA) will enable the ship-to-shore communications required to support the remote control functionality fundamental to the realization of the autonomous ship." The AAWA project, now benefiting from a €6.6 million funding infusion from the Finn-

ish Funding Agency for Technology and Innovation, shows that the voyage towards 2030 (where LR chose to take its snapshot of the future) is well underway.

The Future of Seagoing Labor

LR and their colleague authors recognize the dualities surrounding technological advancement, saying: "Technology, of course, is a double-edged sword and has the power to deliver great benefit, but can also introduce both direct and indirect threats to industries, states and economies." This sword is arguably pointed directly at the human element. While Rolls Royce (and others) focus on the technologies, the view from LR also tackles manning issues, and emphasizes changes in required skill-sets for seafarers.

One section of the report acknowledges a growing manpower shortage when it comes to maritime skill sets that the 'fourth revolution' will require. The authors write, "There are over 104,000 ocean-going merchant ships. The shortage of highly-qualified sea-going staff is an increasing concern, especially as ships become more complex due to environmental requirements. The lack of gas engineers is quoted as a major barrier for the gas-fueled shipping transition." Last year, in LR's report, on *Global Marine Fuel Trends - 2030* (written in conjunction with researchers at University College London), the various forecasting scenarios consider the increased shares of LNG fueling, but also look at methanol and hydrogen fueling- both of which would require expertise not found in the maritime sector.

Although automation and remote monitoring certainly figures prominently in the newly released 2030 report, the LR team states, "Smart shipping is not necessarily about removing people from ships, but about better connecting ships and their crews with specialized onshore resources." Consider that LR's view of new on board kit includes "Dispensers" (robotics for handling laundry, for example), "Searchers" (automated searching in the event of man overboard) and even "Repellers" (presumably fighting pirates, though this is not stated explicitly). Security, a dangerous part of the business for humans, is one where they may be more readily replaced, with LR commenting: "Maritime autonomous systems are driving the biggest revolution in maritime security in over a century."

Just as radio officers are now considered archaic in the maritime world, job qualifications will continue to evolve. We al-



W&O INTRODUCES Fuel-Gard[®] by PERMA-PIPE[®]

YOUR SOURCE FOR MARINE LNG, BUNKER FUEL AND GAS PIPING.

W&O is the proud North American distributor for Perma-Pipe's Fuel-Gard systems for LNG/NG applications. Fuel-Gard piping systems are stainless-in-stainless construction, pre-engineered and pre-fabricated to meet the latest regulations by ABS, IMO, U.S. Coast Guard and other maritime class societies. Perma-Pipe performs finite element stress calculations taking into account thermal loads, ship loading, and interface with supports. Thermal heat gain calculation is also performed on Bunker Fuel piping.

800.962.9696
wosupply.com



Pipe | Valves | Fittings | Actuation | Engineered Solutions



AMERICAN MADE Z-DRIVES FOR AMERICA'S WATERWAYS



Thrustmaster builds a full line of Z-Drives for towboats from 500 HP to 8,000 HP & supports these products with service centers strategically located along major US river ways.

713-338-9226

THRUSTMASTER.NET

ready have specialist electronic officers. In the discussion of job creation and job losses, the 2030 report's authors offer, "While new technology will create the demand for new skills, the smart ship efficiencies achieved may render some maritime professions obsolete, as with other technological evolutions. Only time will tell if the net effect will be positive or negative."

Different Ships; Different Long Splices (skills)

The shift envisioned is towards highly skilled professionals. The writers also note that, "... new skills are already being requested, mostly linked to data management and analysis. Other jobs linked to the engineering side of the technologies to come will include: data grid engineer, remote automation engineer, engineering and naval crew, onboard support technician, shore support specialist or cyber-attack specialist."

While not replacing the people, "Big Data" may help the skilled professionals make informed judgements as they run their vessels. That's because the authors note that the complexity of modern ship systems has taxed crews' ability to manage them. At the same time, the report insists, "The sophisticated analysis of the deluge of data from intelligent, wireless sensors and extensive communication and satellite systems has the potential to further reduce operating costs, increase safety, and enhance environmental protection."

Considerable thought has gone into the behavioral aspects of circa 2030 technologies, as seen in the detailed discussion of Human-Computer Interaction (HCI), which is all about the study and design of the interface between people and computers. Rather than just installing monitors and indicators, thought

must be given to the human element of sharing of the data deluge which is spewed out by advanced systems. The writers note: "For any system where people are 'in the loop' with computers, HCI plays a crucial role in ensuring that the system serves its purpose effectively. HCI as a discipline is challenging; there are fundamental differences between how the human brain and computer processors work – HCI seeks to bridge this gap."

On shore, in our personal lives, we've already seen a shift to smart-phones and portable devices. In the maritime realm, the crew on the 2030-built vessels will see things quite differently. The report writers reprise our present state and rapid progress on land, but less so at sea, saying, "Over the last decade, the technology enabling HCI has developed most rapidly on consumer devices, such as smartphones and tablets, which use multi-touch displays. In contrast, the majority of traditional fixed workstations and personal computers still use the ubiquitous interfaces of mouse, keyboard and display."

Looking forward, the authors prophesy that, By 2030 we can expect a number of new HCI technologies to replace or augment those we currently use, both in fixed locations and when on the move. These technologies will enable us to interact with computer systems in new ways and will be smart enough to recognize our requirements and our personal preferences. Many of these technologies are familiar to us now and include gesture control, speech recognition, and eye tracking. When combined, these technologies promise to dramatically improve



(Image: Rolls-Royce)

our experience working with computers. Other technologies likely to make an impact over the next decade include brain-computer interfaces and intelligent personal assistants ... software entities that are designed to act like personal secretaries.”

As the knowledge workers complete the shift away from greasers and oilers (who, in turn, replaced coal stokers of the original Industrial Revolution), it’s envisioned that machines will handle these lower skilled jobs. LR takes the view that “With faster technological advances, there will be a move towards delegating authority from the human operator to the machine. Machines will perform many more of the tasks which are considered dull, dirty and dangerous to achieve a higher level of safety and efficiency.” Maritime security, to be handled by “Repellers,” falls into the “dangerous” bucket.

Clearly, there are choices here, leaving room for certain owners to carve out their brands as people-friendly, or not. The report adds, “There are varying degrees by which a human can delegate responsibility to a machine, depending on the nature of the task and goal they wish to accomplish, and depending on the levels of automation and autonomy built into a ship.” This observation brings perspective to the comparison with Rolls Royce, with its AAWA project representing one view in the spectrum of commercial shipping automation.

Looking Ahead – and Behind

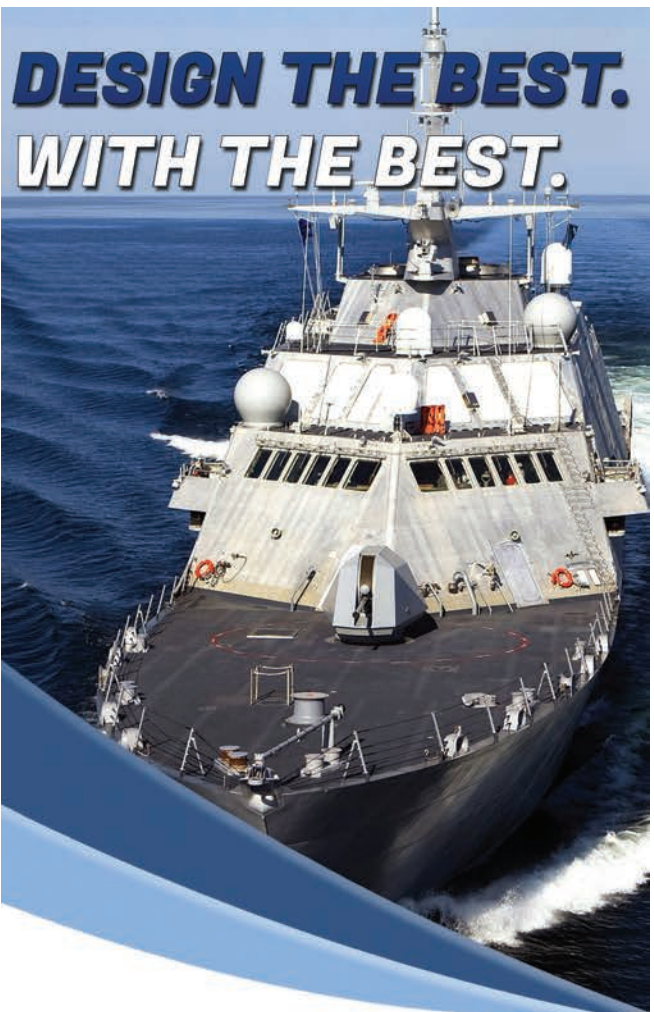
Leadership at shipping companies, maritime academies and training institutes serving the industry will no doubt either marvel at all the new technologies as they read through the LR report, or dismiss them as fantasy. The latter attitude is probably a mistake. When reading the chapters on commercial shipping, all stakeholders need to be thinking very hard about the implications for their companies, and/or for the welfare and safety of the cadets and officers being prepared for the ships of the future.

Anyone who doubts that the ‘autonomous’ revolution is coming to the waterfront only need look to the U.S. military, where young officers are already thinking about moving away from becoming fighter pilots as they watch drones increasingly do the lion’s share of remote bombing and surveillance work. Could this shift in job perceptions presage a similar move in the maritime arena – where changes may take longer, but will impact employment roles nevertheless?

Advances in waterborne shipping for more than 50 years were measured primarily in deadweight, LOA, beam and draft. That’s about to change, albeit slowly. The ship of the future will likely be measured by the number and quality of the bells and whistles that make it float. And if this is indeed the case, the quality of the professionals running it will be even more important.

The Author

Barry Parker, bdp1 Consulting Ltd. provides strategic and tactical support, including analytics and communications, to businesses across the maritime spectrum. The company can be found online at: www.conconnect.com



For over 86 years, Gibbs & Cox has provided the world's most advanced maritime engineering solutions to our Navy and commercial customers. Our team's innovations have helped establish the foundation of cost-effective shipbuilding today.

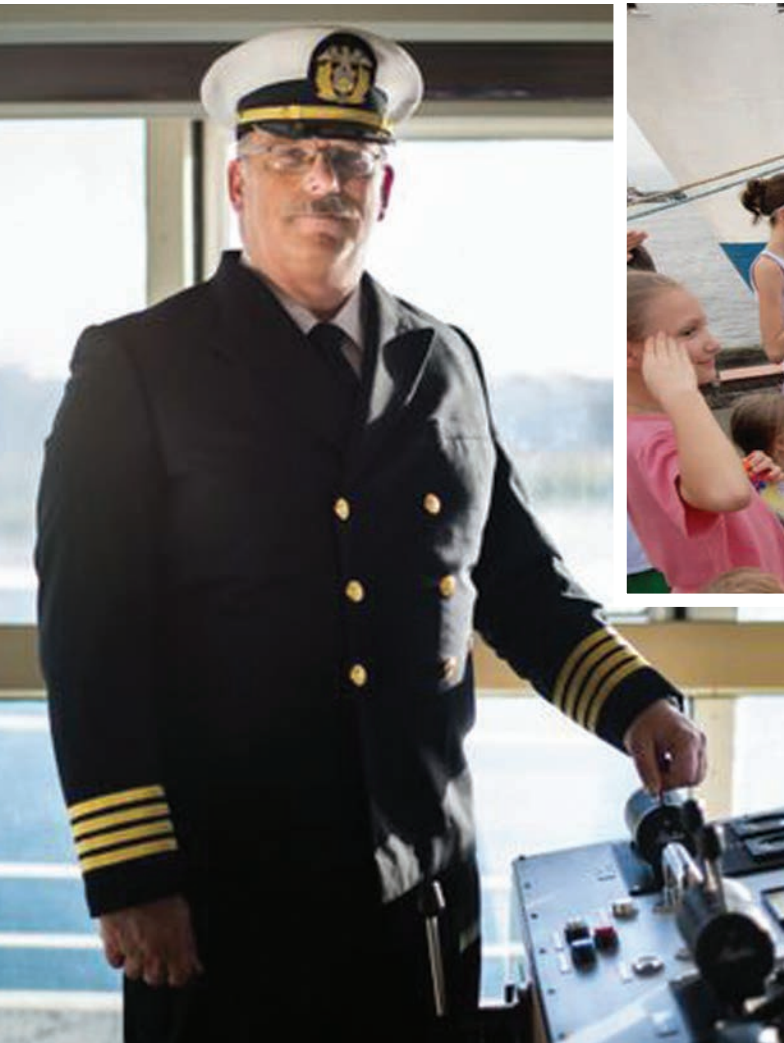
We hire the best naval architects, marine engineers, and CAD designers to engineer the Navy's highest priority projects and the next generation of US sea power.

Gibbs & Cox is headquartered in Arlington, VA with offices in Newport News, VA; New Orleans, LA; Philadelphia, PA; New York, NY and Washington, DC. To learn more about how you can build a future with us, visit www.GibbsCox.com/jobs.htm

Gibbs & Cox is an equal opportunity employer M/F/D/V. No agencies please.



www.gibbscox.com



Mercy Ships:

a life at sea for all the right reasons

Captain Tim Tretheway's selfless journey at sea spanned almost 30 years and helped to change literally hundreds of thousands of lives – for the better – in the process.

By Joseph Keefe

Captain Tim Tretheway's career path, especially viewed from today's sometimes mercenary maritime business climate, can be safely characterized as unusual. Rising up from the foc'sle, Tretheway also eventually plotted a professional course line that took him to virtually every corner of the globe. And, unlike today's mariners who demand – and get – top dollar wages in most disciplines, Tretheway has largely toiled for the intangible reward of serving the greater good. If there is a more unusual and compelling professional story on the water today, then it hasn't yet crossed my desk.

Mercy on the Water

Tretheway has been "volunteering" with Mercy Ships for more than 28 years, working his way up to Master. Mercy

Ships, a global charity, has operated a fleet of hospital ships in developing nations since 1978. In a nutshell, Mercy Ships uses hospital ships to transform lives and serve nations one at a time. According to Tretheway, Mercy Ships "brings hope and healing to the poor, mobilizing people and resources worldwide."

The current vessel was acquired in 1999 through a donation from the Balcraig Foundation. The former Danish rail ferry *Droning Ingrid* was re-named the *Africa Mercy* in April 2000. A £30 million refit was funded by donations from the Oak Foundation and continuing support is received from the Balcraig Foundation and other Trusts, corporate gifts-in-kind and individual contributors.

Tretheway told *MarPro* in August, "In the Mercy Ships sense, 'volunteer' means someone who steps up and says, 'I want to be

a part of impacting the world, of doing some real good, with my professional skills beyond keeping the world economy working.' It means finding the means and time to come, for whatever time one has available, to be a part of something bigger than self, something so deep that a child has a future or an old man first sees his grandchildren. Experiences like these are the reward – not financial, but altruistic.” That’s because, at Mercy Ships, there are generally no salaries on board. Typically, all crew members find their own financial support.

Tretheway is not alone in his life’s work. He explains, “I have been faithfully supported by friends, family and church at home. Among those who ‘pay my salary’ are serving and former U.S. mariners, Coast Guard and Navy officers, and others. Some of these latter supporters could not ever come themselves, but they ensured that an aspect of their careers included supporting the work of the Mercy Ships technical operation by helping colleagues who can make the commitment. This makes them part of the amazing stories we see every day on board, and they can see those stories on the website.”

