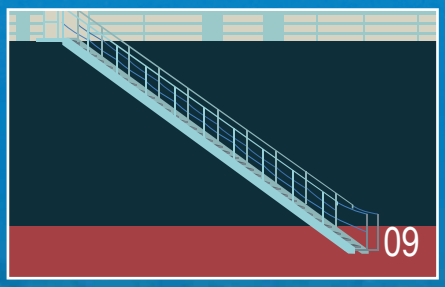
Samundra Spirit

APR 2018 . ISSUE 41

QUARTERLY IN-HOUSE MAGAZINE FOR SAMUNDRA INSTITUTE OF MARITIME STUDIES (SIMS), MUMBAI & LONAVALA

IN THIS ISSUE



SAMUNDRA INSTITUTE OF MARITIME STUDIES (SIMS)

A Training Commitment of Executive Ship Management Pte Ltd (ESM), Singapore
(Certified by leading maritime classification society, DNV GL, Germany for ISO 9001:2008)

INVITES APPLICATION FOR:

1-YEAR GRADUATE MARINE ENGINEERING (GME) - SEP 2018 BATCH

Approved by Directorate General of Shipping, Govt. of India & The Maritime and Port Authority of Singapore (MPA)

- One year training in Marine Engineering at SIMS, Lonavala which includes
- 6 months hands-on practical training in the Ship-in-Campus
- 6 months shipboard training before appearing for Class IV examination

4-MONTHS ELECTRO TECHNICAL OFFICERS (ETO) - AUG 2018 & DEC 2018 BATCHES

- Four months pre sea training at SIMS, Lonavala which makes the candidate eligible for 8 months of onboard training as a Trainee ETO on successful completion of the course

1 YEAR DECK CADETS (DNS) - JUL 2018 BATCH

Approved by Directorate General of Shipping, Govt. of India, The Maritime and Port Authority of Singapore (MPA), and affiliated under Indian Maritime University (IMU) Chennai

- One year Diploma in Applied Nautical Science at SIMS, Lonavala
- Minimum 18 months of practical shipboard training before 2nd Mate's examination

4 YEAR B.TECH. (MARINE ENGINEERING) – JUL 2018 BATCH

Approved by Directorate General of Shipping, Govt. of India and affiliated under Indian Maritime University (IMU) Chennai

- Four years B.Tech Marine Engineering course at SIMS, Lonavala
- 6 months shipboard training before appearing for Class IV examination

Eligibility	For Deck Cadets	For B.Tech	For Engine Cadets	For ETO Officers
Age	For Class XII: Not less than 17 years & Not more than 20 years as on date of commencement of the course For B.Sc. in PCM or Electronics: Not more than 22 years as on date of commencement of the course For B.E./B. Tech. Degree from I.I.T or a college recognized by AICTE: Not more than 25 years as on date of commencement of the course	Not less than 17 years & Not more than 20 years as on date of commencement of the course	Not more than 25 years as on date of commencement of the course	Not more than 28 years as on date of commencement of the course
Marital Status	Unmarried			
Academic	Results should be obtained at FIRST ATTEMPT All Boards (Class XII): Minimum Percentage – 60% PCM minimum – 60% (Physics &Maths Min 60% each) (For Andhra Pradesh & Kerala State Boards, separate board exams held for each class(11th & 12th) & hence, aggregate of both marks are considered) BSc: Degree in Physics/ Chemistry/ Mathematics/ Electronics with minimum 55% in final year along with Min 55% in PCM in Class XII BE (Mechanical) Engineering: Degree from an AICTE/ UGC Deemed University Approved Institute with min 55% in final year	All Boards (Class XII): Minimum Percentage – 60% PCM minimum – 60% (Physics &Maths Min 60% each) (For Andhra Pradesh & Kerala State Boards, separate board exams held for each class(11th & 12th) & hence, aggregate of both marks are considered)	Graduation in BE (Mechanical) Engineering / Naval Architecture from an AICTE approved Institute with a minimum marks of 55% in final year. Candidate must clear his BE/ B.Tech in 4 years only Numbers of ATKTs / Arrears / Repeats / "E" grades obtained during the entire degree programme: Not more than six attempts	12th Class board approved by Ministry of HRD, Govt. of India Class 12th subjects must include Physics, Chemistry & Maths English percentage in 10th or 12th min 50% 3 years Diploma with 60% recognized by State of Central Government. OR Degree in Electrical Engineering, Electronics Engineering, Electrical and Electronics Engineering, Electronics and Telecommunication/ Communication Engineering, or Electronics and Instrumentation or equivalent recognized by AICTE.
Medical	Physically fit and meet the standards laid out by DG Shipping*			
Language	English shall be one of the subjects with minimum marks scored 50% in class X or XII			
Eyesight	No Colour Blindness , 6/6 vision in better eye and maximum permissible up to 6/9 in the other eye (without visual aids)	No Colour Blindness, Use of corrective lenses permitted but the maximum permissible limits, at entry are 6/12 in each eye or 6/9 in the better eye and 6/18 in the other eye for Distant Unaided Vision. (As given in M.S. Act, Medical Examinations, Annexure B.)		
IMU - CET	Candidates must clear IMU-CET		N.A	

