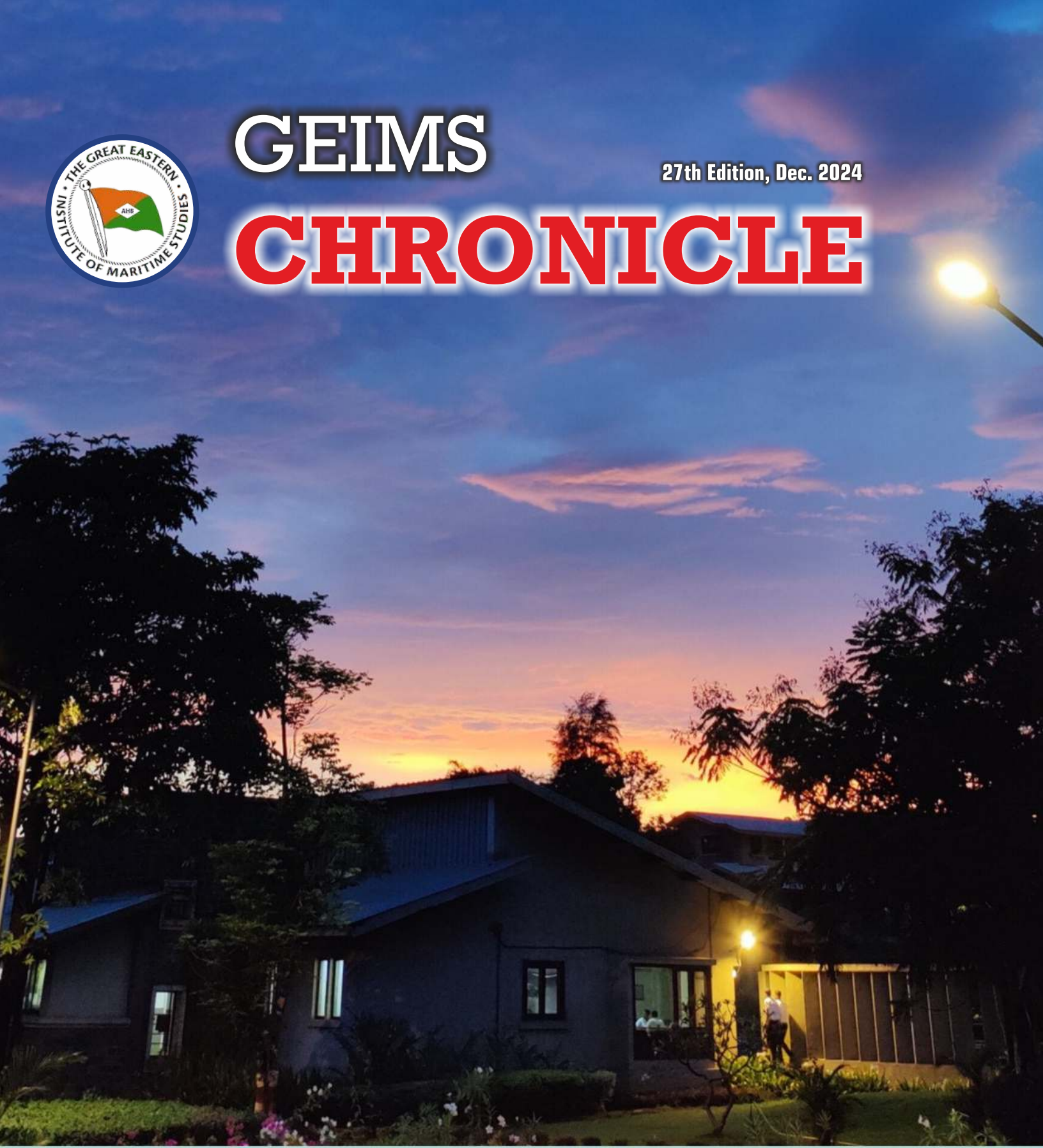




GEIMS

27th Edition, Dec. 2024

CHRONICLE



THE GREAT EASTERN INSTITUTE OF MARITIME STUDIES

A Division of The Great Eastern Shipping Company Limited

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CADET'S OATH

As I embark on my journey as a maritime professional,
I will strive to bring honour to GEIMS.
I will strictly follow the ISM code and all regulations.
I solemnly undertake to ensure safety and security of
my fellow seafarers on board.
I will strive to do my best at all times
I will always uphold the values of India.
Jai Hind!



Est 1975-2006



Estd. 2006

Inspiring quotes by Albert Einstein:- "The important thing is not to stop questioning. Curiosity has its own reason for existing."

A reminder of the power of curiosity and continuous learning, essential traits for any aspiring cadet.

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GEIMS CHRONICLE



Cdt. Aby Leslo, DNS -38

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Dear Cadets,

As we approach 2025 it time to reminisce the year gone by and look back at the events which made us what we are today. As we are about to complete 20 years one of our major achievements have always been timely placements of our cadets for on board training. This year we added to our pool of companies with the prestigious companies – Nautic Fleet, Mitsui O.S.K. Lines , MSI Shipping Services. Our academic performance made us proud as we had 95% overall results. Special mention of GPR 12 and DNS 37 cadets where we had 100% results in externally conducted assessments. We are thankful to our partner companies for selecting our cadets in their esteemed companies for on board training.

Continuous professional development is a key focus area for us at GEIMS. The institute organized a range of training programs to help the Faculty and staff to improve teaching skills to match industry expectations .In addition an initiative has been taken where Faculty members will attend all floating staff seminars of GESCO so understand the gaps of the trainees and accordingly improvise cadet training.

Visit by Industry experts have been a hallmarks at our campus since inception. Mr Deependra singh Bisen DDG Training, DGS was in campus to inaugurate a Bamboo plantation drive under the initiative of the Director General of Shipping -“Ek Pedh Maa ke Naam “. Distinguished guests like Station Commander INS Shivaji, Cmdr. Sameer Chaudhry, Capt. Naren C Bhatt, Chairman, Suntech Ship Management, Mr. Vineet Gupta, MD, Anglo Eastern, Marine HR, Cmdr. Vivek Chawla, Director IMU LBS CAMSAR, Capt. Mahesh Garemall, GM Good wood Shipping, Capt. Anshul Rajvanshi MD Synergy Maritime Services, Mr Kaushik seal who gave a guest lecture.

Our cadets and Faculty members have been actively involved in Paper Presentations. A Research paper on Augmented Reality: A New Horizon in Ship Navigation by cadet. Ayush Tiwari and cadet. S K Mustafijul of DNS 38 has been shortlisted for final presentation at the INSA Students' Technical Paper competition. Cadet R.S Pardeshi GME 61 and Dr. Meena Ravishankar presented a research paper on Artificial Intelligence (AI) and Human. Naval Architecture Faculty Mr Pramod Pai presented a review paper on evolution of Floating Solar Photovoltaic systems at the International Conference on Advances in Energy and Environmental Engg. Our Faculty members have always been the true pillars of our institute and they continue to contribute in many ways to the larger Maritime Industry. Special mention about our recent association with the prestigious INS Shivaji. We have a initiative of Knowledge exchange programme where regular Guest Lectures are conducted on common topics by experts of the institutes .

As we near the end of another exciting year and look forward to the challenges of the future in the highly disruptive era in the Maritime industry with Decarbonisation, Diversity and Digitisation taking centre stage .Training will always be a key pillar to ensure a safe and environmentally acceptable shipping industry of the future. The coming years will have a focussed approach towards practical and simulator training for our cadets with special emphasis on mental wellbeing and environmental concerns.

I take a moment to thank OUR TEAM of dedicated Faculty members, Instructors, Wardens, Admin Staff and IT staff who have continued to excel and ensure we impart a futuristic Maritime training, making our cadets industry ready and mentally strong to meet the challenges of a glorious career at sea. The Industry acknowledged our excellence in Pre Training at GEIMS by awarding the Best Pre Sea Training Institute of the year at the International 11th Samudra Manthan Awards recently held in Mumbai.