Clearly, this kind of endeavor simply cannot be done in a vacuum, or alone. For example, crewmembers are volunteers, so donations made generally go directly to operating the ship, purchasing fuel and paying for all the free services Mercy Ships provide. Companies such as Johnson & Johnson and Alcon supply surgical equipment and consumables. Other companies help on the technical side. For example, Rolls Royce helps by donating parts and services to help maintain the ships, and Advanced Weather Technologies provides a great weather forecasting software system. Mercy Ships accepts ‘goods-in-kind’ donations of required items or services. Tretheway adds, “Mercy Ships could use the support of a major fuel company to ease the strain in that area, and it would help focus resources even more directly to helping those in need.”



“I have been faithfully supported by friends, family and church at home. Among those who ‘pay my salary’ are serving and former U.S. mariners, Coast Guard and Navy officers, and others. Some of these latter supporters could not ever come themselves, but they ensured that an aspect of their careers included supporting the work of the Mercy Ships technical operation by helping colleagues who can make the commitment. This makes them part of the amazing stories we see every day on board, and they can see those stories on the website.”

– Captain Tim Tretheway

Mercy Ships, By the Numbers:

Since 1978, Mercy Ships has ...

78,000

Performed more than 78,000 life-changing operations such as cleft lip and palate repair.

\$1.2B

Value of services & materials in developing nations.

72

Over the years there have been 72 different nationalities in the crew.



Getting Involved With Mercy Ships

Mercy Ships is easily accessible via the website www.mercyships.org. There is a team dedicated to facilitating mariners in the Human Resources department to help navigate and understand the Mercy Ships system. Tretheway says mariners should think about the positive impact his or her skills can have and also the benefit from living in an almost-family atmosphere on board. If one is looking for wild parties and chasing skirts, this is not the place. Mercy Ships is a faith-based organization, but if you can accept this and follow a basic code of conduct, it is an amazing place to meet and work with great people from all around the world. For the mariner motivated to do something to use their skills beyond the ordinary, Mercy Ships can be a satisfying way to go. New or aspiring mariners can come for a taste of life on board and benefit from the continual training and exposure to the world in a unique way. Tretheway then suggests returning to the commercial world until obtaining management level licensing. That would be a great time to then return, with funds in hand, and look at a longer-term commitment. Another way for mariners to be involved could be to support/sponsor a fellow mariner, possibly from the developing world, so that they can serve on board and maybe make a living at it. In this way, you have a share in the amazing outcomes for the patients and still are involved from a maritime point of view.

Climbing the Hawsepipe

Tretheway's first marine license was a 50 ton inland master with sail auxiliary endorsement, followed soon thereafter with a coastal license. Early on, he also earned an AB ticket, where, he says, you had to demonstrate some skill before a stone-faced Master Chief. Growing up on Puget Sound, Tim's early years were spent on the water, fishing with his father and grandfather, and sailboat racing with friends. Still another family member, an uncle was a commercial fisherman, and Tretheway gained some experience there, as well. Eventually, he began to deliver boats up and down the sound, and later all over the region.

Tretheway looks back and says, "I am glad I can say I am a hawse-piper. The years of hands-on experience, including wire rigging – which you generally don't see any more, gave me insights and understanding that just does not come from a book or classroom. I had great instructors: an ex-USCG CPO, a true British tar from Glasgow whose accent was incomprehensible but skills unsurpassed, a Master from India, a former U.S. Naval officer and many, many others. I tried to learn something from every officer, captain and AB I served with, and that included the engineers too." He adds, "Being a hawse-piper silenced many grumblings, because every order I have given to a rating has been backed up with real experience, so there can be no complaint."

Tretheway's career took off long before STCW came into play, and he managed to qualify for some MARAD training, which predated and (he insists) far exceeded the current BST requirements. He explains, "This early training initially gave me some deferment time as STCW standards were debated



and sorted out. The early STCW was not approved by the Coast Guard, which put my license at odds with some countries when I was sailing foreign at first, but the MARAD training helped offset some of these issues.

With the implementation of STCW-95, Tretheway began to do all the required courses. These he had to do at his own expense. Also at that time, however, he began his service with Mercy Ships, and some of the training centers and/or instructors gave discounts. "That really helped," he said.

But, for Tretheway, it was never easy. "The challenge came when I was trying to upgrade. This was before you had to present training certificates for everything to the USCG and could demonstrate your competency through sea time and in the exam room only. I had to buy my own textbooks and supplies and design my own course to cover the material. A great friend and professional mariner stepped in to help, buying most of the study materials and textbooks I needed. Without that help, I would have had to walk away." Along the way, Tretheway experienced countless acts of similar kindness.

For others on board the Mercy Ships, ship-specific STCW requirements also apply. Tretheway lays out the technical details, saying, "Since there are no SOLAS or International regulations defining 'hospital ship,' our organization is faced with two classification possibilities: Passenger Ship or Special Purpose Ship. The trouble with the latter is that every element must be evaluated and possibly tested, documenting and gaining approvals for nearly everything, as this is a catch-all sort of category. Therefore, a non-governmental hospital ship is most closely related to a passenger ship. The larger vessels operated by Mercy Ships have been passenger classed and are considered active vessels, so we maintain a very comprehen-

FFS
Fire Fighting Systems

Complete Class Certified
Fi-Fi-I, II & III Systems
For External Fire Fighting



Orders for 535 vessels in 2014!



FFS Group
www.fifisystems.com



“There is no comparison knowing that what you do has given a future to an otherwise dying child, changed a community’s priorities and even a nation’s view of the importance of healthcare and the need to alleviate the suffering of their people. While I interact with the poorest of the world’s poor, I have also met many presidents and prime ministers and other world leaders. I don’t know of many organizations that can really say they impact an entire nation in the way Mercy Ships does.”

– Captain Tim Tretheway

sive drill, testing and maintenance schedule for all SOLAS, ISM and other requirements. Technical crew must meet all passenger ship STCW requirements such as Security Awareness, Crowd and Crisis Management, etc.”

A Different Calling

Unlike many (most) mariners, Tretheway had the luxury of spending virtually his entire seagoing career with his wife, and child. That said; Tretheway describes an unusual and rewarding relationship. “I met my wife on board our old flagship when she came as an Administrator. I got her into my department because she was a certified forklift driver, so she could fill two functions. I left a short time later for other duties, but we kept in touch. Since we were both motivated to serve before we met each other, we found it an easy transition to living and working together on board.”

In terms of family life, life aboard the Mercy Ships is anything but routine. At any one time, there are 40 to 50 children

on board the *Africa Mercy*, children of the long-term crew. Mercy Ships runs an accredited international academy and Tretheway believes that the school is second to none. “Our son has had a great education so far. The class sizes are very small, 3-5 students perhaps, and he is exposed to languages, cultures and races from all over the world. He is totally color-blind in terms of race and culture and sees people for who they are, not how they look ... even the deformities he sees with many patients.”

In actual practice, Mercy Ships don’t spend a lot of time underway, unless redeploying to a different region; typically two months of underway and technical periods. Drills and training are conducted continuously. For holidays, Tretheway and his family often take advantage of the amazing locations they serve to have family time ashore. He adds, “They are usually not tourist hotspots, but are unique and often places people always want to visit, but never do. Otherwise, we regularly return to the United States or the UK, which we currently call home.”

The Africa Mercy at a glance ...

Length: 152m	Crew Capacity: 474	Built: 1980 Elsinore, Denmark
Breadth: 23.7m	Class: Bureau Veritas	Rebuilt: 2000
Draft: 6.0m	Operating theatres: 5	Main Engines: 4 B&W (3120 kW each)
Registered: Malta	Family cabins: 26	Patient Beds: 82-bed ward



A Long Sea Passage

Tretheway joined Mercy Ships in January 1987 and has since served on most, if not all of their platforms. According to Tretheway, there was a great sense of history on board the old flagship, *Anastasis*, an Italian liner built after WWII. As for his total experience, he wouldn't change any of it. "I loved the smaller Mercy Ships vessels, as these ventured into the more remote locations, some not even properly charted. These ships had very hardworking, versatile and adaptable crews and truly impacted the world's most forgotten poor. With each 'new vessel' the capabilities and livability have improved. The current Mercy Ship, the Africa Mercy, has high initial stability, which is a good thing for the eye surgeons. It also has a vastly larger hospital and surgical area, greater than all the previous vessels combined."

Putting those tools to work means everything, says Tretheway. "There is no comparison knowing that what you do has given a future to an otherwise dying child, changed a community's priorities and even a nation's view of the importance of healthcare and the need to alleviate the suffering of their people. While I interact with the poorest of the world's poor, I have also met many presidents and prime ministers and other world leaders. I don't know of many organizations that can really say they impact an entire nation in the way Mercy Ships does."

In all things there comes a time for change, and soon, Tretheway and his family will end their time of service with Mercy Ships. Tretheway says, "There are many factors, finances being one of them. We have always had what we have needed as a family, but with only a few 'earning years' left, we thought it was time to look for a position to prepare for the later years and to start saving for our son's future education. We will probably live in the UK, are open to possibilities and are going to take a break and see what may present itself for us as a family."

Tretheway steps ashore after more than 28 years – far richer than a Wall Street hedge fund trader – secure in the reward that comes with lifetime friendships and the knowledge that the world is a little bit better because he came and said 'yes'. That's a job well done, Captain Tretheway. Bravo Zulu from *MarPro*.

THE MARSHALL ISLANDS REGISTRY
service and quality are within your reach

International Registries (U.K.) Limited
in affiliation with the Marshall Islands Maritime & Corporate Administrators
tel: +44 20 7638 4748 | london@register-iri.com | www.register-iri.com

SAFER, SMARTER, GREENER **DNV-GL**

EXPERTISE IS KNOWING

World's most experienced service provider in solving your environmental emissions issues and ship performance efficiency. DNV GL provide:

- Ship Classification with USCG ACP since 2000
- LNG Fuel expertise with Class Rules since 2000 and Bunkering Guidelines
- ECO Solutions with significant savings through:
 - ECO Assistant in Trim optimization
 - ECO Lines in Hull optimization
 - ECO Retrofit in Bow, Propeller & Machinery optimization
 - ECO Insight for fleet performance transparency

ContactUS.USA@dnvgl.com www.dnvgl.com



Harrison

Parker Harrison

Vice President, Procurement Crowley Maritime Corporation

By Joseph Keefe

Charlottesville, VA and the University of Virginia are a long, long way from the ocean. Arguably, an even greater distance is the one which stretches from a Bachelor of Arts degree in Italian and German, all the way to a C-suite position at one of the nation’s premier ocean shipping and logistics companies. But, that’s just where Parker Harrison finds herself, a little more than 20 years after graduating from college. Along the way, she also earned a Master’s Degree, also from the University of Virginia, and eventually, a Juris Doctor from Tulane Law School (magna cum laude), in May of 2001.

Looking back, a much younger Parker Harrison had no inkling of what was to come next. “I actually grew up in New Orleans – we moved there when I was 12 – and I crossed the Mississippi River twice each day to go to and from school. But although I watched the ships pass by, it never occurred to me that those vessels and the cargoes they carried might be in any way relevant to my life. Not even once. After I finished my Master’s, I returned to New Orleans, where I worked for several years before applying to law school.”

Serendipity – or good planning?

Harrison’s undergraduate degree in Italian and German studies merits more than passing attention. That’s because she discovered that she had a knack for languages at a very young age and has actually studied French, German and Italian. “Not a very practical choice, but it was something I was good at and I also knew that graduate school was in my future so my

choice of undergraduate majors was not as critical as it might otherwise have been,” she said. Nevertheless, it might be said that a maritime professional whose experience is firmly based in (a.) admiralty law, (b.) the claims process, (c.) risk management, and now (d.) procurement – is as well rounded as an ocean shipping firm could ask for. We asked Harrison: *You arguably couldn’t have planned it any better. Did you? Or was this serendipity?*

“Getting here was pure serendipity, but staying here is deliberate,” she replied, adding, “I am from New Orleans and had planned to make my career there, so attending Tulane for law school was the logical choice, given Louisiana’s civil law system. When I started at Tulane, I knew nothing about maritime law but decided to try an introductory course to see what it was about, especially given Tulane’s excellent admiralty law program.” A job at the admiralty law group at Chaffe McCall, New Orleans’s oldest law firm, immersed her in the area of defense of maritime litigation – chiefly oil spills, personal injury matters, cargo claims, and the post-Katrina litigation juggernaut. Back then, she had little opportunity to learn about her clients’ day-to-day operations.

Eventually, and after several years of law practice, she had an opportunity to get one step closer to the industry by taking a role with the American Club, a member of the International Group of P&I clubs, which dramatically increased her exposure to the commercial realities of operating a shipping company. At Crowley, you might say she’s finally at the epicenter of that commercial reality. “It doesn’t get much more real or

CROWLEY®

People Who Know®

fundamental that buying provisions, fuel, and spare parts for our vessels,” she explains.

Harrison’s internal promotion from Director, Claims, Risk Management to her current role as Vice President – Procurement is a clear step up and has taken her in a slightly different direction. That said; she brings much from the risk side to the equation to her new job, especially when it comes to preventing the kinds of claims that might otherwise come to fruition. And, the new position gives her a fresh perspective on Crowley processes. She explains, “My legal and risk management experience certainly helps me identify potential trouble spots, and my relationships with our Risk Management and Legal teams makes closer collaboration with those disciplines possible. Working together with those groups and having the benefit of their input from the outset can make for a highly efficient and thoughtful procurement process.”

At the end of the day, Harrison insists, VP of Procurement isn’t really a long way from Admiralty Law.

“This role really isn’t unique to the waterfront – in part because Crowley also has trucking, warehousing, fuel distribution in Alaska, and other land-based service offerings. So in addition to fuel for the ships, vessel parts and equipment, we also buy many other items not destined for use on board the vessels. But because admiralty law encompasses nearly every other legal discipline, that background still comes in handy in this new role.”

Women on the Waterfront

According to Harrison, Crowley seeks out top talent wherever it can be found, regardless of gender. And, she insists, the company is committed to building a collaborative, high-performance workforce, and to providing training and career development for every employee each and every year. But, while the role of women in the maritime industry is growing, is not yet representative of the numbers of women professionals in other business sectors. Harrison has her own thoughts on how this metric can be improved.

“There are so many challenges, many of which are self-imposed. The first is ignorance, by which I mean ignorance of this industry and of the vast professional opportunities it offers. The next is lack of self-assurance. Many women tend to be self-effacing to a fault when in fact they might be better served by taking ownership of their abilities and potential. And, certainly, the old-boy network is alive and well. But



FIRST U.S. FLAG
OFFSHORE WIND FARM SUPPORT VESSEL
Built for Rhode Island Fast Ferry - Atlantic Wind Transfers



Under License with South Boats IOW UK



Serving the Maritime Industry for over 66 years

www.blountboats.com
WARREN, RHODE ISLAND USA



MOORING & TOWING SOLUTIONS



Towing Pins OCIMF Roller Fairleads
Guide Sheaves
Shark Jaws Balanced Head Fairleads

Smith Berger Marine, Inc.
7915 10th Ave. S., Seattle, WA 98108 USA
Tel. 206.764.4650 - Toll Free 888.726.1688 - Fax 206.764.4653
E-mail: sales@smithberger.com - Web: www.smithberger.com

at a certain point, women have to figure out how to navigate around those obstacles. I have never been a fan of quotas; they are well-intended but can set people up for failure.”

