

25th Edition, Dec. 2023



GEIMS TRUE NORTH



THE GREAT EASTERN INSTITUTE OF MARITIME STUDIES

A Division of The Great Eastern Shipping Company Limited

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“Sea horses, belonging to the family Syngnathidae, are captivating marine creatures with horse-like heads and prehensile tails. Known for their unique reproductive process—males carrying and giving birth to offspring—sea horses are masters of camouflage, slow swimmers, and inhabit various global oceans. However, they face threats from habitat loss and overexploitation, underscoring the importance of conservation efforts to preserve these enigmatic equestrians of the sea.”

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!



1975 - 2006



Estd. 2006

*“ You are the only one student in your school of life,
and all others are your teachers ”*



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GEIMS TRUE NORTH

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Hello Friends!

I am delighted to present the 4th edition of the new look GEIMS semi-annual magazine, "True North." At the onset I must say that it is my honour to acknowledge the tremendous dedication and innovative spirit of our magazine's editor, Mr. Sudhanshu Phalke, who has consistently poured his imagination and hard work into making each edition innovative and truly special. This edition marks Mr. Phalke's farewell as the editor, as he prepares for a well-deserved retirement. But at the same time, we turn over a new page and so we welcome new talent to our editorial team. Taking Mr Phalke's place is Mr. Sandip Kulkarni as the Chief Editor, and Mr. Pramod Pai will add value as the Sub Editor. Both Mr. Kulkarni and Mr. Pai have joined the institute in September 2023 as faculty members. Whilst we wish them the very best in this endeavour, we have every confidence in their abilities to carry the torch forward and continue the legacy of excellence that Mr. Phalke has established.

Before we delve into the exciting updates from the past six months, I am delighted to inform that we had the honour of hosting the Honourable Director General of Shipping, Mr. Shyam Jagannathan IAS and Deputy Director General of Shipping (Training), DR Pandurang Raut, who visited GEIMS on October 7, 2023. During their visit, they expressed their admiration for GEIMS and its high-quality training programs. Particularly noteworthy was their appreciation for our Learning Management System (LMS), which they are interested in implementing at DGS conducted Competency Exams and the related training as well. They were impressed by the landscape and made a mention that it feels very homely. This recognition has inspired us to redouble our efforts and continue striving for excellence in our training initiatives.

Our website, <https://www.geinstitute.com>, has been revamped to make it more appealing and user-friendly. I encourage you to visit our website and we would love to hear your valuable suggestions which you may send at e-mail id academy@greatship.com. We are actively engaged on social media platforms, ensuring that we stay connected with our audience. We would be happy to receive any suggestions for that too.

Over the past six months, GEIMS has witnessed numerous exciting developments, all contributing towards our journey towards becoming the premier maritime institute. We welcomed new faculty members in August and September, including Mr. Dharendra Sengar as an Engineering faculty (an ex Chief Engineer from GE Fleet with extensive experience), Mr. Sandeep Kulkarni as an Engineering faculty, who previously served as the HOD of Engineering at MANET, Mr. Rohan Girase as an Assistant faculty, and Mr. Pramod Pai as a Naval Architect faculty, bringing 11 years of valuable teaching experience. Additionally, we have appointed new workshop instructors, Mr. Kharatmal and Mr. Jadhav, and one bosun, Mr. Abdul Mullaji. We extend our best wishes to all the newcomers for a long and fruitful career at GEIMS.

In the relentless pursuit of excellence, we've been making strides in enhancing the quality of education at GEIMS. One significant achievement has been strengthening our Learning Management System (LMS) by incorporating KARCO animation video learning software. The positive response from our students reinforces our belief in the effectiveness of these enhancements. Our digital library is being constantly strengthened by various additions.



We have also intensified our focus on student intake quality, incorporating Superset platform. This strategic measure aims to ensure that only the best candidates join our institute. Moreover, we are actively promoting career awareness in the field of merchant navy, with a particular emphasis on reaching out to regions where this profession may be less known. We have conducted roadshows in North East states of Assam and Meghalaya. We have also conducted roadshow in South Goa, Lonavala and the Pune region, spreading awareness about the opportunities in the maritime industry.

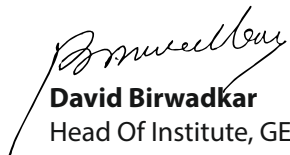
GEIMS boasts state-of-the-art simulators, including Bridge, ERS, LCHS, and GMDSS tutor, and we are in the process of procuring a full mission ME simulator, Ballast Water System (BWS), and steering gear simulator, with installation underway. We expect these to be fully functional by April '24.

Safety awareness remains a top priority at GEIMS, and to further promote this, we regularly arrange guest lectures from the HSEQ department of GESCO on safety matters. In addition, lectures by the Technical and Operations Department Seniors also come over to GEIMS for guest lectures. These initiatives have been greatly appreciated by our cadets.

Our vision is to position GEIMS as a global front runner in maritime education, and our dedicated team is diligently working to turn this vision into reality. We are already beginning to see promising results. As we continue on this remarkable journey, I want to express my gratitude to everyone involved and reaffirm our commitment to making GEIMS the best maritime training institute, not only in India but across the globe. Together, we will strive to achieve this goal!

In the meantime, I encourage everyone to enjoy life, stay happy and healthy, and keep learning. As the saying goes, "Learning never exhausts the mind." It's through our collective efforts and unwavering commitment that we can make our dreams a reality. Thank you for being a part of the GEIMS family. Wishing everyone a joyous and prosperous New Year 2024 filled with success and new horizons!

With all my best wishes,


David Birwadkar
Head Of Institute, GEIMS

**A boss has
the title.
A leader has
the people.**





Dear Cadets,

I take immense pride to share with you the highpoints of the last few months in this edition of TRUE NORTH. It has been a busy period with a spate of company visits and each one of the dignitaries were highly impressed with the turnout of our cadets and the campus. Above all we were privileged to have Shri Shyam Jagannathan ,IAS, Director General of shipping and Deputy DG Dr. Pandurang Raut at Geims, where they spent time with our cadets and faculty showing keen interest in the learning Management systems in place. The campus was graced by luminaries of the maritime industry and to name a few –Capt P.K. Panda – GM, Head Marine Cell, ONGC, Capt Deepak Correa, CEO, Fleet Management and Mr. Arun Sharma – Executive Chairman, IRS. It was a pleasure to host Mr. Mazen Matar, MD Arab Shipping & Repair Yard.

We were proud to have our alumni of TNOC 10, Mr. Ayush Manjrekar back at campus to give an insightful lecture to our cadets regarding LNG carriage on ships and FSRU.

Our academic performance made us proud as we had 93% overall results with the ETO batch having 100% results. Placements have been good as usual with newer companies like Eastern Pacific Shipping coming in to

further strengthen our placements with global shipping companies. Gratitude to the maritime industry for selecting our cadets in their esteemed companies for on board training.

