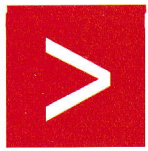


maritime*s*

campus news server | may 2014 issue



Picture: Tolani Bagh



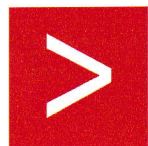
EDITOR TALK

Attitude. Skill. Knowledge. This is what TMI stands for. With a mission to be an instrument of positive changes in the maritime industry for the ultimate benefit of society; Tolani Maritime Institute yet again has added another feather in its cap. This time it is from the Far East! The Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Japan has recognized TMI as a certified institution. Voila! A perfect birthday gift for Dr. N.P Tolani, Founder, Tolani Maritime Institute.

Truly said "A man with no imagination has no wings". 90 years ago a boy hailing from a family in Pakistan (formerly India) would never have imagined that he'll achieve the zenith and beyond: in his lifetime. Dr. N.P Tolani or as they call him a legend has contributed in plenty to the maritime sector. Tolani Maritime Institute was honored to be able to witness the celebration of his 90th birthday with great pomp and show. Catch the entire coverage in this issue of Maritimes – The Campus News Server. We also bring to you our conversation with Mrs. & Mr. Chandra, who graduated from our very own college and happen to be from the pioneer batch of 1998!

Dr. N.P Tolani has always encouraged innovation and its application in modern technology. Tolani Maritime Institute has left no stones unturned and has continuously worked towards achieving this goal. Transtech'14 is one such event which puts on display the platter of technical talent of students from all over the country. Maritimes brings to you a glimpse of the Sports Calendar and the latest happenings in the campus. Keep Calm and read on. Happy summers!

-Himanshu Sharma



CONTENTS

3	Transtech 2014
5	Yet another feather in TMI's hat
6	In a tête-a-tête
8	Dr. N.P. Tolani's 90th birthday
9	TMI goes green
9	Treading Water: Lecture
10	Visits
10	Donation by TMI
11	PMT Thruster

12	Flettner Ship
13	Badminton Tournament
13	Squash Tournament
14	Cricket Championship '13-'14
14	Inter house volleyball
15	Scorpio Cricket Match
15	Manet Mania
16	Global Maritime News

Feature News Items

TRANSTECH 2014

Abhinav Agastya

Photo: Welcoming the Guest of Honour, Mr. N.Ueda.

The seventh annual technical fest of Tolani Maritime Institute, namely Transtech' 14, was held successfully from 6th to 8th March, 2014, for the seventh time. This year's theme for paper presentation was 'Socio-Economic Impact of Futuristic Technologies'.

An amalgamation of innovative presentations from students with a great deal of zeal and enthusiasm, along with presentations from the veterans in diverse disciplines of engineering provided the dynamic and enthusiastic audience of TMI with knowledge and awareness that stretched across the students' regular syllabus. The Chief Guest for the first day, Air Vice Marshal P.P Khandekar, Commandant and Director, Military Institute (MILIT), Pune discussed the socio-economic impact of technologies on a lighter note. He also highlighted the critical technologies and convinced the audience that

the futuristic technologies may be driven by nature. This was followed by an address by the Guest of Honour, Mr. N. Ueda, Chairman and President, Class NK, Tokyo, Japan who flew all the way from Tokyo for the occasion. He elaborated on Class NK's approach of using IT and cloud architecture for the maritime sector. He also discussed the history of classification societies. Class NK has always supported the endeavour of research and development in a variety of areas related to maritime sector. It is up-to TMI to prove our credentials and take benefits of such a prestigious organization headed by Mr. N. Ueda. Mr. Anant Sahastrabudhe, Chairman, Institute of Marine Engineers (I), Pune Branch stress on the importance of such events in overall personality development of a student. Next was the technical presentation by Mr. K.L. Batra, Choguku Paints, on "Maritime Paints and Latest Developments" which gave the audience a valuable insight



Photo: Speech by Mr. N.Ueda.

into the latest innovative paints used to protect ships from corrosive elements. First two technical sessions of the event were conducted in the afternoon. The events of the first day were concluded with the screening of the classical English movie: "Von Ryan's Express".

The second day started with the technical sessions in the first half and was followed by a technical presentation in the post lunch session. The technical presentation by Mr. D.B. Shingrup, C/E Avionics Air India on the topic "Avionics- Aircrafts" gave the audience, detailed information on the history, working and safety standards of the Aircraft Industry.

The Chief Guest of the third and final day was Shri. Mohan B. Dagaonkar, Chairman, Institution of Engineers (India), Maharashtra State Centre. Dr. Cdr. V.K. Rai, Deputy OIC, Trials, Gas Turbine Testing and Tuning, Mumbai gave a technical presentation on "Vibration Analysis and Balancing of Gas Turbines". The theme was very informative and was extensively discussed by the audience. Also, Mr. M Prabhu, Head, Training MTU India Pvt. Ltd. and Mr. Ajay Yadav, Regional Sales Head gave a technical presentation on the topic "Advanced Fuel Injection System".



Photo: Dr. B.K. Saxena welcoming the guests.

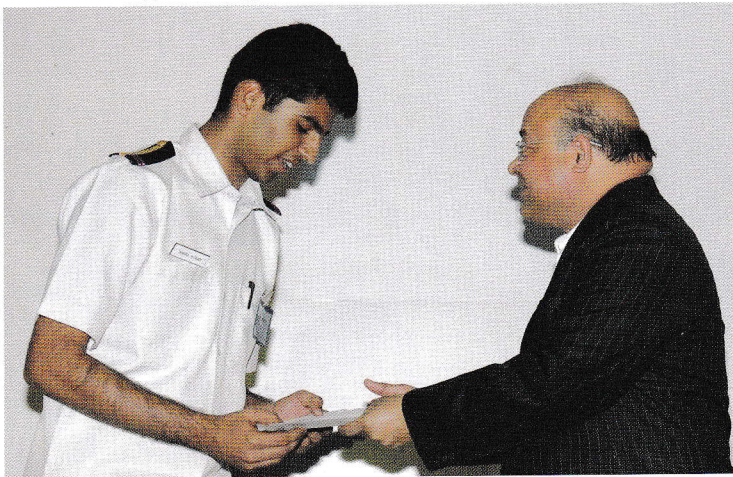


The programme was concluded with the prize distribution. More than seventy five delegates had registered for the event from various Marine and Non-Marine Colleges from all over the country. TMI received more than forty six full length papers out of which only twenty two were selected after technical review and moderation. A total of twelve different institutes participated in the event. There were five technical sessions in total, managed by their respective Session Chairs, in which twenty one papers were presented. The winners for these sessions were chosen by the team of judges: Mr. Md. Ayaz J. Khan, Mr. Anil Bahve and Mr. Ravi Sudame who ensured proper judgment of the papers.

