

## Reclaiming India's Maritime Glory



**Exclusive Interview**  
**Leisure Boats & Yacht**  
**Market in India -**  
**Jayendra Kachalia,**  
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**Autonomous**  
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**Technology**  
**manufacturers' input**  
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Ali Patankar  
+91 99673 58071  
ali.patankar@oceanrademedia.com

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**THE MARITIME ECONOMY**



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Editor-in-Chief

70 % of India's trading in value happens through the Maritime Transport. The India's Strategic location in the Indian Ocean gives the space to the country to delve into the various opportunities in the Maritime Industry with respect to Trade, Ship Building, Ship Recycling, Ship Repair and other Maritime segments.

The Govt. of India's initiative like Maritime India Vision 2030 has identified over 150 initiatives to boost the Indian Maritime Industry which is crafted with the advice and the significant consultation of the private stakeholders from various segments of the Maritime Industry like Inland Waterways, Ship Building, Ports Ship Recycling, Tourism etc.

Though various factors like Geological , Geographical , Political are creating the barriers but the vision of the India to becoming a Maritime Global Hub is taking a shape and the collaborative association between the Stakeholders of the industry and the Government is exploring the Maritime Might of the country.

**Editor-in-Chief**

Pallavi Naik  
pallavi.naik@oceanrademedia.com

**Sub-Editor**

Ali Patankar  
ali.patankar@oceanrademedia.com

**Graphic & Layout**

Zeeshan Ali Husaini  
design@oceanrademedia.com

**Sales**

Debashish Sharma  
debashish.sharma@oceanrademedia.com

**Marketing**

Ali Patankar  
marketing@oceanrademedia.com

**Accounts**

Iram Patankar  
accounts@oceanrademedia.com

**Circulation / Subscription**

Ali Patankar  
marketing@oceanrademedia.com

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Editor:PALLAVI AMOGH NAIK

**Hotline No. :**

+91 77387 78769 /  
+91 77387 53108

**E-Mail :**

marketing@oceanrademedia.com  
sales@oceanrademedia.com

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### PORT ROTATION :

Karachi > Jebel Ali > Zanzibar > Karachi



## Emirates Shipping Agencies (India) Pvt Ltd

101/102, Building No2, Star Hub, Sahar Road, Andheri (East), Mumbai - 400059 India  
Phone: +91-22-62392555

### Person In Charge:

Sachin Mayekar  
General Manager Sales - India | M: +91 7506227721

Ian Menezes  
Manager-Sales | M: +91 8291202159

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# Reclaiming India's Maritime Glory

India has a rich maritime tradition and a glorious history. Being peninsular, her maritime linkages have involved trade, religion, and culture at least. For many Indians, especially those in and from coastal regions, the sea could represent a more intimate relationship with nature's elements – including a source of livelihood.

The peninsular geography divides the Indian Ocean into eastern and western halves. This influences India's policy approaches, plans and strategies, and naval positioning on both sides of the country. Even though the country's policy directives and naval engagements began to take shape and expand in the early 1990s, it was only in the last decade that conversations around these linkages and policies gained prominence. Presently, there is a greater range and number of stakeholders engaging in discussions around maritime geopolitics, trade, infrastructure, ecology, defence, and other areas

***“India's maritime might is a reflection of its rich maritime history, vast coastline, and growing capabilities across various sectors. The country has witnessed significant progress in shipbuilding, with indigenous construction of naval and commercial vessels, contributing to self-reliance and technological advancement.***

***In ship repairs, India has developed world-class shipyards and repair facilities, attracting a global clientele. Its skilled workforce and cost-effective services have earned the country a reputation as a reliable and efficient destination for ship repair and maintenance.***

***Ship recycling is an area where India has notable potential, with environmentally responsible***



**practices. With adherence to strict regulations and international standards, India is becoming a preferred choice for responsible and sustainable ship recycling.**

**India's maritime trading activities are flourishing, bolstered by modernized ports, improved logistics infrastructure, and initiatives such as 'SagarMala'. The country's strategic location makes it a key hub for international trade, connecting the East and the West.**

**Manning is another significant aspect where India excels. Indian seafarers are highly regarded globally for their competency and professionalism. The country's maritime training institutes produce a skilled workforce that serves on ships worldwide, contributing to the growth of the international shipping industry.**

**Overall, India's maritime sector plays a crucial role in the nation's economic development, ensuring self-sufficiency, creating employment opportunities, and enhancing its influence as a maritime nation. With continuous investments, technological advancements, and sustainable practices, India is poised to strengthen its maritime might and secure a prominent position in the global maritime landscape."**



**Capt Girish Phadnis**  
Country Head & Director,  
MTM Ship Management;

**Chairman,**  
Maritime Association  
of Shipowners  
Shipmanagers and  
Agents (MASSA)

Various initiatives including policies, platforms, missions, are set to propel India as a maritime nation. Let's explore a few:

## Maritime India Vision 2030

The Ministry of Ports, Shipping and Waterways prepared the Maritime India Vision (MIV) 2030, a blueprint to accelerate the growth of India's maritime

MIV 2030 identifies over 150 initiatives across various maritime sub-sectors like ports, shipping, and waterways.

These initiatives particularly focus on operational efficiency improvement, port-driven industrialization and creating safe and sustainable world-class ports to address the growing trade volume needs, as well as reducing logistics cost through better evacuation and cost-effective processes. These initiatives will add impetus to integrated efforts towards generating seamless prospects for business and entrepreneurship, and create employment opportunities on a large scale.

The measures will add strength to India's efforts towards building a prosperous and 'Aatmanirbhar Bharat'.

The container throughput of Indian ports stood at 17 million TEUs for the period 2020, whereas that for China stood at 245 million TEUs for the same period. The combined container throughput across top 20 major global ports stood at 357 million TEUs during the period 2020.

Presently, India does not have landside mega-port and terminal infrastructure to deal with ultra-large container ships. Ports need higher draft, several large cranes, better yard management capability, increased automation, larger storage facilities, more inland connectivity, and enhanced labour productivity. Ultra-large container ships seek speedy unloading of the large volumes they carry.

To develop global-standard ports in India, MIV 2030 has identified initiatives such as developing world-class mega ports, transshipment hubs, and infrastructure modernization of ports. Investments to the tune of INR 1,00,000–1,25,000 crore are estimated for capacity augmentation and development of world-class infrastructure at Indian ports. Ports at Vizhinjam (Kerala) and Vadhavan (Maharashtra) will have natural drafts in excess of 18m that would enable ultra-large container and cargo vessels to call on the ports, thereby boosting efforts to make India the world's factory by improving the container and cargo throughput.



## MIV 2030 – Key targets

Key Performance Indicator	Current (2020)	Target (2030)
1 Major Ports with >300 MTPA cargo handling capacity	-	3
2 % of Indian cargo transshipment handled by Indian ports	25%	>75%
3 % of cargo handled at Major Ports by PPP/ other operators	51%	>85%
4 Average vessel turnaround time (containers)	25 hours	<20 hours
5 Average container dwell time	55 hours	<40 hours
6 Average ship daily output (gross tonnage)	16,500	>30,000
7 Global ranking in ship building and ship repair	20+	Top 10
8 Global ranking in ship recycling	2	1
9 Annual cruise passengers	4,68,000	>15,00,000
10 % share of Indian seafarers across globe	12%	>20%
11 % share of renewable energy at Major Ports	<10%	>60%

**“India is an excellent sourcing market for manpower where international cruise companies look up to Indians to fulfil their manning requirements, and India has been successfully doing it.**

**Not only as a stop-over destination, but India is steadily growing as a home-port destination, where cruise companies home-port their ships in India. The flexibility and experiences for passengers of cruise ships ‘touring’ India at nearly untouched scenic destinations is creating the right buzz. That’s not all, one also gets to experience the various offerings of a cruise ship. The novelty of conducting weddings, conferences, concerts, and even Bollywood-theme events on a cruise makes India an ideal cruise market.**