Cadets are our lifeline and their performance give us belief about the Maritime future. They excel in their areas of interest and we take great pride in grooming them. Our cadets represented the institute in the IMO MOCK session of paper presentations conducted by IMU which is a highly acclaimed event in the maritime industry. I am pleased to mention that our team lead by Cdt. Dev Govind, DNS 35, were Runners up in section competing against the best of the Maritime Training Institutes in the country. The topic for the paper was futuristic – “Amendments to be brought in STCW code for MASS Operators”. So enlightening to see the level of knowledge amongst our future mariners. Our Faculty members have always been the true pillars of our institute and they continue to contribute in many ways to compose such moments of excellence.

Our students took part in various community social service where they participated in a cleanliness drive around the Tungarli lake. They cleaned up the plastic debris and garbage and also created awareness on waste segregation, thereby inspiring the nearby residents to be a part of the drive.

As we near the end of another exciting year and look forward to the challenges of the future I take a moment to thank OUR TEAM of Faculty members, Instructors, Wardens, Admin Staff and IT staff who have continued to excel and ensure we impart a high level of Maritime training making our cadets one the best seafarers in the industry.

We are indeed fortunate to have such supportive parents who believe in us to shape the career of their children. Parent's confidence gives us the strength, determination and opportunity to achieve greater heights. I express my heartfelt thanks to each and every one for supporting us in achieving our collective dream of making GEIMS a global front runner in the field of maritime education.

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

Capt Subroto Khan
Principal





Dear Friends,

As I reflect on my tenure as the Editor of this magazine, spanning three editions, I am filled with gratitude for your unwavering support and enthusiasm. It has been an incredible journey, and I am proud that we have persistently emphasized environmental issues, with a particular focus on our oceans.

Our oceans, often described as the cradle of life, harbour a remarkable array of biodiversity. However, this very marvel is under an alarming threat. Pollution, overfishing, and climate change are relentlessly gnawing at the resilience of marine ecosystems.

To protect and preserve marine diversity is not merely an environmental obligation; it is a moral imperative and a matter of survival. We must unite to secure the future of our oceans and the biodiversity they cradle.

Several measures are paramount like establishing Marine Protected Areas, promoting Sustainable Fishing Practices, combating Plastic Pollution.

The responsibility for preserving marine diversity does not rest solely on the shoulders of governments, nor is it the sole concern of industries. Every individual has a role to play. We must spread the word.

As I step down from my role as Editor, I do so with a sense of satisfaction and optimism. I am confident that the magazine is in capable hands, as Mr. Sandip Kulkarni, an esteemed Engineering Faculty member, takes the helm as Editor Designate. I extend my heartfelt best wishes to him and his team, hoping they will continue the magazine's legacy of advocating for the environment.

I conclude with warm regards and heartfelt thanks to Mr David Birwadkar, Capt Subroto Khan for this incredible journey.

Bon Voyage

Sudhanshu Phalke
Engineering Faculty



ENGINE HEALTH CONDITION MONITORING

Background**1. What is Condition Monitoring?**

ISO 13372 defines condition monitoring as: "the detection and collection of information and data that indicate the state of a machine."

Condition monitoring is not simply the act of gathering data. The term CM describes any monitoring activity undertaken while machinery is operating in its normal state, the results of which will be considered as part of an ongoing process of testing and evaluation. This evaluation will lead to a decision to either allow machines to operate unhindered, to modify operational conditions or to initiate maintenance. Any maintenance which is carried out can be planned to take place at a convenient time, with minimal impact on the operational schedule of the ship.

Maintenance resulting from CM must bring under control any changes to normal operation which, without attention, are considered likely to increase the risk of failure. Therefore, the process has two crucial components: collecting quality data and making quality decisions. To make quality decisions, it is vital that only appropriate and relevant data is considered. In attempting to envisage every potential failure, there can be a tendency to collect huge amounts of data. However, the cost of this, and the overly complex analysis which is then needed, is more likely to result in lack of clarity and difficulties in making diagnoses or decisions.

2. The Benefits

The potential benefits of using CM within a condition-based maintenance culture include:

- improved safety fewer unnecessary spares
- improved reliability fewer strip downs
- optimized scheduling fewer maintenance-induced failures
- Optimized maintenance costs reduced uninsured risk.

One major engine manufacturer states:

"Experience has shown that by extending overhauls (especially pistons) and preventing opening up inspections, (especially bearings), the overall condition is actually improved by preventing possible introduction of faulty components and human errors"

3. Condition Monitoring - Tools and Techniques

There are many CM tools and techniques, from watch keeping to vibration monitoring and acoustic emission analysis. These tools are just one part of the overall process of effective machinery monitoring. A key CM requirement is the recording of information pertinent to, or symptomatic of, a defined failure process. There are many tools and techniques available to facilitate this; they range from the very simple to the highly complex. Whatever the technique being used, it must provide sound machinery condition intelligence which can be used to decide where, when and what maintenance tasks need to be carried out. Certain CM techniques are specific to particular machinery condition symptoms.

4. Baseline Data

Baseline data consists of a comprehensive set of measurements taken when machinery is operating at its normal load in a stable and acceptable manner. All subsequent measurements will be compared to these baseline values in order to detect changes in condition. For new or overhauled equipment, time should be allowed for a 'wear-in' period before baseline measurements are taken. For equipment that has been operating for a significant period, baseline data can still be acquired and used as a reference point to detect future changes.

5. Operating Conditions

For optimum results, condition monitoring data should be collected under operating and environmental conditions that are as close to



'normal' as possible for the machinery in question. To enable changes in condition over time to be identified, it is important that the operating Conditions at each subsequent data collection remain as similar as is practicable.

6. Monitoring Frequency

Monitoring needs to be sufficiently frequent to detect, investigate and act upon changes in values which are unexpected. The frequency of

monitoring may often need to be changed, so that it is more frequent when values are under question and less frequent when trends suggest stability. Where known failure modes exist, monitoring must take account of the Potential for failure to Failure (P F) interval (figure 1): if the frequency of monitoring is insufficient then the risk of failure between condition monitoring tasks may be unacceptable.

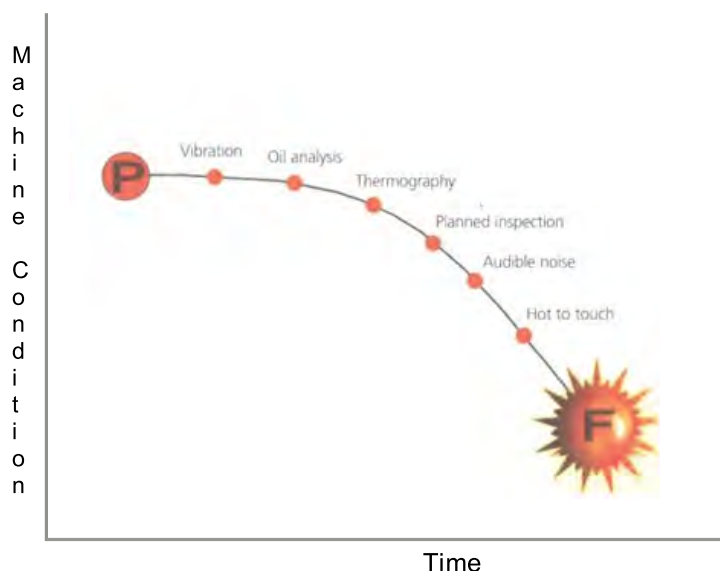


Figure 1: A typical P-F curve.