Harrison continues, “I don’t want an opportunity just because I’m a woman. I want to earn it – and if I don’t, the opportunity should go to someone who does. My biggest challenge has been overcoming the fear of being wrong. That fear stymies growth. I’m still working on the biggest success part; hopefully it lies ahead.”

For women aspiring to the maritime industry, Parker Harrison’s advice is simple: Never, ever pass up an opportunity to learn. She adds, “The people you will meet along the way all come from different backgrounds and have different experiences, styles, and perspectives, each of which can be valuable to you. Never say ‘that’s not my job’, even if you think it isn’t, and do not get down into the mud when disputes arise (and they will). Be respectful but don’t be a pushover. Do not take yourself too seriously. And remember that good humor is as effective as anything when it comes to breaking the ice, persuading people to buy in, and ultimately getting results.”

As Parker Harrison is concerned, the opportunities are there for the taking. But, she says, “You have to know they’re there, and the biggest challenge to attracting talent to our industry is the fact that most people either don’t know it exists or just don’t understand how important it is to their lives. I think that our industry as a whole does a poor job of marketing itself to the general public. As a result, young men and women searching for a good career have no idea of the opportunities available to them in our industry. This needs to change. I’ve often wondered why our industry doesn’t do Public Service Announcements the way the coal, natural gas, and oil industries do.”

The WISTA Connection

As WISTA USA’s Membership Secretary, a member of the Board of Directors and the current WISTA USA Nominations Committee Chair, Parker Harrison is heavily invested in this group and clearly believes in its value to the maritime community. It is also a major time commitment – one which Harrison does not shy away from. “I believe so strongly in WISTA’s mission – the advancement of qualified and talented women in the maritime industry – that the time investment is one I’m happy to make,” she says, adding “We are contributing to the advancement of our industry by building a formidable network of talented, competent, and successful women in shipping.”

WISTA is a networking organization for women at management level in the maritime industry. For Parker Harrison, however, WISTA has meant so much more. “The connections and friends I have made in and through WISTA are unmatched; no other organization offers the same caliber of people around

the world and across the many different sectors of our industry – from ship owners and operators to charterers, managers, agents, suppliers, insurers, brokers, and attorneys. Add to this the fact that WISTA has a presence in 34 countries (and counting), and you can just imagine the opportunities for networking that the organization offers. Many of these women, none of whom I would know were it not for WISTA, have become my good and trusted friends and mentors. And I actually got my first job at Crowley through a WISTA connection.”

Beyond her personal engagement, Harrison also points to the value that WISTA brings the global maritime community at large. She explains, “Shipping seems to be a peculiarly fragmented industry in which like entities with similar interests tend to stick together but do not always relate well to members of other groups. WISTA provides a forum that transcends those invisible divisions and allows women in the many different segments of the industry from around the globe to connect in a way that no other organization does.” She continues, and asks, “How else, for instance, might an SSQE professional in the Pacific Northwest meet and have the opportunity to interact with the CEO of a Dutch ship owning and managing company? Those lives are not otherwise likely to intersect, but WISTA provides the platform that makes those connections possible.”

Looking Back & Ahead

Parker Harrison’s well-rounded education and varied career path have delivered the Crowley Vice President to an enviable position in industry, but that doesn’t stop her from wondering what might have been or what more she can learn. “I do wish I had sailed, though; having the real world experience would have provided invaluable perspective,” she admits, and along with that says, “I’m thinking about arranging a ride-along on one of our ships to get an idea of what our officers and crews deal with on the job. That’s one of the great things about working for Crowley – the learning never stops.”

Summing up a personal and professional life is pretty hard to do. Arguably, it is impossible. Nevertheless, we asked Parker Harrison to take a stab at it. Her response neatly describes what drives most us – regardless of gender – to the waterfront in the first place. “Each day, I get the opportunity to work with dynamic, talented, and driven people in an industry that I find endlessly fascinating. There is always more to learn, so it is never boring. Who could resist that? I am also intrigued by the fact that our industry is largely invisible, despite how vital it is to the world economy generally and our everyday lives in particular.” You get the idea that Harrison is already figuring out how to turn the last part around. If so, we wouldn’t bet against her.



DANISH MARITIME FAIR

The meeting place for Maritime Professionals

Danish Maritime Fair is not only a professional exhibition with exhibitors presenting the latest news in products and services. The Fair is the natural focal point for the concept Danish Maritime Days which was introduced last year: Danish Maritime Days present more than 60 different events and three of the largest events take place in the same venue as Danish Maritime Fair.

If you are working in or have interests in the maritime business, it's a must to visit the Fair for many reasons. You will:

- Increase your knowledge about the latest innovation in the business
- Get a unique insight into a dynamic and exciting professional business
- Get an introduction to various educations and further training
- Get an overview of job- and career opportunities in the business

Registration is now open for delegates

We are giving away 500 free tickets to the readers of Maritime Professional, just use the voucher code **"maritimeprofessional"** when you register, and you will get your ticket for free.

www.eventbuizz.com/danish-maritime-fair-2015/detail/

For booking of exhibition stands:

+45 31 60 40 15

booking@danishmaritimefair.dk



6th to 8th
October
2015



Port Automation Puts Labor on Notice

TEU Growth Forces Efficiency, Productivity Drive

By Patricia Keefe

When Maersk subsidiary ADP Terminals (ADPT) launched APMT Maasvlakte 2, the world's first fully automated container terminal in April, it did so against a background of months of acrimonious labor discussions between the International Longshore and Warehouse Union (ILWU) and West Coast ports in the U.S. That dispute eventually morphed into a hugely expensive, multi-month slowdown that left customers frantic to move cargo and analysts arguing about its impact on the overall economy.

The impact of that four-month slowdown has been described in some quarters as near catastrophic for local agriculture, small businesses and time-sensitive retail campaigns, as food rotted and other goods stayed locked out of reach of inventory-starved businesses. Short-term, the ports lost business as frustrated shippers rerouted to air, rail and or to Canadian and East Coast ports in an effort to get their cargo delivered, adding significantly to their costs in the process. Exacerbating the trauma was the months of port congestion that followed the contract agreement reached in February and ratified in May.

Longer term, the West Coast ports will have to address the serious damage done to their reputations. "Over the past year, the following has been reinforced at the ports of Los Angeles and Long Beach: cargo has no loyalty; cargo seeks the path of least resistance; cargo requires order and predictability at

a competitive price. . . Regardless the cause, we have lost the confidence of many in the supply chain and we must work at re-establishing trust and confidence," said John McLaurin, President, Pacific Merchant Shipping Association, who minced no words while speaking at the World Trade Week Luncheon in May. The loss of trust has already dealt a devastating blow in the Pacific Northwest. First Hanjin Shipping Co., frustrated over productivity issues, and then Hapag-Lloyd, citing "schedule integrity," abandoned the Port of Portland, together taking away 99% of that port's container business. Analysts are predicting that LA and Long Beach will also permanently lose some of the clients they lost during the slowdown.

Ports Look to Automation

The union got the contract it wanted, but the dispute may have hammered the final nail in the coffin of manual labor as ports know it today. Union membership has been trending down since a high in 2007. In the fiercely competitive and margin-pressed world of shipping, terminals and local economies cannot afford to be at the mercy of labor, any more than they can afford to rely on even the best productivity provided by a mostly human workforce. And there is no denying the benefits to be had from an environmental and safety aspect. Earlier ILWU contacts gave terminals unlimited rights to bring in automation of all kinds, and U.S. ports and terminals



are starting to make their move.

In addition to the semi-automated terminals at the Port of Virginia, and Bayonne, NJ, LA's TraPac terminal operator is in the second phase of its move toward full automation, while the Port of Long Beach expects to open its \$1.3 billion automated Middle Harbor redevelopment project, described as the world's greenest container shipping terminal, in 2020. Similar projects have launched in other parts of the world, including APMT's April unveiling of the first fully automated terminal in the world, in Rotterdam, which will be joined by yearend by a similar project, DP World's Rotterdam World Gateway, and eventually, an all-electric port in Mexico.

Global Container Terminals, Inc. (GCT), where automation was uniquely retrofitted on top of the existing, fully operational terminal, due to land constraints, is currently the most automated terminal in the U.S., having gone live with its new technology a year ago.

Richard Ceci, GCT's vice president of information technology, says that so far, automation has not cost a single union job at the Bayonne, NJ facility. Instead, he says workers have been moved around and retrained, for example, to be mechan-

GCT Bayonne Semi-Automated Container Terminal at a glance ...

5,000 transactions per day	167-acres	40 moves per hour
45-minute truck turnaround	2,700' berth	8 post-Panamax cranes
20 semi-automated RMGs	50-foot draft	17 manned RTGs.

BAIER

Since 1947

THE STRONGEST HATCH TO EVER HIT THE DECK!

Over 80 Sizes and Styles!

Cast **Aluminum** Cast **Steel** Galvanized
Deck Rings, Parts, Coamings, Etc.

1-800-455-3917

CATALOG ONLINE AT:
WWW.BAIERMARINE.COM

*Available Direct and thru Commercial Marine Equipment Distributors
See website for Dealers and locations*






Rounds

Ovals

Squares

Multi-Bolt



UNDERWATER LIFT BAGS

ENGINEERED FROM THE BOTTOM UP!

The World's Best Underwater Lift Bags

from 25 lbs. to 50 tons,

Water Load Test Bags to 50 tons.

IMCA Compliant.

ABS Approved.

INNOVATORS IN BUOYANCY AND ENGINEERED INFLATABLES.

MARK W/ORCA RAPID RECOVERY SYSTEMS AIRCRAFT LIFTING BAGS

WATER LOAD TEST BAGS VEHICLE RECOVERY SYSTEMS CABLE & PIPELINE FLOATS

LIFEBOAT DAVIT TEST KITS FEND-AIR® INFLAT-A-TANK PIPE PLUGGERS®

P.O. Box 2030, North Kingstown, RI 02852, USA

Tel: +1 401 884 8801 Fax: +1 401 884 8868

www.subsalve.com richard@subsalve.com

There are six terminals in the Port of NY and each may have a different technology. You can [no longer] just take labor from one terminal and move it to another without a little training delay, whereas in the past you did not have that learning curve when the technology was much similar.

– John Nardi, President of the New York Shipping Association



There is a movement away from a casual workforce to a more dedicated workforce,” says Nardi. “There are six terminals in the Port of NY and each may have a different technology. You can [no longer] just take labor from one terminal and move it to another without a little training delay, whereas in the past you did not have that learning curve when the technology was much similar.”

Going forward, Nardi says, “What you are really looking at is the ability to handle more containers with the same workforce, who will be doing different jobs in the future.” He also predicted that the overall workforce will stay steady, but as the volume (TEUs) grows, the amount of labor required per containers will be less.

In a report released in 2014, the Port of Los Angeles laid out in stark detail the extent to which automation will likely cut labor cuts, estimating reductions of 40% to 50%, or as many as 160-200 jobs, once its semi-automated TraPac facility comes fully online. That’s about half TraPac’s 2011 longshoreman workforce. If the facility reaches its capacity of approximately

ics able to fix robotic equipment or as remote operators of cranes, vehicles and inspection cameras. Ceci was recruited from the auto industry to help design the automated terminals in Virginia and NJ.

A lot of this new technology requires more training than longshoremen have needed in the past, say Ceci and John Nardi, president the New York Shipping Association. “We’re seeing a shift in the type of jobs going from more traditional longshore workers to skilled drivers and more mechanics.



Port/Terminal Infrastructure Equipment Requirements

In addition to deep pockets, in order to accommodate the current largest containers ships, a port/terminal must have:

- * **Large enough cranes** (at least 21-22 boxes across outreach, up to 23-24 boxes)
- * **Enough cranes** (at least 3 cranes per vessel; usually 5 or more is desirable)
- * **Long enough berths** (at least 400 meters, up to 450)
- * **Deep enough water alongside the berth** (at least 14.5 meters and up to 17 meters)
- * **Deep enough water in the approach channel** (up to 17 meters)

Source: Navisworld presentation by Drewry Shipping Consultant’s senior consultant Tina Liu.

2 million TEUs, and the volumes are split between the automated and manual sectors of the terminal, as many as 600 jobs could be lost, the report continues.

The world's first fully automated container terminal, APMT Maasvlakte 2, which is targeting a 40% increase in vessel productivity, is considered the pinnacle of port automation today. European dockworker unions estimate that once APMT Maasvlakte 2 is fully automated, it will result in a loss of 1,000 jobs, or about 20% of the existing unionized labor force; meanwhile, their Australian brethren are already mourning job losses.

That Ship is Sailing

There isn't much labor can do to stem the tide, because at the end of the day – the primary driver behind current port and terminal automation trends are the same issues that drive all port innovations – the need to increase efficiency and productivity, and you do that in great part by increasing velocity. The prevailing factors behind today's drive to automate are twofold: the ever-expanding size of vessels carrying at least twice the cargo of their smaller predecessors; and the push by influential carriers such as Maersk for ports to handle a staggering 6,000 moves per 24 hours – impossible without automation. At best, some terminals can meet a little more than half that today.

There are other benefits to automation from a labor standpoint, according to Ceci, Nardi and Port of Virginia spokesman Joe Harris.

The workers that remain can expect to benefit from healthier environments, increased safety, and yes, career longevity. Removing humans from the terminal floor significantly improves safety. Electric vehicles reduce emissions. And working in a remote office protected from the elements and having to dodge machinery led one longshoreman to tell Ceci he expects to add another six to seven years onto his working life as a result. "No one ever tells me they want to go back to the way it was," says Ceci.

All that technology will require a new, albeit smaller class of highly paid, skilled workers able to run and repair the robots, automated cranes and unmanned vehicles. Automation can also provide a solution when the issue is not enough labor.

Terminals need a steady supply of trained labor. But for a variety of reasons, labor is actually in short supply in many areas. There is a chronic shortage of people in the port of NYNJ, according to Ceci. At other ports, the situation is more drastic. Rotterdam, and at least one port in Mexico, for example, are not located near cities. The drive to get to work is long. There just aren't enough people living in the area to meet the demand for labor. In Dubai, the issue is more a matter of disinterest from the native workforce. So workers are instead flown in from Pakistan and India and then trained.



Our Yards Welcome Your Skills

*Our companies are hiring
18,000 of the best in
the business this decade.*



Hampton Roads, Virginia is the premier region for ship building and repair in the U.S. Our nine sizeable yards and contracting companies feature dry docks that can accommodate the largest ships. With a specialized workforce of more than 40,000 professionals, we want career ship repairers who stay on top of the most advanced techniques. Our 250+ companies reward expertise and performance to ensure efficient and effective high-quality work is accomplished every day.

Competitive Wages. Excellent Benefits. Great Teams.

Commitment.

The most dedicated ship repair workforce in the world.

Safety.

The highest standards for safety and quality control in the industry.

Partnership.

Every ship repairer in our industry benefits from working together.

Visit Our Member Directory and Job Board!

www.VirginiaShipRepair.org



SAMS®

Society of Accredited Marine Surveyors®

A SAMS® Surveyor must:

- ★ Strive to enhance the profession of Marine Surveying.
- ★ Maintain and enhance their professional knowledge and expertise.
- ★ Conduct their business in a professional manner.
- ★ Maintain independence, integrity, and objectivity.
- ★ Avoid prejudice and conflict of interest.
- ★ Abide by a strict code of ethics and rules of practice.