Wishing you and your families a “Merry Christmas and a Happy New year”

Capt. Subroto Khan
Principal



PREPARING CADETS FOR THE FUTURE

The maritime industry is rapidly evolving with the adoption of new technologies, greener ships, and smarter operations. To keep pace, the Great Eastern Institute of Maritime Studies (GEIMS) is taking significant steps to prepare cadets for these advancements. By introducing modern learning tools, providing hands-on exposure and strengthening ties with industry and alumni, GEIMS ensures its cadets are well-equipped for the

challenges of the Merchant Navy.

GEIMS is leveraging advanced tools like Augmented Reality (AR) and Virtual Reality (VR) to enhance training. For instance, cadets can explore engine room operations or navigate challenging situations without leaving the classroom, helping them build confidence before stepping on board.

Practical exposure is another vital aspect of GEIMS training. Cadets regularly visit ships to observe operations and learn about critical systems such as engines and navigation equipment. Additionally, GEIMS plans regular visits to the Garware Rope-Manufacturing unit to give DNS and GPR cadets a deeper understanding of modern mooring systems and their importance in maritime safety. These realworld experiences bridge the gap between classroom learning and actual Industry practices.

GEIMS has also launched a knowledge exchange program in collaboration with the Indian Navy's INS Shivaji. This initiative fosters mutual learning, allowing cadets to compare defense and merchant navy technical developments. By exploring advancements in areas like emission reduction, alternative fuels, and safety innovations. Cadets gain insights into technologies that benefit both sectors. This program encourages cadets to think critically and contribute to future Maritime innovations.

The institute places a strong emphasis on alumni engagement, recognizing their value in mentoring and guiding current cadets. This connection not only enriches the cadets' learning experience but also strengthens GEIMS' ties with the maritime community.

Conclusion

As the merchant navy embraces smarter ships and cleaner technologies, GEIMS is ensuring its cadets are ready to meet these demands. With its focus on innovation, practical learning and industry collaboration. These efforts pave the way for cadets to confidently navigate the challenges of the future and make meaningful contributions to the maritime industry.

Wishing a Happy and Prosperous New Year 2025.

Mr. Sandip Kulkarni
Engineering Faculty



GESCO Senior Officers Seminar : 22nd Oct. to 24th Oct. 2024



GESCO Senior Officers Seminar was held from 22nd Oct to 24th Oct '24 at the 'Ocean House', Worli Mumbai.

As advised by the top management, a better understanding of GEIMS staff regarding the latest happenings on board

GESCO ships and firsthand interaction with the senior sailing staff, following staff from GEIMS, Principal Capt. Subroto Khan, Vice

Principal Mr. Milind Kulkarni and Nautical Faculty Capt. Nalin M. Khera attended the Seminar.

The seminar started on a positive note with an opening address by the COO of GESCO, Capt. Ankush Gupta followed by a presentation by the head of the training department Mr. Sunil Kumar, where he discussed introduction of skill up training book. Next presentation of the day was by Capt. Karthik Nanda and his audit team, where they discussed Risk assessment, incidents especially related to injuries that happened onboard GESCO ships and findings of various on board audits.

Day 2 of the seminar started with recap of day 1 by Capt. Mandar Shete, head HSQE which was followed by a presentation on Vetting and Sire 2.0 by Capt. Aditya Gupte and Capt. Parag Patil, Environment Presentation – EEXI, CII and other related topics by Mr. Satyakumar Gaur and AMC by Capt. Kunal Nanda and Team.

Afternoon session on day 2 was dedicated to open forum for discussing crewing matter with fleet personnel department.

Day 3 of seminar began with recap of the previous day followed by presentations from operation department and technical department.

All sessions of seminar were very interactive and interesting and quite beneficial for all especially for us at GEIMS. First-hand interaction with sailing and office staff gave us lot of insight into the happenings on board and also expectations from the GEIMS cadets. It was a good forum for getting first-hand feedback about our cadets. GEIMS faculty will be attending such seminars in future as well for the mutual benefits of everyone involved.



Strengthening Maritime Bonds: GEIMS and INS Shivaji Knowledge Exchange Program

The Great Eastern Institute of Maritime Studies (GEIMS) was deeply honored to collaborate with INS Shivaji, Lonavala, an esteemed Indian Naval Engineering Institute, as part of an enriching knowledge exchange program. This initiative marked a significant milestone in fostering professional ties and enhancing mutual understanding between the Merchant Navy and the Indian Navy. Through a series of visits and interactive sessions, both institutions shared valuable insights into their respective fields, paving the way for future collaboration.

Merchant Navy Overview at INS Shivaji

The collaboration commenced with a team from GEIMS visiting INS Shivaji to deliver a comprehensive presentation tailored to the trainee officers, who are set to join the Indian Navy as engineering officers. The presentation provided a detailed overview of the Merchant Navy, highlighting its vital role in global trade, the immense scale of shipping operations, and the commercial dynamics of maritime industries. These insights served as a foundation for understanding how the Merchant Navy contributes to India's economy and international trade.



The session was further enriched by a technical presentation led by GEIMS' Vice Principal. This session delved into the intricate workings of machinery like two-stroke engines and explored India's ambitious Sagarmala vision—an initiative aimed at developing inland waterways and enhancing port-led development. The discussion also emphasized the critical role of the Indian Navy in ensuring maritime security, particularly in combating piracy and safeguarding vital shipping lanes.

GEIMS' Participation in Navy Day Celebrations

The collaborative efforts reached another milestone when representatives from GEIMS were invited to participate in the Navy Day celebrations on December 4th. This prestigious event provided GEIMS an opportunity to interact with Indian Navy officers and their Original Equipment Manufacturer (OEM) suppliers. These interactions fostered valuable connections, laying the groundwork for potential future collaborations. The event showcased the Indian Navy's dedication to excellence and its pivotal role in maintaining maritime security.



Indian Navy Cadets' Visit to GEIMS

In a reciprocal gesture, Indian Navy cadets visited the GEIMS campus two days later to gain practical insights into the Merchant Navy's operations. They were introduced to GEIMS' cutting-edge simulators and engineering setups, which provided



them with a hands-on understanding of maritime machinery and operations.



The interactive sessions were marked by enthusiastic participation, as the Navy cadets engaged deeply with the GEIMS faculty, posing insightful questions that facilitated mutual learning. These interactions underscored the value of knowledge-sharing between the two institutions.

Experiential Learning at INS Shivaji's Advanced Training Facilities

On December 11th, GEIMS' Graduate Marine Engineer (GME) cadets had the privilege of visiting INS Shivaji's state-of-the-art training facilities. This visit offered a firsthand look at advanced naval technologies and rigorous training standards. The cadets explored the functioning of gas and steam turbines, Controllable Pitch Propellers (CPP), and a sophisticated firefighting bay equipped with temperature control systems.

This immersive experience was both enlightening and inspiring, leaving a lasting impression on the cadets about the Indian Navy's commitment to technological excellence.



Laying the Foundation for Future Collaboration

This knowledge exchange program has laid a solid foundation for ongoing collaboration between GEIMS and INS Shivaji. The mutual visits and interactive sessions not only enhanced the understanding of each institution's unique strengths but also fostered a spirit of camaraderie and professional respect. Such initiatives play a critical role in bridging the gap between the Merchant Navy and the Indian Navy, ensuring that both sectors can learn from each other's expertise and experiences.

As the maritime world continues to evolve, collaborations like this will be instrumental in shaping the future of the industry. By fostering mutual learning and strengthening ties, GEIMS and INS Shivaji have set a precedent for how knowledge exchange programs can contribute to the growth and development of maritime professionals. This partnership stands as a testament to the shared commitment of both institutions to excellence and innovation in maritime education and operations.