**Additionally, the government has put in a lot of effort to develop infrastructure (including inland waterways) for river cruising. Foreigners will get to experience intricate and hinterland areas, thanks to river cruising. They will also get to experience Indian culture and ancient heritage. If promoted, planned and developed well, river cruising will be an extremely attractive form for tourists.**

**Considering these and several factors, India will continue to see growth in the cruise and leisure sector.”**

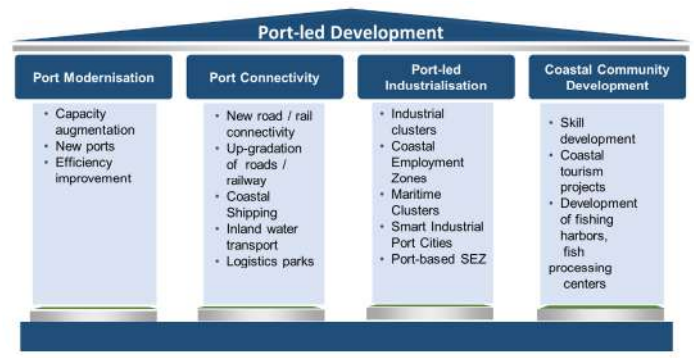


**Marshal Verma**  
**Founder & CEO**  
 Rohi Global Services  
 Pvt Ltd

## SagarMala

As part of the programme, a National Perspective Plan (NPP) for the comprehensive development of India’s 7,500 km coastline, 14,500 km of potentially navigable waterways and maritime sector has been prepared, which was released by India’s Prime Minister Narendra Modi at the Maritime India Summit in 2016.

This national initiative is aimed at bringing about a step change in India’s logistics sector performance, by unlocking the full potential of India’s coastline and waterways. The vision of SagarMala is to reduce logistics cost for both domestic and EXIM cargo with optimized infrastructure investment. Overall cost savings could be INR 35,000 to 40,000 crore per annum. Some of this will be direct cost savings, while others are savings from inventory-handling costs resulting from time (and reduced variability) in transportation of goods, particularly containers. These cost savings apply to current industrial capacities as well as future coast proximate capacities for energy, material, marine and discrete industries that could come up through port-linked industrialization. SagarMala also aspires to reduce carbon emissions from the transportation sector by 12.5 MT/annum. The concept of ‘port led development’ is central to the SagarMala vision.



**“The history of maritime trade and power of this South Asian peninsular region, now known as India – i.e., Bharat, is thousands of years old. The remains of a Port at Lothal in Gujarat around 2200 BCE, and findings of ancient ports at Bharuch, Sopara, Kozhikode, Thoothukudi, Machilipatnam, and Tamralipti, stories of Alexander sending his loot by a large number of ships from this coast in last few centuries of the BCE era, right up to recent events like bigger ships of Indian merchants which guided the vessel of Vasco-da-Gama from the African to the Indian coast in the**



*in the 1500s – all indicate why this region contributed to a quarter of the world GDP almost up to the 18th century!*

*This suddenly changed with the advent of gun power of European ships and sinking of thousands of our trading vessels in the 18–19 century, to control international commerce from Indian shores. The Indian Ports Act, 1908, is a strong reminder that we are still not free from those shackles. Its attempted revamp in 2022 leaves a lot to be desired for a growing Maritime Power.*

*World wars of the 20th century indicate that 'maritime power' was the key to world domination. The USA took over from the Europeans, mainly Britain, with Russia and China playing catch-up. Well-focused and hard-working nations like Japan, South Korea and China rebuilt their economies from scratch by focusing on ship-building and ship-repair in the past six decades, much after we got independence. Our leaders, administrators and the business community have failed our people in this key sector. The courageous and talented seafarers from the fishing communities continue to remain cheap and good labour for foreign ship owners.*

*Well intentioned schemes like SagarKhedu, SagarMala, Maritime Vision 2030, and Blue Economy are doing quite little and moving so slow for the simple reason that they have not been fully thought through, are improperly marketed, and their implementation is left in hands of those who have serious limitations. Those who have devoted their lives to working for the upliftment of coastal communities can only await well-focused action plans and their implementation.”*



**Rajesh Doshi**  
Marine Engineer & Promoter  
Dwarka Kutchh Ferries &  
Tourism Pvt Ltd

## PM Gati Shakti

India's Prime Minister launched PM Gati Shakti – National Master Plan for Multi-modal Connectivity. It is a digital platform to bring 16 ministries, including Railways and Roadways, together for integrated planning and coordinated implementation of infrastructure connectivity projects. The multi-modal connectivity will provide integrated and seamless connectivity for movement of people, goods and services from one mode of transport to another. It will facilitate the last mile connectivity of infrastructure and also reduce travel time for people.

PM Gati Shakti will incorporate infrastructure schemes of various ministries and state governments including BharatMala, Sagarala, inland waterways, dry/land ports, and UDAN. Economic zones like textile clusters, pharmaceutical clusters, defence corridors, electronic parks, industrial corridors, fishing clusters, and agri zones will be covered to improve connectivity and make Indian businesses more competitive. It will also leverage technology extensively – including spatial planning tools with the Indian Space Research Organisation (ISRO) and imagery developed by the Bhaskaracharya National Institute for Space Applications and Geoinformatics (BISAG-N). ●

### 6 Pillars of PM Gati Shakti

PM Gati Shakti is based on six pillars:

- **Comprehensiveness:** It will include all the existing and planned initiatives of various Ministries and Departments with one centralized portal. Each and every Department will have visibility of each other's activities providing critical data while planning & execution of projects in a comprehensive manner.
- **Prioritization:** Through this, different Departments will be able to prioritize their projects through cross-sectoral interactions.
- **Optimization:** The National Master Plan will avoid different exercises in planning for projects after identification of critical gaps. For the re-orientation of the goods from one place to another, the plan will help in selecting the most optimum route in terms of time and cost.
- **Synchronization:** Individual Ministries and Departments often work in silos. There is lack of coordination in planning and implementation of the project resulting in delays. PM Gati Shakti will help in synchronizing the activities of each department, as well as of different layers of government, in a holistic manner by ensuring coordination of work between them.
- **Analytical:** The plan will provide the entire data at one place with GIS based spatial planning and analytical tools having 20+ layers, enabling better visibility to the executing agency.
- **Dynamic:** All Ministries and Departments will now be able to visualize, review and monitor the progress of cross-sectoral projects, through the GIS platform, as the satellite imagery will give on-ground progress periodically and progress of the projects will be updated on a regular basis on the portal. It will help in identifying the vital interventions for enhancing and updating the master plan.



Article contributed by:

**Mr. Nishit Doshi**  
Midnight Creatives

# It's Not Just About Big Data



**Capt. Melvin Mathews**  
Founder of 'Capture High'  
& 'Advance Higher'

Like the hot tropical sun 'Big Data' seems to have appeared on the horizon of several new industries in the last decade. Industries such as Shipping, Mining, Oil and Gas, etc. that were not in the initial footprint of Big Data appeared to be feeling the early subtle heat. Although conservative and steeped in tradition, the promise of better insights and quest for higher profits has made many curious about big data. Not to be left behind many companies have joined the AI bandwagon by either making early investments in Big Data or by allocating resources for it.

The very nature of big data makes traditional database management tools and data processing applications virtually useless. This primarily drives the necessity for investment in managing big data. Several organizations prefer outsourcing the data management to specialist companies that already have the experience, cloud and IT infrastructure in place.

With the increasing number of logs, counters, recorders, sensors, devices, etc. installed everywhere possible, capable of gathering enormous amounts of data at higher and higher frequencies, the traditional means of manually collecting data no longer makes the cut. The early movers have unquestionably long moved towards automated data collection. However just generating and accumulating enormous amounts of data is not worth anything in real terms.

Vast volumes of data come with its own set of

challenges, the chief among them appear to be accuracy, storage, security, transfer, sharing, and filtering. However, just attaining sanitized and reliable data is also not sufficient by itself either. Thorough analysis and detailed study are what make reliable observations and conclusions possible. Ultimately, it will be strategic decisions made by the visualization of valuable insights attained from the data that will steer towards profitability.