The winners of Transtech '14 were awarded prize money sponsored by Tolani Maritime Institute and Institute of

Marine Engineers (I), Pune Branch. The winners were:

- 1) The first prize of Rs.5000 was awarded to the paper- 'Reduction of Ship Weight using Aluminum Foam', by Cdt. Eugene Fonseca, Cdt. Satej Joshi and Cdt. Amey Peshwe of Tolani Maritime Institute.
- 2) The second prize of Rs.3500 was shared by the papers 'Underwater Noise Pollution due to Merchant Vessels- Causes, Impact and its Mitigation' by Cdt. Saumya Singh of Tolani Maritime Institute and 'Energy Harvesting Techniques' by Pravin Kumar Mishra, Rahul Sharma, Ashish Kumar and Anurag Chakravarty of C.V Raman College of Engineering, Bhubaneswar.



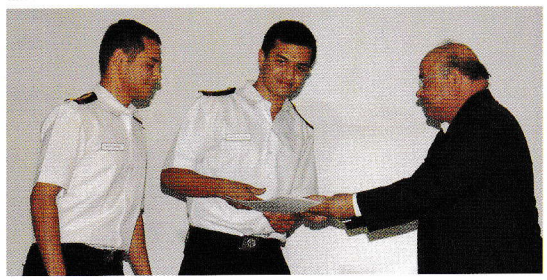
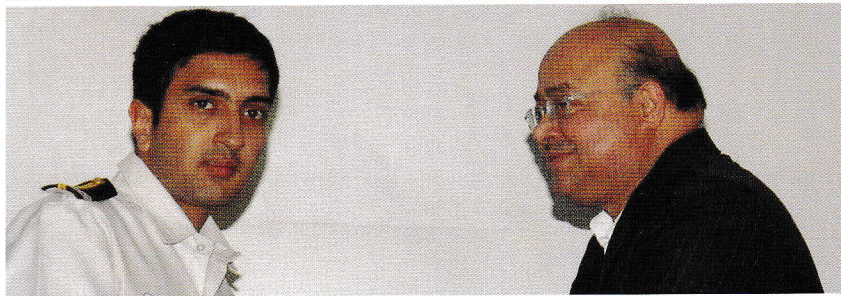
Transtech '14 consisted of various sub-themes on which the papers were focused. Winners of each sub-theme were awarded a sum of Rs.1000. The winners were as follows:

- 1) World Technical Vision 2040- Think Wild: 'Floating Structure Technology' by Cdt. Abhinav Agastya of Tolani Maritime Institute.
- 2) Impact of Advanced Technologies on Human Life: 'Impacts of Advanced Technologies on Human Life' by Cdt. Javvaji Pradeep Kumar, Cdt. Pawan Kumar Pande and Cdt. G. Krishna Mohan Kumar of R.L Institute of Nautical Sciences.
- 3) Smart Materials for Smart Future: 'Smart Materials and Smart Systems' by Cdt. Tanveer Singh Bhullar, Cdt. Surender Singh Rathore and Cdt. Shivendra Pandey of The Great Eastern Institute of Maritime Studies.
- 4) High Voltage Applications in Industries and Transportation: 'High Voltage Applications in Industries and Transportation' by Kevin D Almeda and Ram Keshav of Euro Tech Maritime Academy, Kochi.
- 5) Use of Satellites in Communication Technology: 'Satellite Communication: Present and Future' by Cdt. Himanshu Sharma, Cdt. Avijit Sharma and Cdt. Ashutosh Patel of Tolani Maritime Institute.
- 6) Impact of Capital Dredging on Environment: 'Environmental and Social Impacts of Proposed Capital Dredging off Royapuram Fishing Harbour' by K. Balamurugan and U. Saravanan of Institute for Ocean Management, Anna University, Chennai.

Four Consolation prizes in the form of books worth Rs.2000 were also awarded to the participants. Moreover, a sum Rs.750 was given for each paper presented. A total of seven models regarding the theme were also displayed. The winners of the model display competition were as follows:

- 1) The first prize of Rs.5000 was awarded to the model 'Flettner Ship', by Cdt. Sudarshan Pawar, Cdt. Priteesh Ranjan and Cdt. Pratyush Malik of Tolani Maritime Institute.

- 1) The second prize of Rs.3500 was shared by the models 'ArduROV- Remotely Operated Underwater Vehicle' by Cdt. Gurparwaan Singh, Cdt. Pankaj Kishlay, Cdt. Rishav Bindal, Cdt. Roshan Kumar and Cdt. Rutwik Prabhu of Tolani Maritime Institute and 'Multi Terrain Ambulance' by Cdt. Sam Soman, Cdt. Akhil A R, Cdt. Braino T Jose and Cdt. Jintu M Kuruvilla.
- 2) A special prize was awarded to the model 'Sundial for TMI' by Cdt. Utkarsh Sharma.



A cash prize of Rs. 2000 was given to Cdt. Lopez Desmond Agnel for poster designing, and a cash prize of Rs.2000 was shared by Cdt. Naman Kumar, Cdt. Devesh Singh and Cdt. Pranjal Anand for video making.

Recognition Of TMI By Japanese Government

-Aditya Mohan

After a rigorous audit of the systems, Ministry of Land, Infrastructure, Transport and Tourism (MLIT), Japan has recognized TMI as a certified institution under system of recognition and has decided to start applying it to the graduates after June 2014. This in effect means that TMI graduates get equivalence in Japanese maritime education system and will be preferred in Japanese flag vessels.

The SMPL Award

-Deep Ghatak

Tolani Maritime Institute continues to shine, this time bagging yet another Maritime Award for its outstanding achievement in Maritime Education and Training.

Tolani Maritime Institute was unanimously selected for the "SMP Leadership and Excellence Award 2014" for its continuous good work in the field of Education and Training. CHEMTECH presented the Award to the Institute on the 10th of February, 2014, in Mumbai. The award ceremony is held biennially by Jasubhai Media in conjunction with the SMP World Expo to recognize excellence in fields such as innovation, safety, and education within the maritime industry. The award ceremony was held at the Lalit Hotel in Mumbai and was attended by 160 representatives from the Indian and global maritime industry.

*In a tête-a-tête with
Mr. & Mrs. Chandra
-Naman*



Photo: Mrs. & Mr. Chandra

Hailing from the pioneer batch of 1998, Mrs. Sharvani Chandra & Mr. Saugat Chandra have been married happily for the past 9 years. Beginning their journey as cadets, they both have risen up and have experienced an interesting career in the Merchant Navy and in the corporate world. Maritimes managed to catch hold of them recently and tried getting insights on the professional and personal front.

Q: TMI as itself didn't have a brand name in 1998. What gave you the courage to step forward and join the college?

Ma'am: The moment we were introduced to the lecture halls, accommodation and the overall infrastructure; it all sounded way promising. You wouldn't see such a beautiful establishment anywhere around the country at that point of time. The quality was visible even before you started studying or learning to accept the brand name of TMI as such which didn't exist.

Sir: One could see a vision and a goal in the establishment. Moreover, TMI was the second engineering college in India which provided a Marine engineering course at that time. The other good thing about Tolani Maritime Institute was that it provided unmatched transparency and had all required approvals.

Q: Please throw some light on the infrastructure of TMI during the initial years.