“Stepping Aboard: Crew Trainees' First Encounter with Life on a Ship”

On November 12, 2024, we GPR-13 of the GEIMS had the opportunity to visit the bulk carrier SW Rich at Indira Dock, located in Mazgaon Port /Mumbai. The SW Rich, with IMO number 9169342, is a general cargo vessel primarily used for transporting bulk goods. The visit lasted for 1 hour and 10 minutes and provided valuable insight into the operations and onboard facilities of this impressive vessel.

Ship Details

- Name of the Ship : SW Rich
- Type of Ship : Bulk Carrier (General Cargo)
- IMO No : 9169342
- Master Name : Capt. Xu Qihong
- Crew : 21 members

Port and Visit Details

- Port Visited : Indira Dock
- Date of Visit : November 12, 2024
- Time Spent on Ship : 1 hour 10 minutes
- Places Visited on Ship :
 - Bridge : Yes
 - Engine Room : No
 - Cargo Area : No

Cargo on Board

During the visit, it was noted that the SW Rich was carrying a diverse range of cargo, including:

- Scrap Metal
- Spare Parts
- Vehicles



These items are typical for a general cargo vessel, which is designed to carry a variety of non-containerized goods.

The cargo holds were not directly inspected, but the nature of the cargo indicates that the ship is well-equipped for handling bulk materials and vehicles.

Bridge Visit

The primary area explored during the visit was the **bridge**, where the ship's navigation and command operations are managed. The bridge was equipped with modern navigational and communication equipment, ensuring safe and efficient operation during transit. The ship's master, Capt. Xu Qihong, provided valuable information about the ship's daily operations and safety measures, including the procedures followed when docking at busy ports like Indira Dock.



Best Marine Training Institute Award 2024 was awarded to the Great Eastern Institute of Maritime Studies (GEIMS). This award recognizes GEIMS's outstanding contributions to Maritime education and training. It highlights GEIMS's commitment to providing high-quality education, state-of-the-art infrastructure, and excellent placement opportunities for our Cadets. GEIMS has continually set benchmarks in maritime training, ensuring our cadets graduates are well-equipped to meet the industry's evolving challenges. This accolade reaffirms their position as a leader in maritime education.



and Digitalisation. It addressed the maritime training industry's challenges, highlighting advancements in future fuels and digital technologies critical for maritime decarbonisation goals.

Star & Universe Exploration at GEIMS



GEIMS cadets and faculty enjoyed visiting the planetarium set up at GEIMS. The aim was to demonstrate how planetarium domes are used in schools and colleges across India to provide immersive educational experiences in astronomy and space science. These domes, often referred to as mobile or fixed planetariums, project images of celestial objects, constellations, and other astronomical phenomena onto a dome-shaped screen, creating a realistic night sky experience. This experience helps students understand complex astronomical concepts in an engaging and interactive manner.

Wärtsilä Marine Industry conducted a seminar on October 16, 2024, attended by GEIMS dignitaries and faculty. The event, exclusive to Wärtsilä customers and stakeholders, focused on Decarbonisation





A **plantation drive** was organized under the theme "Ek Ped Maa Ke Naam" within the campus, aiming to honor and celebrate the nurturing spirit of mothers. The event was graced by the chief guest, Deputy Director of the Directorate General of Shipping, Mr. Dipendra Singh Bisen, along with Mr. Sanjeev Mehra. Together, they inaugurated the drive by planting 100 bamboo saplings, symbolizing strength, growth, and resilience. Each sapling was dedicated to mothers, reflecting the



core theme of the initiative. This drive not only promotes environmental sustainability but also serves as a tribute to the selfless love and care mothers provide. The event marks the beginning of an annual tradition, with plans to continue planting saplings each year, ensuring a greener and more meaningful future for the campus community. The plantation initiative aims to instill environmental consciousness and foster a deep connection between nature and the values of love and care associated with motherhood.

A **health check-up camp** was organized specifically for Safai Mitras, the sanitation workers who play a crucial role in maintaining cleanliness in the community. The camp provided free medical check-ups, offering a range of services including general health screenings, blood pressure monitoring, and tests for common ailments, ensuring that these workers received the necessary healthcare attention. The initiative aimed to ensure that the well-being of these essential workers, who often face health risks due to their occupation, is prioritized. By providing access to healthcare and social welfare benefits, the program helped to uplift and empower the Safai

Mitras, acknowledging their contribution to society and promoting their overall welfare



On Gandhi Jayanti, cadets took the lead in organizing a Swachhata Awareness Rally, highlighting the importance of cleanliness and environmental sustainability. The rally began on campus, with cadets carrying banners and slogans emphasizing sanitation, waste management and reducing single-use plastics—reflecting Mahatma Gandhi's vision of a clean and sustainable India. Following the campus rally, they extended their efforts to the local community, conducting a cleanliness drive in nearby areas. Cadets worked with residents to clean public spaces, pick up litter and promote eco-friendly practices. Additional awareness programs were held to advocate for solutions like Sewage Treatment Plants (STPs) for wastewater recycling and reducing plastic usage. Participants were encouraged to adopt sustainable habits, inspiring long-term change for a healthier environment.





“New Faculty, New Directions: Sailing into a Brighter Future at GEIMS”

Capt. Kiran Mohite,
Nautical Faculty



I am a Master Mariner with extensive experience in the maritime industry, having sailed with various reputable shipping companies across different types of vessels. Over the years, I have developed a deep understanding of navigation, cargo handling, and ship management. I have now transitioned to teaching and am currently serving as a faculty member at the Great Eastern Institute of Maritime Studies (GEIMS), where I am passionate about sharing my knowledge and practical expertise with aspiring seafarers, preparing them for successful careers at sea.

Capt. Nalin M. Khera,
Nautical Faculty



I started my journey of merchant Navy in 1983 by joining T.S. Rajendra, became Master in 1998 with Barber Ship Management. Worked as Pilot at Goa Port from 2003 to 2007 and did a small stint of one and half year with a shipping agency as branch head of their Goa office. I went back to sailing again and finally hung my sailing boots in 2023.

I joined GEIMS in Jan'2024 with the thought of giving back to the shipping community and since then enjoying guiding and mentoring young minds at GEIMS.

Capt. Ramnathan
Nautical Faculty



After a career spanning over 44 years in the shipping industry in Ship Management, Loss Prevention & Quality Assurance, Commercial Shipping Operations / Voyage Management, I wish to share the experience and knowledge I have gained to our young seafarers to enable them become leaders in their field of work

Mr. Chintanmani Mokashi
Engineering faculty



I have joined GEIMS in December month with a purpose of sharing my experience and knowledge with the candidates who are about to venture into this field and make their transition smoother and more productive.



"From Pumps to Giants: Navigating Maritime Engineering Evolution"

During the age of sail, ships were a marvel of maritime engineering, yet they were not impervious to water ingress. Whether from leaks, weather, or daily activities, water would find its way into the bilge, the lowest part of the ship's hull. Left unattended, this water could pose serious threats to the vessel's buoyancy and stability.



To manage this, sailors relied on bilge pumps, a critical piece of equipment aboard any sizable ship. These pumps were the last line of defense against the relentless intrusion of water. The technology of bilge pumps evolved over the centuries, but during the age of sail, there were primarily three types:

Burr Pumps: These were essentially cone-shaped leather buckets that drew water up a tube. Simple yet effective, they were one of the earliest forms of bilge pumps used on ships.

Chain Pumps: Featuring a continuous chain with small burrs or buckets, these pumps lifted water up and pull it up, running over upper and lower sprockets. They were more efficient than burr pumps and became a common sight on larger vessels.

Common or "Suction" Pumps: Representing a significant advancement, these pumps appeared on ships sometime between the late 1400s and early 1500s. Initially made entirely of wood, they were later constructed with metal parts as the technology for boring iron tubes improved. The

operation of these pumps was labor-intensive, often requiring the coordinated effort of multiple sailors. The pumps needed to be regularly maintained and were sometimes used as a latrine by the crew, which could lead to the accumulation of filth and garbage in the bilge. This was a health hazard, but it also provided an indication of the hull's condition. Clear and sweet-smelling bilge water was a sign of a tight hull, while foul-smelling water indicated that it had been stagnant and the ship might be leaking.