Make sure your next surveyor is a SAMS® Surveyor

www.marinesurvey.org * 800-344-9077



“The Future of Global Trade” at the launch of APM Terminals Maasvlakte II

In the auto industry, a United Auto Worker member typically works a specific job every day for a specific company. In contrast, marine terminal workers can jump around between jobs and ports. They might work cruise ships one day and cargo containers another, at two different sites. It can be difficult to schedule and assign shifts when you can't be certain of how many, and specifically with what skills, the workers coming in will have.

Automation allows for building and operating terminals in areas where there aren't any, opening up new markets, particularly in third-world countries where a suitable labor pool, again, may be limited.

Automation can also help smaller ports with space limitations expand their capacity by making better use of the space they have to handle significantly more cargo from bigger ships.

Most of the automated terminal facilities around the world have been built on green fields, but room to grow is a big issue in the U.S., says Ceci. Leading the way are the automated terminals in Norfolk and Bayonne, which are unique for the way in which the projects were done: by retrofitting the new facility on top of the old terminals, which remained in full operation throughout the four-year construction schedule.

“With one 10,000 TEU ship versus two 5,000 TEU ships – you need capacity, not necessarily to be faster. That's where automation [and retrofitting] comes into play,” says Beth Rooney, assistant director of port performance initiative for the Port of NYNJ. “There is no more land to put the boxes on

or to expand the gates. There is no real estate to expand to, so you need to handle better and more efficiently.”

“Densifying” existing facilities also enables terminals and ports to better protect coastal habitats and wildlife, and meet environmental regulations and restrictions. .

If You to Ask, You Can't Afford It

There are many automation projects being talked about today, says Ceci, but only a small number are actually in process – for example, LA, Long beach and Mexico.

The biggest obstacle? Money. People always talk about the savings automation can bring – and it does deliver savings –but it takes a monstrous amount of money, and an equally large commitment to build an automated terminal. The first two semi-automated terminals, which opened in the late '90s, in Rotterdam and Hamburger, took 10 years and \$1 billion to build using a team of 100 IT workers who had to invent the needed technology, says Ceci.

Today, similar terminals are being built in as little as four years, for a half billion dollars, using mostly off the shelf software, primarily from Navis, but also from some smaller companies. Much of that money pays not for technology but to strengthen infrastructure. Bigger ships require bigger cranes, so dockside facilities have to be shored up. More containers stacked in a yard means more stress on the yard floor.

Even if cost and space were not an issue, there's the ROI factor. Automation isn't necessarily going to increase busi-

No one ever tells me they want to go back to the way it was.

– Richard Ceci,
Global Container Terminal's Vice
President of information technology



ness, because the factors that drive clients to a port have less to do with technology, and everything to do with the type of goods and the ability to transport them the fastest possible way to their final destination, says Rooney.

“Automation is about whether it’s efficient or not. We could fully automate the NYNJ Port, and it wouldn’t bring more cargo to us. There might be some discretionary cargo opportunities but the market is the market. If you bring something to NY and it costs three times as much to move it to Tennessee than it would to bring it to Savannah, it’s not going to matter whether the port is automated or not,” she adds.

The one thing everyone agrees technology can do is keep terminals competitive. Still, “The fact there is going to be fewer, larger ships hauling to fewer ports means that if you are not the largest port on the west or east coast, the likelihood of investing in automation will be slim. The margins are very small on shipping, and anything that adds to the cost gets added to the cost of the consumer good. People are very mindful of the cost of automating, the cost of investing in new technology. There is a careful balance between services to the customer and managing costs as much as possible,” says Rooney.

Most U.S. ports are treading lightly, but as they gear up to accommodate the Super-Max fleet expected to burst through the expanded Panama Canal, and represent the big shipping alliances, they need make sure they spend as much time figuring out how to efficiently service those super loaded vessels after

they dock, as they are on making sure the ships can get into their ports.

Thin margins and the volatility of the economy over the last decade means that ports and terminal operators are going to need massive commitment, and importantly, investment, from shippers and other marine investors, in order to move forward with modernization. But there are busy shipping lines today that are looking three years ahead at their likely bookings and not seeing a lot of work, says Ceci.

“So when you have the investors lined up, there may not be enough work for them, and when there’s enough work, you may find the investors aren’t ready to commit,” observes Ceci.

In the end, automation is going to require a big leap of faith by all parties involved. Ships are only going to get larger, thanks in part to the expansion of both the Suez and Panama Canals, as well continued economic turbulence that makes alliances and fewer trips in bigger ships attractive. The juxtaposition of taglines from two automated terminal pioneers best sums up what ports should be planning on from here on out: *The Future of Global Terminals (APMT Rotterdam) is Where Tomorrow Arrives Today.*



Patricia Keefe

is a veteran journalist, editor and commentator who writes about technology, business and maritime topics.

adonis



**THE GLOBAL
HUMAN
RESOURCE
SOLUTION**

With over 25 years serving some of the most dynamic companies in the maritime industry, we bring you best of breed, real-world solutions for Crew Management, Crew Planning and Payroll.

Our customers are market leaders who appreciate the insight, expertise and “*the human touch*” that are our trademarks.

Find out why more and more companies prefer Adonis for their global human resource activities!

For more information:
www.adonis.no



SHIPYARDS: Recruitment, Training and Retention

By Joseph Keefe

Notwithstanding the current state of energy and its collective impact on the maritime sector, there are plenty of reasons for optimism. For example, the subchapter 'M' Towboat and Ballast Water Treatment rules lurk just around the corner, the maritime security sector shows a robust appetite for new hulls and Jones Act blue water building is more active than it has been for three decades. That optimism comes with the important caveat that shipyards everywhere must continue to search for, find, train and retain the right people to do the job.

In this edition, we polled human resources executives from three of the most prominent shipyards on the planet – spanning three coasts on two continents – to better understand how each yard is going about that critical task. Listen in as Austal's Don Keeler, Damen's Arold de Vries and Vigor's Sue Haley weigh in on the human resources strategies employed at their yards, how those methods relate – and where they diverge.

[Describe the human resources strategy for your shipyard in terms of recruitment, retention and training.](#)

Arold de Vries, HR Director, Damen Shipyards: That's quite a broad topic, but let's try to bring it down to daily life. We have new build yards, general office for design & sales and we have repair yards. We need a lot of good people for the future: and the future is defined as being two to six years. We fill existing vacancies through normal channels; our web sites, LinkedIn, social media, events and exhibitions and ad-

vertisements. We're also trying to increase our brand visibility in schools, universities and for professionals in the market. So, we're either reacting to an existing vacancy, but also being out there trying to be known as an interesting company to work for. The majority of our hires are professionals who have experience. In terms of retention, we are very proud of our level of engagement, and we measure this every other year and it is something that we score very high on. Our people are proud of working here and therefore we have high levels of retention. Secondly, we look after our people – we pay them well. In addition, we spend a lot of time and effort in developing our people – that could be personal things, skills development or management training. The younger generation is very interested in development opportunities; there is more to working than just a salary and a car. And, people need to know where those opportunities are. In the past, we were a widely dispersed company with many operating units. The information wasn't always shared. So now, and through our Intranet, we make sure people know where these opportunities are, how to approach the director for the job, and then, if they are not successful, teaching them how to be successful in the future. Internal mobility has to go up. People have to know not only where the jobs are, but also how to be ready for that job. We are a very international company and we are very proud of that. We have local management teams in Vietnam, South Africa, Cuba and the Middle East, to name just a few. And that means that we have local talent and local opportunities.



Immediately access job-ready First and Second Class marine craftsmen experienced in all trades at all skill levels. With offices in 36 port cities, we are the leading provider of high-caliber marine craftsmen.

Helping shipbuilders increase workforce productivity – to sustain a profitable balance of work-to-workers – is what has earned us their loyalty.

Tradesmen International has *Total Labor Support*[®] services that will help you grow your profit margins by consistently meeting *Six Key Business Objectives*:

- Maximize workforce productivity
- Reduce hiring costs and challenges
- Minimize Workers' Comp exposure
- Control rising benefits costs
- Reduce SUTA/unemployment costs
- Lessen regulatory compliance risk

**Rely on North America's
Elite Marine Craftsmen.**
Safe. Productive. Skilled.

To learn more, contact us at: 844.249.4373
or marine@tradesmeninternational.com



**Tradesmen
International**[®]
Marine Trades Solutions

“The most significant thing – and I’ve been here for four years – is that we operate as one company internally and to the outside world – and we offer internal opportunities to develop talent locally.”

– Arold de Vries,
HR Director, Damen Shipyards



Sue Haley / Executive Vice President / Vigor Human Resources & Administration: At Vigor, it is all about understanding what our business needs are today and anticipating what it will need as we evolve. And these needs are constantly shifting with 12 locations and multiple business units that focus on everything from complex fabrication of nuclear containment and structures, to our more traditional work building and repairing marine vessels.

Don Keeler, Vice President of Human Resources, Austal USA: For those positions requiring technical skills, we had to approach recruiting with a focus on selecting individuals well-suited for technical training and relied heavily on our partnerships with the state training programs, area technical schools and our own internal skills training competency. Our hires are almost a 50/50 mix of experienced persons and trainees. For a more in-depth understanding of our business, we also rely on a robust apprenticeship program for skilled craft positions. As we look beyond our region for talent we use a sourcing tool that locates communities or areas with pockets of desired skills and we recruit in those communities by sponsoring job fairs and offering relocation benefits. Our retention

efforts stem from a number of different points of interest. First is our commitment to safety, offering a job with one of the safest shipbuilders in the industry. Coupled with our commitment to safety is a long-term reliable backlog of work that is primarily completed indoors. Employees have years of secure work and do not struggle with lost work days due to weather. Career growth and access to skills training is another priority for some of our people. Across the board, Austal provides competitive compensation and benefits reducing an employee’s motivation to leave for better pay or benefits. We are also a company that cares about its people and offers opportunities for employees to be involved in work design and planning. Based on these metrics, it would be hard for someone to find a better place to work. Austal provides craft training through a variety of education programs to include apprenticeship, on-the-job training, specific task training, upgrade training, and continuing education. Austal’s Department of Labor-certified apprenticeship program is completed over a four-year period, with a goal to train the worker on the complete craft. On-the-job training is on-going and task and upgrade training occur over a shorter period of time and typically focus on a narrow competency or process within the craft.

With regard to your human resources strategy, what has changed in the last five years? What has remained the same?

Sue Haley: Five years ago we were a small organization with HR focused primarily on transactions and compliance. Today we are much more focused on ensuring we have the right leadership in place now and for the future. We are an evolving organization, one where our values—truth, responsibility, evolution and love—influence who we are and what we do. We ask our leaders to lead from the heart and inspire those around them to grow and learn. We hire and promote based on these values and their skills. We have found that if the person fits our values and culture, we can help provide the skills they will need to be successful. In terms of what has remained the same, we still maintain the hardworking, entrepreneurial, family-focused atmosphere that has made us successful.

Don Keeler: In the last five years we have experienced a need to hire employees with transferable skills and provide front-loaded training to address skills gaps. The implementation of the “hire-down, skill-up strategy” which Austal refers to in recruitment as “Innovate and Advance a Pathway to the Future,” has become a model for Austal’s hiring plan. This model has increased our post-hire training opportunities allowing employees to receive compensation and benefits while being trained. We recognize the overall skill level of crafts personnel has declined which has eroded the market and increased wages for highly skilled employees. Turnover continues to be a challenge in light of the high demand for these highly skilled individuals. A strong need for a skilled workforce exists today and will likely to be our reality for many years to come. Austal provides a great career opportunity for individuals willing to learn

and grow. As Baby Boomers continue to exit the workforce, job opportunities for the younger generations are plentiful. A strong working relationship with public education to enhance high school and trade school entry-level trade skills is critical to our industry’s future. Initiatives in public education are picking up momentum and will become our primary resource for talent. For the shipbuilding industry there is no shortcut to years of experience and we will all suffer through a period of heavy recruiting of inexperienced workers placed in a steep learning curve to replenish the supply of skilled workers so high in demand.

Arold de Vries: The most significant thing – and I’ve been year for four years – is that we operate as one company internally and to the outside world – and we offer internal opportunities to develop talent locally. We operate as one and

we deliver to everybody. That was rarely the case in the past – things were done locally. Now, our brand awareness and power has increased dramatically since we operate as one in the outside world. That’s probably the biggest change.

What IT tools does your shipyard use to find, train and retain employees?

Don Keeler: We secure employees through pre-hire and post-hire training initiatives, national and local hiring events, community engagement and robust branding. Most notably we are recognized by the DOL as having one of the top apprenticeship programs in the nation. This allows us the opportunity to secure, train and retain top talent. Our number one point of retention is our commitment to safety, offering a job with one of the safest shipbuilders in the industry. Safety is followed closely

BOLL & KIRCH FILTER TYPE 6.64 THE NEXT FILTER GENERATION



For over 60 years, BOLLFILTERs have improved the efficiency and prolonged the life of ships' vital equipment throughout the world. Now we have taken it to the next step.



BOLLFILTER

Protection Systems

BOLL FILTER CORPORATION
WWW.BOLLFILTER.COM

Novi, MI 248-773-8200
BOLL@BOLLFILTERUSA.COM

“As we’ve grown and taken on ever more complex projects, the biggest challenge is to ensure that our organization evolves fast enough to meet customer demands.”

– Sue Haley,
Executive Vice President,
Vigor Human Resources &
Administration



VIGOR



by our strong backlog of business that allows an employee the comfort of knowing there is job security at Austal. After job safety and security comes job satisfaction whether found in job stability or career growth, Austal provides both. An employee has significant career opportunities if there is a desire for career growth.

Arold de Vries: We want to make sure people know who we are. Our web presence across many platforms is very important. We make sure everything is visible and up-to-date there. That’s the basic, fundamental way we do things. And then, we have an external web site where we explain what kind of jobs we have, opportunities, internships, etc. and we tell stories there, about people’s careers, what they are doing, etc. That’s the second layer. Then, we also track our applicants. We have an applicant tracking system. We maintain all of our correspondence and data for each candidate within those files. And, we are trying to become much better about ‘talent manage-

ment’ information. We’ve also started a “Damen Academy” which is a learning management system. Within this system, people can basically control their own training needs and what you do about it. There are e-learning tools within the system and it works very nicely.

Sue Haley: We use multiple methods. Of course we use the traditional channels such as job postings, recruiters, union partnerships and some social media networking such as LinkedIn. We also bring people in through training: We collaborate with local community colleges at our training centers in Portland, Ketchikan and Seattle. We provide internships and support high school programs. We develop our employees through in-house training, craft apprenticeships, and promotion to supervisory positions. We are constantly developing internal talent and have training programs in place that cover employees from the shop floor to executive leadership.

An aging workforce can translate into the loss of accrued knowledge. Is your organization using technology and e-methods to capture and retain those skills and cumulative knowledge?

Arold de Vries: The ship-building industry in Holland had a huge peak in the 1970's and 1980's and all those young people who joined the company back then are now 50 or 60 years old. So, we are aware of this and trying many things. First, the retirement age in the Netherlands has gone up and people are staying on a bit longer. We're trying to keep everybody healthy. And, we're trying to transfer the knowledge. That happens at a couple of levels. The most important thing is that we train some of the traditionally focused workers into being mentors and coaches so that they actually assist the new generation in being successful. We're not looking to just tell people how to do things, but instead, transfer knowledge in a bit more modern way. And, on paper, it looks very nice but we found out that in practice, it didn't work. So we're now into a huge training program where we make sure the older more mature people actually have the tools to transfer the knowledge.