N.B. The order in which techniques trigger alerts will differ for each different type of failure.

P – Point of failure

F – Functional Failure occurs

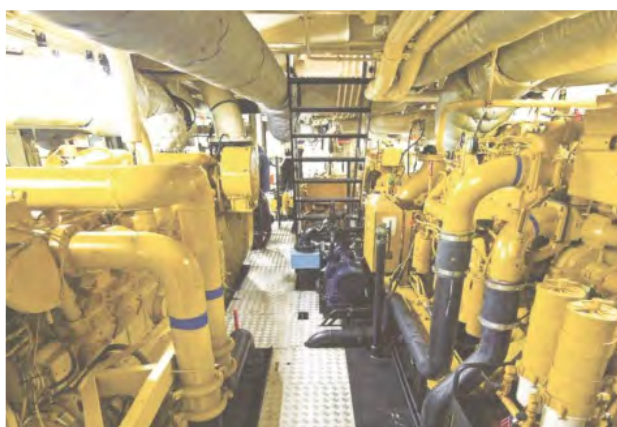
7. CM Alarm and Alert Levels

When carrying out condition monitoring, alarm and alert limits, based on severity, should be established. The most commonly used limits are differential or delta values. Alarm and alert limits are based on rises in values above an established baseline. They can help establish rates of deterioration and can help establish when corrective action needs to be taken to prolong component life.

8. Basic Condition Monitoring

Watch keeping is a fundamental aspect of marine engineering. Recognizing changes in performance as indicated by alarms, alerts, gauges and readings, and responding appropriately forms the basis of all marine engine room operations. The engineer is central to the monitoring function his or her ability to assess the criticality of a given situation is itself,

critical to the eventual outcome. This ability to assess a large number of discrete variables, identify a problem and offer a solution, often unconsciously drawing on previous experience, emphasizes the importance of the human element in machinery maintenance.



Watch keeping is a fundamental aspect of marine engine room operations.



The most effective tools often utilize the most basic technology. Routine monitoring of variables within conventional engine room and machinery spaces, based on the human understanding of, and relationship with, machinery, has traditionally been used to great effect. Numerous variables, such as pressure, temperature, Flow rate and power demand are routinely monitored in order to control functions such as engine operation, ballast and cargo handling systems. This allows the engineer to review operational statistics and understand whether systems are operating in an expected and controlled manner. If monitoring is managed well, it can indicate when systems are performing differently and help engineers decide whether to intervene in order to balance the effect or rectify the problem. In modern systems, variables are often captured by engine management systems. In these cases, the engineer is not required to take the reading but is involved with alarm and alert setting. He or she needs to be suitably qualified to respond appropriately to alerts.

9. Bearing Wear Monitoring – Example of Engine Health Monitoring

Wear taking place in key engine bearings such as main crankpin and crosshead bearings can be identified using a bearing wear monitoring (BWM) system. This can help avoid unnecessary opening up of bearings for inspection and consequently help reduce the risk of introducing failures into a well-functioning system. BWM systems can either be installed during ship construction or retro-fitted to existing ships. A system based on measuring changes in the vertical position of the crosshead assembly relative to the engine frame is shown in Figure 2 and consists of three main parts:

- Distance sensors (which perform the measurement) fitted in the crankcase of the engine.
- The connection between the sensors and the software.
- A display unit which indicates bearing wear and

warns if predefined values are exceeded the operator may also be able to view trend curves over defined time ranges.

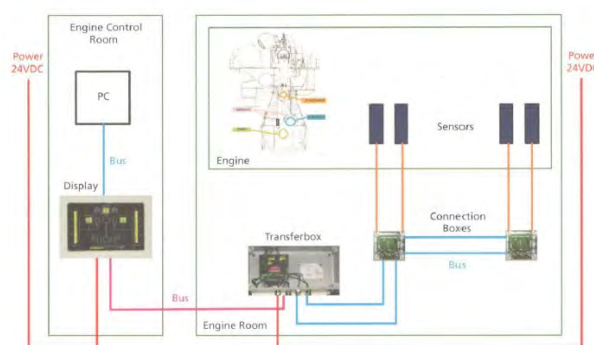


Figure 2: A typical bearing wear monitoring system.

10. Measurement

During each revolution, the sensors measure the distance between the head of the sensors and the crosshead assembly at the bottom dead center (BOC) position of the piston (see Figure 3). Comparison with normal 'reference' values and the use of two sensors per cylinder enable the system to measure wear in any of the main, crankpin and crosshead bearings.

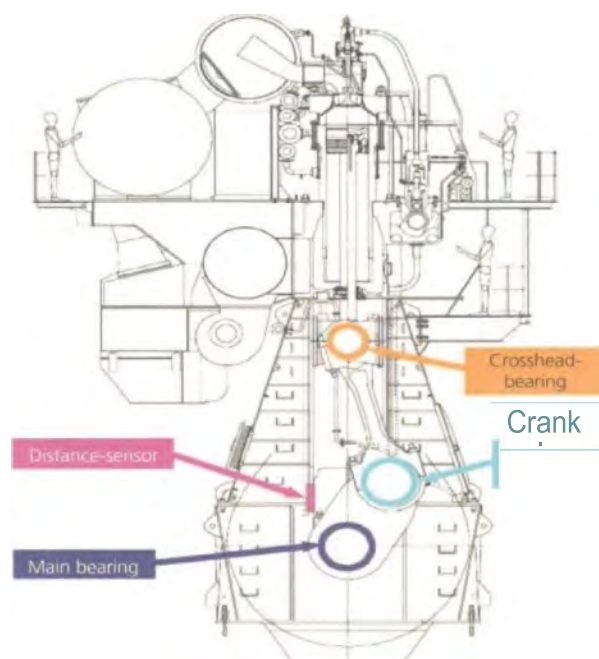


Figure 3: Sensor positions for bearing wear monitoring

11. Analysis

The signal from the sensors will contain 'noise' caused by minor irregularities in engine combustion characteristics and will also be dependent on other factors such as engine speed and hull deformation. Complex signal processing is required to extract useful information from the data, and may incorporate parameters such as engine speed, temperature and power. Under normal conditions, the difference between the measured and reference values should be insignificant and within limits specified by the engine designer. An alarm or engine slowdown will occur if the limits are exceeded. There is normally some provision for storing the data so that historical readings can be reviewed.