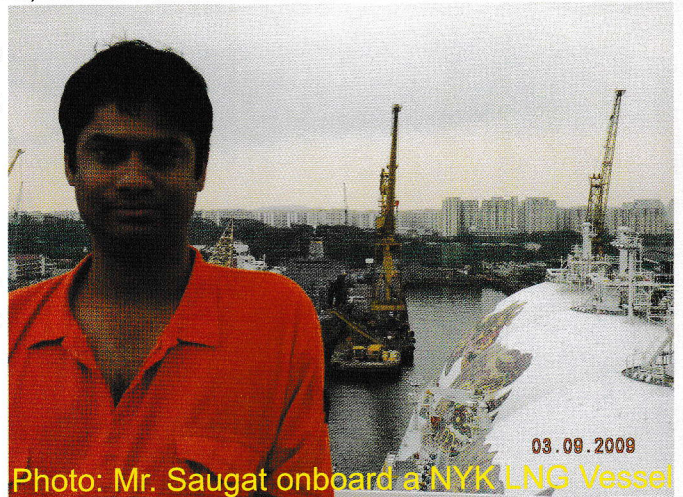


Photo: Mr. Saugat onboard a NYK LNG Vessel

Sir: TMI started out in Sharda Centre, Pune with temporary facilities due to the early arrival of the operating license. The first batch began with just 120 cadets. When it came to infrastructure, TMI left no stone unturned. It had 4 air conditioned classrooms, an auditorium, a huge drawing hall and an excellent workshop which suddenly disappeared after the first semester due to establishment of a parking lot on the original spot. TMI stood back and was efficient enough to arrange our workshop sessions at Maharashtra Institute of Technology.

Q: How was your experience in the college?

Ma'am: Archana and I were the only girls in the batch. It wasn't easy especially when you are dealing with teen-

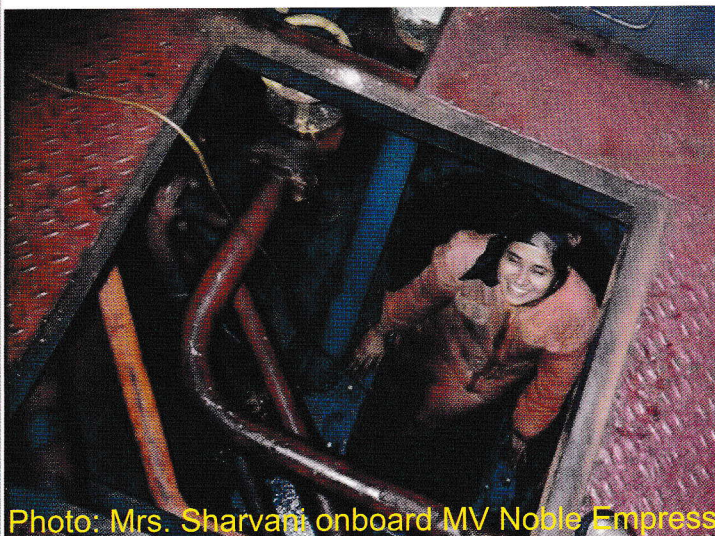


Photo: Mrs. Sharvani onboard MV Noble Empress

-agers. Initially, it was difficult for everyone to accept the presence of girls in the batch. It was unimaginable for me to understand why boys were behaving strangely, so yes there was a mismatch initially but as time flew by, people understood us well.

Sir: It was a dream for me to pursue Marine Engineering. I couldn't make it to MERI (formerly DMET) which was a setback for me. Joining TMI was like living a dream come true. The faculty was very supportive and the college despite its limited resources extended a helping hand for researches and projects, both financially and technically. Pune was at its best and it was fun to live around.

Q: When did cupid have its effect?

Sir: (giggles) We were very close friends and by the time we were about to pass out, we came to a conclusion that maybe it was more than friendship. Things went along well and we appeared for our Class IV exam together in Kolkata. That was the time when we decided that we can tolerate each other!

Ma'am: (smiles) There hasn't been a formal proposal. It wasn't love at first sight and it was friendship that kept us together. We still fight the way we used to in college (blushes).

Q: How was the life post TMI?

Sir: The better part got finished. Just like everyone else we were desperate to pass out and sail the high seas, travel the world and earn money. As the time progressed, it became more difficult. We had more responsibilities and we were missing all the fun way back from college life.

Ma'am: Whatever money you earn or no matter which country you visit, college days are always special. We had always referred to TMI as 'Tolani Resort'. By the time we passed out, we had our placements in hand and TMI sure had made a mark in the market.

Q: Ma'am, how was life onboard for you?

Ma'am: It was wonderful. I still recall those days when I first went onboard. Life onboard is always very good because firstly, you're earning clean money plus you aren't paying any taxes on it. Secondly, when you are aboard in the engine room, you're a pure engineer and all you do is work hard with lots of dedication. On the whole, it's a good package as this profession takes you to places which you only dreamt of.

Q: When did you both quit sailing and why?

Ma'am: I sailed last in 2007. I had already cleared my Class II but I was sailing as a Fourth Engineer with Shell.

Sir: I quit in early 2012 just after clearing my Class I. I have no regrets for not sailing as a Chief Engineer. I started out on containers and I fondly remember my first Chief advising me to switch to tankers as most of the Superintending Engineers came from tankers. Then began my hunt for a tanker and soon after my Class IV, I was aboard on an LPG Carrier. I cleared my Class II (Motor) but sailed as a Fifth Engineer on a Japanese Steam Ship. I never mind any of it, as I wanted to do it and I did it.

Q: What after sailing, did you both find enough opportunities on shore?

Ma'am: After I quit sailing, I went in for a Masters of Business Administration (MBA) programme. As of now I'm working in

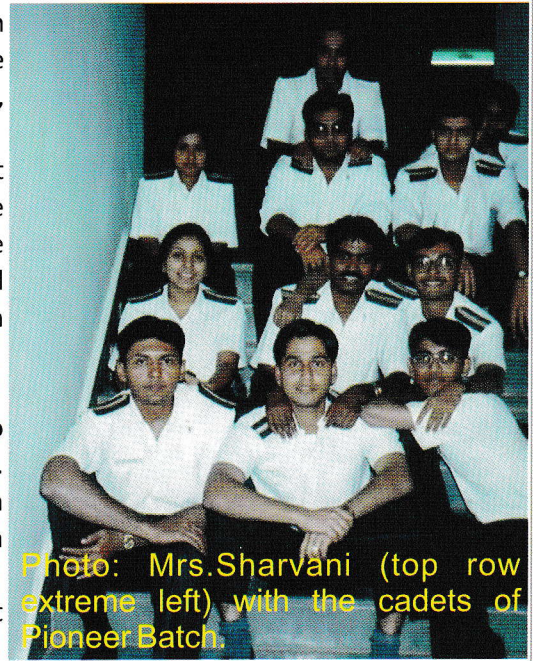


Photo: Mrs. Sharvani (top row extreme left) with the cadets of Pioneer Batch.