Sue Haley: We provide on-the-job training, and we use our more experienced craftsmen to mentor and train. We also select some Vigor employees to serve as lead teachers for the training centers. With respect to developing our leadership talent, we have those graduating from our leadership programs assist with teaching the next class of leaders.

Don Keeler: We use our subject matter experts to assist with development of training programs and curricula, to support continuous improvement of advanced shipbuilding and manufacturing and to mentor our workforce.

What is the biggest challenge for your shipyard in today's business environment? Why?

Sue Haley: As we've grown and taken on ever more complex projects, the biggest challenge is to ensure that our organization evolves fast enough to meet customer demands. This means not only identifying and filling skill gaps at every level but also making sure we identify and accelerate the growth of our next-generation leaders so they can help us promote the change that will be needed.

Don Keeler: Austal's biggest challenge is the ability to secure and retain highly skilled shipbuilders and to increase the awareness of the opportunities in the maritime industry. Why? The industry has been volatile for the last few decades, we continue to lose shipbuilders to other industries, the workforce

is aging and we need to find a way to better brand our industry for the future generation of workers.

Arold de Vries: We have 32 shipyards and 13 other type of operations. The biggest challenge for us is to produce top quality products at the lowest possible cost. We think we have a nice product but competitors are not stupid. They make similar products and try to do it cheaper. So, we have to bring the costs down and keep the quality at a high level.

What one thing do all of your employees agree is the one critical requirement (benefit / salary / training, etc.) of their employment at your firm?

Don Keeler: There is no one critical element. Across the board, Austal provides competitive compensation and benefits reducing an employee's motivation to leave for better pay or benefits. We are also a company that cares about its people and offers opportunities for employees to be involved in work



Safety is paramount.

Effectively manage and deliver training.
Train anywhere, on board or on shore.
Achieve superior safety and performance.

 **Marine Learning Systems**
www.marinel.com

“Safety is followed closely by our strong backlog of business that allows an employee the comfort of knowing there is job security at Austal.”

– **Don Keeler,**
Vice President of Human Resources,
Austal USA



AUSTAL



design and planning. Career growth and access to skills training is another priority for most of our employees. It would be hard for someone to find a better place to work.

Arold de Vries: If I ask the 59-year old worker who has always been through collective labor agreements, he’s probably focused on his holidays and his salary. That’s still important. But, if I talk to people in our office here, we have international people running around doing all sorts of job descriptions, salary is not number one. It’s the development opportunities. People want to know – either within their own job, or if there is another job coming – how can I develop myself to do that. That includes coaching from the line manager, it includes personal time management, etc. That’s for the typical employee under 40.

Sue Haley: Safety comes first. We want everyone to succeed and go home to their families at night without any injuries.

What is your mix of (contract vs. permanent) employees? Is one situation more desirable than another?

Arold de Vries: It changes a bit from country to country. In a country like Vietnam, everyone is on a Damen contract. But that can be a short term contract – say one year, or a contract for life. If I look at our Netherlands head office situation, we have about 1,500 international people here, of which 1,100 are actually Damen payroll employees. Of those 1,100, maybe 30 percent are on a 1 or 2 year contract. Not everyone wants to work with just a one year contract, so we are always assessing whether that’s the right way to go. If we’re talking about a repair yard that’s under a bit of pressure at moment, the tendency is to go with a shorter contract period. In the Far East, we tend to go with the indefinite longer term contract, also because the competition is pretty fierce. Younger people will tend to hop companies. There is no one answer. It depends geographically and depending on job description. Also, remember, we are a privately owned company. So the pressure

is different than it would be if we were owned by private equity. Competitors who have private equity ownership have a slightly different contract strategy – certainly harsher than ours.

Sue Haley: We hire mostly full-time employees. We use contract or temporary employees as needed to meet cyclical business demands or specific projects. With our clear focus on culture and values, hiring the right people and retaining them fits our business model better.

Don Keeler: On average, Austal has 10% contract employee support. The most desirable is to hire direct and source contractors for special projects or spikes in demand.

Are you currently hiring and if so, what is the number one position or skill that you need to fill?

Sue Haley: We are a project-management-driven business. Qualified project managers and skilled crafts men and women who fit our entrepreneurial business model are always in demand.

Arold de Vries: We are currently hiring and have open positions in virtually every department. Our largest number of job opportunities are in engineering, pipe fitting and pipe welding, marine electrical, outfitting, machinery, test and trials and leadership positions. Anyone interested in working at Austal can get details on our open positions and training opportunities at www.austaljobs.com.

Arold de Vries: We need engineers that can design a ship, project managers and currently we need purchasing personnel. In the yards, we haven't yet seen a shortage of those skill sets – especially in Eastern Europe and the Far East.

What about diversity hiring? Are you attempting to hire more women?

Arold de Vries: Austal is an equal opportunity employer that values diversity and inclusion. We have established aggressive goals in the hiring, training and promotion of females. We source females into the industry through innovative branding and focused recruitment strategies complimented by training. We leverage our external partners by requiring them to adopt the same philosophies Austal has in encouraging female participation and engagement. The business recognizes diversity as a critical talent resource and considers diversity recruiting a strategic step in building a strong highly-engaged workforce.

Arold de Vries: We hire the best person for the job. Some people might find it a difficult thing – the concept of a female yard manger. Although, we do have one in Sweden and we have one in the Ukraine. But, the problem is, there's not many to choose from. We're definitely not ahead, certainly not the U.S. companies. The ones that are out there are in high demand. We simply want the best person for the job. But, we need to do a lot better in this regard.

Sue Haley: We are continually focusing on ways to recruit and retain a more diverse workforce. We have hosted diversity fairs to educate and engage our hiring partners, have created women's forums at our larger sites to promote community and understand issues, have sought diverse student groups for our on-site community college programs, and have requested women/minority applicants for our apprenticeship programs. We have increased the percentage of female employees at our sites

from 11 percent to almost 14 percent over the last three years and have a minority population of nearly 30 percent. A more diverse employee base makes us stronger.

Industrial Grade Pressure Washers

WATER CANNON.COM

1.800.333.9274

Apply for a 30 day terms account & financing is available

TOP 10 SHIPYARD LIST

Deciding which shipyard is better than another isn't necessarily an apple-to-apples exercise. In terms of human resources – the backbone of any successful manufacturing operation – the retention of today's key employees to power tomorrow's work environment will arguably determine the pecking order for future backlogs. Using those metrics, where does your yard stack up against the lineup we've chosen below?





ROYAL IHC

PO Box 204, 3360 AE Sliedrecht
 Molendijk 94, 3361 EP Sliedrecht
 Telephone: +31 184411555
 E-Mail: info@ihcmerwede.com
 Web Site: www.royalihc.com

Number of employees: 2,800
Turnover rate: 8%
Current openings:
 Number of jobs available: 13 internships
Job descriptions: www.ihcjobs.nl

Recruiter contact information:
 Staffing Department
E-Mail: staffing@ihcmerwede.com
Telephone: +31 786910984

Preferred method of job training:

IHC's in-house expertise allows the shipyard to perform most technical training in-house. General and management training is accomplished both in-house and externally.

The Case for Royal IHC:

Technological innovation is in the DNA of Royal IHC. Working at IHC therefore means working at 'the technology innovator.' A working day consists of developing innovative solutions and huge projects. Royal IHC gives employees the opportunity to reach their full potential and grow in their chosen profession. Company staff is given plenty of room for personal development and gets the opportunity to progress into higher positions. Perseverance is another characteristic that flows freely through the veins of the organization. Everyone at IHC is focused on improvement and innovation to the core. At IHC people will continue to learn and therefore their expertise will continue to grow.



Damen

**SHIPYARDS
GROUP**



Avelingen-West 20
4202 MS Gorinchem
The Netherlands
Telephone: +31 183 63 99 11

E-Mail: info@damen.com /
recruitment@damen.com
Web Site: www.damen.com/career
Recruiter contact information:
www.damen.com/career

Number of employees:
9,000 employees worldwide at 32 yards.
Turnover:
€2 billion (2014)

Current openings:

90 openings within newbuilding and repair & conversion including jobs related to Project Management, Engineering, Design & Proposal, Research & Development. These require backgrounds in marine, mechanical and electrical engineering disciplines.

Preferred method of job training:

When building, repairing and maintaining ships, it's all about working with state-of-the-art technology and processes. Damen keeps a step ahead by offering employees an ideal environment to continuously work on both personal and professional development. The firm has

established the Damen Academy for all Damen Shipyards employees. The Damen Academy offers courses of various types and lengths, from general development (Leadership –and Management Development courses and the Damen Traineeship for young professionals) courses to those focusing on specific professional capabilities.

The case for Damen:

At Damen, it's all about ships – it's what they do and who they are. Damen designs ships, builds them, services them, and repairs them. Working at Damen means working at one of the world's leading innovative, internation-

al shipbuilding companies, but it also means working at a family company. Although Damen has more than 9,000 employees and operates globally, it has never lost its family values. The unique culture of entrepreneurship and business thinking combined with a 'can-do' mentality is why Damen is so successful today. Damen stands for challenging jobs, personal and professional development, and for numerous career opportunities. And above all it's fun to work for Damen. From the first day at Damen, employees are the freedom and responsibility to chart their future course. Whatever your talents are, Damen will encourage you to develop them to the fullest.





NAKILAT-KEPPEL OFFSHORE & MARINE (N-KOM)

Erhama Bin Jaber Al Jalahma Shipyard
Southern Breakwater, Ras Laffan Industrial City
POBox 28388, Doha, Qatar
Telephone: +974 4419 7300

E-Mail: marketing@nkom.com.qa / commercial@nkom.com.qa
Web Site: www.nkom.com.qa
Number of employees: 2,600
Turnover rate: Confidential

Current openings:
For updated listing, refer to www.nkom.com.qa/en/content.aspx?sid=27
Recruiter contact information:
careers@nkom.com.qa

Preferred method of job training:

Both types of training conducted, depending on the training type and requirement. The shipyard has its own training centre in-house and routinely organizes various skill-trainings on-site for its employees. Trainings are conducted by in-house trainers and also those engaged from reputable consultancies such as Kepner Tregoe.

The Case for K-NOM:

Within a short period of 5 years into operation, Nakilat-Keppeel Offshore &

Marine (N-KOM) has become one of Middle East's leading shipyards, and received accolades for its business excellence and safety culture. These achievements have been possible due to the company's strong people focus. N-KOM believes that its people are its greatest asset. The company invests heavily in nurturing and developing its employees to reach their full potential through its robust training and development program. In addition to a customized training plan, senior mentors are assigned to every employee

to monitor their performance as well as strengthen skills and competencies. World-class trainers have been engaged and joint-training sessions with our trade partners held to ensure skills and knowledge of the team is streamlined to meet the objectives of the company and at the same time develop our talents into future leaders. This is a win-win scenario as it allows our employees to strategically explore, plan and mold their future and at the same time fulfills the organization's need for a vital and effective workforce.





**GENERAL
DYNAMICS**

NASSCO

2798 East Harbor Drive
San Diego, CA 92113

www.nassco.com

Number of employees:
3,584 (as of August 2015)

Turnover rate: 5.3% YTD
(as of August 2015)
Number of jobs available:
385 openings, 71 positions

Recruiter contact information:
Amanda Thomas
Telephone: 619- 544-3400
E-mail: amanda.thomas@nassco.com
Web site: www.nassco.com

Preferred method of job training:

General Dynamics NASSCO offers a myriad of training and development opportunities for prospective and current employees from various backgrounds and skill sets. Individuals hired as students, having little to no background of maritime industry trades such as welding and outfitting, undergo an 8-week, paid trades training program to prepare them for the NASSCO workforce. The company also offers internships for college students providing them a dynamic environment and perspective of the shipbuilding and repair business while enhancing their classroom knowledge with practical skills. In addition to internships, the company also maintains a Professional Development Program open to both internal and external applicants. The program involves a two year rotation throughout various organizations within the company including but not limited to engineering, production and management. The program provides employees with a holistic view of the different disciplines of the company's shipbuilding, design and repair opera-

tions, while establishing strong relations throughout the company and preparing participants for their future career path. The company supports its employees with a tuition reimbursement program to local universities and colleges, supervisor and employee development programs, after-hours training and certification courses for specialized trade skills and trainee and journeyman advancement, including internal programs spearheaded by various departments throughout the company.

The Case for NASSCO:

General Dynamics NASSCO is the largest full service shipyard on the West Coast of the United States. The company services a mix of both government and commercial customers for whom it has been designing, building, and repairing large ocean-going ships for more than 55 years. In addition to its San Diego location, NASSCO also operates ship repair facilities in Norfolk, Virginia; Mayport, Florida; and Bremerton, Washington. NASSCO has long been a leader in developing break-

through maritime technology; most recently, in 2015, NASSCO launched the world's first LNG-powered container-ship. NASSCO is also responsible for the design and construction of the U.S. Navy's semi-submersible Mobile Landing Platform and Afloat Forward Staging Base variant.

NASSCO fosters a culture of personal growth and continuous improvement through extensive in-house and external training and development opportunities for each of its employees. NASSCO is also one of the safest shipyards in the United States. Through its embedded safety culture, the company is Occupational Health and Safety Assessment Series (OHSAS) Specification 18001 certified and currently maintains one of the lowest incident rate records among shipyards of its size in the U.S.

Many NASSCO employees have been with the company for 30 or more years. NASSCO's commitment to its employees and the quality products produced for customers are the reasons why NASSCO is ranked among the top shipyards in the world.



AUSTAL USA

100 Addsko Road
Mobile, AL 36602
Telephone: 251-434-8000
Web Site: www.austal.com

Number of employees: ~ 4,000
Turnover Rate: Confidential
Recruiter contact information:
www.austaljobs.com

Current Openings:

Austal USA is always interested in discovering new talent in our industry. Applicants can visit www.austaljobs.com for a listing of current openings and position descriptions. The recruiting website also allows interested applicants who don't qualify for any of the current open positions to join the Austal talent network and receive updates on positions that become available in the future.

Preferred method of job training:

Austal USA conducts all professional training in-house. The state of Alabama has provided Austal with priority use of 60 percent of the Alabama Industrial Development and Training (AIDT) Maritime Training Center, less than one mile from the main production facility. Most of Austal's pre- and post-hire training is conducted at this state-of-the-art training facility.

The Case for Austal:

Austal USA is a global leader in safely and profitably building high-speed aluminum ships while meeting or exceeding customer expectations. Currently working under two U.S. Navy ten-ship block-buy contracts worth over \$5 billion; the 338-foot Joint High Speed Vessel and the 419-foot Independence-variant Littoral Combat Ship, Austal employs over 4,000 of the country's most talented ship production and engineering employees and has a current backlog beyond 2020. Austal USA has hired over 2,000 front-line workers in the past five years. Of those, 63% received free training through the partnership with Alabama Industrial Development Training (AIDT); 36% received paid training post-employment. During this five-year span 71% of our employees were promoted and received pay increases and 300 completed advanced training in the paid Lean/Rapid Improvement Workshop. Austal is recognized by the Department of Labor as having one of the top apprenticeship programs in the nation. Since 2006 Austal has hired nearly 700 apprentices, many since promoted to supervisory or higher skilled jobs. Austal takes pride in providing employees with a safe working environment worthy of several industry safety awards over the past few years.