12. Assessment

Reviewing recorded data is important in order to assess the condition of the bearings within each cylinder compartment. Therefore, it is prudent to keep the trend data for the lifetime of the bearings, not only as a comparator for future analyses, but also to allow comparison of different cylinders, or even different vessels.

Bearing wear monitoring systems can not only be used for condition monitoring to avoid intrusive opening up of machinery, but can also be used for carrying out safety related functions like slowdown requests. Once the predefined threshold is exceeded, the system requests a slow down to protect the engine.

Mr Katdare
Engineering Faculty



Shipping Conventions

What Events Triggered Them?

Sinking Of Titanic

After Sinking of Titanic, the first Version of SOLAS was adopted in **1914**



**SOLAS -
Safety of Life
At Sea**

Numerous Collisions At Sea

The increase in the size and number of ships in **1960s** lead to increase in number of Collisions



**COLREGS -
International-
al Collision
Regularions**

Torrey Canyon Disaster

UK's worst Oil Spill accident ever and first tanker disaster to attract such an enormous media coverage



**MARPOL -
Marine Pollu-
tion**

Extinction Of Marine Species

Zebra mussel invasion in Great Lakes in the **1980s** via ballast water discharged by ships from Europe



**BWMC -
Ballast Water
Management
Convention**

Attack Of 9/11

In the wake of the 9/11 attacks in the United States, ISPS code was introduced to avoid similar attacks using ships



**ISPS CODE -
International Ship
and Port Facility
Security Code**



CHARTING THE COURSE – INDIAN MARITIME LANDSCAPE

Maritime sector has been backbone of India's trade and grown manifold over the years with over 7,517 Km of coastline comprising of 12 major ports and 205 minor ports facilitating sea borne trade augmented by 14500 km of potentially navigable inland waterways.



Map showing 12 major ports in India.
Source: Annual Report 2022-23 Min.
of P&W, Gov. of India.

111 waterways have been declared as National Waterways under the National Waterways Act of 2016.

Thereafter in 2022-23 the density of coastal shipping increased to 151 Million MT per annum. The cargo movement on national waterways had a record breaking 108.79 Million MT in 2021-22. Movement of bulk cargo like coal, fly-ash and iron ore through inland water transport proved to be cost-effective and less polluting as compared to rail & road transportation.

India has 43 shipyards in the public and private sector having a capacity of building ships up to 400,000 DWT.

Major challenges faced by the shipbuilding industry

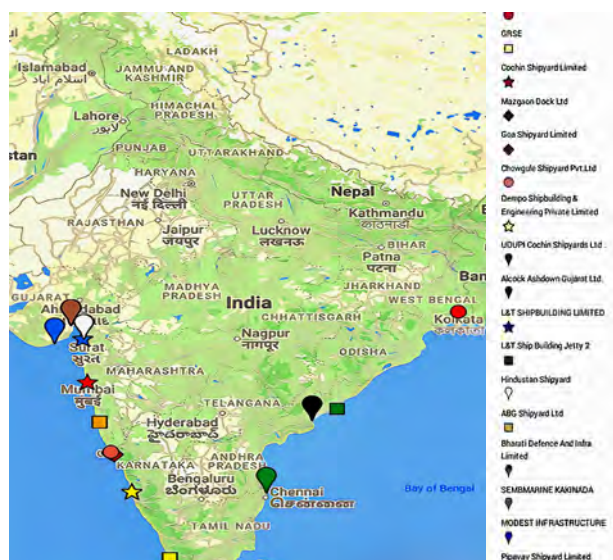
1. Lack of infrastructure due to collapse of many private shipyards.
2. Improper financing mechanism for shipbuilding.

3. Lack of local manufacturing facilities of marine machinery and equipment leading to their import and drain of forex reserves.

India's global share in ship repair industry is less than 1% despite having cheap labor. Our proximity to major trade routes provides an opportunities for more business and must be exploited.

Opportunities also exist for the construction of River-Sea vessels - inland vessels, barges and fishing vessels in India. Hence GOI has granted "Infrastructure" status to the national shipbuilding industry and provided budgetary support as a part of 'Make in India' initiative for developing sustainable blue water economy.

Major Shipyards And Repair Facilities In India



India's Shipbuilding Map
Source: Google Map

The National Ship Recycling Industry recognized as environment friendly is slated for expansion by 50% to 9 MMT per annum by 2024.

National AIS network with 87 Physical Shore Stations has been set up enabling tracking of all vessels with AIS transponders. India is scaling new heights in the maritime sector.

Mr Pramod Pai
Naval. Arch. Faculty



THE GREAT EASTERN INSTITUTE OF MARITIME STUDIES ROADSHOW EMPOWERS ASSAM CAREERS

The Institute embarked on a mission to spread awareness and unlock opportunities in the maritime industry with a series of roadshows across colleges and universities in the picturesque state of Assam. The initiative, spearheaded by the Honorable Shri Sarbananda Sonowal, Union Cabinet Minister for Ports, Waterways, Shipping, and Ministry of Ayush, received a warm welcome and enthusiastic participation from students across the region.

From the 23rd to the 26th of August 2023, GEIMS covered nine esteemed institutions in Assam, including ITI Women's College, Guwahati, Assam Engineering Institute Guwahati, S. B. M. S College,

Sualkuchi, and University of Science and Technology, Meghalaya.

The roadshow was not only about introducing students to the exciting world of maritime career but also included valuable meetings with influential figures such as Shri. Kuldeep Gayan (PS to the Shipping Minister), Shri B. Kalyan Chakravarthy (Principal Secretary to Govt. of Assam), and Shri Dhrubajyoti Borah (Director, Directorate of Technical Education). These discussions aimed at establishing collaborative efforts to conduct more such shows not only in Assam but also across other North Eastern States.





Students from various academic backgrounds, including Higher Secondary, ITI, and Mechanical & Electrical Engineering, were enlightened about the vast career opportunities in the Merchant Navy. The sessions comprised introductions, audio-visual presentations, and informative discussions on the Merchant Navy, GEIMS, and the courses conducted in the Institute. Cadet Anup Jyotinath, an alumnus of GEIMS hailing from Assam, shared his personal experience in both English and local Assamese language, connecting on a personal level with the aspiring students.

What became evident during their interactions was that there is a need for increased awareness about the maritime profession among the youth across the Northeastern states of India. However, as the sessions progressed, more students expressed keen interest, asking questions, and seeking clarification on the prospects of a maritime career. The roadshow successfully addressed doubts and sparked curiosity amongst the students.