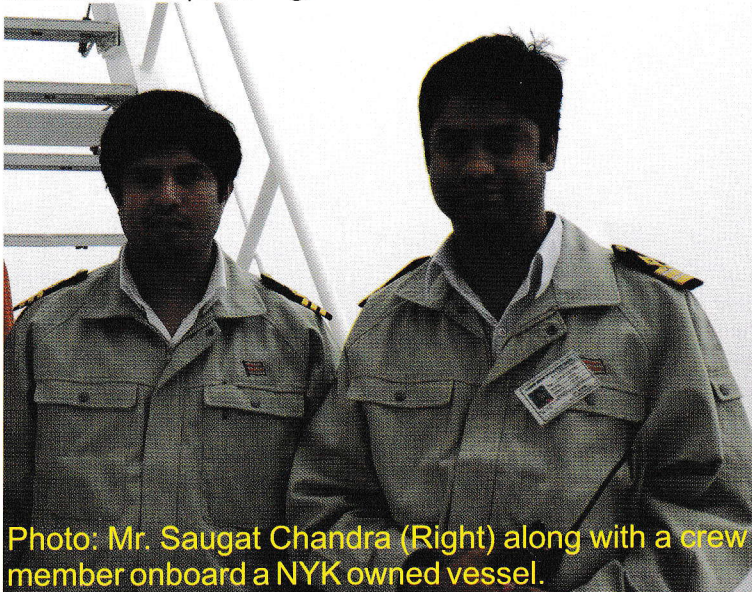


Photo: Mr. Saugat Chandra (Right) along with a crew member onboard a NYK owned vessel.



Photo: Mrs. Sharvani (as on September, 2001) aboard a 23,000 dwt Bulk Carrier.

NYK's Mumbai office in the commercial management sector. I deal with the operations of LNG carriers and tankers.

Sir: I, along with a friend from DMET, took the initiative to establish a workshop which caters to our own industry. We set up a workshop called Tri Gen Marine Solutions and as of now we have a good client database.

Q: When it comes to shore based opportunities, do the mariners have a good scope?

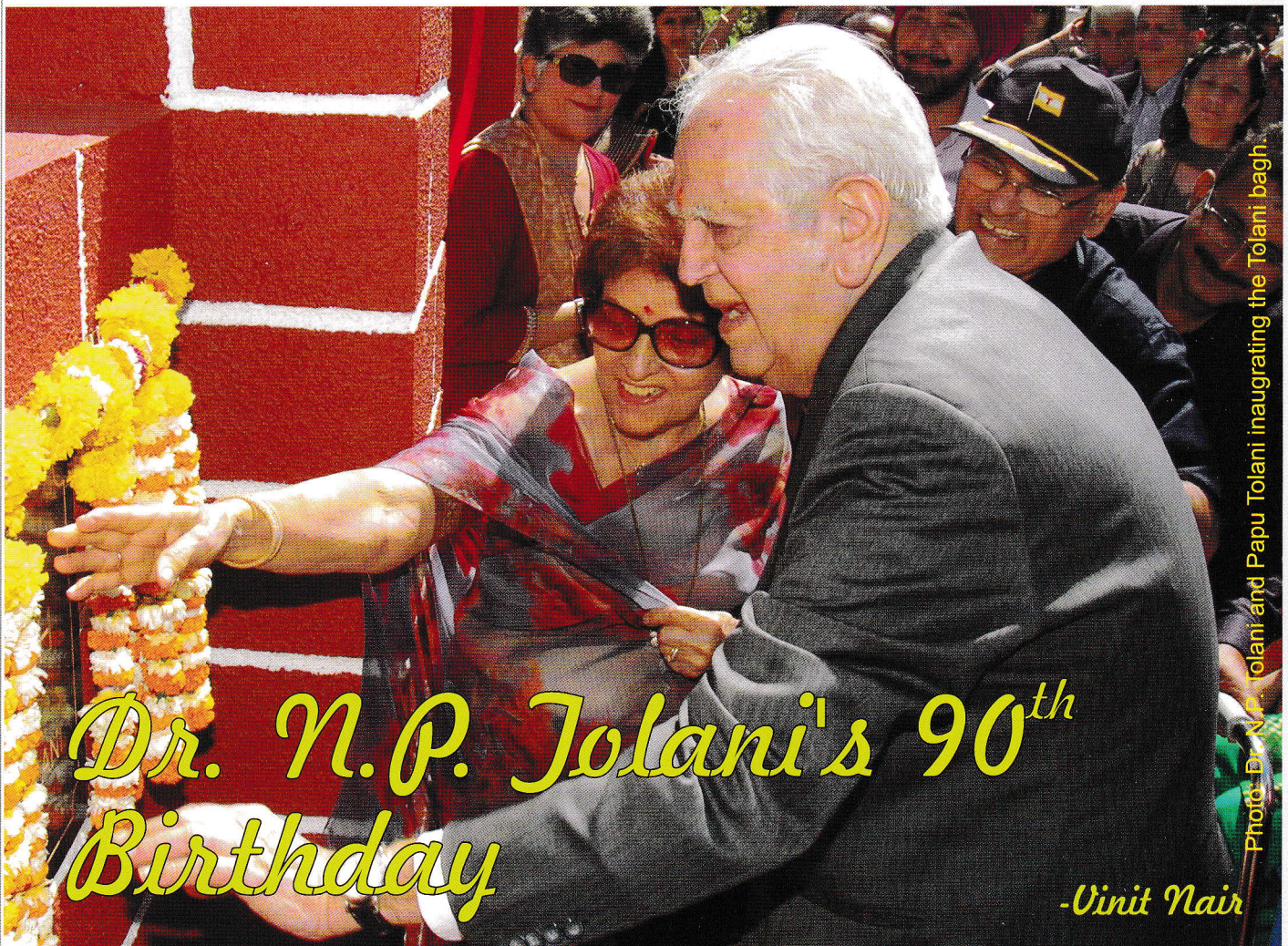
Ma'am: Totally. There are immense opportunities for sailors on shore. There's a sea full of opportunities but initially you won't probably earn the same that you will when on board. After some experience, you can scale out and achieve higher packages than the ones offered on board. Sea as a career is normally good for 10-12 years as by that time you'll achieve the maximum of what you can.

Sir: This career has opened its doors way beyond one can imagine. Sailing on a whole is fun as it gives you everything that you require in life. It gives you good money, immense job satisfaction and most importantly a wonderful career. Sailing isn't for everyone and a good lot of people do not like to sail. For them, the shore has a lot to offer, be it on the engineering front or the managerial side. You can do a lot more than you think of and one shouldn't be scared of working ashore.

Q: What message would you like to give the TMI cadets?

Ma'am: Work hard and prove yourself at each level in life. As mentioned earlier, don't be scared to work ashore. Rise and shine and become a good person in life.

Sir: Well, you people have no idea of what college you are in right now. I would like to call TMI a gem as it has shaped my career so well. Respect your college for all that it is giving you. Interact with your faculty a bit more. Your teachers care a lot about you and they want you to be successful, they want you to be happy and they want you to do great things. There's something else they want as well. They like when you stay in touch. Stay in touch with your teachers. They invest a lot in you. Don't do that out of gratitude but with the remaining part of relationship.



Fifteenth February, 1924 saw the birth of a great visionary, educationist and entrepreneur. Dr. N.P. Tolani, founder of the Tolani Maritime Institute, was inspired by his father, who believed that the progress of India could come only through education. Dr. Tolani has an M.S. as well as a Ph.D. from Cornell University, USA. He entered the business of real estate development and later diversified into river transportation and ocean shipping business.