In a world where companies are created and sinking at a faster and faster pace, Big data is giving that competitive advantage that companies both big and small are looking for. It reveals hidden risks and areas for improvement that otherwise remain elusive. Transparency allows synergies especially in large diversified and loosely connected businesses and departments. Analysis of processes, procedures and operations at the smallest level not possible before, allow efficiencies and savings not thought attainable.

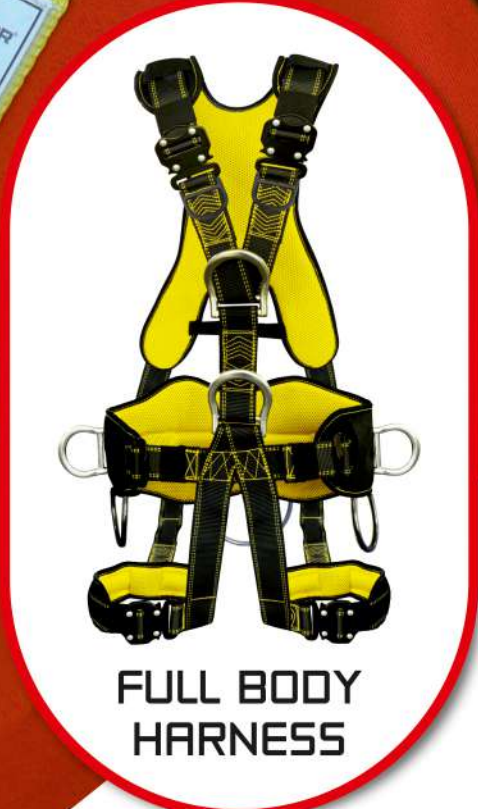
It is believed that in many industries big data is yet to be exploited for what it presents, especially due to the current economic scenario. Many say that the impact it will have in the long run is unquestionably profound especially with the latest development in AI technology. Is this the general consensus?

What is your experience with 'Big Data'? Is it really as complex and cumbersome as it is made out to be? Or is it best leaving it to the experts? ●





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📍 RV INDUSTRIES, Plot 6, Goila, Chinhut Industrial Area, Lucknow, India





# Autonomous Ships: What's Holding Them Back?

In the not-so-distant future, the world of maritime transportation is set to undergo a revolutionary transformation. Advancements in technology are paving the way for autonomous ships, vessels capable of navigating vast oceans without human intervention. These self-steering giants promise safer journeys, increased efficiency, and a reduction in environmental impact, a critical factor for an industry responsible for 80% of global trade. With sensors and artificial intelligence at their helm, these ships are poised to unlock a new era of maritime exploration. However, challenges lie ahead as researchers strive to bridge gaps in various key areas, ensuring these autonomous marvels can seamlessly integrate into existing maritime ecosystems.

## Challenges in Autonomy Levels

To ensure safety and accommodate regulations, effectively managing the implementation of higher autonomy levels is essential. The IMO has established four autonomy classes for vessels, and operational guidelines are required for each.

The initial obstacle involves enhancing autopilot systems on crewed ships and boats at IMO autonomy level one by integrating AI and deep learning-based sensors and algorithms. Currently, radar and the global 'automatic identification system' (AIS) used for tracking maritime traffic fail to detect small boats, debris, swimmers, and riverbanks. Introducing visual and thermal cameras, along with lasers, can provide captains with improved situational awareness,

assisting in collision avoidance, risk assessment, and route planning, which are currently performed manually. Nevertheless, researchers must overcome sensor system limitations, such as the challenge of distinguishing smaller obstacles from waves.

At autonomy level two, we find remotely controlled vessels with a small onboard crew responsible for backup, maintenance, and cargo handling. These vessels are increasingly utilized for freight transportation on rivers and canals. Maritime technology providers like Seafar in Antwerp, Belgium, and the US-based company Sea Machines operate them from a distance on behalf of ship and boat owners.

At level three, we have remotely controlled vessels without a crew, already operational. These vessels, often referred to as 'drones,' are typically less than 10 meters in length and serve purposes like measuring water depth and monitoring marine habitats and harbors. However, scaling them up to the size of a ship and equipping them to carry cargo, cranes, robotics, and fuel requires meeting higher safety standards and incorporating systems to prevent grounding, collisions, and communication loss.

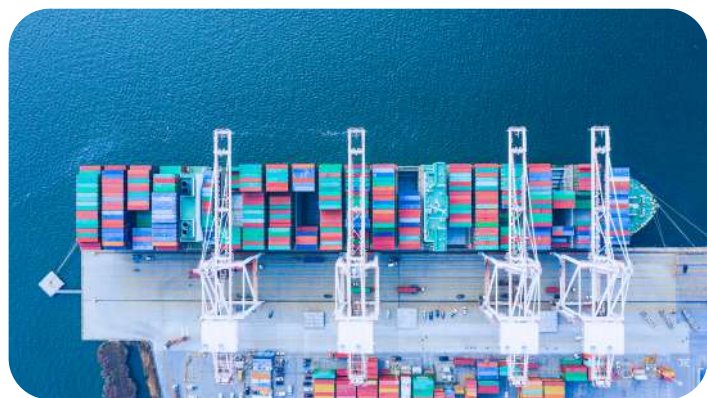
Moving on to level four, certain small drones have achieved full autonomy. In these cases, the operating system can independently make decisions and take actions for a certain duration. For instance, boats like Wave Glider, AutoNaut, Sailbuoy, and Saildrone can operate autonomously in the open ocean for days,



relying on wind, solar, and wave energy. However, there are still challenges to address when it comes to operating near coasts, alongside other vessels, and in shallow waters and currents.

For all autonomy levels of vessels, it is essential to establish guidelines that consider mixed environments where autonomous and crewed vessels coexist in the same waters. Researchers must focus on creating cooperative navigation and communication systems to facilitate the seamless operation of vessel groups, enabling them to function as a fleet.

## The Role of Humans



Autonomous ships will always incorporate a human element to oversee navigation, perform maintenance, handle cargo, supervise tasks, and assess risks. Clearly defining these roles is crucial. Until thoroughly testing any highly autonomous ship, at least one human must retain command and control, either on board, akin to an airline pilot, or remotely, like a drone operator. As technology advances, human supervision may only be necessary during emergencies.

To enable effective decision-making for navigation, remote control, and interactions with other ships and ports, researchers are focusing on designing human-machine interfaces. These interfaces will resemble air traffic control centers, providing a familiar environment for operators. Some remote-control centers are already operational, overseeing vessels like Zhi Fei, Yara Birkeland, and Seafar, marking significant progress in this direction.

Further analysis is essential to understand the interaction between humans and AI, especially regarding the effective exchange of performance and navigation information with remote operators. Researchers should develop methods for verifying

the accuracy of sensor-based automated detections, particularly concerning small boats and potential hazards. Additionally, there is a need to gain more insights into how humans comprehend and anticipate the maneuvers of other ships, ensuring collision avoidance in busy waters. Humans might also be required to assess the calculated risks of voyages, taking into account weather forecasts and other uncertainties.

## Ensuring Safety and Security



In the maritime sector, just like in the automotive industry, safety remains a top priority during the development of new technologies. Classification societies such as DNV in Norway and Bureau Veritas in France have already released preliminary guidelines for utilizing automated processes in navigation and systems maintenance. These guidelines outline the qualification of concepts and technologies, as well as the design of systems supporting autonomous and remote vessel operations. However, they lack specific details on their practical application in challenging conditions like poor visibility, storms, or sea ice.

Ensuring the safety of autonomous ships involves addressing several key areas. One critical aspect is the development of smart maintenance procedures that remotely monitor ship components and swiftly detect, diagnose, and repair faults. Incorporating redundancy in systems, with spare components ready to take over in case of failures, would enhance overall resilience.

Moreover, cybersecurity risks pose a significant concern for autonomous ships. Recent cyberattacks on major shipping companies have resulted in severe damage to assets, finances, and reputations.