The bilge pumps were so vital that their failure could spell disaster for a ship. A vessel could lose its rigging or rudder and still offer hope of survival, but without a working bilge pump, it was doomed.



Reproduced by kind courtesy to : Curtesy Erika Fernandez. Works at Freelancer, Novelist, Writer

So, the management of bilge water was a constant concern for sailors in the age of sail. The pumps they used were a testament to their ingenuity and determination to keep their ships afloat in the face of the relentless sea.

What is the maximum size limit for building ships? If there is no limit, why aren't even larger ships built?

When it comes to shipbuilding there isn't a universal maximum size limit for building ships, but practicality and Physics impose their own constraints. Seawise Giant was the longest ship ever constructed, at 458.45 m (1,504.1 ft), longer than the height of many of the world's tallest



buildings, including the 451.9 m (1,483 ft) Petronas Towers.

In the world of container ships, the trend has been towards building ever-larger vessels to benefit from economies of scale. Even this has practical limits. The largest container ships can carry over 20,000 twenty-foot equivalent units (TEUs), but they face similar limitations in terms of ports that can accommodate them and the canals they can traverse.



freight rates, making the operation of mega-ships less viable.

As technology advances, we may see larger ships, but they will always be bound by the practical realities of the maritime world.



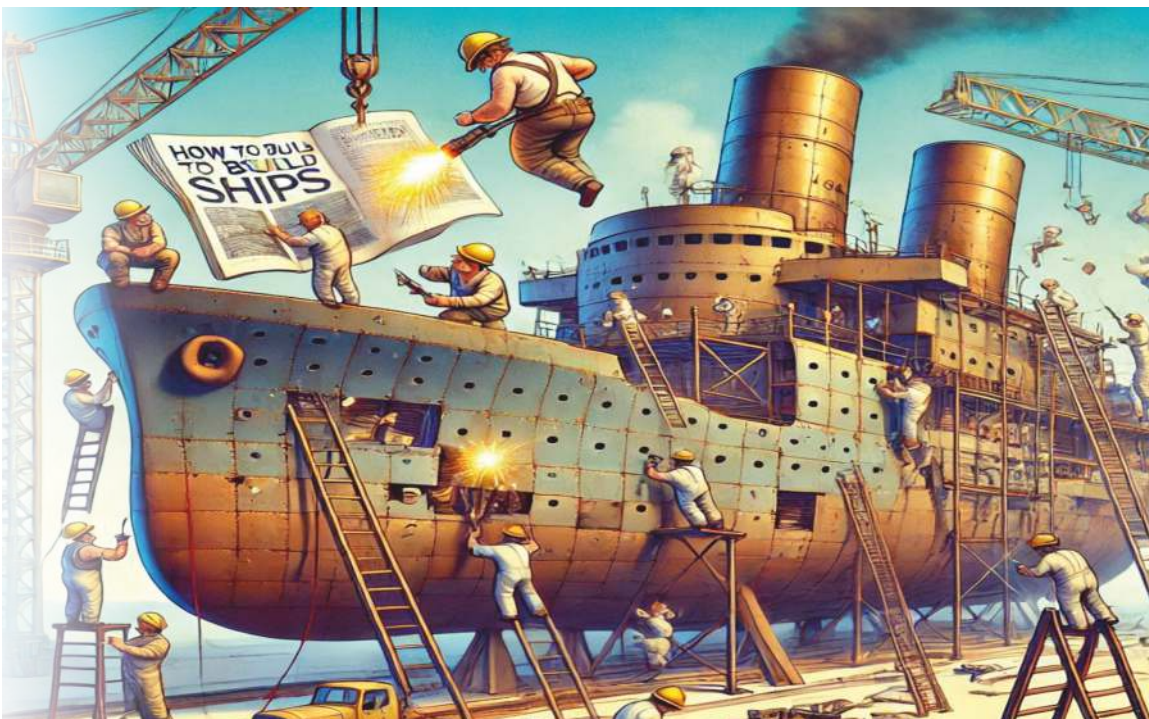
Thanks to Erica Fernandes A boating enthusiast.

Capt. Ravi Shankar

Nautical Faculty



Another consideration is the market demand. Building a ship is a significant investment, and there needs to be enough cargo to make such a venture profitable. The shipping industry is highly cyclical, and overcapacity can lead to plummeting





Revolutionizing Maritime Training with VR: An Overview of Oculus Quest 2 Integration

The maritime industry is embracing cutting-edge technology to enhance training methodologies, and Virtual Reality (VR) has emerged as a game-changer. Leveraging the Oculus Quest 2, a standalone VR headset, maritime training now offers cadets an immersive, safe, and cost-effective learning experience that closely mimics real-life ship environments.

System Features

The Oculus Quest 2 boasts high-resolution displays and a fast refresh rate, delivering crystal-clear visuals and smooth motion. Its touch controllers provide six degrees of freedom, ensuring precise movement tracking. Training sessions are managed by a navigation simulator instructor with IT staff support. Each cadet uses an individual login, enabling tracking of training progress and quiz scores. A reliable internet connection of at least 5 Mbps per headset is required for optimal functionality.

Training Modules

The VR training encompasses 10 ship-based locations, captured live for realistic and engaging environments. Key areas include:

1. Bridge (navigational equipment)
2. Navigation equipment
3. Main Deck
4. Aft Peak
5. Forecastle
6. Dry Dock
7. Accommodation
8. Engine Room
9. Emergency Generator
10. PSC items

Cadets virtually position themselves on deck, interacting with icons to access audiovisual content for an interactive and educational experience.



Simulator Training

The VR training operates in tandem with advanced simulation systems, replicating shipboard scenarios in a controlled and repeatable manner.

This approach provides cadets with hands-on experience while mitigating the risks and logistical complexities associated with live training.

Challenges

Despite its advantages, VR training has a few limitations:

1. ***Technical Glitches***: The system may require frequent resets.
2. ***Battery Life***: Controllers last approximately 2 hours after a 4-hour charge.
3. ***External Support***: Troubleshooting often requires additional technical assistance.

Conclusion

VR technology, while not a necessity, is undeniably a valuable tool for pre-sea cadet training. It offers an unparalleled opportunity for cadets

to familiarize themselves with ship environments and onboard equipment without stepping aboard a vessel. This innovative approach complements traditional training methods, fostering foundational maritime skills in a risk-free setting.

Capt. Kiran Mohite





Exploring the Cosmos: A Guide to Telescopes and Their Mechanisms

Telescopes, the quintessential tools of astronomers and sky-gazers alike, serve as windows to the universe. Telescopes are like magic windows to the universe, letting astronomers and sky-watchers see things that are too far away or too faint to see with just their eyes. Learning how these telescopes work is super important for both people who love looking at the stars and scientists who study them. Understanding the intricacies of these instruments is crucial for enthusiasts and professionals alike, as they navigate the vastness of space and time.

Types of Telescopes:

Telescopes primarily operate in two configurations: Refractors and Reflectors, each with its unique design and functionality.

Refractors:

Often considered the archetype of telescopes, refractors utilize an eyepiece and an objective lens to gather and magnify light, producing crisp, clear images of celestial wonders. While versatile for terrestrial and astronomical observations, refractors can be relatively costly to manufacture, making them ideal for capturing intricate details of lunar and planetary surfaces.