On 15th February, 2014, Dr. Tolani celebrated his 90th birthday here in TMI, an institution he founded 16 years ago. The event was well planned in-Hostel 1 which was decorated lavishly, with dining facilities for the invited guests and the cad-

-ets. Captain Banerji walked us through Dr. Tolani's life, the hardships he faced and his achievements. After an anxious wait, at 1330hrs, Dr Tolani entered through the gates and he was greeted by the faculty members and the cadets with a lot of enthusiasm. Following him were his family members and friends who seemed thrilled and excited by the show put up by the institute.

Everyone spoke about the wonderful experiences they shared with Dr. Tolani and how his outlook was so unique and different. A lot of stories were told, laughs were shared and it was a walk down memory lane for him and everyone who was close to him.

In the flow of the event, the cadets along with the faculty members sung a variety of old songs. Soon, lunch was served; Everyone sat around Dr. Tolani, wished him and had a nice talk with him, his family and his friends. When it was time to leave, everyone was filled with nostalgia and had a smile on their face. The stories of Dr. Tolani motivated the cadets. It takes a lot of effort and courage to achieve what Dr. Tolani has done in his lifetime, all of which has been captured in his latest book 'Odyssey'. Our institute itself stands as a memento of his brilliance.



Tolani Maritime Institute organised a cleanliness drive on 15th February, 2014 beginning at 6 A.M in the morning. Over 250 TMI cadets, along with faculty members, cleaned the sprawling Bhandara Hill near the TMI campus. Cadets set out in two groups to clean the area. They segregated plastic and other waste materials and disposed them in the allotted areas near the hill. TMI has really set an example by conducting this cleanliness drive as a part of their responsibility and contribution to the society.

Treading Water: Reflections on an Intemperate Medium The 16th Vasant J Sheth Memorial lecture, January 2014

-Edited by Ameya Mutatkar

The 16th annual lecture series of the Vasant J Sheth Memorial Foundation which took place in Mumbai's Chhatrapati Shivaji Maharaj Vastu Sangrahalaya (former Prince of Wales Museum) was packed to capacity with an audience of over 400 Mumbaikars including critics, historians, intellectuals, businessmen and students. The lecture reflected on a range of ideas on literature and creativity and water with a special interpretation of T.S. Eliot's *The Wasteland*. The distinguished speaker, Homi K. Bhabha, is the Anne F. Rothenberg Professor of the Humanities, Harvard University. He is the author of numerous works including *Nation and Narration* and *The Location of Culture*. His other publications include *A Global Measure* (Harvard University Press) and *The Right to Narrate* (Columbia University Press). Bhabha has delivered the Presidential Lectures at both Stanford University and Freie Universität Berlin, and most recently the Hegel Lecture at the Freie Universität Berlin, Mellon Distinguished Lecture at Duke University and keynote lectures at Peking University in Beijing, the Asia-Pacific Centre of Education for International Understanding and the Korea Foundation in Seoul amongst others. He has also served as Chair of the World Economic Forum's Global Agenda Council on Human Rights and on various advisory boards.

The Vasant J Sheth Memorial Foundation, over the years, has brought in the best speakers from diverse disciplines and has never failed to enthrall audiences. Now 20 years old, the Foundation has executed over 70 projects and welcomes volunteers, resources and talent participation in future projects. If you would like to support the Foundation in any way, please contact Genevieve/Arundhati at vjsmf@greatship.com, +91 22 67498534 / 32.

-Genevieve Adil Dubash/ Project Manager / Vasant J Sheth Memorial Foundation

Visits

-Aishwarya Chaurasia

Date	Name of the Visitor	Company
3-Dec-13	Mr. Mahesh Garimella & Mr. Rahul Dudhade	Northern Marine
5-6 Dec-13	Mr. C P Paul and Mr. Abir Dey	NYK Ship Mgmt., Mumbai
13-Dec-13	Dr. Manoj Soni	Astt. Prof, (Mech Engg), BITS, Pilani- Pilani Campus
16-19- Dec	Capt. Shashank Jahagirdar	Marine Manager, Bibby Ship Management, Singapore
Dec-13	Mr. Praveen Gupte	General Manager – Nortrans
	Mr. Manoj Khojrekar	Training Superintendent – Nortrans
24-Dec-13	Mr. Sudhakar Surve Capt. Pankaj Nayak Capt. Anand Ghonasgie	Resident Representative of Wallace Steam Ships Training Manager, V-Ships Training Manager, V-Ships
3-Jan-14	Mr. Rajesh Dixit	Manager - Recruitment, Maersk Crewing Division
27-Jan-14	Dr. Sharmila Dhobale	Ayurvedic Doctor and Master Trainer Facilitator
28-Jan-14	Dr. Urvashi Rathod	Professor, Symbiosis Centre for Information Technology
30-Jan-14	Capt. Naoki Saito Mr. Ajay Kumar	Manager, Certification Service Department, ClassNK Principal Surveyor, Class NK
6-Feb-13	Mr. Noboru Ueda Dr. M.A. Rahim	Chairman and President Of Class NK, Tokyo Regional Manager of Europe and Africa, London of Class NK
	Mr. Y. Seto Mr. A.V. Pradhan Mr. Sumithran Sampath	Executive Operations Div., Tokyo, Class NK Regional Manager of India, Class NK GM (Surveys), Mumbai, Class NK
18-Feb-14	Mr. Erik Graumann Capt. Ashok Menon	Vice President, Tech. Divn., TORM and CEO, TORM (I) Sr. Manager (Training)
24-Feb-14	Mr. Ashok Advani	General Manager, PIL
25-Feb-14	Capt. Ashok	TORM
28-Feb-14	Mr. C. P. Paul	NYK
3-Mar-14	Mr. Eric Kleess	President, ABS Pacific
	Mr. Thomas Tan Mr. R. Ashok	Sr. VP, ABS Country Manager Pacific Division, ABS (India)
6-Mar-14	Mr. Noboru Ueda Air Vice Marshal P.P. Khandekar	Chairman and President Of Class NK, Tokyo Commandant and Director, MILIT- Pune
7-Mar-14	Mr. K. L. Batra Mohan B. Dagaonkar	Chogoku Paints (I) Chairman, The Institution of Engineers (I), Mah. State Centre
12-Mar-14	Capt. Koji Higashijima	CEO & Managing Director, K Line Ship Management

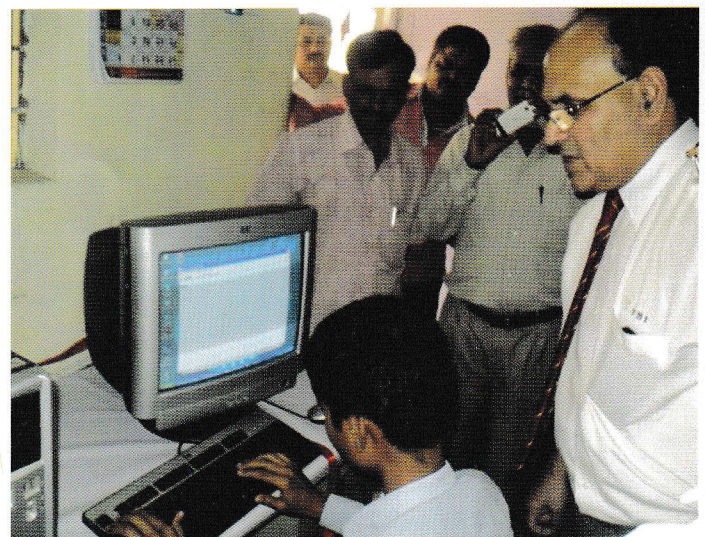
Donation of Desktop Computer to Blind School by TMI