VIGOR INDUSTRIAL



Locations in Oregon, Washington & Alaska
5555 N. Channel Avenue
Portland, OR 97217
Telephone: 503-247-1777

E-Mail: info@vigor.net
Web Site: www.vigor.net
Number of employees: 2,532
Turnover rate: 18%

Current Job Openings: 127
Job descriptions:
Various @ www.Vigor.net/jobs
Recruiter contact information:
recruiter@vigor.net



Preferred method of job training:

Vigor supports a variety of training methods. Vigor offer on the job training, partner with unions and collaborate with local community colleges in Oregon, Washington and Alaska.

The Case for Vigor:

Vigor is a thriving, increasingly diversified company offering shipbuilding, high performance aluminum vessels, ship repair, blasting and coating, machining and complex fabrication services at 12 locations throughout the beautiful Pacific Northwest and Alaska. Vigor is motivated by three simple words: "Industrial Jobs Matter," to its workers, their families, communities and country. The firm strives to make the company more competitive, and remains focused on what really matters: Vigor's people.

Vigor has invested in training and facilities to provide workers with the opportunity to grow and cross-train in new areas. The firm has diversified to better weather the ups and downs of any one market segment and thereby provide more job stability for its people. While investing the critical infrastructure necessary to compete on a global level, Vigor has also worked hard to develop into a company driven by four core values:

- **Truth:** *We see the truth and we speak the truth.*
- **Responsibility:** *We act on what we know is right.*
- **Evolution:** *We seek mastery, and we adapt to a changing world.*
- **Love:** *We care about the people we work with and the world we live in.*

INTERNATIONAL SHIP REPAIR & MARINE SERVICES, INC.



1616 Penny Street
Tampa, Florida 33605
Telephone: 813-247-1118
E-Mail:
jaslanian@internationalship.com

Web Site: www.internationalship.com
Number of employees: 205
Turnover rate: 15.5%

Recruiter contact information:
E-mail: Rlapresti@internationalship.com
Telephone: 813-247-1118
Web Site: www.internationalship.com

Preferred method of job training:

ISR has a variety of training incorporating both certifications from outside training resources, such as community welding certifications and educational partnerships, to on-site testing and certification offered within the yard. Additionally, the company is very supportive of educational outreach at the high school level to continue to expand training and internships for students and create greater awareness of maritime and shipyard career paths. ISR utilizes both methods – inside and outside training – dependent upon the skills to be acquired.

The Case for International Ship Repair & Marine Services:

ISR is a progressive, stable shipyard with a proven track record of completing both complex and basic projects. With an emphasis on 3 pillars created from listening to customers, ISR has consistently grown in both revenue and capabilities. These pillars are: exceptional quality, competitive pricing, and reducing out-of-service time of vessels and communication. ISR's most recent expansion has been with its acquisition of a Panamax Sized Dry Dock. Additionally, the shipyard has partnered with an International Ballast Water Treatment system provider to establish a North American Training center, the first of its kind. These two items clearly demonstrate ISR's focus and commitment

to the future of both its customers and the environment. Strategically located, ISR can and does successfully serve domestically owned/operated vessels of all kinds as well as foreign.

Current openings:

2 Managerial openings, but always hiring for craft and tradesmen positions

Number of jobs available: Helpers, Welders, Shipfitters, Pipefitters, Crane Operators, Foremen, Leadermen, Ship Superintendents, Marine Estimators/Contract Managers, Production Management.

Job descriptions: Detailed job descriptions available upon request from the Human Resources department.

METAL SHARK



Jeanerette Headquarters and Production Facility
6814 E. Admiral Doyle Drive
Jeanerette, LA 70544
Telephone: 337-364-0777

E-mail: sales@metalsharkboats.com
Web Site: www.metalsharkboats.com
Number of Employees: 250+
Turnover Rate: Confidential
jobs@metalsharkboats.com

Preferred Method of Job Training:

This varies depending on position and level of responsibility, with external training and certification required for some positions. In any case, Metal Shark prefers candidates who can capably demonstrate their knowledge and experience, and is happy to provide ongoing training and advancement opportunities for qualified individuals.

The Case for Metal Shark:

Best known for the welded aluminum vessels it produces for the U.S. Navy, Coast Guard, and other military and law enforcement customers, Metal Shark greatly expanded its production capabilities with the opening of its new

Franklin, LA shipyard in 2014. Metal Shark now offers aluminum and steel vessels up to 250' and has expanded into numerous commercial markets. This year Metal Shark's new Franklin yard has delivered a 45' monohull pilot boat, a 75' catamaran Dive Support Vessel, a 38' yacht tender, and 75' catamaran and 55' monohull multipurpose port security vessels both with fire fighting and CBRNE capabilities. To support its efforts at the new Franklin yard, Metal Shark has promoted personnel from its nearby Jeanerette, LA production facility, while hiring others from outside the organization. Due to the significantly increased vessel size and complexity, the company continues to seek qualified

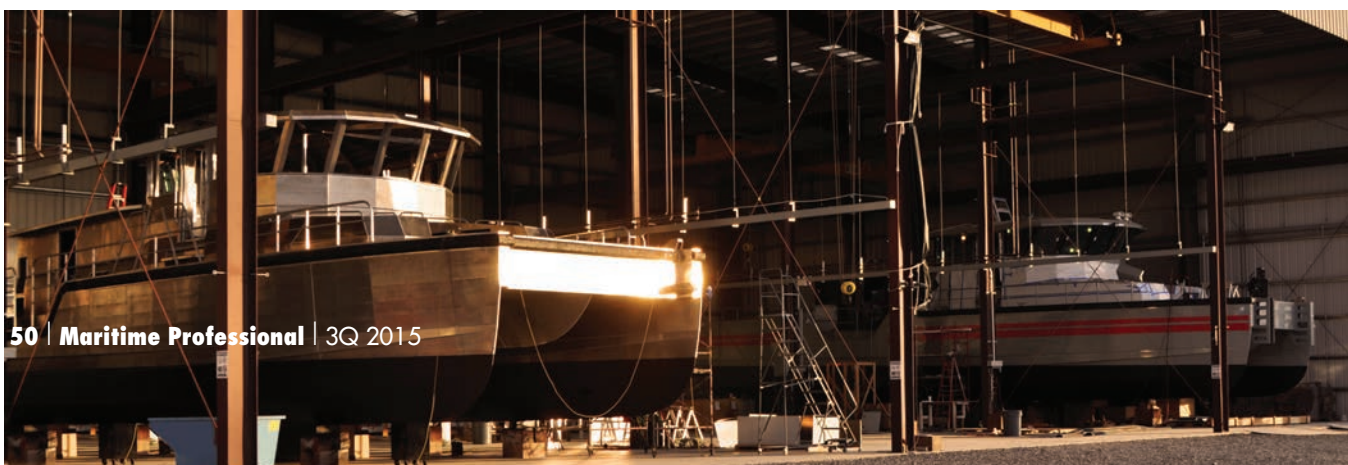
candidates in a number of fields. As a family owned business in place for over 30 years, Metal Shark strives to offer a safe and friendly work environment with numerous advancement opportunities. The company touts its clean working conditions, health insurance, matching 401K, and other employee benefits among its perks of employment.

Current Openings:

Welders/Fitters, Marine Mechanics, Marine Electricians, General Shop Hands

Number of Jobs Available: 20+

Job Descriptions: Metal Shark is seeking qualified personnel to join its rapidly growing team. The fit of each applicant will be assessed on an individual basis, but the firm recruits for quality craftspeople in the following disciplines: Welders/Fitters, Marine Mechanics, Marine Electricians, CNC Operators and Shop Hands.





8365 Hwy. 308 South
 Lockport, LA 70374
 Telephone: 985-532-2554
 Web Site:
www.bollingershipyards.com

Number of Employees: ~ 2,000
Turnover Rate: Confidential

Recruiter Contact Info:
 Cathy S.
Toll Free: 877-465-1985
Direct Line: 985-532-7239
www.bollingerjobs.com

Preferred Method of Job Training:

Bollinger Shipyards is one of the nation's most respected employers. Offering competitive wages, attractive benefits packages, skills training and the opportunity for advancement, Bollinger provides more than just a place to start a long lasting rewarding career. Over one hundred areas of training at Bollinger range from respiratory protection, fatigue and fire prevention to overhead crane awareness, hazardous waste handling, oil spills and ethics. The company uses its own trainers, along with third-party organizations, for staff development.

The Case for Bollinger:

Bollinger is an equal employment employer and is committed to providing employment opportunities to minorities, females, veterans and disabled individuals. Today, thousands of Bollinger

professionals proudly strive to uphold the standards of excellence which have guided Bollinger Shipyards for more than half a century. They have brought recognition to South Louisiana and honor to the Bollinger name. Family owned and operated since 1946, Bollinger Shipyards specializes in new construction, steel fabrication, vessel repair and conversion of a wide variety of U.S. Coast Guard and military vessels and commercial offshore and inland vessels. Bollinger currently operates ten shipyards, all of which are ISO 9001:2008 registered and strategically located throughout South Louisiana and Texas with unrestricted access to the central Gulf of Mexico and the Mississippi River. With 30 dry docks ranging in capacity from 400 tons to 10,500 tons, Bollinger Shipyards provides a wide variety of dry-dock, repair and conversion

services for both shallow and deepwater vessels and rigs. Bollinger Shipyards is proud of its long-established reputation of integrity as a leader in the shipbuilding industry; a reputation emanating from the company's success in creating a workforce dedicated to the principles of continuous improvement.

Current Openings:

For more information regarding Bollinger career opportunities, applicants can visit www.bollingerjobs.com. Available jobs at Bollinger include Professional Trades, where Electrical Engineers, Estimators, Marine Engineers, Naval Architects and P C Client Technicians are being sought. Openings for skilled trades include Blasters/Painter Supervisors, Tig Pipe Welders, Test & Trials Marine Electricians, Crane Operators and Marine Electrician



Preferred method of job training:

Ingalls utilizes both external training and in-house training. The Apprentice School at Ingalls Shipbuilding accepts over 200 apprentices per year. The school offers two- to-four, tuition-free apprenticeships in 13 trades. Apprentices work a 40-hour week and are paid for all work, including three of the four hours spent in academic classes. Through partnership with the Mississippi Gulf Coast Community College, The Apprentice School's academic program provides the opportunity to earn an associate's degree in maritime technology or a bachelor's of science degree in Ap-

1000 Jerry St. Pe' Hwy
 Pascagoula, MS 39568
Telephone: (228) 935-1122
Web Site: www.huntingtoningalls.com

Number of employees: 11,500
Voluntary Turnover rate: 5 percent
Recruiter contact information:
www.buildyourcareer.com and
 1-888-935-1507

plied Technology. Currently there are approximately 700 apprentices and this is expected to grow to 800 by year's end.

The Case for Huntington Ingalls Shipbuilding:

For more than 77 years, the employees of Ingalls Shipbuilding facilities have pioneered the development and production of technologically advanced,

highly capable warships for the surface Navy fleet, U.S. Coast Guard, U.S. Marine Corps, and foreign and commercial customers. Ingalls Shipbuilding in Pascagoula, with 800 acres and 11,000 employees, is the largest manufacturing employer in Mississippi and a major contributor to the economic growth of the state.



REGISTER NOW AND SAVE

New for 2015!
Full session on Ship Telematics. Listen and learn, as 10 industry experts share their expertise on connected ships and cyber security.

SHIPPINGInsight 2015

Fleet Optimization Conference & Exhibition

October 13-14, 2015

Stamford Marriott Hotel & Spa

Stamford, Connecticut

www.shippinginsight.com

Broaden your horizons, learn from experts and network with your peers at the Number One maritime technology event in North America. This is the one maritime-industry event you can't afford to miss.

Register online now to take advantage of the **Early-Bird \$200 discount!**

SHIPPINGInsight 2015 by the numbers:

- 25+ senior executives from international shipping companies as panel moderators or speakers
- 5 keynote speakers
- 6 themed panel sessions
- 4 roundtables of industry experts
- 9 networking events
- 25+ industry sponsors
- 40+ exhibitors
- 4 supporting organizations
- 5 media sponsors
- 1 SHIPPINGInsight award presentation
- Up to 200 registered delegates
- 1 dedicated seminar presented by ShipNet

Conference Chairman and Keynote Speakers



Captain Michael Wilson
President & COO (Americas)
Laurin Maritime
Conference Chairman



Gary Vogel
Chief Executive Officer
Eagle Bulk Shipping
Conference Keynote Speaker



Scott Bergeron
CEO, Liberian
International Ship & Corporate Registry
Roundtable Keynote Speaker



Paal Johansen
VP/Dir. Operations
Maritime
DNV GL
Session A Keynote Speaker



Angus Campbell
Managing Director
Bernhard Schulte
Shipmanagement
Session B Keynote Speaker



Ronald Spithout
President, Maritime
Inmarsat
Session C Keynote Speaker

Feedback from Last Year's SHIPPINGInsight

"Compelling, finally an event focused on providing shipowners/managers the latest information on actual experience, products and services to optimize fleet performance and compliance while reducing OPEX." – Erny Otterspoor, Vice President and Technical Director, TBS-Roymar Ship Management.

SHIPPINGInsight

intelligence for effective maritime management.

Contact: info@shippinginsight.com | Phone: +1 434-295-6642

U.S. Shipyard Employment Data -

Back in 2006, and fueled by a Katrina relief grant to the Alabama Technology Network (ATM), four shipyards and four workforce development organizations along the U.S. Gulf Coast formed Gulf States Shipbuilders Consortium (GSSC). GSSC membership now stands at 76 members, of which 15 are shipyards representing almost 30,000 employees. The mission of GSSC is to promote increased productivity and improved competitiveness in the Gulf Coast ship building industry. Part of that involves expanding the number of technically skilled workers in the region. To that end, and in the fourth quarter of 2014, GSSC surveyed shipbuilding and repair facilities on wage and benefits offered to employees.

The data in the survey relates to 16,112 hourly production craft work-

ers out of a total employment base of 24,307 employees. The results of that survey were eye-opening, and provide a good window on what makes the shipbuilding industry tick: the people that work in those yards. *By the Numbers, U.S. shipyards wage and benefit numbers – completely anonymized – tell the real story:*

Pay Rates are Up: Hourly wages for all entry level positions are up from the previous year; with some crafts showing as much as a 42% increase for entry level pay. Top level hourly pay rate increases were more modest, ranging from 4.8% to 15.9%.

Pipe is King: The largest increases for hourly rates show up in two crafts; namely, pipe welding and pipe fitting. And, employers are willing to pay a pre-

mium to get them. The data, says GSSC supports recent reports that demand for pipe crafts is currently the hottest in the industry. Last year, the numbers said that shipfitters and structural fitters were in high demand.

High Turnover Rates: Finding enough qualified and experienced workers is hard enough, say GSSC members, but when *annualized turnover rates exceed 25% for shipyards*, the situation is arguably approaching crisis levels. Turnover rates, according to the survey, are highest among skilled trade providers, adding still more pressure to the job market.