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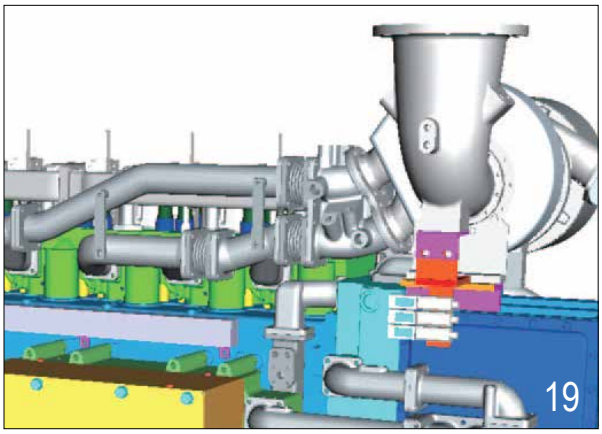

Background of cover picture:
A collage of the pioneer batch of ETO graduation and SIMS Olympiad.

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Samundra Spirit is a quarterly in-house magazine produced by Samundra Institute of Maritime Studies (SIMS) for private circulation.

Our Editorial Team wants to hear from you!

If you wish to submit any feedbacks and/or contributions, feel free to write to the Editor at: samundraspirit@samundra.com

**Please note we reserve the right to publish your letters/articles or an edited version of it in all print & electronic media.*

Editorial Note

If Spring means new fragrance in the air, symphony of the birds, colours of the flowers and foliage hitherto hidden out of sights, this issue of Samundra Spirit is indeed aptly the Spring issue with the rhythm of a new song and fragrance of nostalgia and memory brought in by our contributing seasoned seafarers.

The usual tone of narratives has turned into somewhat somber reflection on issues and situations in their early life as trainees and Junior Officers bringing a fresh perspective and insights. Indeed a wisdom based on long experience and exposure to life in action.

Knowledge is infinite. More you share, more you gain and those who were blessed with an unselfish mentor know the value of that knowledge gain. Mr. M. Syed shares his over four decade's old memory about his struggles as a Junior Engineer and then the culture shock having shifted to a foreign company from an Indian. Similarly story with a twist from Mr. Jims Andrews who in spite of (ill) advice from a Machiavellian crew decided to share knowledge with a senior. Indeed, an interesting peep into the mindsets of the seafarers of couple of decades back.

Safety Vs Productivity by Maneesh Jha speaks with clarity the need for assessing the commercial requirements without compromising on safety. Mitigate the risks than blindly balk under safe inaction. Mr. Viswanathan's take on the Demystifying the Sulphur Cap is as interesting as his choice of various engineering topics in earlier issues.