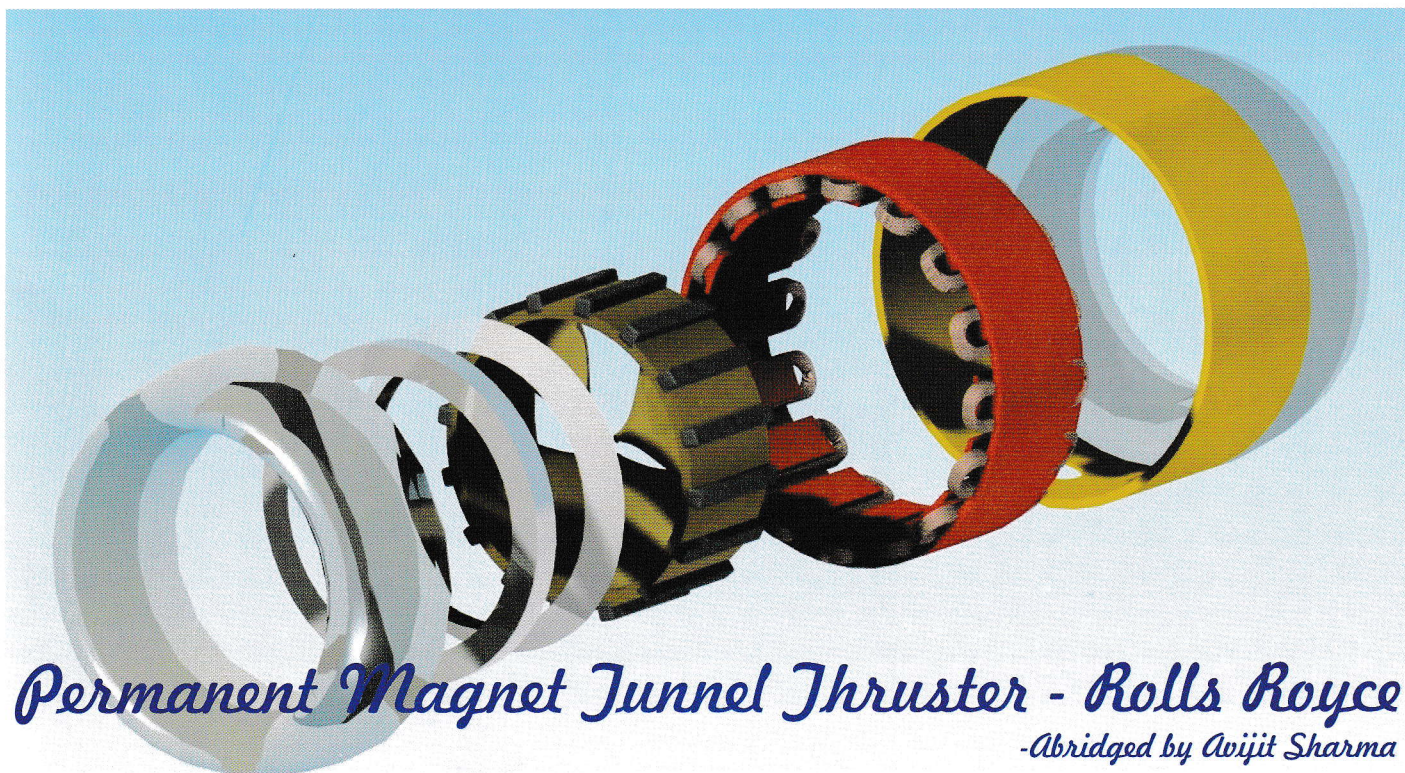
-Amarsinh Chavan

“Imagination is everything. It is the preview of life’s coming attractions.”
-Albert Einstein

As an initiative towards social responsibility, on 28th March, 2014 TMI donated a desktop multimedia computer to the Indryani Blind-Orphan Welfare Centre in Induri.

The computer was pre-loaded with unique software especially designed for the visually impaired. The system was handed over to the Chairman and trustees of the Welfare Centre by Provost, Capt. Raj Razdan.





Permanent Magnet Tunnel Thruster - Rolls Royce

-Abridged by Avijit Sharma

Rolls-Royce has won a contract to deliver a unique package of advanced ship equipment for a new offshore construction vessel currently being built in Turkey for the Norwegian ship owner Volstad Shipping AS. The contract is worth approximately £13.5 million to Rolls-Royce. The package includes the first commercial delivery of tunnel-thrusters powered by permanent magnet (PM) technology. The Permanent Magnet tunnel thruster is a new addition to the Rolls-Royce family of thrusters, built on a completely new approach to thruster design and motor integration. The TT-PM meets the strictest requirements for performance, noise and vibration.

In traditional thrusters on a ship, the gear is placed directly behind the propeller, shaped as a bended knee with shaft passing through the hull above the thruster. Hydrodynamic drawbacks are present in this design since the shaft and gear is in the path of the water. Also the shaft can induce vibrations as it pierces through the hull. All these shortcomings have been eliminated and further improvement in the dynamics of thruster has been incorporated in the TT-PM technology.

The rim driven thruster has a propeller running on roller bearings, supported by a central shaft which in turn is supported by stays. The stays and the central bearing housing recover some of the swirl energy created, thus providing additional thrust. A rotating magnetic field is created by the stator which interacts with the fields of the permanent magnets on the rotor, which generates force to drive the rotor around, providing the mechanical power. A new and patented mounting system, based on rubber thrust bushings, reduces the vibration and noise transferred to the steel structure. Due to this patented mounting, the unit can be removed and replaced without dry docking. Having the motor in the rim frees up space directly above the thruster where thruster motors are normally located, making the thruster room available for other equipment or alternative use.

Permanent magnet machines have some promising features when it comes to applications where direct drive, low speed and high torque are desired. Compared to the conventional thrusters it has relatively larger propeller diameter and a high number of poles, resulting in thin and short active machine. The main features of this design are efficient and space saving PM technology providing a 25% increase in power output from the same size propeller, fast response time and better dynamic performance since the rotor is light and higher flux density exists across the air gap, rugged design with high reliability, equal thrust in both directions, oil filled stator for superior cooling and protection, as well as a robust center shaft that carries all propeller loads.

PM thrusters are currently available in two sizes with powers of 1,000 and 1,600 kW. Equipped with a monobloc propeller, the thruster is driven by Active Front End (AFE) drive, providing complete control over reactive power and harmonics as well as high dynamic speed and torque response. Anders Almestad, President – Offshore, Rolls-Royce said: "This cutting edge technology is suitable for a range of applications in offshore and merchant vessels, where operators will benefit from its high power output and rapid response to power demand, combined with exceptionally low noise levels. It is capable of running for thousands of hours in harsh conditions of the offshore oil and gas fields, where rapidly varying loads and alternating thrust directions are the norm."