To mitigate such risks, researchers must expand the guidelines to include safety and security

requirements for autonomous ship technologies in various operational contexts. This includes assuring the effectiveness of human-machine interfaces during rough seas, handling navigation uncertainties caused by currents and weather conditions, and developing measures to prevent and respond to cyberattacks.

Creating secure infrastructure, reliable data links between ships and control centers, and implementing digital twins (computer-based copies of large systems) for simulation and validation are also essential steps in ensuring the successful integration of autonomous ships into the maritime landscape. By focusing on safety and security, we can unlock the full potential of autonomous vessels while safeguarding the integrity of the global shipping industry.

### Reimagining Ports

Making ships autonomous doesn't require drastic alterations in their design. However, progress will be necessary to integrate equipment that facilitates autonomous operation and to concurrently develop cleaner propulsion systems.

When it comes to ports, the introduction of autonomous ships will speed up the shift toward more automation. At present, the main focus is on automating cargo handling, which involves a significant number of containers being moved globally the port of Rotterdam already utilizes unmanned cranes and 'automated guided vehicles' to manage an

entire container terminal with a small team of 10-15 people daily. Similar robotic mooring and crane systems are already operational in various locations, including Stockholm, Tallinn, Naantali, and Helsinki. Moreover, Singapore is currently constructing the world's largest autonomous terminal, a project expected to be completed in the future.

As autonomous ships become more prevalent, additional services will be required, such as automated pilotage and tug assistance, arrival management, and berth allocation. Instead of physical boarding, pilots will remotely control the vessels, and vessel traffic services will monitor and offer recommendations to avoid hazards. Finding ways to connect ropes between tugs and crewless ships will also be essential. Looking ahead, it will be crucial for autonomous ports to cooperate and coordinate with each other and with each other and with logistics chains to ensure smooth cargo flow without bottlenecks or delays. However, integrating all these diverse systems presents a significant challenge.

In conclusion, for autonomous ships to truly make a difference, scholars must improve their understanding of how waterborne autonomy can be adopted. ●



Article contributed by:

**Mr. Gavara Naveen**  
B.Tech Naval Architecture &  
Ocean Engineering Student,  
Indian Maritime University,  
Visakhapatnam



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# Technology manufacturers' input more critical than ever for effective maritime regulations

**N**ext year marks a crucial milestone for the International Maritime Organization's (IMO) Ballast Water Management (BWM) Convention, with all ships required to meet the D2 standard for ballast water management by 8 September 2024. D2 specifies the maximum number of viable organisms allowed to be discharged. In most cases, it requires the installation of a ballast water management system (BWMS) on board the vessel.

2024 will be a pivotal moment for the ballast water market and while it is true that the retrofit market will diminish and leave behind only a small newbuild market, some challenges will remain. These

will primarily be related to enforcement of the Convention, matters related to Port State Control and how to deal with non-compliance. Manufacturers, especially those with a large customer base, will still have an obligation to provide technical support and services but there is no doubt that the number of makers will diminish, and there is an expectation that single product companies could exit the market completely.

Furthermore, by the time the 2024 deadline arrives, 20 years will have passed since the BWM Convention was adopted by the IMO. One of the main reasons for it taking two decades for the Convention to be



ratified, is that regulations were written, and views were expressed before the treatment technologies were available. Regulators were also unaware of how best to treat ballast water.

Since that time, ballast water treatment systems have been developed and evolved that perform well and consistently to meet the requirements of both the IMO and US Coastguard. Challenges remain, notably in the case of ports where water quality affects the performance of some treatment technologies. However, despite the delays, thousands of vessels have been retrofitted with effective ballast water treatment technology. Put another way, significant work has been done to protect the marine environment from aquatic invasive species, and that work continues.

## Learning from past mistakes

Even so, if other environmental regulations are to have the desired effect, lessons need to be learned from the failings of the BWM Convention, which highlight a need for technology manufacturers to have greater involvement in the regulatory process. It is a fair assumption, that had equipment manufacturers been invited to participate in early discussions surrounding the BWM Convention's development, the many amendments and subsequent delays might have been avoided.

It is a well-known fact that there is a lag between technology development and regulatory affairs, as the speed at which technology advances outpaces the regulatory process. But it is essential that regulators have a more informed understanding when developing rules, especially where technology and investment is required.

For example, we can already see parallels between the BWM Convention and the Carbon Intensity Index (CII) regulations. The CII regulation has the potential to be one of the most impactful decarbonisation regulations brought in by the IMO. However, it is only part of the equation, and it has been well reported that the regulations do not currently take into consideration the realities of ship operations.

Currently, the CII calculation is based on a ship's

transit period only and assumes a full cargo load. It does not take into consideration other aspects of ship operations, such as the length of time a ship spends in port, or the impact slow steaming could have on emissions.

In the case of port operations, shore power solutions can completely eliminate emissions while at berth, and this is an area that has gained a great deal of attention.

## The importance of input from industry

Shore power is not a new concept, and the CARB regulations related to the use of shore power connections in select Californian ports for 80% of vessels first came into force 15 years ago. Since then, China and the EU have also brought in their own rules related to the use of shore power. So, we might ask why port operations are not included in CII calculations.

Recognising the environmental and operations benefits of shore power, ERMA FIRST has designed BLUE CONNECT, a next-generation alternative maritime power (AMP) solution that enables a seamless, safe and reliable connection between the ship and port's electrical grids. This allows the ship to shut down its diesel-fuelled auxiliary engines and generators which reduces noise and vibrations along with the emission of pollutants including particulate matter, nitrogen oxides, sulphur oxides, carbon oxides and other volatile organic compounds. Furthermore, BLUE CONNECT was recently officially categorised as an ESD by DNV and recognised as a solution that can have a positive impact on future CII ratings.

The CII regulations are due to be reviewed in 2026, and I truly believe manufacturers will have amassed enough data and information to prove how such solutions can effectively support decarbonisation. I hope that the next revision of the regulations will account for the presence of such devices, recognise their potential and introduce their use to the rules. But for this to be done properly and prevent a repeat of the delays experienced with the BWM Convention, technology manufacturers need to be involved in the review process.

The maritime industry is a rule driven sector, and

regulations continuously evolve. However, we need a more open and collaborative approach to rule development. Regulatory development is a complex process and the fragmented landscape where regional and international rules, regulations and standards exist, can make it somewhat difficult to navigate and implement efficiently. In situations where manufacturers are not involved in regulatory discussions at the highest level, it is important to be proactive and engage with regulators and fellow industry stakeholders wherever possible. By closely monitoring developments and increasing

dialogue between manufactures, class societies and regulators, we can ensure that when new regulations are introduced, they are fit for purpose and products and services are ready to meet compliance-driven demand. ●



Article contributed by:

**Dr Stelios Kyriacou,**  
Chief Technology Officer,  
ERMA FIRST

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# Celebrating 5 Years of excellence of “Alaknanda” a Fiberglass Ship Built by Samudra Shipyard



**A**laknanda, the beautiful fiberglass ship built by Samudra Shipyard at their Kolkata Yard is entering into her 5th Year of its operation at Varanasi, the constituency of **Honorable Prime Minister of India, Shri Narendra Modi ji.**



She was the first modern boat built for M/S Nordic cruise Lines Varanasi. Built at the Yard at Kolaghat, Kolkatta, she sailed almost 1500 (One thousand five hundred Kilometers) 800 Nautical miles upstream to reach Varanasi.

Alaknanda has an Air-conditioned cabin on the lower

deck to seat 80 Passengers and an open upper deck to seat 40 passengers.



In her journey of 5 years, she has hosted the who's who of the Indian political space as well as that of the business world, which includes the of **Honorable Prime Minister of India** as well as the leading industrialists of India & Abroad. Over the years, she has evolved as an Icon of the holy temple city.

Designed by Mr Unni Mohan, a design Faculty at IIT Mumbai she was completed in a record time of 6 months from mould to delivery at Varanasi. It seems

that the unconventional design has captured the imagination of the city and you can see many vessels plying in the Ganges following the design cue.