Benefits: It probably comes as no surprise to anyone that reported benefit packages and other incentives are shrinking, especially in comparison to last year's survey. Fewer benefits and

ENTRY LEVEL HOURLY RATE (USD \$)

	Pipe Welder	Pipe Fitter	Structural Welder	Ship Fitter	Outside Machinist	Tack Welder	Rigger	Marine Electrician	Crane Operator	Laborer
Low	11.41	11.41	11.41	11.41	11.41	11.00	11.41	11.41	14.75	8.00
High	40.00	36.00	36.00	32.00	26.00	19.00	30.00	26.00	36.00	15.00
Mean	20.98	19.31	18.85	18.33	16.98	14.48	17.73	18.23	21.85	11.64

TOP LEVEL HOURLY RATE (USD \$)

	Pipe Welder	Pipe Fitter	Structural Welder	Ship Fitter	Outside Machinist	Tack Welder	Rigger	Marine Electrician	Crane Operator	Laborer
Low	21.25	20.00	20.00	20.00	20.00	14.50	16.50	20.00	21.25	10.00
High	45.00	38.00	38.00	65.00	28.00	23.98	32.00	28.00	36.00	24.10
Mean	26.05	24.62	24.44	27.12	23.21	17.24	22.09	22.79	25.20	14.54

Source: GSSC

by the numbers

increasing deductibles for health care benefits were the rule, and not the exception. The average number of paid vacation days earned in the first year of employment is up slightly to 6.6 days, but at 15 years, it is down from 19 days to 16.8 days. The percent of *healthcare premiums employers pay on behalf of employees varies widely from zero percent (0%) all the way to a high of 70%*. Likewise, annual out-of-pocket health-care deductibles have similar range of \$0 – to - \$2,400. Perhaps the one thing that is up is referral or recruiting bonuses. Today, 90% of companies pay these bonuses – a clear reflection of the current job market.

Base Wages: Base wage levels – entry and top level, for each of the ten (10)

crafts depicted in the chart below gives a good snapshot of the state of the industry. Pipe welders get paid the most as entry level workers, while ship/structural fitters take over as the highest paid top level craft.

Pensions / Retirement Plans: Only ten percent (10%) of respondents reported offering a defined benefit retirement program. On the other hand, *ninety percent (90%) of shipbuilding and repair companies reported that they provide either a 401K or profit sharing plan*. None of the skilled labor providers reported offering any type of retirement, 401K or profit sharing benefit.

Vacation Days: As with paid holidays, skilled labor providers do not



typically provide workers paid holidays. Among shipyards, paid vacation generally varied as a function of the length of tenure with a company, in accordance with the chart show below:

+ Number of Vacation Days by Years of Employment +						
Vacation Days	1 year or less	5 years	10 years	15 years	20 years	25 years
0	14%					
5	57%					
10	29%	86%	29%	14%	14%	14%
15		14%	57%	43%	30%	30%
20			14%	43%	43%	43%
25					14%	14%
Total	100%	100%	100%	100%	100%	100%
Highest	10 Days	15 Days	20 Days	21 Days	25 Days	25 Days
Lowest	4 Days	10 Days	11 Days	12 Days	12 Days	12 Days
Average	6.6 Days	11 Days	14.7 Days	16.8 Days	18.3 Days	18.3 Days

Source: GSSC

Contract Labor in the U.S. Maritime and Offshore Sectors

A 'win-win' scenario is emerging for employers and human resources alike. But, mitigating Contract Employee Risk in the United States means understanding how the laws and regulations work.

By Eric Peters, Managing Director, Faststream USA

The rapidly burgeoning skills gap for the offshore and maritime labor market is also driving a change in employee and employer mentality when it comes to working on a contract basis. In part because of current market conditions but also as a function of changing business models, companies are hiring more contractors and fewer permanent hires. Beyond this, government regulations have complicated already murky waters of determining employee status – 1099 independent contractor, permanent hire, etc. – and have required firms to reassess the classification of personnel in order to mitigate compliance risk.

At the same time, a similar and no less important shift in employee mindset has occurred. Employees in the oil and gas industry especially are well aware of the skills gap and know exactly how important their skills and expertise are – and they know employers are willing to pay a premium for them. By “hopping” from job to job every 6-12 months, employees can demand a higher hourly rate or salary, which increases their overall happiness in the industry. That said; there are more efficient vehicles for employees to ride along the way, ones which can increase access to more employers, and at the same time, maximize the benefits available to these individuals.

FIXED VERSUS VARIABLE TERM EMPLOYMENT

For employers, a rapidly emerging strategy involves a close look at the organizational chart. What many find is that they have certain people on the books that tend to be seasonal workers – with peaks and valleys in their workload – and they decide whether they should keep those people as a fixed headcount or use them in a contract / temporary solution status. Shipyards in particular often need a defined skillset for a set time versus committing to them on a full time basis. These job descriptions run the gamut from copper and nickel welders, all the way up to program and project managers on a newbuild site. *Bottom line:* companies are now looking at their business in more a project setting – staffing up when they need people and down when they do not. If only it were that simple.

And then, there is the federal Affordable Care Act. Federal audits are now turning up instances where workers are being

treated as independent contractors when the U.S. government deems otherwise. Hence, these employees – some of whom have no health coverage – need to be offered healthcare. Another piece of the equation involves a compliant payroll solution that makes sure you are withholding all the right taxes. And, at a time when the federal government is also in the process of ferreting out what it claims is about \$8 billion in underpaid taxes in the marine and offshore industries, this is no time to be taking chances that your contractors will get caught in that net.

CHANGING MINDSETS

A recent survey conducted by Faststream Recruitment Group went out to more than 5,000 individuals in the shipping sectors, marine services, shipyard and oil & gas sectors. Revealing a growing trend in maritime employment circles, in just three basic questions, employees showed a strong affinity for the new business strategy.

But, beyond the increase in the use of contract employees in the maritime and oil and gas industries, bigger concerns loom on the horizon. The U.S. government's recent crackdown on employee classification, which resulted from the Patient Protection and Affordable Care Act (PPACA) and the Internal Revenue Service's (IRS) recent claim to be more vigilant against companies that don't meet contract employee classification requirements, means the risk for audit and financial penalty for maritime, shipbuilding and oil and gas companies in the U.S. has never been greater. According to Ted Dimitry, Vice President of Alliant Insurance Services, insurance should be the top of that list of growing concerns.

RISK

Companies unsure as to whether they are misclassifying employees probably have already made mistakes, especially if they employ contract labor today on or near the water. Dimitry told *MarPro* in August, “Over the last several decades, the U.S. Congress has passed a number of laws that affect an employer's obligations and liabilities. Some of these laws appear to overlap or conflict, which can lead to some confusion for companies employing personnel working on, over or even

near the territorial waters of the United States and its territories or possessions.”

The world of inland marine construction is perfect example of this reality: a land-based construction company wins a contract to repair municipal bridge and places workers on board a barge for a short period of time – where they unfortunately get hurt – and the employer suddenly finds himself embroiled in several lawsuits involving longshore and/or Jones Act issues.

Dimitry goes on to say that any company pursuing any sort of commercial maritime venture, should be aware of the laws and how they can impact that company’s liabilities and obligation, both inherent under the law and as required by contract. And, he adds, there are four main items of legislation to address in commercial maritime ventures within the jurisdiction of the United States. These include:

- ***The Longshore and Harbor Workers’ Compensation Act (LHWCA a.k.a. USL&H);***
- ***The Merchant Marine Act (“The Jones Act”);***
- ***The Death on the High Seas Act (DOHSA); and***
- ***The Outer Continental Shelf Lands Act (OCSLA)***

Employers sending personnel to work offshore in the territorial waters of the United States put themselves at risk unless they secure coverage in the form of Workers’ Compensation and Employer’s Liability (WC-EL) insurance, including endorsements extending coverage to include benefits as required under the US Longshore and Harbor Workers’ Compensation Act (LHWCA or USL&H). Beyond this, Maritime Employer’s Liability (MEL) coverage inclusive of both the Merchant Marine Act of 1920 (as amended) (“the Jones Act”) and the Death on the High Seas Act (DOHSA) may be necessary. This can be purchased either an endorsement to the Workers’ Compensation policy or as a “stand-alone” MEL policy.

For those firms who are accustomed to working in these environments with full time staff, the advice may seem elementary. On the other hand, and to avoid misclassifying the growing number of contract employees being utilized on and around the water in these uncertain times, companies can enlist the resources of a staffing firm to ease their minds. But, that staffing firm should be one that assumes all the compliance risk associated with temporary, temp-to-hire and interim employees. By directly employing contract workers, a firm – like Faststream, for example – assumes all risk for tax liability, insurance (health and liability) and benefits.

For the workers themselves, the use of a staffing firm also eliminates headaches for would-be contract staff that, under most circumstances, must provide their own insurance (assuming that the principal’s policies would allow it at all) and often find it impossible to secure such coverage on their own at a reasonable price.

THE EMPLOYEE: WHAT IS IN IT FOR ME?

As the marine sector moves away from being ‘employed’ to

a position of being ‘employable,’ companies understand that they simply cannot ‘over hire’ any longer. But, where does that leave the worker? The move away from the traditional model of 30 years of work, the gold watch and retirement on a pension can be a scary prospect for some professionals. Probably the most frightening part of the ‘contract’ equation is that, up until now, healthcare coverage wasn’t a ‘given.’ And if it was, it ended up being unaffordable. Now, everyone has to have coverage. That’s the law.

In the Faststream staffing model, the worker doesn’t have to worry about the economy of one company – instead, they get access to all of them. Continuously vetting prospects and references yields the best possible candidates. Beyond that, the right staffing agency understands that the current assignment will eventually come to an end. Before that happens, they are already shopping the best and the brightest candidates to the next situation or employer.

As candidates warm up to the reality that project-based employment is the way of the future, they also quickly position themselves as ‘employable’ as opposed to being simply ‘employed.’ And, when it is all said and done, it really is a two-way street in maritime and offshore recruitment. Companies need talent but don’t always want permanent staff. Candidates want to work and they can earn, learn and experience more by taking short and medium term project work. It’s a win-win situation.

Faststream ‘contract’ employees sit on the Faststream W2 where all withholdings, insurance – appropriate for the assignment at hand – is bound and those same professionals are offered a premium healthcare package. The employer gets the same benefit of a 1099 employee without the hassle of a 1099. As companies begin to more closely scrutinize their business partners, there are, in reality, a dozen things you need to consider before you say, “We’re cutting back, bringing in contract labor.” It sounds good and it may be the right move. But, first, you have to vet who you are doing business with.

THE NEW NORMAL: PEACE OF MIND?

Insurance, benefits, payroll – and the law, too: all are important issues to everyone – employers and workers alike. When you finally make the move to leverage quality contract human resources, or if you have decided that your current formula might not be making the grade, make sure your next move includes a staffing solution whose service advisory plank starts with reducing your corporate and legal liabilities.



Eric Peters is the Managing Director, Faststream USA. Contact him at Eric.Peters@faststream.com



Career Development means Company Support for the *New Generation of Mariner*

By Murray Goldberg

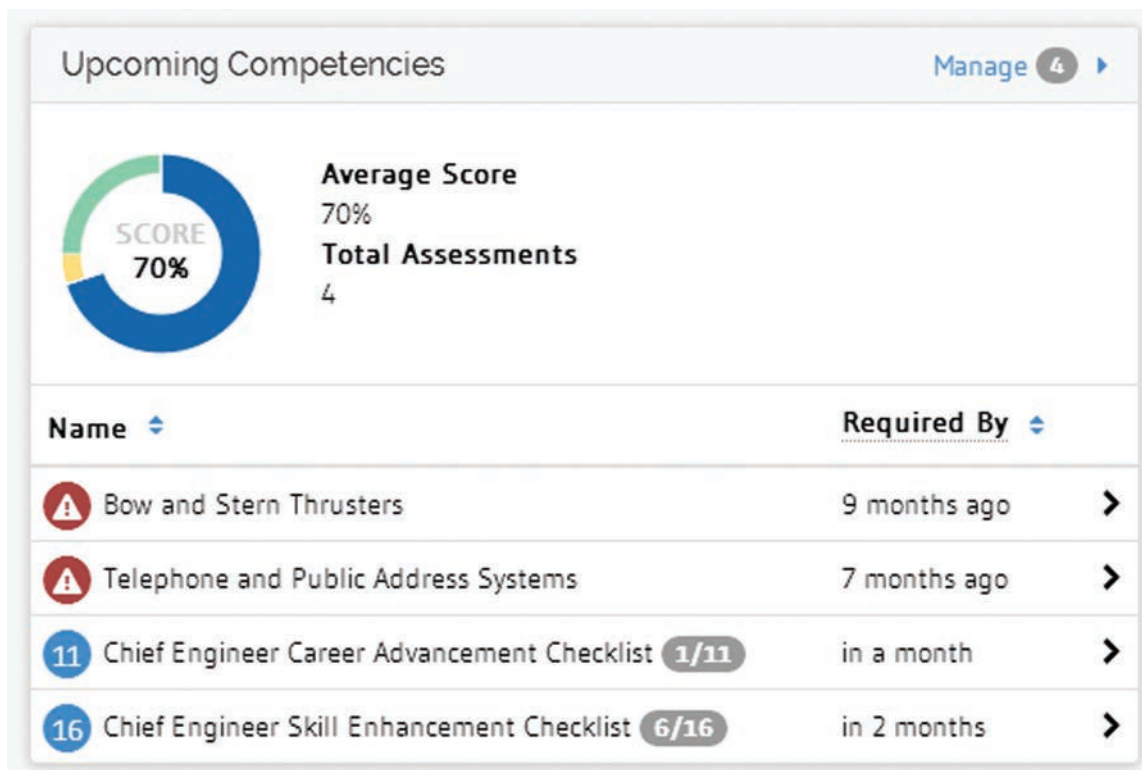
The maritime workforce is in a state of rapid change. Young (and even not-so-young) mariners are seeking careers, not jobs. They expect to learn, develop their abilities, and advance through their place of employment. In short, they are looking for opportunities to grow and excel. If they don't find those opportunities in their current company, they will find them elsewhere. These changes are forcing vessel operators to adapt.

Not only must operators respond to the needs of this new generation of employee, but they must do so in an increasingly complex world. Regulatory environments, employee churn, training challenges and succession planning all add to these complexities. In one such effort, a team at British Columbia

Ferry Services Inc. is addressing those challenges. Together with their learning management system provider, the team is developing a novel web-based software tool called the "Career Navigator." The Career Navigator is currently in beta testing and will be piloted at BC Ferries as a supporting tool for the "Career Progression" phase of their Standardized Education and Assessment (SEA) program.

Career Navigator

According to Jeff Joyce, the Director of Fleet Operations at BC Ferries and thought leader for the Career Navigator, "The Career Navigator is fundamentally about enabling transparency, accountability, planning and management. More specifi-



cally, it is intended to enable career progression for all individuals, whilst providing the company with a set of tools to manage that inherent complexity.” Joyce envisions the Career Navigator as a tool to help satisfy three important goals. Actually, Career Navigator addresses all three:

- *transparency around all aspects of career progression,*
- *the ability to nurture and support employees in their career progression,*
- *tools and information to assist the company in making near-term and strategic decisions around career progression and succession planning.*

Transparency

Effective training and career advancement must be a partnership between employees and their employer, not something done “to” employees “by” the employer. There can be no successful partnership without transparency. The Career Navigator is intended to provide transparency into many aspects of training and career progression.

In the context of the Career Navigator, the SEA Team has coined the acronym “TASK” to generally refer to some Training, an Ability, a Skill, or some Knowledge; think of a TASK as a competency, but more broad. The career navigator has the potential to track the completed and assigned “TASKs” for each operational employee.