In conclusion, it became apparent that the North Eastern States of India represent an untapped pool of talent for the maritime industry. The students,

often from lower-middle-class backgrounds, exhibited a strong desire to enhance their standard of living through lucrative and adventurous careers in the Merchant Navy. We at GEIMS are optimistic that these roadshows will lead to a surge in enrollments, especially from the North Eastern states, as the awareness about the benefits of joining the Merchant Navy continues to grow.

The journey doesn't end here. GEIMS is committed to conducting more roadshows not only in Assam but also in other North Eastern States, including Meghalaya and Arunachal Pradesh. The photographs captured during this roadshow are a testament to the impact it has made, and GEIMS looks forward to welcoming more students from the North Eastern states into the world of maritime excellence. This will help fulfill the desire of our esteemed Shipping Minister and of the Government whose desire it is to make India a major and recognized Shipping Hub.

Ms Neelam Shukla
Admin Assistant



GEIMS (THE GREAT EASTERN INSTITUTE OF MARITIME STUDIES) MERCHANT NAVY AWARENESS SESSIONS LEAVES A LASTING IMPRESSION IN GOA



In a significant stride towards nurturing maritime aspirations, The Great Eastern Institute of Maritime Studies (GEIMS) recently conducted a number of compelling awareness sessions about the Merchant Navy in the picturesque state of Goa. The 3-day program, held from October 3rd to October 5th, 2023, was an initiative of Capt. Venzy Veigas, MLA of the Benaulim Constituency in South Goa.

The team seized the opportunity to share valuable insights for highlighting Merchant Navy as a career option with the students of various schools / colleges / Institutes in South Goa. Capt. Venzy Veigas, with his wealth of experience being a Master Mariner himself, played a pivotal role in spreading awareness about the dynamic and adventurous career opportunities in the maritime industry. Adding a local touch to the session, Cadet Vrushabh Desai an alumni of GEIMS spoke in English / Goan language, making it easier for students to connect and comprehend.

The GEIMS Career Awareness Roadshow, driven by the vision of Mr. David Birwadkar, Head of the Institute, was a resounding success. During a press conference, Mr. Birwadkar shared his thoughts on the enriching journey that unfolded during the roadshow, emphasizing the significance of creating awareness about careers in the Merchant Navy and why GEIMS should be the preferred Institute for this training.

The roadshow witnessed engaging discussions about the maritime industry's potential and the diverse career paths it offers. Team members took the opportunity to shed light on the importance of maritime education and the transformative impact it can have on individual's futures.

The chosen colleges for the awareness session reflect GEIMS commitment to reaching students from various educational backgrounds. Visiting esteemed institutions such as Holy Cross Institute, Sacred Heart of Jesus HS, St. Pius X HS, St. Mary's HS, St. Aloysius Hs, Holy Trinity HSS, Auxilium HS, Infant Jesus Hs & HSS, Rosary College, Fr. Agnells Ashram and Margao Government ITI, the team ensured a comprehensive outreach.



In conclusion, the GEIMS awareness session in Goa stands as a guiding light, illuminating career possibilities in the Merchant Navy and leaving an indelible mark on the educational landscape of the state. The Institute's commitment to fostering awareness and guiding aspiring individuals on this maritime journey is undoubtedly making waves of positive change.

Ms Tasleem Herlekar
Admin Asst



A STELLAR VISIT BY THE DIRECTOR GENERAL OF SHIPPING: A MILESTONE ACHIEVEMENT

Lonavala, 7th October 2023

In an event that marked a significant milestone in the journey of maritime education and training, The Great Eastern Institute of Maritime Studies was privileged to host the esteemed Director General of Shipping, Mr. Shyam Jagannathan along with the Deputy Director of Shipping, Dr. Pandurang Raut. They were welcomed by the Head of the institute, Mr. David Birwadkar along with Principal, Capt. Subroto Khan, Vice Principal, Capt. Ghanashyam Deo and Head of Engineering Dept., Mr. Milind Kulkarni.



The day commenced with a splendid march pass by the institute's proud cadets. The rhythmic cadence of their synchronized steps was a demonstration of discipline, determination, and dedication—the very qualities that define the seafaring profession.

The heart of the institute's prowess lies in its state-of-the-art Learning Management System (LMS). The Director General of Shipping, accompanied by the Deputy Director of Shipping, was given an immersive tour of the LMS system. They were not only impressed by its sophistication but also by its potential to redefine how maritime education is delivered and absorbed.

However, the LMS was only the beginning. The true showstopper was the array of advanced simulators that awaited the dignitaries. The visit provided them with an opportunity to witness firsthand the cutting-edge technology employed in training the

seafarers of tomorrow. These simulators, which replicate the challenges of life at sea with astounding realism, are a testament to the institute's commitment to offering the most comprehensive and hands-on training available.



It was not just about showcasing the institute's infrastructure; it was about demonstrating the dedication, hard work, and passion that goes into every cadet's journey from a novice to a skilled seafarer.

The Director General of Shipping and the Deputy Director of Shipping were not merely impressed; they were inspired. Their words of encouragement resonated deeply with everyone present. They acknowledged the vital role that maritime education institutions like The Great Eastern Institute of Maritime Studies play in shaping the seafaring community, ensuring safety at sea, and contributing to the nation's economy.

As the visit concluded, it left behind a sense of achievement and a renewed commitment to excellence. The institute had not only welcomed esteemed guests but had also set a new benchmark for itself. It has demonstrated that it stands at the forefront of maritime education, ready to embrace the challenges and opportunities of the future.

Vaishnavi Narvekar
Executive- Business HR





Late Capt Supdt. Prafulla K Deshpande the first Principal of GEIMS placing the idol of Vastu Purush in the first classroom on the ground floor next to the workshop.

FACT : The GEIMS complex had its Vastu Pujan as two classrooms and a Chart room became operational for the 1st TNOC batch of 22. Cadets and faculty were accommodated in "Shrikrishna" motel along Mumbai-Pune Road.



May 6th, 2006, the workshop, which is sitting upon red volcanic basalt rocks featured three bays and a factory-like roof, ensuring ventilation for student work. Its uniquely designed roof, requiring extra budget and 20 MT of structural steel, now supports solar panels, promoting green energy.





The Chairman, Mr. KM Sheth, inaugurated the sports complex on his birthday, Jan 26, 2007, presiding over a day of speeches, cricket matches, and a trophy presentation to the winning GEIMS A team's captain, Mr. Prashant Shinde. This event marked the first gathering of the senior GES group office bearers, fostering a strong sense of unity and growth within the institute.



16th Dec, 2006 L to R : Late Mr KJ Vesuna, Architect Mr Ranjit Singh, Project Consultant Mr Palanichami, Project in Charge Cmdr Dhareshwar.



REVIVING INDIA'S MARITIME LEGACY: THE STITCHED SHIP PROJECT

In an ambitious endeavor to revive India's ancient maritime prowess, the Stitched Ship Project sets sail on a journey through time, meticulously recreating an ancient Indian ship utilizing the archaic stitching technique delineated in ancient texts like the Ramayana. Nestled in the shores of Goa, India, this pioneering project harnesses traditional shipbuilding methods, employing lumbar timber, coconut fiber, and rope to resurrect a bygone craftsmanship.