### Principal Particulars:

LOA: 28.6M

Beam: 4.87M

Draft: 1.4M

Engine: ALM6ETI



Samudra Shipyard is a family run private Limited company, established in the year 1990. It has a full-fledged FRP Boat building facility at Aroor (near cochin). Samudra can make vessels up to 33 M in length.

FRP Hand layup is the most popular method of construction, however Vacuum infusion is also

practiced where weight is of critical importance. There are about 60 people working on the shop floor.



Over these years Samudra must have built more than two thousand boats. They are operating successfully in different parts of the world. Samudra is the only company making FRP House boats in India, which are very popular in this part of the world.



The customer profile includes high net worth individuals, Government organizations as well as Private tour operators.

The first project was a 6 Metre outboard motor driven passenger boat built for the District Administration



head (The district Collector) in the year 1990. A 7 Metre boat built for the Lakshadweep fisheries department is still going strong in the Arabian Sea after three decades of operations.

The most prestigious projects include 8 House boats for the West Bengal Tourism development corporation and the boat built for Varanasi.



## Ecstasy



## Bluefin





# Leisure BOATS & YACHT Market in India



**Jayendra Kachalia - a Director of 'Navnit Group'** is also managing Navnit Marine Pvt. Ltd. He entered the family business nearly 35 years back, having been educated in the stream of Finance and Commerce. He is also Past President of Federation of Automobile Dealers Association (FADA) - An apex national body of automobile retail Industry.

Navnit Group, a formidable force in Corporate India, has added a new perspective to 'Mobility' having strong foothold in Automobile and Marine Industries, by dealing with premium global brands and has enhanced movement on Land, Water and Air. The Group diversified into franchises of Yachts and Speed boats in the year 2002.

Navnit Marine Pvt. Ltd., a part of the Navnit Group, represents Bayliner, Harris flote boats of Brunswick Boat group, USA and Princess Yachts plc from UK- a leading British luxury yacht manufacturer with meticulous attention to detail, delivering unforgettable experiences.

Living by our motto of Service First, Navnit Marine has invested in state of the art full fledge 24x7 Marine service workshop 'Navnit Cove Marina' in Mora Uran situated 3nm from the Gateway of India, Mumbai -for boats parking and maintenance with a capacity to Dry Dock nearly 30 Boats. The Service department comprises of trained Marine Engineers and Licensed Boat Masters.

Navnit Marine provides a comprehensive, end to end, service package to its customers taking care of every need of theirs in boating, be it repairs and servicing of engines or hull body, launching and hauling, repairs & maintenance of navigation, electronic equipment and marine products, housekeeping, hospitality, Insurance, etc to providing crew members and captains. We have all the expertise with us in- house and provide service with ease and care.

The Group has simultaneously pioneered high service standards and a process driven professional approach which has helped raise the bar in the Indian dealership

space serving countries HNIs and masses. These successes led to the consolidation of core capabilities and the subsequent diversification into new initiatives like Infrastructure, Adventure Sports, Aviation, Financial Services, Insurance Broking and Re Insurance.

The Group is driven by a deep commitment to continually improve their value offering to their customers and their stakeholders.

### Q 1

**How did Navnit Motors' Group Company get into The Leisure & Boat & Yacht Industry?**

The Group, since last 4 decades, is catering to the automobile needs / lifestyle products of the masses, HNIs, UHNIs and who's and who's of the country. Understanding their needs to have mobility, leisure and sports on water as well, the Group then, about 2 decades ago, entered into providing Boating Concept herein India as much as owning a Boat making it much easier like owning a car.

### Q 2

**Tell us about The Leisure Boats & Yacht Market in India?**

The Leisure Boats and Yacht market is growing steadily in India. People would want to be gratified with the lifestyle and pleasure of owning and enjoying the Boat and having fun on water. Today, the water sports enthusiasts, gets this pleasure by going to around countries like Dubai, Thailand. With proper infrastructure we will see exemplary growth in this market.

### Q 3

**With over 2 decades in the industry – how have you seen The Leisure Boats & Yacht sales in India changing trends?**

The country has 7,500 kms of virgin coastline, lots of navigable lakes, warm weather and almost 50 per cent below-25 years of age-

population. The number of Indians entering the the millionaire income bracket is on the rise. The spending patterns and life style of an average Indian has vastly changed and this has brought in changes for lifestyle demands. Post Pandemic people are looking to spending more for a better lifestyle for themselves and their families. We experience this in growing enquiries and sales of Boats, lifestyle and adventure sports products.

### Q 4

**What is current governments vision for The Leisure & Boat & Yacht Industry?**

The present Government is for pro development and is very much trying to do their best to develop inland waterways for commercial purpose. Soon their focus shall be on pleasure Boating and Water sports. Tenders are out and soon we shall be seeing marinas getting developed in prime areas of the country like Mumbai, etc.

### Q 5

**Tell us about Navnit Marine and what according to you is the most important success factor of Navnit Marine?**

Navnit Group is primarily synonymous with quality, commitment, reliability, integrity and customer delight. Every activity, be it in automobiles, adventure sports or marine, has steadily focused on creating a better experience in every aspect of life.

Customer satisfaction is an integral part and every interaction of ours with the customer is with emotions which has resulted in customers repeat purchases or upgrades with higher products. Such repeat purchase constitute to nearly 60%. Google reviews is the most integral part of our ecosystem, and we average around 4.8 star at the group level in customer satisfaction. ●



**K**ochi, India – Cochin Shipyard Limited (CSL), the premier shipbuilding and ship repair company in India, today delivered the 11th Electric Hybrid 100 Pax Water Metro Ferry BY 135 to Kochi Water Metro. The occasion was marked by the Delivery Protocol Signing ceremony held at CSL, in the presence of directors of KMRL and CSL, along with senior officials from KMRL, CSL, DNV, and IRS.



## Cochin Shipyard delivers 11th Electric Hybrid 100 Pax Water Metro Ferry by 135 to Kochi Water Metro

Shri. Harikrishnan S, Chief General Manager CSL, and Shri. Shaji P Jananardhanan, Chief General Manager KMRL, signed the protocol document on behalf of their respective organizations. Both organisations worked closely towards the successful completion of this project, which contributes significantly to the sustainable development and modernization of water transportation in Kochi.

The Electric Hybrid 100 Pax Water Metro Ferry BY 135 is a state-of-the-art vessel designed to provide efficient, eco-friendly, and convenient transportation options for the residents and visitors of Kochi. With a focus on sustainability and environmental responsibility, this ferry is equipped with electric

hybrid technology, ensuring reduced emissions and minimized environmental impact.

By achieving the milestone of delivering the 11th Water Metro Ferry, CSL and KMRL have demonstrated their commitment to advancing the Nation's maritime capabilities while prioritizing eco-conscious transportation solutions. The collaboration between the two esteemed organizations is a testament to the potential for excellence within the Indian shipbuilding industry.

CSL and KMRL officials conveyed their gratitude to all stakeholders, including DNV and IRS, for their support and partnership on the project. ●



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Tug built with approved standard Tug Design & Specifications; a groundbreaking initiative driven by the Government of India.

The 62T bollard pull Azimuth Stern Drive (ASD) tugs are primarily intended for harbor towing & ship assist in the Indian ports. firefighting & coastal towing are also assigned as secondary roles.

The main particulars of the vessel include a length overall (LOA) of 33.00 meters (excluding fenders), breadth moulded of 11.9 metres, and depth moulded of 5.40 meters. The vessel has an international gross tonnage of less than 500 GT and will accommodate a crew of up to 12 persons.

## Udupi Cochin Shipyard Limited launches the first in series ASTDS compliant 62T BP Tug for Ocean Sparkle

Udupi Cochin Shipyard Limited, a wholly owned subsidiary of Cochin Shipyard Company has launched the first in series ASTDS compliant 62T BP Tug for Ocean Sparkle, an Adani Group company in the presence of Mr. Madhu Nair, Chairman & Managing Director of Cochin Shipyard Limited and other senior officials of the company.