Reflectors:

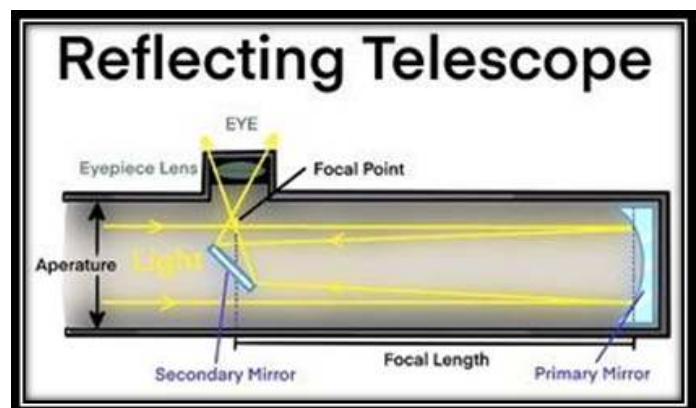
Reflectors, also known as Newtonian Telescopes, were first developed by Sir Isaac Newton. They use curved mirrors to collect and bounce light. These telescopes have a tube with a big concave mirror at one end, which reflects light onto a smaller mirror angled at 45 degrees. The resulting image is then observed through an eyepiece, with



magnification determined by the focal lengths of the telescope and eyepiece. Reflectors excel in deep-sky observations, offering impressive views of galaxies, nebulae, and star clusters.

Our Telescope at the Great Eastern Institute of Maritime Studies

A beacon of astronomical exploration in our institute, the Newtonian Telescope graciously donated by our former principal, Mr. Ajoy Chatterjee, stands as a testament to the wonders of the cosmos. This Dobsonian Sky-watcher model boasts a 1200mm focal length and an 8-inch aperture, mounted on a rotating base equipped with electronic motors for azimuth and altitude adjustments. Precision is paramount during high-magnification observations, facilitated by automatic tracking mechanisms that ensure objects remain within view. A marvel of modern technology, our 'smart' telescope simplifies stargazing with user-friendly controls for date, time, location, and alignment. With just a touch of a button, enthusiasts can embark on voyages through the cosmos, exploring the universe's treasures with unparalleled ease and precision.



Cdt. T M U Qureshi

DNS 36

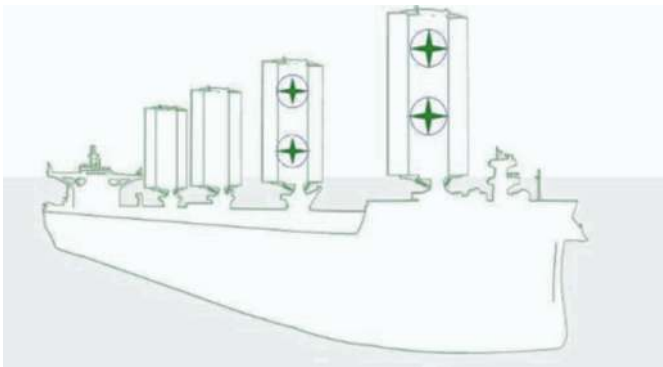


Solid Sails and Wind Energy Generation Integration with Wind Assisted Propulsion

This article proposes a hybrid propulsion and energy system for maritime vessels that combines solid sails with integrated wind turbines. This system utilizes wind energy for propulsion and electricity generation, potentially reducing reliance on fossil fuels and lowering emissions of sulphur oxides (SO_x) and nitrogen oxides (NO_x).

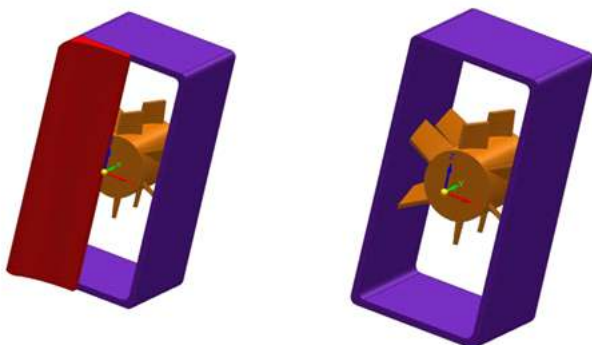
Key Components and Operation:

Solid Sails with Integrated Turbines: Turbines are embedded within the sails, capturing wind energy to generate electricity when the flaps are open. When flaps are closed, the sails function traditionally, propelling the ship forward.



Dual Modes:

- **Propulsion Mode:** Closed flaps allow sails to catch the wind and move the ship.
- **Energy Generation Mode:** Open flaps enable wind to pass through the turbines, generating electricity to power on board systems.



Advantages and Challenges:

- **Benefits:** This dual-functionality approach can reduce emissions and enhance energy efficiency. It is particularly useful for long voyages, where wind conditions vary.

Challenges: The design must address structural integrity, aerodynamic efficiency, and manage efficiency trade-offs between propulsion and power generation.

Energy Efficiency and Environmental Impact:

Wind turbines within sails have an estimated energy conversion efficiency between 20% to 40%. The system could contribute to sustainable maritime practices by leveraging renewable wind energy, aiming for a reduction in fuel usage and emissions.

Future and Scalability:

Scaling the system for large ships would involve larger, robust sails, and may require new materials like carbon fibre to minimize added weight. Implementing this technology on existing ships would be costly and complex but feasible on new builds. While costly, the system offers potential savings in fuel and emissions, aligning with industry trends toward decarbonisation.

Conclusion:

The hybrid sail-turbine system presents a promising solution for greener maritime propulsion and on-board power generation. Although scaling challenges exist, ongoing technological advancements may make this a viable option for large vessels in the future.

Cdt. Sanyal Mandal

GME 60



Cdt. Tushar Bangwal

GME 60





शहीद

समझ आ रहा नहीं खता क्या, तो फिर दिल में मलाल है क्यों ।
सदा से बैठा यहीं अकेला, तो ये बिछड़ने का ख्याल है क्यों ॥
अंत समय जब परे खड़ा, तो किसका आंचल थामूँ मैं ।
भारत माँ की गोद में जीकर, गोद में मरना चाहूँ मैं ॥

सुनाई है एक माँ की, लोरी मुझको कानों में ।
लिपट तिरंगे में लौढ़ंगा, माँ अब तेरे अंगन में ॥

जल्दी में था मैंने माँ की, सूरत जी भर ताकी न ।
तेरे पैरों पर सर रख, करनी थी कितनी बाते माँ ॥
कितने और पड़े रणभूमी, पर अंतिम रणरास करें ।
कितने बेटे कोख से अपने, मरते बाप की आस करें ॥

कितनी बहनों की डोली को, मिला न कांधा भाई का ।
कितने हाथों की राखी, खुद-ब-खुद खुल कर छुट गई ॥
कितनी ललनाएँ अपने, जीवन साथी की राह तके ।
कितनो की नवजीवन की, आशा तो पल में टूट गई ॥

लाखों हुए शहीद और देखो, कितने आज भी मरते हैं ।
हम सब की जो ये आजादी है, उनके खून के कतरे हैं ॥
हम जिस झंडे के नीचे, नित खड़े सलामी भरते हैं ।
उस झंडे में रंग वो अपना, खुन मिलाकर भरते हैं ॥

भारत के उन बेटों की, पगधूल पे खुद को रखता हूँ ।
उन अमर जावनो के आगे खुद को नतमस्तक करता हूँ ॥

Cdt. Ayush Tiwari

DNS 36



The Cadet's Voyage''

Beneath the sky, so vast and wide,
On oceans deep, where dreams reside,
A cadet stands, with heart so bold,
In ships of steel, and tales untold.

The waves may rise, the winds may roar,
But steadfast feet upon the floor,
With every storm, with every tide,
The sea becomes a trusted guide.

For in the dark, where stars do gleam,
A sailor learns to chase the dream,
Through charted course, or paths unknown,
The ocean's call becomes his own.

And though the night may seem so long,
The heart of sailors beats so strong
In every port, in every wave,
They find the courage to be brave.

So here's to ships, and here's to men,
To journeys forth, and back again,
With sails unfurled, we face the sea,
For we are bound to destiny.