Flettner Ship - Return of Wind Propulsion

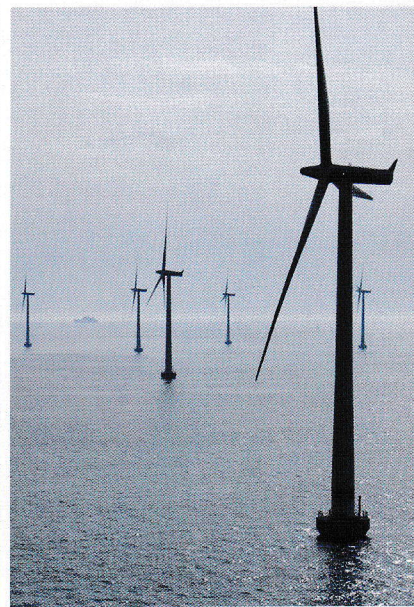
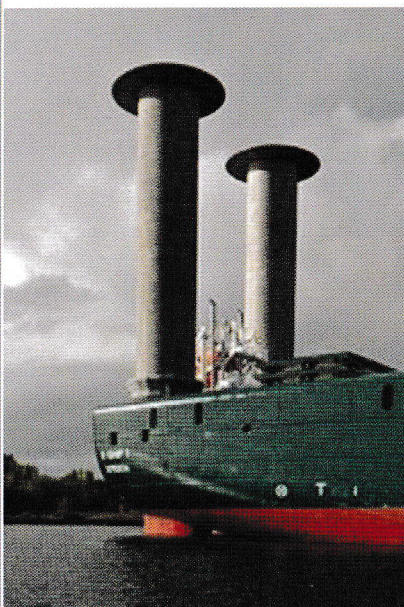
- Priteesh Ranjan, Pratyush Malik and Sudarshan Pawar

During the 1920s when the diesel engine was fast replacing sails being used on ships, Anton Flettner, a German engineer proposed the idea of a ship that uses Magnus effect to propel ships. Magnus effect is a force that acts on a rotating body in a moving airstream in a direction perpendicular to the direction of the wind. Two years after applying for a patent for the rotor ship, Flettner came up with 'Backau'-the first rotor ship. Backau could not compete with the then developing diesel ships in terms of efficiency as its design lacked research and the ship was scrapped soon.

But now, with the rising cost of fossil fuels and their environmental impacts, Flettner ships are being sought as a means of reducing the load on diesel engines and for providing a cleaner source of propulsion.

Principle: Magnus force

When a body rotates in an airstream, its surface interacts with the air. One half of the surface moves with the wind while the other half moves against it. The surface moving with the wind tries to curve the air particles in its direction of rotation while the surface moving against the wind tends to slow down the air particles. The net effect is the deviation of air from its natural path. Air will deviate from its natural path only if a force acts on it. Now, since air is deviating because of its interaction with the body, the body experiences an equal and opposite force from the wind (due to Newton's third law). This force is used by a Flettner ship to propel itself.



12

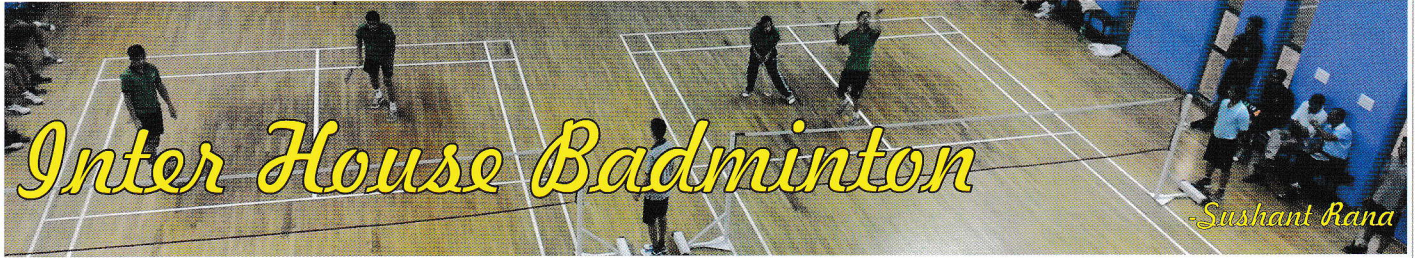
Flettner ships today:

The E-ship 1 was launched in 2010 by wind turbine manufacturer Enercon. It has 4 rotors, each is 4 meters in diameter and 25 meters tall. It is used to carry wind turbine components. The ship has a length of 130m, beam of 22.5m, draught of 6-9m and has two 3.5 MW diesel engines installed on it. Apart from its two propellers, it has four Flettner rotors which work in tandem to give it a maximum speed of 17.5 knots. Since its first voyage in August 2010, E-Ship 1 has covered more than 170000 nautical miles- primarily in the North and Baltic Sea, North and South Atlantic Ocean and the Mediterranean Sea by July 2013. The four rotors provide the main engine with additional drive that, with streamlined propellers and helm and the sleek lines of the hull and deck superstructures, add to fuel savings of upto 25%. This means that the ship has an annual fuel saving potential of up to 1700 tonnes and annual CO2 savings of up to 5100 tonnes. Given its major advantage of being highly fuel efficient, the possible causes for it not being widely used in the industry can be:

1. Interference with cargo loading and unloading
2. Extensive modifications required for the retrofitting onto existing vessels.
3. High cost to manufacture and install
4. Maintenance issues.

New rotor designs are coming up to cope with the present problems. Some of these are:

1. Telescopic rotors which, when ship is in port, will fit in a compartment below deck thereby giving a free deck space for loading and unloading.
2. Foldable rotors



The institute witnesses the high speed racquet sport of badminton on the well maintained courts of TMI every year. This semester too, the skill displayed with the racquets was no less. A bright eyed band of merry cadets commenced the playoffs.

On the very first day, 5th March, 2014 Cassim house faced Mudaliar house while on the 6th Morarjee battled with Masters for booking a place in the finals. After some closely contested games, Master and Cassim advanced to the finals. The competition intensified and the court witnessed some really notable games. The powerful and attacking game of the Cassim players proved worthy enough for a splendid triumph in the end.

The overall House standings were:

- | | |
|------------|------------|
| 1)Cassim | 2)Master |
| 3)Morarjee | 4)Mudaliar |

Best Doubles: Rohan Singh and Abhishek Budharkar
 Best Singles : (Men's):- Varun Sarode
 (Women's):- Arushi Tyagi.



Inter House Squash Tournament

-Archie Gracias

Officially termed as one the most tiring games in the world, 'SQUASH' was organized in TMI from 13th to 18th March, 2014. Every team showed their intentions right from the beginning. Admirable backhands were witnessed and the pressure put on the opponents was clearly visible. Even though Cassim maintained its pace, it wasn't able to stop Masters in their tracks. Masters won the tournament in style. Chirag Singh Shekhawat was awarded the best player for bringing laurels to his respective house.



The zeal shown by the audience was motivating for all players.

At the end of the tournament, the scoreboard read as follows:

- 1) Master
- 2) Cassim
- 3) Morarjee
- 4) Mudaliar

Best player (Men's) -Chirag Singh Shekhawat
 Best player (Women's) -Arushi Tyagi

Inter House Cricket Championship '13 -14

-Abhinandan Chandra

"Some sports are skin-deep but Cricket goes to the bone."