Adani Harbour Services Limited & Ocean Sparkle Limited own over 100 tugs and are the largest tug owners and operators in the country. ●

DNV has awarded an Approval in Principle (AIP) to HD Korea Shipbuilding & Offshore Engineering (HD KSOE) and its subsidiaries, HD Hyundai Heavy Industry (HD HHI) and Hyundai Mipo Dockyard (HMD) for their new hydrogen system. HD KSOE aims to complete development of the hydrogen carrier technology that enables large-capacity hydrogen transportation and storage by around 2030.



## DNV awards AIP to HD KSOE's hydrogen system for liquefied hydrogen carrier

Sustainably produced zero and low carbon hydrogen has been identified as a key part of the world's energy

transition. Efficient transport by ship faces a number of challenges, including the complexity of holding

at minus 253 degrees Celsius, some 100 degrees colder than LNG, at large scale. But finding solutions to this challenge is vital, as shipping has an important role in unlocking the use of hydrogen in decarbonizing heavy industries, such as steel and cement production.

HD KSOE's new system utilizes boil-off gas from hydrogen transport for a hybrid propulsion system, integrating hydrogen DF engines and fuel cells. Collaborating globally, HD KSOE and partners like Woodside Energy and Linde Engineering are exploring new hydrogen transportation and storage solutions, aiming to commercialize their advancements by 2030.

Dr. Sungjun Kim, CTO at HD KSOE said: "We are continuously developing world-class technology in liquefied hydrogen following our achievements in methanol, ammonia and CO2 carriers. With our hydrogen system, we will lead technology advances in transitioning to a carbon-neutral society."

Vidar Dolonen, DNV Regional Manager for Korea & Japan, added: "To build confidence and overcome the challenges of hydrogen transport for shipping, we need to bring many different partners together, build on the learnings from other fuels and industries, and adapt technologies to the maritime environment. This is why we are very pleased to be working with innovative partners to help establish new design

standards, that can create the next generation of hydrogen carriers and help this emerging segment develop and succeed."

Maria Gonzalez-Perez, Vice President Strategic Planning & Portfolio New Energy of Woodside Energy stated: "This new system is expected to accelerate the development of the hydrogen shipping value chain. To realise hydrogen shipping, the roles of hydrogen producers, consumers, and shipyards are crucial. Through ongoing collaboration, we hope to develop solutions to accelerate the growth of hydrogen."

Lars Blum, the Managing Director of Linde Kryotechnik, noted: "Linde Kryotechnik is pleased to collaborate with the leading shipbuilding company, HD KSOE on technology and to bridge an existing gap in the hydrogen value chain. Through this cooperation, the technologies and expertise of world class companies are brought together to help to unlock the massive potential of hydrogen."

Samuel Zouaghi, CEO of Cryostar, commented: "Cryostar is progressively developing equipment for hydrogen, both on land and at sea. Leveraging our expertise, we will develop equipment that aligns perfectly with the newly developed system and hydrogen vessels. ●







## Ulstein Verft signs new shipbuilding contract on a cable laying vessel for Nexans

On 19 September 2023, Nexans Marine Operations AS and Ulstein Verft entered into a contract on the construction of a large DP3 cable laying vessel.

The vessel, an ST-297 CLV design by Skipsteknisk, is an updated version of the Nexans Aurora, delivered in 2021.

***“We awarded the contract for a new vessel to Ulstein after an extensive tendering process, where Ulstein’s track record, including the delivery of Nexans Aurora, was important factors in deciding on the shipyard Ulstein Verft yet again. We are looking forward to working with Ulstein for this new exciting project,”***

says Pascal Radue, Nexans EVP Generation & Transmission.

***“Ulstein is excited to see Nexans return to Ulstein Verft for the construction of a new cable laying vessel. In 2021, we delivered the Nexans Aurora on time despite the challenges we faced with handling the Covid pandemic. This adds to our long history of delivering vessels to the agreed quality and time. We look forward to continuing our close collaboration with Nexans and are very pleased that Nexans again trusts Ulstein Verft with the new addition to its fleet,”***

states Ulstein Group’s CEO, Cathrine Kristiseter Marti.

The new vessel is based on the Nexans Aurora

design, as developed by Skipsteknisk, which is now playing an important role in Nexans’ turn-key supply of advanced subsea high voltage systems to support the electrification of the world, including providing vital connections between countries and regions, offshore renewable solutions as well as electrification solutions for other offshore installations.

The vessel is specially designed to carry out the transport and laying of various types of subsea cables, including cable bundles as well as recovery and repair. It can perform effectively even in challenging weather conditions and boasts exceptional manoeuvrability and station-keeping capabilities. Ulstein Verft is responsible for the vessel’s construction and the preparation of its topside equipment.

This cutting-edge cable laying vessel features a split turntable on deck capable of holding up to 10,000t of cable, an under-deck turntable with a 3,500t cable capacity, and a fibre optic basket holding 450t. The vessel measures 31 metres in width, 149.9 metres in length, and is accommodated for a crew of 90.

***“We are experienced in constructing large and complex vessels and we look forward to commencing the work on the cable laying vessel for Nexans,”***

says Lars Lühr Olsen, managing director at Ulstein Verft.

For over 120 years, Nexans has played a crucial role in the electrification. The Group is a leader in the design and manufacturing of advanced cable systems and services.

Norway-headquartered Ulstein Group is a family-owned company established in 1917, and specialises in ship design, shipbuilding, systems and services for the maritime market.

The ship design company Skipsteknisk was established in 1976 and designs specialised vessels with emphasis on offshore, research and fisheries. ●



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**M**aersk ECO Delivery reduces global greenhouse gas (GHG) emissions footprints through certified low emission fuel for ocean shipping as an alternative to fossil fuels.

Florham Park, New Jersey – A.P. Moller - Maersk (Maersk) and Amazon have finalized a 2023-2024 agreement for the transport of 20,000 FFE containers using green biofuel through Maersk’s “ECO Delivery” ocean product offering. Maersk estimates this purchase will contribute to a reduction in 44,600 metric tons of CO2e vs standard bunker fuel, roughly equivalent to 50 million pounds of coal burned. This is the fourth consecutive year that Amazon and Maersk have arranged container shipping using low GHG fuel options.

***“We’re proud to collaborate with Maersk, a Climate Pledge signatory and leader in shipping logistics, on actionable solutions to decarbonize maritime shipping, We’re excited to have containers on Maersk’s first methanol-enabled feeder vessel and to continue using their biofuel.”***

Adam Baker, Vice President of Global Transportation at Amazon

The ECO Delivery biofuel option offers emission reductions that enable immediate and externally verified GHG savings for customers, without compensatory measures like offsetting. This year, Amazon will benefit from a new feature of the ECO Delivery product which will be enabled by also using green methanol in addition to the bio diesel as a second green fuel\* in the vessel fleet. ECO Delivery is using primary data for fuel consumption in the methodology to report emissions savings with greater precision, inclusive of other greenhouse gases in addition to the CO2. The new model also provides price certainty and stability and is de-linked from the fossil fuel market.

“Amazon’s record of securing sustainable shipping over the years, no matter the business climate, is testament to its contributions to building a better



## Maersk Finalizes ECO Delivery Deal with Amazon

future. We share a common goal with Amazon to reduce our total GHG emissions to net zero by 2040. As cosigners of the Climate Pledge, we must constantly create new opportunities to make this a decade of action. Decarbonizing shipping is one significant step that is to be combined with many others to protect our future.

Narin Phol, President North America, A.P. Moller - Maersk

Co-founded by Global Optimism and Amazon, the Climate Pledge is powered by over 400 companies in 38 countries around the globe. The pledge is a commitment to reach net-zero carbon emissions by 2040. Signatories agree to 1.) Measure and report greenhouse gas emissions on a regular basis, 2.) Implement decarbonization strategies in line with the Paris Agreement, and 3.) Neutralize any remaining emissions with credible offsets. To learn more about the Amazon and Maersk’s commitment to the future, visit the “Sustainability at A.P. Moller - Maersk” and “Sustainability at Amazon” web pages.