Cdt. Pranjit Roy

DNS 36





A Photograph is more than just capturing an image. It's the art of capturing moments, a feeling and a memoir

Astronomical Photography

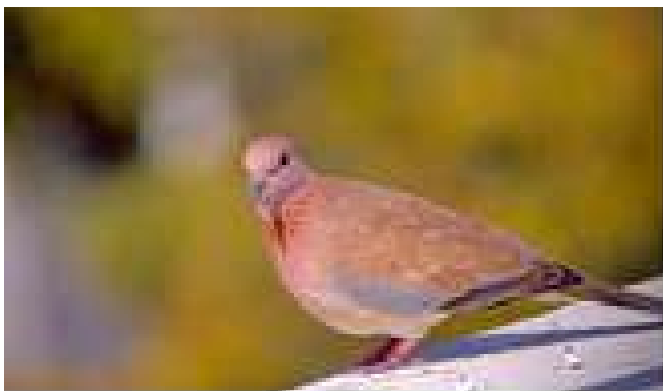


Astrophotography is a specialized type of photography that focuses on capturing images of astronomical objects, celestial events, and the night sky. This often involves long-exposure shots to capture faint light from distant stars, galaxies, planets, and other celestial phenomena.

Astrophotographers use dedicated cameras and telescopes to capture these captivating images.

Nature Photography

Nature photography involves capturing images of the natural world, including landscapes, wildlife, plants, and any other elements found in the environment.



Photographers in this genre aim to showcase the beauty and diversity of nature, often emphasizing the aesthetics, lighting, and composition to create visually stunning and evocative images. Whether it's landscapes, close-ups of flora and fauna, or the interactions between different elements in nature, the goal is to convey the inherent splendor of the natural world through photography.

Cdt. Abhikalp Tripathi

DNS 36





The great Eclipse mishap: A satirical saga of soggy decks and Disappearing captains

The Captain's Note to the Chief Officer

Early in the morning, there will be a total solar eclipse at 09.00 hours. This is something that cannot be seen every day, so let the crew line up in their best clothes on deck so that they may see it. To mark this the rare phenomenon I will explain it to them. If it is raining, we will not be able to see it clearly. In that case, the crew should gather in the mess room.

The Chief Officer's note to the First Officer

On Captain's orders, there will be a total solar eclipse early tomorrow morning at 09.00 hours. If it is raining we will not be able to see it clearly from the deck in our best clothes. In that case, the sun's disappearance will be fully observed in the mess room. This is something that does not happen every day.

The First Officer's note to the Second Officer

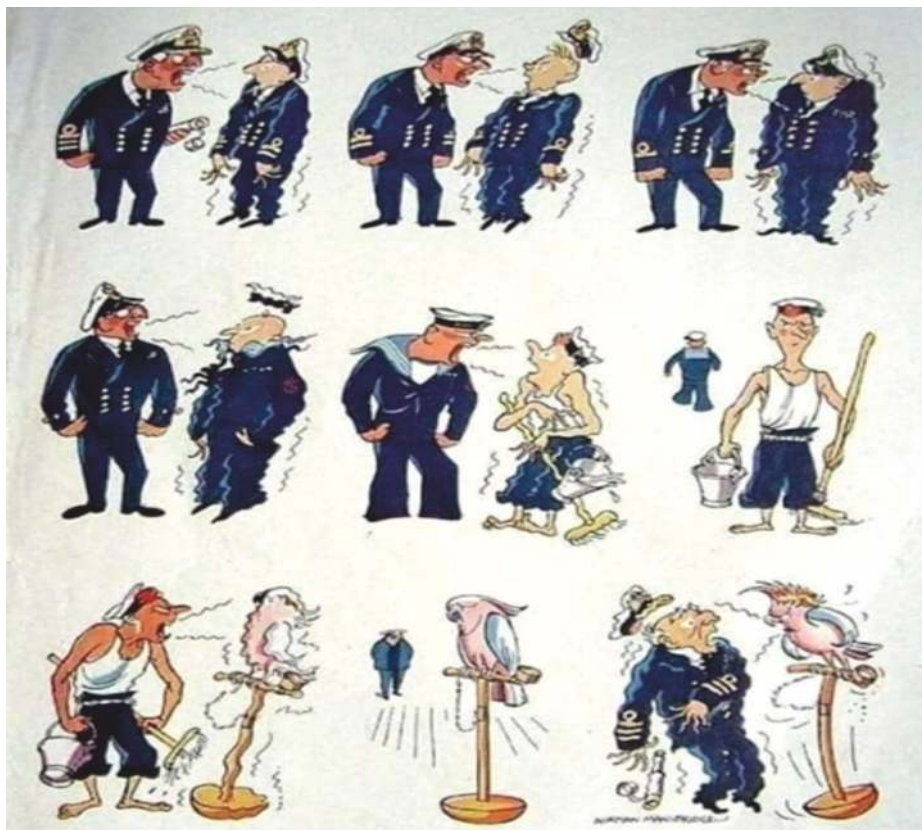
On Captain's orders, we shall fully observe in our best clothes that the sun disappears in the mess room at 09.00 hours. The Captain will tell us if it is going to rain. This is something that does not happen every day.

The Second Officer's note to the Bosun

If it is raining in the mess room early tomorrow, which is something that does not happen every day, the Captain in his best clothes will disappear at 09.00 hours.

The Bosun's note to the crew

Early tomorrow at 09.00 hours the Captain will disappear. It is a pity that this does not happen every day.





How the Absence of Shore Leave is Affecting Seafarers' Mental Health

Merchant navy is a profession that has long been synonymous with isolation, danger and hard work. However, a new challenge has emerged on the horizon for many of the world's seafarers:

The absence of shore leave.

Historically, shore leave offers seafarers a crucial respite from the rigors of life at sea, providing opportunities for rest, recreation and reconnection with their social life. Yet, as global trade intensifies and port restrictions become more common, many seafarers are finding themselves confined to their vessels for extended periods with profound implications for their mental health.

The Importance of Shore Leave

Shore leave is not just a luxury, it's an essential component for seafarer's well-being. It allows seafarers to step away from the relentless routine of shipboard life, which is marked by long hours, confined spaces, and a lack of privacy. During shore leave, seafarers can explore new environments, enjoy diverse experiences, and engage in activities that break the monotony of life at sea. This downtime is crucial for mental rejuvenation and maintaining a healthy work-life balance.

The Impact of Extended Voyages

The COVID-19 pandemic highlighted the vulnerability of seafarers, as lockdowns and port restrictions forced many to remain at sea far beyond their scheduled contracts. Although the pandemic has eased, many seafarers continue to face extended periods without shore leave due to ongoing logistical challenges, tightened security measures and economic pressures on shipping companies.

The absence of shore leave has several significant impacts on seafarers' mental health:

1. **Increased Stress and Anxiety:** The prolonged confinement can lead to heightened

stress and anxiety. Without the ability to temporarily escape the high-pressure environment of the ship, seafarers may experience burnout and emotional exhaustion.

2. **Isolation and Loneliness:** Extended periods at sea can exacerbate feelings of isolation and loneliness. Seafarers are often cut off from their families and social support networks, which can lead to feelings of alienation and depression.

3. **Decreased Mental Health Resilience:** Without the opportunity to engage in leisure activities or receive psychological support during shore leave, seafarers may find it increasingly difficult to cope with the mental and emotional demands of their profession.

4. **Strain on Relationships:** Prolonged absences can strain relationships with family and friends. The lack of face-to-face interaction can lead to misunderstandings, conflicts, and feelings of disconnection.

Addressing the Crisis

Addressing the mental health crisis among seafarers requires a multi-faceted approach. Shipping companies, maritime organizations and governments need to work together to implement strategies that mitigate the adverse effects of extended voyages:

1. **Enhanced Support Services:** Providing access to mental health support services on board, such as counselling and psychological support, can help seafarers manage stress and mental health challenges.