This quote was ably epitomized by the spirit and skill showcased by the cadets of TMI representing their respective houses. The teams took to the pitch in the sweltering sun and even that could not dampen the enthusiasm of the players.

The championship began on 12/12/13 with Mudaliar facing Morarjee house. Mudaliar house bowlers huffed and puffed and kept the Morarjee batsmen at bay, eventually winning by 2 runs.

Master house batsmen found it difficult to put runs on the board, scoring 87 and 85 against Cassim and Mudaliar house respectively which both the sides chased down with ease. Two defeats in as many matches meant Master house could contend for 3rd position.

The first semi-final played between Cassim and Morarjee turned out to be a free scoring match. Morarjee house blazed to 144 runs with Cdt. Samanshu scoring 82 runs. Cassim house skittled out far short of 144 runs. The win ensured a place for Morarjee house in the final alongside Mudaliar house. The 3/4th playoff between Cassim and Master house was where Master house finally showed their cricketing prowess. They bowled out Cassim for a paltry of 88 runs and chased it down with 5 wickets to spare. The final was held between Morarjee and Mudaliar house. Being put into bat first, Morarjee House put up a formidable score. Faced with an uphill task, the Mudaliar batsmen made easy work of the total. The openers Cdt. Alwin Daniel & Cdt. Sarthak Tomar complemented each other brilliantly and their solid start ensured this fixture wasn't a repeat of what happened the last time these two sides met.

Thanks to his consistent performance, Cdt. Sarthak Tomar was declared "Best player of the championship".

The final standings were as follows :-

- | | | | |
|-------------|-------------|-----------|-----------|
| 1. Mudaliar | 2. Morarjee | 3. Cassim | 4. Master |
|-------------|-------------|-----------|-----------|

Inter House Volleyball Tournament

-Jaideep Chaudhary



Played from beaches to Olympics, Volleyball is a sport that requires strength, endurance, stamina and control.

The Interhouse Volleyball Tournament was held in TMI from 4th to 11th December, 2013. The chief guest of the event was Dr. D.D Mundra.

An enthusiastic spark could be witnessed on the faces of the finalist teams of Morarjee and Mudaliar House in Group A, who managed to beat the other two teams in the semi finals.

It was an incessant exhibition of snaring points by the Mudaliar House which gained an initial lead. The climax was nerve shredding when the Morarjee House team, brimming with confidence, took a point bound effort to defeat Mudaliar House and become the champions.

Cdt. Sahil Chanjta of Morarjee House was adjudged as the Best Player in Group A and Cdt. Shubham Chand of Master House in Group B.

The overall standings were as follows:

- | | |
|-------------------|-----------------|
| 1) Morarjee House | 2) Master House |
| 3) Mudaliar House | 4) Cassim House |

Scorpio Cricket Match

-Amarsinh Chavan

A friendly cricket match was held between Tolani Maritime Institute (TMI) and Scorpio Shipping, at the Institute's ground on 7th December, 2013. The players of Scorpio Shipping came all the way from Mumbai to play the match. Capt. Raj Razdan led the home team while Capt. Shailesh Bhambhani led the away team. TMI won the toss and elected to bat. The Home team played well, but were restricted to 144. Bhupesh Kalia and Tejas Gokhale took two wickets each. Cdt. Shantanu Malik was the best of TMI, who scored 49. In the second innings, Scorpio clocked the scoreboard at 111. The match was made more interesting by the commentator Capt. Pawan Virk, a Scorpion team member.



MANET Mania

-Guna Abhinav

The 2nd National Level Inter Maritime College sports meet was held at Maharashtra Academy of Naval Education and Training (MANET) during 17th-20th February, 2014. Cadets from various colleges across the country took part in this meet like, MANET, SIMS, TMI, HIMT, AMET, TSR, etc. This prestigious event provided a platform for TMI cadets to showcase their skills at a higher level. All the events were played in the true spirit of sportsmanship.

Tolani cadets once again proved their mettle by winning quite a few events namely Badminton, Tennis and Swimming. They were runners-up in Basketball, Football and Water Polo.



Our greatest glory is not in never falling but in rising every time we fall ~Confucius

Global Maritime News

-Yashwardhan Singh

1). NYK Container ship Rescues Five Rowers in the Mediterranean Sea



On March 25, 2014, the container ship 'NYK Orion' rescued five rowers from a boat in distress in the Mediterranean Sea. The same day, the vessel received an alert from a boat reported to be in distress. NYK Orion immediately responded to this distress call and established communication with the boat to gather information needed to perform a safe rescue operation in the existing unfavor-

able weather conditions. All five rowers on the boat safely boarded NYK Orion and were reported to be in good health without any injuries. The rowers were heading from Greece to Malta, and during the voyage, 127 nautical miles off Malta, the boat's main sail was damaged. The craft was then determined to no longer be safe in the unfavorable weather conditions. After the rescue, NYK Orion recommenced its original passage to Suez. On March 27, 2014 the five rescued rowers disembarked from the vessel at Port Said anchorage at Northern Suez Canal and then returned to the UK.

2). Maersk Drilling takes delivery of the largest jack-up Maersk

Maersk Drilling has taken delivery of its first ultra harsh environment jack-up, Maersk Intrepid, from the Keppel FELS shipyard in Singapore on time. Maersk Intrepid will start its mobilisation to the Norwegian North Sea in two weeks, where it will commence a four year contract with Total E&P Norge AS. Maersk Intrepid is the first in a series of four newbuild ultra harsh environment jack-up rigs to enter Maersk's fleet.



Editorial Team Graphics Team Faculty Advisors Feedback

Himanshu Sharma
Abhinandan Chandra
Abhinav Agastya
Ameya Mutatkar
Archie Gracias
Deep Ghatak
Pranav Gupta
Yashvardhan Singh
Amarsinh Chavan
Aishwarya Chaurasia
Guna Abhinav
Jaideep Chaudhary
Sherwin D'sylva
Sushant Rana
Vinit Nair

Naman Kumar
Himanshu Iyer

Photo Credits

Aditya Chawla
Roshan Noronha
Monal Kumar
Anshul Prechandani
Anubhav Rana
Pranav Arora

Special Thanks

Mr. Saugat Chandra
Mrs. Sharvani Mishra
Avijet Sharma
Priteesh Ranjan
Sudarshan Pawar
Pratyush Malik

Mrs. Vandana Shinde
Mrs. Swati Bhise
Mrs. Puja Awachat
Mr. Wallace Jacob
Mr. Ganesh Ingle
Mr. Vinod Mangwani

Do send your valuable feedback, comments and suggestions at :
Tolani Maritime Institute,
Induri, Talegaon-Dabhade,
Pune - 410-507
Phone: +91 2114 242016
Portal : www.tolani.edu
Email:
maritimes.tmi@gmail.com

Tolani Maritime Institute
ISO 9001:2008 | CRISIL GRADE I (OUTSTANDING)



Attitude. Skill.
Knowledge.



Off Campus Centre of
BITS, Pilani



Approved by
DG Shipping,
Govt. of India