\* Maersk defines ‘green fuels’ as fuels with low to very low GHG emissions over their life cycle compared to fossil fuels. Maersk green fuels and its supply chain are verified by the International Sustainability and Carbon Certification (ISCC). The methodology for accounting emissions is based on GLEC (Global Logistics Emissions Council) and is certified by Smart Freight Center. We ensure auto-generated performance tracking of Maersk ECO Delivery shipments. Maersk ECO Delivery CO2e saving certificates will be issued. The method is audited by PwC in accordance with the International

Standard of Assurance Engagements 3410 (ISAE 3410 – Assurance Engagements on Greenhouse Gas

Statements), showing CO<sub>2</sub>e savings for the scope of the Maersk ECO Delivery agreement. ●



temporary employees, who have strong expertise and relationships in India. The Stellar acquisition will help CEVA diversify its presence in India, boosting its local workforce, assets, customer roster and capabilities. The deal strengthens CEVA's strategy to provide its customers with end-to-end supply chain solutions.

## CEVA Logistics to Expand Presence in India through Acquisition of Stellar Value Chain Solutions

### Next step in CEVA's strategic development in APAC

● CEVA to expand contract logistics footprint with purchase of nationwide, Indian contract logistics expert

• Deal includes Stellar's cold chain logistics capabilities

• Acquisition advances CEVA's regional, global growth strategy through scale, local expertise from nearly 8,000 Stellar employees

**MARSEILLE, FRANCE – CEVA Logistics announced that it has signed an agreement to acquire 96 percent of Mumbai-based Stellar Value Chain Solutions from an affiliate of private equity firm Warburg Pincus and other shareholders.**

Started in 2016 by Anshuman Singh, Stellar Value Chain Solutions has grown into a key local player in contract logistics with omni-channel fulfillment services in the eCommerce, automotive, food products, consumer, fashion and retail, healthcare and pharmaceuticals market segments. Anshuman Singh will continue driving this business following the acquisition.

CEVA will acquire approximately 7,700,000 square feet of space across more than 70 facilities in 21 cities across India. In addition, CEVA will inherit the Stellar workforce of nearly 8,000 full-time and

CEVA Logistics is currently present in 75 locations across 35 cities in India with approximately 2,700,000 square feet of warehouse space. With the acquisition, CEVA Logistics would become a much stronger player in Indian contract logistics, offering its new customers global expertise and increased operational efficiency and innovation.

In addition to India, the acquisition complements recent growth in CEVA's contract logistics business elsewhere in the Asia Pacific region. The deal is also expected to benefit CEVA's freight management and customs business in the region. With new manufacturing trends and supply chain routes developing, CEVA's global network and wide range of logistics solutions provides its APAC clients with the agility needed to navigate changing market conditions.

**Mathieu Friedberg**, chief executive officer, CEVA Logistics, said "With the addition of Stellar VCS, we will continue our strategic growth with the goal of becoming a Top 5 global logistics player. We are expanding into more key market segments and boosting our presence in this strategic country. Stellar has an important network of contract logistics facilities across India and a top roster of customers. Bringing on their expertise and footprint in India is a major step forward for CEVA Logistics."

**Anshuman Singh**, founder, Stellar Value Chain



Solutions, said **“We have built a strong network across India based on our commitment to serving our customers through long-term partnerships. Warburg Pincus has been an extremely valuable and supportive partner in building this company right from its inception and is now passing on the baton to another global giant, CEVA Logistics, to take this company ahead. I look forward excitedly to**

**the future with CEVA, further supporting our commitment to our customers and allowing them to benefit from CEVA’s global capabilities with our knowledge of India. The shared values of our Stellar associates and those of the CEVA Logistics team will allow for a quick integration and new, global opportunities for our associates.” ●**

**H**industan Shipyard Limited (HSL) has successfully completed emergency repairs of the vessel MV Jag Radha belonging to M/s Great Eastern Shipping Company Ltd., Mumbai.

The vessel of dimensions 189.99 Mtrs X 32.26 Mtrs with a DWT of 58,133 tons suffered extensive damage to the hatch covers and its hydraulic operating system while discharging the cargo at Kattupalli port.

The vessel arrived at HSL on 26 Aug 23 and all projected repairs were completed on war footing basis to the satisfaction of class surveyors. During the course of repairs, all structural damages were made good, hydraulic system checked, hydraulic cylinders were brought ashore, overhauled and defective parts such as seals, bearings & barrels were renewed.

Also ram cylinder pins that were damaged were



## **Hindustan Shipyard Limited Successfully Completes Emergency Repairs Of Great Eastern Shipping Vessel.**

replaced with new units. Further to ensure integrity & watertightness of the hatch covers, retaining channels & rubber packing were renewed. After completing these repairs, hatch covers were aligned and tested for their structural integrity, water tightness & smooth operation. The entire job was completed in 05 days time on war footing and vessel was given clearance for sailing on 31 Aug 23. ●





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## CMA CGM completes the acquisition of GCT Bayonne and New York container terminals

● **Acquisition expands CMA CGM's U.S. East Coast footprint, strengthening the Group's position as a global terminal operator.**

• **Development plan at both terminals will provide needed capacity to support the fluidity of U.S. supply chains.**

• **CMA CGM to work closely with the Port Authority of New York and New Jersey to decarbonize GCT operations.**

Further to the agreement announced on December 7th, 2022, the CMA CGM Group, a global player in sea, land, air and logistics solutions, has finalized its acquisition of Global Container Terminals (GCT) Bayonne and New York terminals. Through this strategic investment, the Group strengthens its position as a global port terminal operator, and a leading supply chain player in the United States providing end to end solutions to customers worldwide.

Port GCT Bayonne and Port GCT New York expand CMA CGM's portfolio of terminals in the U.S. to seven, ideally complementing on the US East Coast the Group's acquisition of the Fenix Marine Services container terminal in the Port of Los Angeles on the US West Coast.

operations at a critical entry point on the U.S. East coast. This acquisition will strengthen the East Coast's role in securing the U.S. supply chain and improve network resiliency.

**Investments in industry-leading infrastructure to support continued growth**

While CMA CGM Terminal arm will operate the two multi-user facilities under its current management team, the Group intends

to further develop the two terminals which are key to the strategic New York/New Jersey gateway, the largest on the U.S. East Coast. CMA CGM's ambitious development plan includes:

• **Continued development of Bayonne's Berth 3, which when completed, will be one of the most capable berths on the U.S. East Coast at a depth of 55 feet with 18,000 TEU vessel handling capability.**

• **Investments to create additional yard and berth capacity allowing improved operational fluidity at Bayonne and New York.**

• **Improved direct access to major highways and railways to and from the terminal facilities.**

• **Reduction in emissions and greenhouse gases with a goal of becoming Net Zero by 2050.**

CMA CGM, through its investments, will target to increase terminals capacity by more than 50% during the next 10 years. The development plan will add approximately 240 direct jobs and more than 700 construction jobs over the next seven years, providing a pathway to further benefit job growth in the New York/New Jersey region. ●



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**M**umbai, India -PSA Mumbai, one of the five container terminals operating at JNP, has set a record by handling 1,94,708 Twenty-foot equivalent units (TEU) in August 2023. This is the highest monthly container throughput ever handled by a single terminal in the entire JNP, surpassing the previous record of 1,90,709 TEU set in January 2018.



## PSA Mumbai Sets New Record for Highest Container Throughput in Jawaharlal Nehru Port (JNP)

Since its inception in February 2018, PSA Mumbai has managed to achieve a cumulative handling of 6 million TEU within a short span of 5 years and 6 months. This exceptional performance has continued apace with a 37% year-on-year growth to date in 2023. Currently, PSA Mumbai accounts for 35% of the entire container traffic flowing through JNP and approximately 10% of India's total container traffic.

The remarkable growth trajectory of PSA Mumbai has been made possible by the strong support from our customers in entrusting an increasing number of services to call at the terminal.

This achievement is a testament to the terminal's commitment to operational excellence and customer satisfaction. PSA Mumbai has consistently invested in state-of-the-art infrastructure and advanced technologies to continually enhance our operational

efficiency and productivity.