Under the auspices of the Indian government and spearheaded by Babu Sankaran and his adept team, the project harbors multifaceted objectives. Not merely confined to constructing a vessel, its core essence resonates with understanding the nuances



of ancient maritime technology, reconnecting with India's seafaring history, and fostering a deep sense of pride in the nation's maritime heritage.

Rooted in a 4th-century schematic drawing from the Ajanta Caves, the ship's design manifests itself as a testament to historical accuracy. Yet, the project faces formidable challenges in computer modeling due to the complexity posed by external stitches—a quandary aptly addressed through physical models and rigorous hydrodynamic testing.

The crafting process unfolds as a meticulously orchestrated symphony of traditional techniques. Commencing with the laying of the lumbar timber keel, planks are tenderly steamed and shaped before being paired and stitched using coconut fiber and rope. The application of kudu resin, fish oil, and limestone for adhesion heralds the ship's watertight integrity. Red brick pigment fortifies the hull, while a meticulous application of plugs, putty, and fish oil concludes the intricate process, resonating with the ancient stitching traditions of Goa.

Anticipation surges as the ship, a replica from the Gupta period, gears up for a momentous voyage, poised to unfurl the secrets of monsoons, currents, and ancient trade routes within the Indian Ocean. The ship's imminent launch in 2025 at the Bali Jatra festival echoes a historic ode to distant lands, rekindling maritime legacies etched in wind patterns, surface currents, and ancient sailing routes.

Throughout this arduous but evocative endeavor,



the project seeks not only to recreate history but also to catalyze a resurgence of ancient maritime craftsmanship. As modernity grapples with the challenges of the past, the Stitched Ship Project stands as a testament to India's indelible maritime legacy, heralding a poignant revival of a bygone era.

Technical Insights:

The construction methodology follows age-old practices rooted in Indian maritime history. It involves laying a lumbar timber keel, shaping planks in steaming chambers, and employing coconut fiber and rope for stitching, while kudu resin and fish oil ensure waterproofing. This meticulous craftsmanship, coupled with red brick pigment for the hull and the application of plugs and putty, encapsulates the intricate process, celebrating the ancient stitching traditions of Goa.

SOURCE - The Stitched Ship Project: Legacy of Maritime History of BHARAT | Sanjeev Sanyal / YOUTUBE.

CDT SHWETAM RAJ
DNS 36 B



SETTING SAIL THROUGH TIME: NAVIGATING THE EVOLUTION OF SAILING VESSELS

Ahoy, fellow adventurers! Join me on a thrilling voyage as we unfurl the sails of history and explore the mesmerizing transformation of sailing vessels into the modern marvels that grace our oceans today. Ready to embark? Let's weigh anchor and set sail!

Close your eyes and imagine a time when sailing ships, propelled by the whims of the wind, ruled the vast seas. From clippers to schooners, these vessels were the unsung heroes of exploration and trade. Can you envision the golden era of sailing, where every journey was a dance with the elements?

The Wind-Powered Essence

While engines may hum in the background of today's ships, the essence of wind-powered navigation endures. Think about it – the art of tacking and gybing, once the lifeblood of sailing ships, still influences the intricate movements of our modern vessels. Adjusting sails for optimal wind capture remains a crucial aspect of contemporary maritime practices, connecting sailors to the age-old mastery of harnessing the wind.

Nautical Terms: Bridging the Past and Present

Ah, the language of the sea! Let's navigate through nautical terms that have stood the test of time. The bowsprit, once a majestic extension from the bow, now defines a modern vessel's forward structure. Other terms, such as lee helm, weather helm, belaying pins, and futtock shrouds, have seamlessly transitioned from sailing's heyday to the contemporary maritime lexicon. These terms serve as a linguistic bridge, connecting the maritime heritage of the past with the practices of the present.

Bowsprit:

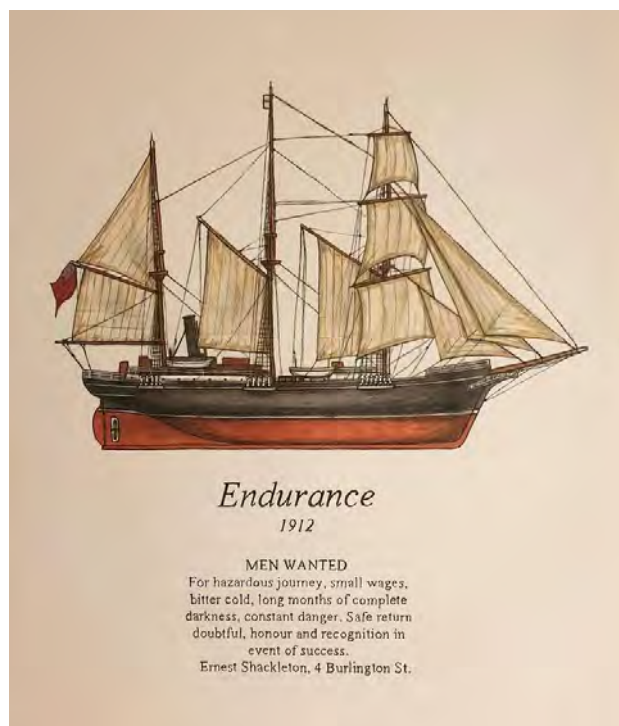
Then: A prominent feature on tall ships, extending from the bow.

Now: Defines a forward structure on some modern vessels.

Lee Helm and Weather Helm:

Then: Crucial for understanding how ships respond to the wind.

Now: Still relevant in describing the windward and leeward characteristics of vessels.



Belaying Pins:

Then: Used for securing lines on sailing ships.

Now: Transformed into advanced equipment – quite a journey from securing lines, highlighting the evolution of maritime technology.

Futtock Shrouds:

Then: Part of the rigging supporting masts on sailing vessels.

Now: Modern rigging supporting masts bears resemblance to the past's futtock shrouds, showcasing the enduring principles of ship construction.

The Living Legacy

Now, let's talk about legacy. Although sailing vessels may have given way to modern marvels, their legacy lives on in the hearts and practices of today's mariners. Understanding this heritage enriches the craft of modern sailors by instilling a profound respect for the traditions that paved the way for their contemporary counterparts.

Romancing the Seas

In the modern era of training, learning about sailing ships adds a touch of romance to the pragmatic realities of maritime education. Close your eyes and



imagine navigating by stars, feeling the grace of billowing sails – a stark contrast to the structured training of today. This romanticized view of sailing vessels enhances the seafaring narrative by infusing it with a sense of adventure, tradition, and a connection to the sea's timeless allure.