The Career Navigator can provide transparency by way of a learning plan “dashboard” indicating which TASKs are required of each employee, and when. It does this in the form of a visual timeline highlighting upcoming, overdue, and achieved requirements. For each employee who opts-in, their learning plan is visible to the employee, their supervisor and if they choose, any mentors the employee may have (more on that below). There is no paper to carry or lose – the learning plan is available anytime and anywhere the employee or his/her supervisor wishes to access it. This form of transparency is fundamental, but even this basic information is unclear in many work environments.

In addition to the learning plan, employees can be provided feedback on their achievement in acquiring each TASK. This feedback is standardized according to guidelines or “rubrics” which help ensure uniformity. Along with the learning plan, this feedback could be especially helpful when an employee acquires a new supervisor. The detailed history provided by the learning plan and the related feedback, if shared, will help the new supervisor immediately understand the employee’s strengths while highlighting learning and support opportunities.

A third form of transparency envisioned in the Career Navigator is the gap analysis report. This report will allow employees to view “what if” scenarios showing the TASKs which would have to be achieved to prepare themselves for a position of interest. Likewise, the report will be able to show



“The Career Navigator is fundamentally about enabling transparency, accountability, planning and management. More specifically, it is intended to enable career progression for all individuals, whilst providing the company with a set of tools to manage that inherent complexity.”

– Jeff Joyce,

Director of Fleet Operations at BC Ferries

employees a list of positions they are “nearly” qualified for – those requiring only a small number of new TASKs for that employee.

These basic forms of transparency could help make the employee an engaged participant in their training and career advancement. This has been shown to help place employees into more suitable positions within the company, to improve employee retention, and generally make for more engaged and happy workers.

Supporting Employees

To fully develop their employee’s talents and opportunities, the Career Navigator team is envisioning additional functionality to support and nurture employees as they progress through their career. Mentorship is one example. All employees have tremendous expertise, and sharing that expertise is beneficial to the expert, the person being mentored, and to the company. To facilitate this, the Career Navigator can allow any employee to indicate (by clicking a checkbox) that they are willing to act as a mentor. For any employee seeking a mentor, the Career Navigator lists appropriate mentor candi-

dates according to the TASKs needed by the employee, and the TASKs held by the potential mentors. Essentially, the employee is presented with a list of mentor candidates, ordered by their ability to mentor that particular employee. Employees then have the option of allowing their mentors access to their learning plan. Facilitating these mentorship relationships and putting their management in the hands of the employees is highly supportive and makes employees active drivers of their own career advancement.

Another aspect of employee support for career advancement opportunities is the Career Navigator's capacity to facilitate supportive communication between the employee, their mentors, and their supervisor. Each employee's learning plan has several web-based discussion areas.

There is a discussion area for each TASK the employee has been assigned or accomplished, one for each high-level goal they are working towards, and one overall discussion area. Each of these discussion areas allow the supervisor/mentor to guide the employee, and the employee to ask questions. These discussions are not only supportive, but their history provides valuable insight into the learning style of the employee, their abilities, and their areas with opportunity for improvement. Overall, the Career Navigator presents a central hub of support available to the employee regardless of when they need it or where they are.

Decision Making and Strategic Planning

The data managed by the Career Navigator has the potential to provide incredible value to employees and employers as the data grows year after year. Consider for a moment that the Career Navigator "knows" which TASKs are assigned to each employee, and which have been accomplished. It learns over time how long, in general, it takes for employees to accomplish a TASK. It knows when TASKs lapse or are lost because the employee leaves the company. It even learns, over time, the typical progression of employees through the TASKs, and which career paths present the most efficient routes from one TASK to another. And because these TASKs are often related to the abilities needed to fill a company position, an opportunity presents itself to mine this data for succession decision making and strategic planning.

According to Jeff Joyce, "Big data is the new frontier all successful companies should leverage and the Career Navigator provides that tool set. It may seem esoteric, but the Career Navigator provides hope for the employee and sustainability for the company." With this data, the Career Navigator should be able to identify candidates who are ready or nearly ready to fill needed positions, and then automatically generate learning plans linked to learning materials to support those employees' progression into those positions.

Perhaps more interestingly, the Career Navigator collects data on the career paths that employees take through the company as they move from position to position, including the frequency and speed at which they do so. This creates the potential for the Career Navigator to eventually look years into the future, indicating where future staffing gaps may occur, and providing remedial suggestions on how to adjust training and hiring now to close those future gaps.

This kind of insight, provided by big data, could be tremendously valuable both to the company and to the individual employees. Although the Career Navigator is still in testing and development, it holds tremendous promise in terms of increasing transparency, and supporting and nurturing employees through their maritime career. In addition, it is hoped that it will open up the "black box" of data which will be incredibly valuable in helping companies understand, predict and optimize both short-term and long-term career progression with (not "for") their employees.

This kind of initiative, where the employee is made a partner in the joint success of his/her personal goals and company goals, has been shown to greatly improve company culture and, as a result, safety. Over time, employees who are not driven to succeed tend to drift to other places of employment. Likewise, new employees choose their place of work based on its alignment with their own desire to progress and succeed. It is not an instant process, but it is a powerful one in the making of a great company.



Murray Goldberg is CEO of Marine Learning Systems (www.MarinEL.com). An eLearning researcher and developer, his software has been used by 14 million people worldwide.

Contingent Skilled Labor:

A means for Shipyards to decrease labor-related costs and economically meet ongoing production challenges.

By Joseph Keefe

Amidst global energy uncertainties and the challenges of keeping new and existing tonnage on the water and working, shipyards continue here at home with the business at hand. The good news is that workloads in the commercial and government shipbuilding sectors are holding steady. On the other hand, the downside includes an unquestionable skilled workforce shortage. Industry and maritime businesses continue to have difficulties finding tenured, qualified trades for the work at hand. Finding, attracting and keeping those skilled workers is at best, a daunting task.

Workplace Realities

A recent U.S. Department of Labor study that suggests three to four tenured craftsmen are exiting the workplace for every one new individual entering the trades. Human Resource acquisition professionals in shipbuilding and repair facilities experience this predicament daily and are conservatively interviewing four or more candidates just to find the one individual who meets their project trade specifications. For welders, who must meet highly exacting quality standards, it's not uncommon to hire just one out of every 10 candidates who walk through the door.

Obviously, as the challenge to find yard-ready craft candidates grows, so do expenditures related to attracting qualified trades to business. There are the expenses for job board postings, print want ads, social media efforts and referral or sign-on bonuses. Then there are costs associated with screening applicants, reference checking and interviewing. When combined





“Subsequent to the economic collapse in 2009, our business has seen a major shift in the hiring practices of both construction contractors and shipyards of all sizes.”

– Mike Christiansen,
Tradesmen International Senior Vice
President of sales and marketing.

with on-boarding costs related to background checks, skill assessments, drug testing, physical exams, company orientation, safety training, benefits and payroll/HR processing, the overall per-employee hiring cost can easily exceed \$2,400. And that does not even include carrying costs related to lost productivity initially realized with new employees until they are fully acclimated to the company, the yard and specific project at hand.

Changing Strategies

As the need for skilled craftsmen grows, more and more shipbuilders are turning to contract or contingent labor available through staffing services that have a focus on the marine industry and who employ marine-dedicated trades ranging from shipfitters and pipefitters to outside/inside machinists, joiners, electricians, welders and other trades.

“Subsequent to the economic collapse in 2009, our business has seen a major shift in the hiring practices of both construction contractors and shipyards of all sizes,” said Mike Christiansen, Tradesmen International senior vice president of sales and marketing. He adds, “Whereas previously they relied largely on internal resources to hire long-term employees and called us for short-term – one to three-month – employee needs, we are now supporting their long-term skilled trade needs as well.”

Essentially, Tradesmen International and other staffing services are acting as extensions of shipyard human resource departments because marine businesses recognize that reducing permanent payroll can help them meet key business objectives:

- *Increase workforce productivity – Contingent workers can be easily flexed in and out to keep the work-to-worker ratio in balance*

- *Decrease Workers’ Comp Costs and Exposure – Most staffing services carry their contingent employees on their insurance*
- *Reduce Unemployment Costs – Reducing contingent workforce totals does not impact a yard’s SUTA rate, etc.*
- *Minimize Benefits-related Expenditures – Any benefits provided to the contingent workforce are typically the responsibility of the staffing service*
- *Decrease Hiring Costs and Challenges – Staffing services have sizable trade databases and one call to them can yield multiple pre-screened candidates with specific marine skill-sets*

Marine-specialized staffing services invest heavily in multiple recruitment advertising channels above and beyond what many shipbuilding or repair businesses can realistically handle financially or even manage from a human resource department perspective. In addition, these staffing services have numerous marine industry experienced recruiters whose sole job it is to attract, screen, hire and retain proven craftsmen. According to Tradesmen’s Christiansen, “It’s to the point where we are regularly participating in our client labor planning sessions, working hand-in-hand with their internal HR personnel, with the collective goal of optimizing project labor fill-rate percentages.”

Technology

“We have just over 9,000 trade employees on client jobsites and shipyards right now,” said Christiansen. And, he says, technology plays a huge part in the human resources game. “By using our proprietary employee tracking software, we



know when these individuals will be coming off their current assignments and available for mobilization to another client's yard. This technology, combined with our applicant tracking software that helps us manage and maintain constant contact with tens of thousands of other prescreened marine craft candidates in our various trade pipelines, gives us the power to attain greater fill-rate percentages on client orders — and with marine-experienced craftsmen who more accurately meet skill-set needs of the clients we serve.”

For prospective employees, especially those who in the past may have been reluctant to consider contract work, the tracking technology signals a new way to gain access to multiple job opportunities and the ability to work more days annually, gain more experience and ultimately, exposure to a better class of potential employers.

Reputable skilled trade staffing services have therefore seen a marked increase in activity as targeted clients – like domestic shipyards, for example – incur skyrocketing hiring costs and recognize that the quality of contract skilled labor has advanced substantially over the past decade or so. That's, in part, a function of rigorous pre-screening and vetting by the staffing agencies themselves.

“The stigma of contingent craft employees as being inferior has been stamped out,” said Matt McClone, Tradesmen International vice president of workforce development. “Craftsmen recognize credible staffing services have stringent hiring procedures that have effectively sharpened the overall quality and reputation of the nation's skilled contingent employee. Our continued leadership, and ultimately our company brand, is reliant on our ability to consistently serve shipyards with safe, productive and highly skilled first-class and second-class workers. And, at the same time, we take very good care of our

valued employees.”

As business conditions change, so too, will the methods used to attract, hire and retain quality personnel. The new business model looks a little different, but the results speak volumes for the yards and maritime entities moving that direction. Hence, a permanent shift to skilled, contingent labor may well be the ‘new normal.’ That's a good thing for everyone.



Advertiser Index

Page	Company	Website	Phone#
9	ABS.....	www.eagle.org	(281) 877-5700
33	Adonis AS.....	www.adonis.no	+47 53 48 23 00
11	Austal USA.....	www.austaljobs.com	Visit our website
29	Baier Marine Company Inc.....	www.baiermarine.com	(800) 455-3917
25	Blount Boats Inc.....	www.blountboats.com	(401) 245-9300
37	Boll Filter Corp.....	www.bollfilter.com	(284) 773-8200
5	Capital One.....	Please call us at.....	(985) 857-2658
27	Danish Maritime Days.....	www.eventbuizz.com/danish-maritime-fair-2015/detail	+45 31 60 40 15
23	DNV-GL.....	www.dnvgl.com	(281) 396-1000
C3	Fairbanks Morse.....	www.fairbanksmorse.com	Please visit us online
C4	Faststream Recruitment Inc.....	www.faststream.com	(954) 467-9611
21	Fire Fighting Systems AS.....	www.ffsystems.com	+47 69 34 50 60
17	Gibbs and Cox.....	www.gibbscox.com	(703) 416-3600
23	International Registries Inc.....	www.Register-IRI.com	(703) 620-4880
3	KVH.....	www.kvh.com	(401) 847-3327
7	Man Diesel & Turbo.....	www.mandieselturbo.com	Please visit our website
39	Marine Learning Systems.....	www.MarineLS.com	1-855-E-MARINE (362-7463)
1	Seaspan.....	www.seaspan.com/careers	Visit our website
53	SHIPPINGInsight 2015.....	www.shippinginsight.com	(434) 295-6642
25	Smith Berger Marine Inc.....	www.smithberger.com	Please visit us online
31	Society of Accredited Marine Surveyors.....	www.marinesurvey.org	(800) 344-9077
29	Subsalve USA.....	www.subsalve.com	(401) 884-8801
15	Thrustmaster of Texas.....	www.thrustmastertexas.com	(832) 399-5229
35	Tradesmen International.....	www.tradesmeninternational.com	(440) 349-3432
C2	Travelers.....	www.travelers.com	Visit our website
31	Virginia Ship Repair Association.....	www.virginiashiprepair.org	Please visit our website
15	W&O.....	www.wosupply.com	(800) 962-9696
41	Water Cannon.....	www.watercannon.com	(800) 333-WASH (9274)



**OUT HERE, THERE'S
NO SUBSTITUTE
FOR EXPERTISE.**



Our commitment to your success starts with every engine we build, and continues with our Factory Certified Technician program. By building one of the industry's largest teams of technicians, and a nationwide network of service centers, you get the maintenance expertise and performance that can come only from the very people who built your engine. We train to a higher standard because we're driven to serve you better.

Learn more at www.fairbanksmorse.com/service.



Marine

**FAIRBANKS
MORSE
ENGINE**

an EnPro Industries company



SPECIALIST IN THE SHIPBUILDING INDUSTRY.

Faststream are the world's premier Maritime and Oil & Gas recruitment firm offering turn-key recruitment solutions providing key personnel to design, build, crew and operate vessels. We support vessel owners and shipyards by placing individuals on a permanent, project, interim and contract-to-hire basis. Faststream Group was established in 1999 and employs over 130 specialists dedicated to sourcing the very best talent for your organization, through a network of global offices in Ft Lauderdale, Houston, Singapore and United Kingdom.

Latest Shipbuilding/Shipyard Roles

Project Managers & Engineers

Gulf Region, East & West Coast - \$75-\$100K

Naval Architects/Marine Engineers

Mid-West & Gulf Region - \$65-\$120K

Planner/Scheduler

East & West Coast - \$65-\$95K

Designers, Drafters & Planners

West Coast & Gulf Region - \$70-\$90K

Estimators

Gulf Region, East & West Coast - \$60-\$95K

Field Engineers

Gulf Region, East & West Coast - \$70-\$95K

LNG Engineers

Gulf Region, East & West Coast - \$95-\$125K

**Contract Skilled Tradesmen
(Welders, Pipefitters, Shipfitters)**

Gulf Region, East & West Coast - \$19-\$26/hour

Find us: www.faststream.com
Call us: FL office: +1 - 954 - 467 - 9611
TX office: +1 - 713 - 636 - 9514
Email us: info-us@faststream.com

Follow us: [@faststreamUSA](https://twitter.com/faststreamUSA)
Connect with us: [in](https://www.linkedin.com/company/faststream-recruitment-group) Faststream Recruitment Group
Like us: [f](https://www.facebook.com/Faststream-Recruitment-Group-Americas) Faststream Recruitment Group - Americas