To ensure that PSA Mumbai continues to be the terminal of choice in JNP, the terminal began its Phase 2 capacity expansion on 18th April 2022, which involves the construction of an additional 1 km of quay (berth) and 44 hectares of stacking yard. This expansion will effectively double the terminal's existing current capacity, enabling it to handle 4.8 million twenty-foot equivalent units (TEUs) by the first quarter of 2025 and enable PSA Mumbai to play its part in supporting the growth of the Indian economy.

PSA Mumbai extends gratitude to JNPA, JNCH, Shipping Line Customers, Port users, and other stakeholders for their support and cooperation. ●



📍 Location : Subic Bay, Philippines  
Equipment installed new from 2007-2009

- (2006) **SIMTECH** Edge Rounding Machines
- (2006) **MESSER Omnimat** CNC Oxygen/LPG Stripping Machines (4x)
- (2006) **Koike** Stripping Cutting Machines (3x)
- (2007) **PUIL E&C** Semi Gantry Cranes



(2007) PUIL E&C 15T Semi Gantry Cranes



(2006) Koike CNC Plasma Cutting Machine



(2006) Koike Stripping Cutting Machine



ARKI 20T Overhead Cranes



(2006) Simtech Edge Rounding Machine



(2008) Kone Wia Goliath Cranes

Goliath-Jib (Dockyard), Bridge Type & Overhead Cranes  
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Panel & T-Bar Fabrication Lines, Forklifts, Welders, Boomstackers.



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## Ministry of Ports, Shipping and Waterways (MOPSW) developing Next-Gen Container Terminal at Tuna Tekra, Gujarat

● *Concession agreement signing ceremony between Deendayal Port Authority and DP World on 25th August 2023 in the august presence of Shri Sarbananda Sonowal*

● *The estimated cost of the project is Rs 4,243.64 crore*

● *The up-coming Greenfield terminal will be capable of handling next generation vessels carrying more than 18,000 TEUs*

Ministry of Ports, Shipping and Waterways is committed towards developing the best infrastructure at the ports for increasing the economic growth of the country. Deendayal Port Authority (DPA), a leading Major Port on the West Coast of India in Gujarat, is signing a concession agreement for the development, operation and maintenance of a new mega container terminal at Tuna-Tekra, Gujarat (near Kandla) with DP World, a multinational logistics company based in Dubai, United Arab Emirates. The concession agreement will be signed on 25th August 2023 between Deendayal Port Authority and DP World in the august presence of Shri Sarbananda Sonowal, Union Minister of Ports, Shipping and Waterways and AYUSH, and H.E. Sultan Ahmed Bin Sulayem, Group Chairman and CEO of DP World at Tactic 1&2, Aloft Hotel Aerocity, New Delhi from 8 PM

**Onwards. Shri Shantanu Thakur, Minister of State for Ports, Shipping and Waterways, and other dignitaries will also be present during the signing.**

The project involves construction of a mega-container terminal at Tuna-Tekra near Kandla, at a cost of Rs 4,243.64 crore through Public Private Partnership (PPP) mode. Once complete, the terminal will have annual capacity to handle 2.19 million container units

(TEUs) with capability to handle next-generation vessels carrying more than 18,000 TEUs.

The new terminal will cater to future trade demand from Northern, Western and Central India, connecting the regions to global markets. The project aligns with Vision 2047 of Government of India to quadruple port handling capacity and develop multimodal logistics infrastructure to promote economic growth.

The 30-year PPP project agreement with an SPV of Hindustan Infralog Private Limited (a JV of DP World and National Investment and Infrastructure Fund (NIIF)), is on Build-Operate-Transfer (BOT) basis, extendable upto 50 years. The container terminal will be fully compliant with the green port guidelines ensuring sustainability in port operations by adopting best practices of port environment management contributing towards the long-term sustainability goals set out by the Government of India.

The project is expected to add operational efficiency in terms of reduced congestion at Kandla creek, enhanced ability to handle mega container vessels, significant reduction in turnaround time and many other advantages for the creation of efficient and resilient supply chains in the country. Equipped with multimodal connectivity through a wide network of roads, rail and highways, the terminal will provide a gateway between hinterland and the global markets. ●



**28<sup>th</sup>**  
**February**  
**2024**

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marketing@oceantrademedia.com

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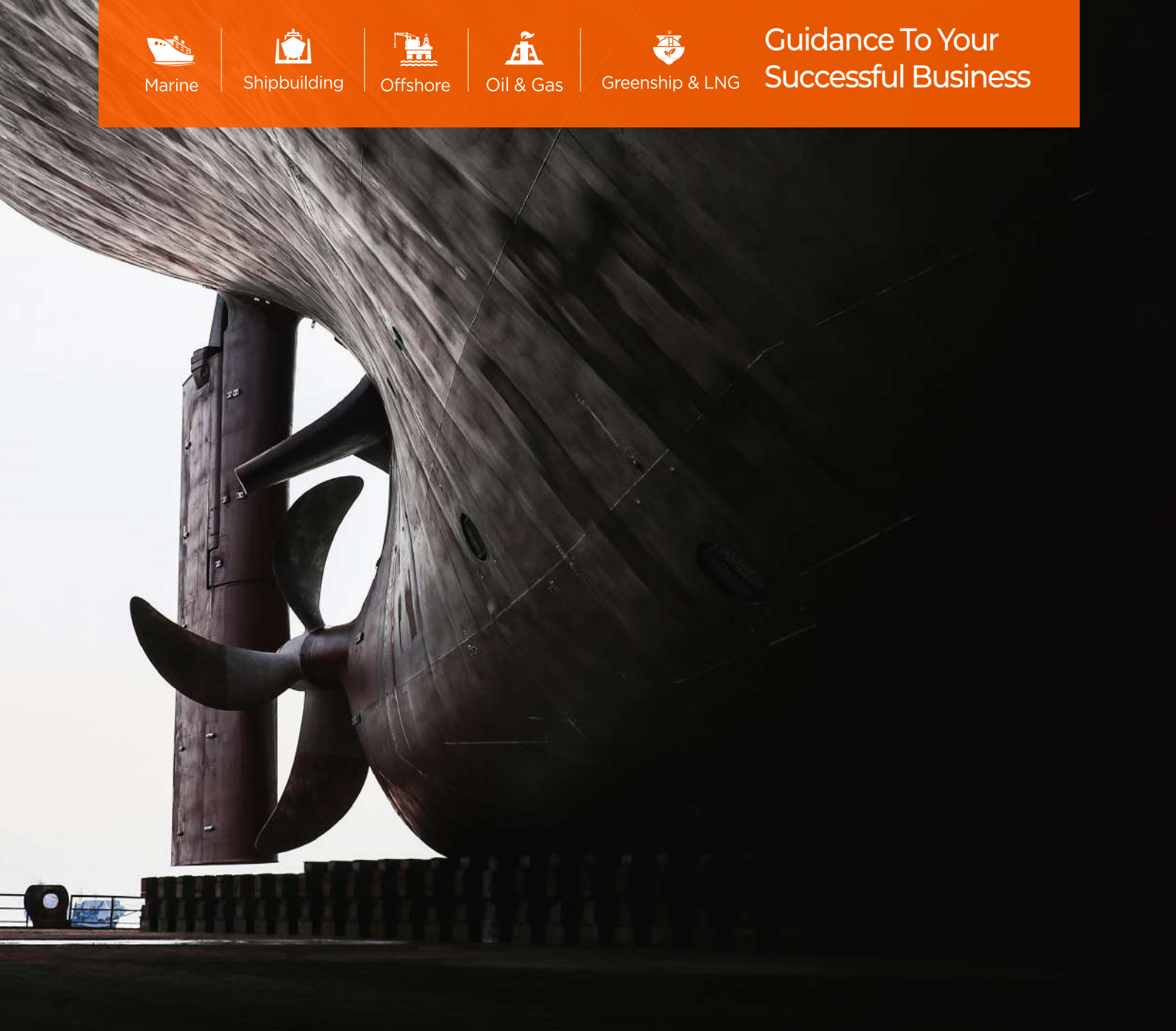


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