If you are lucky to be safe, is definitely a matter of deep concern and immediate action on board a ship! Capt. Vincent Fernandes raises the pertinent question of how safe is the gangway as this is one critical equipment which cannot accept neglect in regular maintenance and attention to details. Capt. Pankaj Bhatnagar's persistent pondering on things going wrong during a well versed Ship to ship operation, assisted in identifying the problem and its solution. These are real life lessons invaluable for a new comer to the industry. Capt. Vikram Kakar's honest narration of his almost fatal experience as a cadet will sure give you goosebumps!

The story of Cadet Pranit Bakshi will definitely win your heart with his struggle to meet the challenging fitness criteria of selection to SIMS - his dream institute and the road to merchant navy. Hats off and three cheers for this unstoppable and persistent would be seafarer!

As a leading maritime institute of India, SIMS plays a responsible role and convening the first inter collegiate Olympiad in February '18 was a significant step. Congratulations to the enthusiastic faculty and staff and the cadets, of course. We are happy to carry a report from a participating contestant.

The graduation of the pioneer batch of the Electro-Technical Officer and the 22nd GME batch are indeed our proud moments. Hearty Congratulations to all the graduates!

Till we come with our next issue in summer,

Remain safe and be happy always,

Sikha Singh

Message from Mr. S.M Iyer

This splendid edifice called the Samundra Institute of Maritime studies (SIMS) has long established itself in the shipping industry as a world class maritime training institute. Although originally envisaged as a part of backward integration of Executive ship management, to meet the requirements of good quality officers to serve onboard ships, it has far exceeded its target and encompassed a broad requirement of the shipping industry at large. This venture was not for any commercial gains but to produce the best seafarers from India to the world maritime industry, by operating the ships safely and most efficiently.

The above objective is visible in each and every creation at SIMS. For example, the Ship in campus (SIC), with all the running machinery, stands tall & provides hands on training to the marine cadets of this training center. The basic concepts of good watch keeping, which is the core function of a seafarer, is inculcated in this SIC. The electronics and automation labs, conceptualized and developed by faculty members, provide a great learning platform for engineering cadets to understand the basic concept of onboard equipment.

Apart from the impressive infrastructure, SIMS has introduced innovative ways of imparting knowledge to the budding merchant navy officers who join this academy. The in-house developed, blended learning software leverages the multimedia to bridge the gap between a traditional theoretical classroom session and actual application onboard. The state of art workshop, Free fall Life Boat, Integrated Gas tanker Simulator, Bridge and Engine simulators are all designed with a specific objective to enhance the learning experience of the candidates to make them more proficient in ship operation. The R & D department adds value to the education and provides an opportunity to the hugely dedicated faculty and students to brain storm and find solutions to the dynamic challenges faced by the industry. The research on Ballast water treatment to comply with upcoming regulations is a prime illustration of efforts by our R&D team.

It is indeed a matter of great pride and satisfaction that the gentlemen cadets passing out from SIMS are doing a yeoman service on board the vessels they have joined in. However, simultaneously I must remind the boys that there is no end to learning. Every day on board the ship is a new learning experience and they must keep enhancing their knowledge. The shipping industry is going through one of the toughest time and all stakeholders are looking for only the most efficient and responsible seafarers.

I can add, through a rigorous processes of performance calibration the best talent will be identified and professional advancements shall be offered to the 'deserving'.

Finally, for a successful career, the attitude matters more than skills. Breach of discipline or violation of drug and alcohol policy can only ruin the career.

Nevertheless, there's always rewards for the deserving. In fact, tough and challenging time is the ideal time for the tougher and the fitter ones to blossom & achieve their aspirations. I wish them all the very best as they baby step into this very adventurous career at Sea.

Mr. S.M. Iyer,
Resident Director,
ESM India

Demystifying Sulphur Cap in Bunker fuel

In emission control areas (ECA), the Sulphur content in bunker fuel used has been limited to 0.1%. IMO's Marine Environment Protection Committee (MEPC 70), in October 2016, had decided that the 0.50% limit shall apply from 1 January 2020 in rest of the areas of the world. Ship owners and operators have to prepare their fleet of existing ships to tackle this new requirement. It will be worthwhile to look into the options available for existing ships.