2. **Improved Communication:** Facilitating better communication channels between seafarers and their families can help bridge the gap created by extended periods at sea. Technologies such as satellite communications can play a crucial role in maintaining connections.

3. **Policy Reforms:** Maritime organizations and regulatory bodies should advocate for policies that



ensure more regular and reliable shore leave for seafarers. This includes negotiating port access agreements and implementing flexible scheduling practices.

4. Awareness and Training: Raising awareness about the mental health challenges faced by seafarers and providing training for ship management and crew on recognizing and addressing mental health issues can contribute to a more supportive work environment.

Conclusion

The absence of shore leave is more than just a logistical inconvenience; it is a significant factor

affecting the mental health and well-being of seafarers. As the maritime industry continues to evolve, it is crucial to recognize and address these challenges to ensure that seafarers can maintain their mental health and perform their vital roles in global trade. By prioritizing mental health support and advocating for more consistent shore leave, we can help mitigate the psychological toll of life at sea and support the well-being of those who keep the world's economies moving.

Capt. Anubhav Kalra

TNOC- 04





DEMYSTIFYING CATEGORY ZONE OF CONFIDENCE (CATZOC): A MARINER'S GUIDE TO NAVIGATIONAL ASSURANCE

In the vast expanse of the open seas, where precision and reliability are paramount, mariners rely on sophisticated tools to navigate safely. Among these tools, the Category Zone of Confidence (CATZOC) emerges as a crucial ally, providing clarity and assurance to seafarers as they chart their course through dynamic waters.

Understanding CATZOC:

CATZOC is a classification system embedded in Electronic Chart Display and Information Systems (ECDIS), it serves a simple yet profound purpose, to help mariners assess the reliability of the navigational information displayed on their electronic charts.

Categories at a Glance:

CATZOC divides navigational data into several categories.

Each category signifies a different level of confidence in the accuracy of the displayed information. The categorization of hydrographic data quality is based on three factors,

- a. Position accuracy
- b. Depth Accuracy
- c. Seafloor coverage

CATZOC A represents the highest confidence; indicating the latest highly accurate data, while CATZOC D suggests lower confidence, often due to outdated or less precise information. CATZOC U unassessed Practical Benefits for Mariners:

Real-Time Decision-Making:

CATZOC equips mariners with the ability to make informed, real-time decisions. By understanding the reliability of the displayed data. They can navigate with confidence. Adapting to changing conditions and potential challenges.

Enhanced Safety:

The primary concern at sea is safety, and CATZOC

significantly contributes to this aspect. Mariners can identify areas where the navigational information might be less reliable, prompting them to exercise increased caution and implement safety measures accordingly.

Dynamic Adaptation:

The seas are dynamic, with underwater characteristics changing over time, CATZOC allows mariners to adapt to these changes by providing a clear indication of the latest survey date for navigational data. This adaptability ensures that charts remain relevant in the face of evolving maritime environments.

Compliance and Standardization:

CATZOC operates within a framework of standards and regulations that govern electronic navigation. This standardization ensures consistency across the maritime industry enabling mariners to apply CATZOC information universally.

User-Friendly Interface:

CATZOC is designed with simplicity in mind. Its user-friendly interface makes it operable by mariners with varying levels of expertise. This ease of use facilitates quick decision-making on the bridge, even in challenging conditions.

In conclusion, CATZOC serves as a reliable guide for mariners navigating the vast seas. By providing a clear understanding of the confidence levels associated with navigational data, it empowers seafarers to navigate with assurance, safety and adaptability ensuring that each voyage is a well-informed and secure maritime venture.

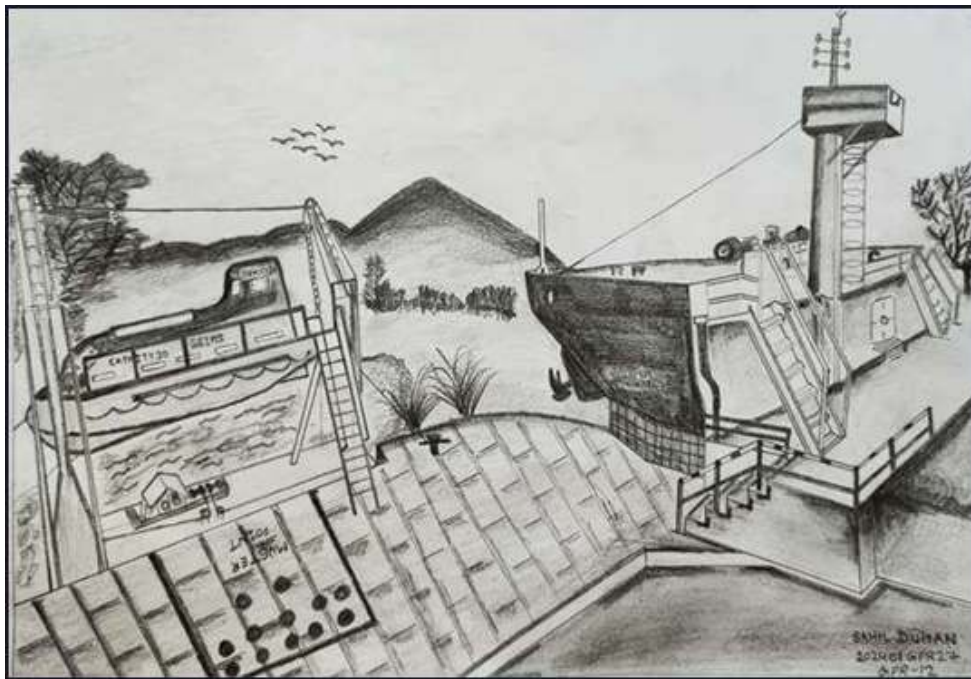
Amit Dixit

Third mate





"A Cadet's Perspective: The Forecastle and Lifeboat Embarkation"



Sahil Duhan

Tr.-OS; GESCO

"Welcoming Doors: The Entrance to Our Administration Office"



Neelesh Suvarna

Tr.-OS; GESCO



Expert Insights from Comd. Sameer Chaudhary, Commanding Officer INS Shivaji



Mastering Corrosion Science: Insights from a Naval Expert

Q: How do you envision leveraging your expertise in corrosion science and engineering?

A: Corrosion science was my chosen field during my M.Tech studies, given its strong relevance to marine engineering. In marine environments, corrosion is a significant challenge because metals exposed to these conditions corrode rapidly. My focus on corrosion science provided me with valuable practical knowledge that is highly beneficial in this field.

Corrosion science is closely related to material science. A solid understanding of material science can significantly enhance decision-making regarding the selection and replacement of various ship components, such as engine parts and auxiliary equipment. This expertise offers a competitive edge, as it enables one to identify the right materials for specific applications. I believe choosing corrosion science was a fantastic decision that has given me a considerable advantage in my career.

After completing my M. Tech, I had the opportunity

to instruct in this field, further solidifying my expertise. I taught corrosion and material science for three years, which, combined with my M. Tech duration totals four and a half years of focused experience. This extensive involvement has greatly enriched my understanding and capabilities in this vital area.

A Distinguished Career in the Indian Navy

Q: Could you please tell us about your journey in the Indian Navy from your commission in 1993 to your current role as Base Commodore?

A: My journey in the Navy began in 1989, right after completing my 12th grade, though officially it is counted from my commissioning date in 1993. Reflecting on this 31-year journey, I can confidently say it was the right path. The Navy provided numerous challenges and opportunities, each contributing to my growth and satisfaction. The journey has had its share of ups and downs, but the joy of doing something I am passionate about has been immensely rewarding. The experiences and accomplishments throughout my career have given me a profound sense of fulfillment and pride, which I cherish deeply, along with the support of my family and friends.



Insights on Responsibilities as Additional Command Engineer Officer

Q: Could you share some insights on your responsibilities as the Additional Command Engineer Officer at Eastern Naval Zone?