As we wrap up our maritime adventure, reflect on the dynamic interplay between tradition and technology. The evolution of sailing vessels into

modern ships is a riveting tale that connects us to our seafaring past while propelling us into the boundless horizons of the future.

Bon voyage, fellow explorers! May your sails be ever full and your compass true.

CDT DEV GOVIND
TNOC 35



A DAY AT THE ROYAL BOMBAY YACHT CLUB WITH CMDR. ABHILASH TOMY



On August 25th, the Royal Bombay Yacht Club hummed with maritime spirit as our Principal Captain Subroto Khan and Mr. Sudhanshu Phalke led four eager nautical cadets, including myself, on a unique journey. The occasion, a high tea function, transformed into an unforgettable experience, culminating in a dialogue with the legendary Cmdr. Abhilash Tomy.

Surrounded by cadets Nitin Kumar, Ayush Arora, Anand Ladhe, I found myself immersed in an enriching conversation with Cmdr. Tomy. The focus? His extraordinary voyage, marked by his historic feat of becoming the first Asian to conquer the Golden Globe Race on April 29th, 2023. This encounter proved to be a treasure trove of insights and inspiration, offering me a glimpse into the world of a seasoned sailor and national hero.

Cmdr. Tomy's achievements weren't the only highlight of the day. The event held personal significance for me as well. Having previously contributed to True North Magazine, I seized the opportunity to secure an autograph from the esteemed commander, adding a treasured memento to the day's inspiration.

The Golden Globe Race, renowned for its unwavering commitment to the rules and technology of the original 1968 race, lent an additional layer of meaning to the occasion. Competitors, including Cmdr. Tomy, are obliged to navigate using boats and equipment reminiscent of a bygone era, shunning modern technology and satellite-based aids. This unique challenge stands as a testament to the GGR's role as a true test of seamanship and traditional navigational skills in the modern age.

In conclusion, my day at the Royal Bombay Yacht Club transcended the boundaries of a simple high tea function. It was a rendezvous with maritime excellence, a platform where I, along with my fellow cadets, gleaned wisdom from a sailing legend. As we departed, each carrying not just an autograph but also a cargo of inspiration, the Royal Bombay Yacht Club resonated with the echoes of a day well spent in the pursuit of maritime knowledge and unwavering spirit.

CDT DEV GOVIND
TNOC 35





APJ ABDUL KALAM



A HELPING HAND CAN BE A RAY OF
SUNSHINE IN A CLOUDY WORLD

CDT SHARON MATHEW
GME 58



PASSING OUT CEREMONY OF GME 55



PASSING OUT CEREMONY OF DNS 35





Mr Arun Sharma

Q1: How did your early life and education shape your journey into the shipping industry?

A1: I was born in Kharagpur, where my initial education took place. However, after completing Class 7, my family moved to an English school in Vasuri, seeking a shift towards an English-medium education. Despite an initial inclination towards medical studies and appearing for competitive exams like JEE and applying to medical colleges, I pursued a 5-year integrated course at Christian Medical College Ludhiana. This journey led me to the shipping industry through DMET in 1965.

Q2: Could you talk about any influential figures or family connections that led you to consider a career in shipping?

A2: My mother's brothers were both captains in the merchant navy. One uncle, in particular, left a lasting impression on me. His career, his mannerisms, and advice played a role in shaping my interest in the sea. His suggestion to pursue engineering over becoming a master mariner influenced my decision-making.

Q3: How did your professional journey progress within the shipping industry, leading to leadership roles?

A3: My career trajectory within the shipping industry evolved from starting with Shipping Corporation to moving through Varun Shipping, India Steamship, and eventually becoming Chairman of IRS. Interestingly, many of these transitions were unplanned. For instance, leaving companies like SCI due to perceived lack of meritocracy or accepting unexpected job offers that stemmed from casual lunch invitations.

Q4: What significant achievements in your career gave you the most satisfaction?

A4: Among the many milestones, a particularly satisfying accomplishment was the substantial growth of a company from 110 crores to 260 crores within five years. Additionally, witnessing the bottom line increase from 10 crores to 100 crores and the fleet expansion from 12 million tons to 26 million tons brought immense fulfillment. These accomplishments stood out as moments of pride, eclipsing the satisfaction derived from awards and recognition.

Q5: What guiding principles or advice do you believe contributed to your success in the industry?

A5: Throughout my career, several principles have proven instrumental. Compassion, spirituality, effective time management, and the importance of mentorship were crucial aspects. Furthermore, finding joy in one's role within an organization, understanding that success often involves external factors beyond one's control, and adapting to unplanned career shifts were significant contributors to my professional journey.





Capt Ramesh G Khare

Q1: How has the shipping industry stabilized over time, as illustrated by examples from other industries like telecom and steel?

A1: Shipping industry has stabilized over time, just like other industries such as telecom and steel. This is since the industry has reached a point where there is no longer a need for exponential growth. For example, the telecom industry, it once took years to get a telephone. Today, you can walk into a shop and buy one immediately. Similarly, the shipping industry is now a mature industry, and the growth of the industry is proportional to the GDP growth of the world.

Q2: How have significant increases in ship sizes over the years, as the shift from 15,000-ton ships to much larger vessels, impacted the shipping industry in terms of ship numbers and employment opportunities?

A2: The increase in ship sizes has led to a decrease in the number of ships needed to transport the same amount of cargo. However, this has not necessarily led to a decrease in employment opportunities. The larger ships cannot operate in all ports, so there is still a need for smaller

ships to transport cargo to and from these ports.

Q3: What inspired you to pursue a career in the shipping industry, especially coming from a landlocked town like Khandwa, and what aspects of the prospectus for Dufferin's training program appealed to you the most?

A3: I was inspired to pursue a career in the shipping industry after seeing a prospectus for Dufferin's training program. The prospectus showed photos of cadets in different uniforms, and it promised a starting salary of 450 rupees a month, which was more than the salary of a Collector of a district at that time. I had no idea as to what the life afloat was going to be. I had neither seen the sea nor the ships before appearing for the competitive examination for the training ship "Dufferin".

Q4: How do you perceive the value and breakdown of the salary received by shipboard staff?

A4: I believe that the salary received by shipboard staff is fair, considering the hardships they face at sea. The salary can be broken down into three parts: one part for the hardships by way of living with storms, fog, varying weather conditions from desert heat to freezing snow falls, rolling and pitching of ships which makes life very uncomfortable, the second part of being away from the family causing the disruption to family life which meant you are not able to attend many important family get together and functions or meet emergencies, and the third part for the work which is to be done on all days without having a weekend or other holidays. There may be no shore leave at all in many ports due to either local regulations or short port stay. Thus you may remain ship bound for months together.

Q5: How do individuals in the maritime industry need to evaluate their career choices in terms of staying at sea or transitioning ashore, taking into account factors like financial stability, work-life balance, and personal resilience to challenges such as seasickness?