Options available for existing ships:

I. Using Bunker fuel containing less than 0.5% Sulphur, as below:

a) Heavy fuel containing less than 0.5% Sulphur
b) Distillate fuel
c) LNG

II. Using Bunker fuel containing up to 3.5% Sulphur with Exhaust Gas cleaning systems retrofitted.

Option Ia. Heavy fuel containing less than 0.5% Sulphur

The advantage of this option is having no necessity for modification and retrofitting of equipment. Existing fuel tanks, pipelines, purification and handling systems can be used as they are. Cylinder oil for Main engine and Crankcase oil for auxiliary engine may have to be changed to suit the lower sulphur % in fuel.

However, there are two drawbacks, one the availability of low sulphur fuel oil in all regions of the world; presently in some regions of the world, low sulphur fuel is not in the product mix of the oil refineries. Secondly, if available the cost factor of such fuel oil will increase the operating cost of the vessel.

Option Ib. Distillate fuel

Ships' engines have been using MDO and LDO for a long time. However, Main propulsion engines were changed over to MDO only for a short time during arrival/ departure port. The fuel systems, (fuel injection pumps, injectors, etc.) may not be suitable for running the engines for an extended time on distillates. If and when the engine manufacturer is ready for advisory/ recommendation, one can expect some addition/ modification to fuel systems, thereby incurring cost. Of course, the main engine cylinder oil/ Aux. Engine crankcase oil will have to be suitably changed.

For the above two options, it will be necessary to clean the fuel tanks and pipeline systems and structural changes may not be required.

Option Ic. LNG

Usage of LNG as a fuel is still at its nascent stage. Not many ports in the world have facilities for providing LNG bunker fuel. In any case, for existing ships it may be possible to use LNG as fuel only after an exhaustive modification to ships' structure to store and handle LNG. Existing fuel tanks will become redundant.

Option II

Using Bunker fuel containing upto 3.5% Sulphur with Exhaust Gas cleaning systems retrofitted.

This requires extensive retrofitting of Exhaust gas cleaning systems not only for Main engine, but also for Auxiliary engines and auxiliary boilers. These are very bulky as large volume of exhaust gas has to be dealt with. In addition, the wash water has to be neutralized with chemicals and residue has to be disposed off as per regulation. [Refer to Resolution MEPC.259(68) (adopted on 15 May 2015) - 2015 Guidelines for Exhaust Gas Cleaning Systems]

S.Viswanathan
Advisor
SIMS, Lonavala

This might not be the best option for existing ships as capital cost for retrofitting and running cost for additional power and consumables (neutralizing chemicals) will have to be incurred. In addition, space requirement for the exhaust gas cleaning system may be limited in the existing ships.

Conclusion

There is sufficient time available for shipowners/ operators to consider all options and take an informed call on the system to employ. Whatever option is exercised, it is clear that additional investment and running cost will be involved. Ship's personnel will have to be trained in operating the new fuel handling system. Lastly, the ships will be required to obtain certification for exhaust gas cleaning system fitted on board. ■

Functional Alarm Saved My Life

After completing my three months of Pre sea training in the year 1992, I was all enthusiastic and eager to finally join the ship. The day came and I was allocated a sixteen year old VLCC. Age of the vessel was no concern as the spirit to join the vessel was high.

I joined the vessel at Teluk Semangka, Indonesia by a wooden motor boat as the vessel was at anchor. On approaching close to the vessel, it looked like a huge floating island and felt proud doing my cadetship on such a large vessel. On boarding the vessel the age of ship was evident at the corroded deck and leaking pipelines. This was an era of pre ISM and Security code, so there was no one to welcome us at the boarding arrangement. Seeing a group of joiners coming onboard, one of the ratings appeared from under the pipeline and directed us to go inside the accommodation. On entering the accommodation it looked empty and desolate as I later realized that almost 70 to 80 % of crew had gone ashore as this was the home port for this vessel.

The vessel was on fixed run from Indonesia to Persian Gulf. It used to load crude oil from one of the ports in Persian Gulf and return to do a lightering operation with a ULCC stationed in Teluk Semangka. The complete voyage would take as one month. The vessel was a single hull tanker and a clean ballast ship, which means that we had to clean some of our designated cargo tanks during the ballast passage and then take ballast in it for maintaining stability.