A: In the Navy, there are several layers of engineers. Initially, as an Engineer Officer on a ship, whether big or small, you are responsible for maintaining the ship's technical operations. The next level up is the Fleet Engineer Officer, overseeing all engineer officers within a fleet. One rank higher is the Command Engineer Officer, responsible for all ships within a specific command, such as the Eastern Naval Command, where I served.

The Command Engineer Officer handles technical issues, daily operations, maintenance planning and major equipment replacements. This role also involves managing downtime and ensuring swift resolution of technical problems. During my two-year tenure in Vishakapatnam, I dealt with both fleet and submarine technicalities, which was a highly enriching experience.

Leading the Engineering Training Institute

Q: How has your experience as Base Commodore and head of the Engineering Training Institute shaped your approach to naval engineering?

A: Leading the Engineering Training Institute has been a unique and rewarding experience. It has allowed me to shape the future of naval engineering by imparting knowledge and skills to the next generation of naval engineers. The role involves overseeing training programs, ensuring they are up-to-date with the latest technological advancements and maintaining high standards of education and practical training.

This position has enhanced my understanding of the broader strategic and operational aspects of naval engineering. It has also allowed me to mentor young officers, helping them develop the necessary skills and attitudes to excel in their careers. The ability to influence and guide the training process has been one of the most fulfilling aspects of my career.

Advice for Aspiring Naval Engineers and Officers

Q: What advice would you give to aspiring naval engineers or officers who aim to reach leadership positions within the Indian Navy?

A: For anyone embarking on a career, it is crucial to maintain the right attitude and character. Whether in Marine Engineering, Naval Engineering, or any other field, your attitude toward work, responsibility and continuous learning will define your success.

Professional knowledge can always be enhanced, but a positive attitude, willingness to learn and curiosity are indispensable. These traits will enable you to adapt and grow, no matter the challenges you face. My advice to future engineers and seafarers is to focus on continuous learning and to stay curious. Even now, I consider myself a learner, always seeking to improve and expand my knowledge. Keep your eyes and ears open, learn from everyone around you and you will excel in your career and life.

My advice would be to focus on learning and keep on learning because now also I feel I am still learning. There are so many fields where I feel my experience or my knowledge is not adequate. So, if your eyes and ears are open and your attitude is there to learn, even from your juniors, I think you will generally do well in life. So, my advice would be to keep learning and be curious and you will be there at a very big place in the future.

Conclusion: A Legacy of Excellence and Learning

Mr. Sameer Chaudhary's journey from a young naval officer to a Base Commodore and head of the Engineering Training Institute of the Indian Navy is a testament to the power of dedication, continuous learning and a positive attitude. His insights into corrosion science, his extensive career in the Navy and his leadership at the training institute offer invaluable lessons for aspiring naval engineers and officers. By embodying these principles, future leaders can navigate the challenges of their careers and achieve excellence in their respective fields.



Reflections from a Maritime Leader Mr. Pendyala Prabhu G.M. Technical



On a serene morning at the Great Eastern Institute of Maritime Studies, as I walked through the verdant gardens with my wife, I was struck by the aura of purpose that filled the campus. Cadets in spotless uniforms were preparing for their day, their energy and pride palpable. This was more than an institution—it was a cradle for future maritime leaders, shaping lives with the same vitality as the rising sun shapes a new day.

For the graduating cadets, this moment marked the culmination of years of hard work and dedication. For those just beginning their training, it was the start of an adventure brimming with promise. Watching them, I was reminded of my own early days in the industry—the excitement, the uncertainties, and the questions about what lay ahead. To these cadets, I offer this reassurance: you are embarking on one of the most rewarding journeys imaginable. A seafaring career is not just a job—it is an adventure, a calling, and a privilege.

Lessons for the Voyage Ahead

Reflecting on my years in the maritime industry, I've gathered insights that I hope will guide the next generation of seafarers:

1. Opportunities: The Sky is the Limit

A career at sea offers unparalleled opportunities. You will travel across countries, immerse yourself

in diverse cultures, and earn a livelihood few industries can match. Tax-free earnings in dollars, career progression to roles such as superintendents or ship managers, and even becoming a shipowner are all within reach.

However, these rewards are earned through dedication, professionalism, and a passion for excellence.

2. Challenges: Embracing the Unexpected

Life at sea is as challenging as it is rewarding. Mariners often rely on their judgment and creativity to navigate unforeseen circumstances. From mooring operations to cargo handling in extreme weather, teamwork and vigilance are paramount. These challenges are opportunities for growth, helping you become a capable leader ready to face the unexpected with confidence.

3. Good Watchkeeping: A Key to Success

"Good watchkeeping is the foundation of a successful maritime career." Early in my journey, I learned the importance of preventive maintenance from seasoned electrical officers who inspected every detail. At sea, stay calm during malfunctions, observe, analyze, and act. Over time, you'll develop an instinct for your equipment, much like a parent understands their child's needs.

4. Safety is Non-Negotiable

In the maritime world, safety is a way of life. Always adhere to safety protocols, wear PPE, and follow lockout-tagout procedures. Remember, your safety and that of your crew depend on your diligence.

5. Continuous Learning: Stay Ahead of the Curve

With technology evolving rapidly, staying updated is vital. The equipment you train on today might be obsolete tomorrow. Embrace lifelong learning, whether onboard or ashore. Like Eklavya from the Mahabharata, who mastered archery through self-



reliance, be prepared to innovate and learn independently when guidance is not readily available.

6. Values: The Cornerstone of Leadership

Integrity, honesty, and loyalty define a successful mariner. Onboard, where the crew is small and stakes are high, these values are crucial. Compromising on them can jeopardize not just your career but the safety of all on board.

A Message to Cadets

As future leaders, your responsibilities extend beyond the vessel. Whether ensuring seaworthiness or collaborating with shore offices, success demands teamwork and commitment. Let us collectively strive to achieve the vision of "Maritime India 2030."

In pivotal moments, I often find inspiration in music. The song 'Verge' by Owl City resonates deeply with its lyrics:

I've got a heartbeat, I've got a fire in me / A light to guide me home.

This song captures the courage and purpose needed to embark on new chapters. To the graduating cadets, your journey is just beginning, filled with endless possibilities. To the new entrants, welcome to a career that will challenge, inspire, and transform you.

As I reflect on my own journey, I feel immense pride and a renewed motivation to contribute to this great industry. Together, let us navigate the future with purpose, passion, and perseverance.



**Mr. Dipendra Singh Bisen**

Designation - Dy. Director General of Shipping



It is indeed a pleasure and great opportunity to be associated with the plantation drive at GEIMS. I found all the cadets with great motivation and having urge to conserve nature by regular plantation. I wish GEIMS and all its candidates a great and successful future.

Capt. Mahesh Garimella

Designation - G. M. – Goodwood Marine Services Pvt. Ltd



It has been a great pleasure coming to GEIMS. The quality of cadets and faculty is excellent. The infrastructure is also excellent. I wish the institute continued success.

Capt. Albe Zachariah

Designation - General Manager, MOL Maritime India, pvt. Ltd.



It was a pleasure to meet you and the GEIMS team. We thank you for the hospitality during the day and sharing the institute achievements with us. We are happy with the positive support for induction plan. We thank you for the ETO candidates presented for the induction. We wish GEIMS all the best for future years.

Mr. Sanjeev Mehra

Designation: HGS IME(I) Mumbai Branch



Grateful indeed to grant us permission to plant the bamboo saplings. Grateful to GEIMS



PASSING OUT CEREMONY OF DNS 36



PASSING OUT CEREMONY OF GPR 11





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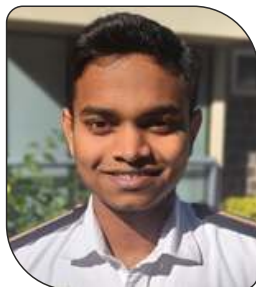


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Upright Honorable Righteous

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