A5: Individuals in the maritime industry need to evaluate their career choices based on their personal preferences and circumstances. Some factors to consider include financial stability, work-life balance, and personal resilience to challenges such as seasickness. If you are considering transitioning ashore, you should make sure that you have reached the highest position that can be reached on board the ship such as a Master or Chief Engineer, earned enough money to live comfortably on a lower salary as the components related to the being away from family and the hardships on the ship disappear once you are ashore.

Q6: Why did you pursue an extra Master's qualification?

A6: I pursued an extra Master's qualification because I wanted to attain the highest possible qualification in the maritime industry so that no one could ever disqualify me for being under qualified. This gave me respect and attention, and opened more doors for me. I also did it to improve my understanding of the business side of the industry. I did B.A. in Economics and Statistics while I was on a shore job to better appreciate business related activities around.

Q7: Can you share a specific incident that shows the importance of qualifications and experience in the maritime industry?

A7: Yes. Once, a ship was heavily listed on one side due to flooding on one of the hatches as the ship had hit a mine in Chittagong port-approaches. One of the senior Superintendents from the offices, was sent to conduct the salvage operation, but the operation was unsuccessful and the ship sank instead. This was because there was lack of appreciation of the stability aspect of the ship's

condition. Deeper understanding of this aspect would have helped.

A similar situation arose when a ship was to be flooded to extinguish a fire in a hold. I was able to calculate the stability aspect and make an informed decision. The hold was flooded and there was no untoward incident. This is the value of knowledge.

Q8: How has the advancement of navigation technology impacted maritime navigation, and what are some of the potential challenges or vulnerabilities associated with relying solely on electronic navigation systems?

A8: GPS has made navigation much easier, but it is important to remember that electronic navigation systems can be vulnerable to sun flares, system errors, attack by malwares and being shut down during war. It is important to still have the basic skills of manual navigation, such as taking sextant readings and calculating ship's position. There are any number of cases of "GPS" assisted ship groundings. Over reliance on GPS without cross checking can lead to unhappy situations.

Q9: Is there any regulation by which a merchant navy captain or officer can be inducted into the defense navy?

A9: When the merchant navy did not exist in India, merchant navy officers could directly join the Indian Navy. Later, there was an option for merchant navy officers to join the Indian Navy through the NDA. However, I am not aware of any current regulations for the induction of merchant navy officers into the defense navy.

Editor - Sir, we are grateful to you for having spent some memorable moments with us and shared your experiences.



Mr Sandeep V Joshi

Q1: How did the process of setting up the Institute, including overcoming Vastu-related challenges, contribute to a unique and fulfilling experience for you?

A1: Establishing the institute was a uniquely fulfilling endeavor, compelling me to stretch beyond my domain so as to familiarize with and delve into unfamiliar territory.

Collaborating with a diverse team was pivotal, as it helped us surmount various obstacles. Leveraging our distinct skills and expertise to attain our shared objectives, within extremely tight budgets of both cost and time, meeting requirements, Vastu norms, architectural and structural engineering norms was challenging at Lonavala - sometimes known as Cherapunji of Maharashtra due to very heavy rains.

We had to make the two stage water tank on the SW corner of the complex at a height, that is visibly higher than the Tungarli Hills on the NE side. The level of chart room was raised 20 feet by landfilling and concreting to make the construction Vastu compliant.

Whenever I visit or even drive beside our Institute, its Vastu humbles me immensely as it

I am reminded of the numerous challenges overcome by so many individuals. It will touch and shape lives of so many seafarers in the future.

Q2: Some significant developments and facilities have been added to the institute, such as the deep swimming pool and guest houses. How did that enhance the campus?

A2: Key additions to the institute encompass a cutting-edge deep swimming pool for helicopter rescue training, state-of-the-art guest houses for accommodating visitors, and a well-equipped IT library offering cadets access to current IT resources. These upgrades have significantly improved the institute's appeal and functionality.

Q3: Can you describe the challenges and solutions involved in raising the playground and building culverts around it, particularly in dealing with the hard rock and storm water drainage?

A3: One of the biggest challenges we faced was raising the playground by 5 to 6 feet. The playground was originally a paddy field, and the ground was very hard. We had to use special machinery to break up the rock and raise the ground level. We also had to build culverts around the playground to prevent storm water drainage from flooding the area.

Q4: What challenges were encountered when transporting the two-stroke engine from Alang to Lonavala, and why was it necessary to cut the engine horizontally?

A4: Transporting the two-stroke engine from Alang to Lonavala was a challenge because the engine was very large and heavy. We had to cut the engine horizontally into two pieces so that it could fit on a trailer truck. Further it required deflating the tires of the truck so that it could pass under the low bridge under the Expressway.

Q5: How did budget constraints impact the procurement of machinery like lathes, and what strategies were employed to manage



these limitations during the Institute's development?

A5: Budget constraints were a challenge, but we were able to manage them by finding creative solutions. For example, we were able to purchase lathes from an original equipment manufacturer at a discounted price and used branded prime movers. We also used our own faculty to design and build some of the machinery, which saved us money.

Q6: What was the original intention of the FORECASTLE?

A6: The FORECASTLE was originally intended to have a cargo hold adjacent to it and also serve as a training ground for painting and at a later stage, it was planned to install hydraulics for operations of cargo holds. However, it was later

converted into a multi-purpose facility that can be used for a variety of purposes like anchor operations and demonstrating CO2 flooding fire-fighting system.

Q7: What message would you give to youngsters like him to be a success in life like you?

A7: My message to youngsters is to never give up on their dreams. Life is full of challenges, but it is important to persevere and never give up like in a trekking or white water rafting mission. I also encourage youngsters to be positive and to always believe in themselves.

Editor - Sir, interacting with you was an incredibly humbling experience. Your extraordinary contribution to this Institute, as an Advisor and Former Head, exemplifies a very high level of dedication and effort.



VISITOR'S LOG

Mrs. Ramaa Nadgauda (*Actress and Writer*) - It was an interactive and enlightening experience to visit and see the facility.



Ms. Sahar Ataei (*Deputy CEO & CFO, ARAB SHIP BUILDING & REPAIR YARD*) -

Very happy to visit this amazing facility, such an impressive facility, well done, great achievement.

Capt. R G Khare (*Dufferin Cadet of GREAT EASTERN*) - Pleasantly surprised to see such out - standing facilities for maritime training. This institute will greatly contribute to enhance the quality of shipboard personnel. Very nostalgic to be here. Institute has shaped up.



Mr. Arun Sharma (*Executive Chairman, INDIAN REGISTER OF SHIPPING*) -

Wonderfully . Lovely location and faculty and of course the products that has passed out. Nice to come here. GOD BLESS.

Mr. Mazen Matar (*Managing Director ASRY - BAHRAIN*) - Impressive faculty, discipline, and above all people. Great Vision leading to this infrastructure and knowledge base.





CREDITS

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