Since we had no internet and latest movies or magazines onboard, playing games and socializing in the smoke room or mess room was the only time killer on this vessel. During one of these socializing sessions in the mess room in the late evening, I had the urge to drink a coke. I requested the chief cook who was also present to issue me one. He handed over the galleys keys to me so that I could go to the vegetable room and collect one and bring some for the whole group too. Since this was a VLCC, the galley was located a deck below the mess room. I was dressed up in shorts and a thin T-shirt when I went down to take the can of coke. I opened the cold storage room door and left it hanging without securing it thinking that it would take me a minute to fetch the coke from the vegetable room. Neither did I put the lights on and nor did I know the layout of the light switches of the cold storage room. On entering the vegetable room, due to rolling the main door of the cold storage room got shut and there was a complete blackout for me. To further add to my panic the opening device of the main door was also damaged, because of which I could not open from inside. Now I was trapped with barely any knowledge of what to do to escape the death trap! Indeed it was a near death experience. I knew if they forgot me and no one came to my rescue, I would surely collapse due to hypothermia. This activated my survival instinct and I started hitting the walls, hoping to at least to find the light switch. But to my luck my hand struck the alarm and I activated it. Hearing the alarm sounded, the Chief cook came running down and rescued me. I thanked GOD for saving me and making the alarm work at that time in such an old ship.

Capt. Vikram Kakar
Nautical Faculty
SIMS, Mumbai

Frankly speaking, at that time and age I was not even aware that such an alarm existed in the reefer room. The only alarm I had been trained for was the General and Fire Alarm. It was indeed the pre ISM code era and incidents like this neither got reported nor investigated. Defects like the damaged reefer room main door didn't get repaired or placed in the defect list during my tenure onboard. I was simply lucky that the old alarm functioned and I lived to tell and write this incident after decades.

Incidents like these help us to respect the ISM code which makes sure that all safety equipment and alarms are tested onboard on a routine basis. Also the Vetting and PSC inspections which make sure that all such equipment's are operational and Incidents and Near misses are reported promptly to avoid future reoccurrence and learn from them. ■

Ship To Ship Transfer Gone Wrong

Capt. Pankaj Bhatnagar
Nautical Faculty
SIMS, Mumbai

Ship to ship transfer is one important operation. Most of the navigators, we are well aware of the Ship to Ship (STS) cargo transfer procedures. Most of us must have done the STS several times. Most of the procedures are commonly known and well understood by us. But I would like to describe one of the incidents I had experienced about 7-8 years back which was neither smooth nor easy.

I was on a VLCC and just completed part loading at one of the ports in Persian Gulf. To complete the loading, we had to carry out STS with another large tanker. We did all the preparations on our vessel. We anchored during the night and another vessel also arrived the location almost same time. We talked to the loading master on VHF and exchanged information. We agreed to the plan. We had to commence the movement next daybreak. The weather and visibility were good to do such type of operation.

We commenced picking up anchor as planned and started moving. Apart from other preparations, I wished to confirm if the fenders were positioned properly. Fenders must be positioned according to manifold positions in relation to extreme length of parallel body of another vessel. The loading master confirmed all preparations as per checklists, which we complete before STS. I was the constant heading vessel and was following the instructions of loading master who was on another ship. Slowly both the vessels started coming closer. Operation was progressing flawlessly. At this point the stern of other vessel came close to our vessel and suddenly we saw that the life boat of another vessel touched our vessel's shipside close forward of accommodation in the area of ballast tanks. From our bridge wing I saw minor damage to the other ship's life boat though no damage to our vessel at least as seen from our bridge.

Immediately, our crew inspected area and they informed that they cannot see any damage. I informed my company superintendent and owners. Since there was no damage to our vessel, we continued STS operation. During the day, we called the local P&I, Class surveyor for the inspection to check whether there was any other damage. They boarded our vessel during the day. Thorough inspection was carried out of our vessel where the boat had touched our vessel's shipside. Inspection of ballast tank from inside was done. Luckily, there was no damage except very minor paint scratch on shipside.

As the custom is, both vessels issued letters blaming each other for the incident. The loading master wanted to have our course recorder recording as he suspected that we made mistake in maintaining our ship's heading. Course recorder did not show any deviation. We preserved all the records for future reference. The class and P&I inspectors left the vessel late in the evening.

Later, I was standing on my ship's bridge wing and trying to recollect the incident. I had carried out so many STS operations on various ships, big and small, on constant heading ship /or other ship, with or without loading master but never had a situation when the shipsides came close and touched. While thoughtfully looking at the fenders, I realized that the after most fender, which is supposed to be on the extreme length of the parallel body length, was little forward!

During the darkness, I could not assess the exact situation. As soon as the twilight came, I went on deck and checked the exact position of after most fender between the shipsides. It was much forward of the extreme end of parallel body length. When the ships came closer, the fender acted as pivot point and allowed the stern to come close to our ship, resulting incident.

Once we analysed the incident and had a better appreciation of facts, I informed the company again about the wrong position of fenders. I also informed that while casting off, as the bows of vessels are separated first, using after most fender as pivot point, the body of another ship will certainly come in contact again. I took photo and sent to the company. We had just learnt from a mistake.

The situation was well understood by the team in office and directed the loading master to adjust the position of the fender or provide a tug for casting off vessels. As the weather was good, we could shift the fenders easily.

As soon as the mistake was realized that the fenders were positioned incorrectly by other vessel and loading master was responsible for not checking positions, we issued another letter to other vessel holding other vessel fully responsible of the incident.

The casting off operation was done without any complications.

To avoid similar incidents, the procedures for STS were amended to include "All vessels to recheck positions of fenders on another ship before the STS starts. The plan of positions of the fenders to be exchanged and rechecked by both the vessels involved in the STS operations."

Lessons learnt: Apart from size of fenders, positioning of fenders in relation to extreme ends of the parallel body of vessel is also very important.

A joint plan by both vessels would help both ships to ascertain the correct positioning.

Fenders may be secured on either oil tanker. However, landing on an unprotected hull section is less likely if the fenders are rigged on the manoeuvring ship and it is therefore preferable that fenders be secured to that ship. ■

Wisdom on Sharing knowledge

Mr. Jims Andrews
Vice Principal
SIMS, Lonavala

Knowledge when shared, only multiplies. I had the opportunity to reflect on this, on board my first ship as a trainee marine engineer.

The ship in question was a very old oil tanker, almost on its way to the scrapyard. As a novice, onboard life was tough, but I slowly got acclimatized, as the senior engineers went the extra mile in helping me find my way through the ageing oil tanker. I still fondly remember how they were instrumental in making me feel at home during those vulnerable times.

As the days went by I got familiarized with the shipboard systems and grew in confidence. The tasks which seemed Herculean in the beginning suddenly appeared to be routine and elementary. In the fourth month of my stay on board there was a crew change and a new fourth engineer signed on with previous experience in the same position with at least 4 ships, but none in an oil tanker. Consequently, he was low on confidence to start with and solicited my assistance in getting familiarized with the specific requirements of an oil tanker. I was only too happy to oblige and it was a matter of pride for me to share whatever little knowledge I had gained in that ship with someone who was in fact senior to me in years and in rank.

This went on for a couple of days but I was suddenly confronted by a 'wise' old oiler who had a very serious piece of wisdom to pass on to me. This gentleman had been of great help to me during my initial days in that ship and was highly amiable with vast knowledge in his area of work. In a very patronizing tone he said, "Sir, don't teach the new fourth engineer everything. You will get into trouble eventually."

This was news to me and I failed to understand in what way I could get into trouble. His logic, which he claimed was founded from his solid experience of 40 years as a seafarer, was that the person will turn around and show his true colours once everything he needed was milked out of me. The way forward according to him was to hold back critical information and make the new joiner dependent on me for the rest of his stay in this ship. This logic escaped me and the oiler went on to illustrate his point with a colourful tale. The story goes like this.

The lion cub was the nephew of the cat (Don't we all know that biologically they belong to the same family?). Aunt cat took pride in teaching the cub all the tricks he would need to know to survive in the wild. Soon the cub grew up into a handsome young adult who could hunt like any other lion and terrify the neighbourhood.

It was not long before he decided to hone his hunting skills on the aunt herself. The wily old cat had enough of her feline instincts left to sense the nephew's intentions and ran for her life. The lion chased his aunt and was gaining on her when the cat suddenly went up the branches of a nearby tree. The lion paused below, looked up foolishly, and growled, "Aunt, how come you did not teach me this trick?"

The cat looked down triumphantly and said, "This was the last trick I had in my bag. I would have been dead by now If I had taught you this as well!"

With such animated illustration, the oiler made his point, albeit being a very negative one. As I delved deep into the message of the tale and my situation, few thoughts surfaced.

I realized the motive for holding back information was founded in lack of belief in one's own strength and the consequent sense of inferiority. Most of the mariners would have come across similar cases on board where easy parallels could be drawn. If we are confident in our competence and abilities, there is no space for cowardice. On the other hand, imparting knowledge is a priceless tool in nurturing belongingness and mutual understanding.

Sharing of best practices also paves the way to building up knowledge capital, informed decision making and overall wellbeing of any organization. All these assume a greater importance in the special circumstances of a merchant ship where each one's safety is dependent on the competence of every other member of the ship's. We also tend to remember fondly for the rest of their lives those who had been their mentors and who had helped them to weather the storm.

As seafarers, let us pledge to contribute in grooming the new generation of aspiring seafarers. Let us go that extra mile, which someone would have done for us in our formative years. Let the sharing of knowledge be without any inhibitions and unfounded apprehensions. Let us contribute in our own small way to the building a pool of competent seafarers and to the prosperity of the seafaring fraternity as a whole. ■

How Safe is the Gangway?

Capt. Vincent Fernandez
Nautical Faculty
SIMS, Mumbai

This was the first question asked to me when I boarded my first ship as a cadet in the port of Chennai. Eighteen years later, while in command I was asked the same question by a port state inspector, only this time it was more about the SWL (safe working load) calculation of the gangway. However, the real question that we face today and should be more concern is actually, how safe is the gangway?

In my career, I have experienced damage to the gangway on two occasions which I will narrate below. We were fortunate that there was no injury or fatality involved, however several maritime industry cases I have come across, have not had the same good fortune.

The first time was back in the year 2002 on a product tanker in the port of Goa, India. We were all set to sail. Tugs fast, Pilot on board and for'd and aft stations called. The chief cook (who was also from Goa) had not yet returned from shore leave and we planned to pick him up from our next port Mumbai. We cast off all our lines and the tugs began to pull. Suddenly we see the Chief Cook come running on the Jetty and screaming as loud as he could to take him on board. The Master saw him from the bridge-wing and requested the pilot to push the vessel back alongside so we could pick him up. The aft station crew in their endeavour to quickly take him on board began lowering the gangway. Unfortunately they lowered it too much. The tugs kept pushing and when the crew realised that they had lowered it too much, they began heaving it up but it was too late. The gangway came between the jetty fender and the ship side and was completely twisted and crushed.

The second time was in 2010 on a VLCC anchored in Fujairah. The Chief mate returned from shore leave and one minute after he boarded the gangway wire parted and the gangway fell into the water. The gangway was vertical and hanging on its hinge pins. We used messenger lines and the mooring winch to heave it back up. We later discovered that while the C/O was boarding the gangway, the service launch had touched the gangway bottom platform and jerked it a bit. It caused the wire to jump out of the sheave vertically above the gangway. Later when the A/B was heaving up the gangway after the C/O boarded the wire chaffed and parted.

Two very narrow escapes and here is my advice to avoid such incidents for our future seafarers:

Frequent checks on the gangway systems and equipment must be undertaken to ensure safe working of the gangway.

Crew operating the gangway must be adequately trained and never be made to work under pressure. A common example is when the pilot boarding arrangement has changed from port to starboard and the crew are rushing to rig the combination ladder. These are prime conditions for an accident. The gangway rigging and heaving must always be done calmly, taking full safety precautions and following checklists for working overside. Teach the crew how to estimate the correct height above water level as this is the most common cause for last minute changes to the Pilot boarding arrangement, especially when it's a combination ladder involved. Train the crew to be more vigilant and understand the dangers associated when personnel are boarding directly from a boat onto the gangway and constantly monitor that all sheaves are rotating.

Nearly all systems and equipment on a modern vessel have a back-up system in place. Failure of the primary allows the back-up to take over. For the gangway however we must remember that there is no back-up. The gangway is usually suspended by a single wire, the parting of which will cause it to fall into the water resulting in injury or even loss of life. Gangway wires must be replaced at the intervals specified in the vessels PMS. Regular oiling and frequent checking of the gangway wire will help in ensuring that it is at its best.

Gangway sheaves must be greased and

checked for rotation. Frozen sheaves are another cause for chaffing of the wire.

The gangway motors and associated piping equipment must also be regularly serviced and checked.

The gangway itself must be kept in a good condition, free from rust and oil. The stencilling on the gangway must be done correctly to reflect the max SWL of the gangway. Please check if the SWL mentioned is in line with the certificate provided during the load test in the ship yard. The Port state inspector asked me this question as he doubted the SWL mentioned on the gangway. Fortunately for me it was correct.

Avoid heaving the gangway with persons on it. A slip of the wire from the sheave would end in the same result as it did for me in Fujairah.

The Gangway or Accommodation ladder is the first step a visitor takes to get on board a ship. At times the upkeep of the Gangway may be perceived as the measure of overall safety culture on board and has the potential to create a wrong im-pression.

Finally, always remember that prevention is always better than the cure. Early and preventive maintenance on the gangway can go a long way in preventing unwanted accidents.

Lost to gain entry to SIMS

Uniforms fascinated me as I grew up watching my parents in their uniform in the Indian defence forces.

So did Merchant Navy, with an added advantage of the biggest attraction to travel the world, see other cultures and meet people from different parts of the world. In my mind, merchant navy probably is one of the best professions to opt for, since even the Indian Government is also working to improve this sector.

Present Indian Government and our Prime Minister have launched many schemes and projects to better the Indian Maritime Sector. New Major Ports are being set up in Andhra Pradesh and West Bengal, "Sagarmala Project" an initiative to modernise the existing ports with modern facilities, etc.

Accordingly, right after graduating as a BE Mechanical Engineer in May 2017, I started to search for institutes who conduct Graduate Mechanical Engineer course (GME) and found Samundra Institute of Maritime Studies, with good reviews and feedbacks saying it is one of the best institutes in India.

So I filled my form and appeared for the exam and interview. It was reassuring that the institute built by Executive Ship Management, situated at the serene foothills of Lonavala in Maharashtra, provided a job guarantee The architectural and natural green landscapes within the 55 acres campus impresses and lures the visitors to want to be part of the institute. The campus is aesthetically and tastefully maintained and built along with the most modern apt training facilities. Like anyone else, I was also very impressed and decided that anyhow I want to be part of the institute and start my next phase of professional life from here.

I qualified in my exam and interviews and was informed that I had made it to the merit list. I was overjoyed and excited. But as per the fitness level requirement of the Institute, I embarked on a strict diet and weight loss exercise program for four to five months. I had had improved a lot on my fitness but had to work more to fit in the criteria. My goal was very close to me but till far to reach!

I continued with a strict diet of fruits, boiled vegetables and increased my exercise too. Even though I put in efforts, it was not an easy task. It's like you have an option of having normal food but still you can't eat. But I had decided that satisfaction of having good food is nowhere near to satisfaction of achieving my target. During this whole process, the admission team of the institute were also very supportive, kept me motivated and trusted me.

I lost almost 25 kgs in a period of six months and finally I could reach my target too! I secured my admission in SIMS. During my weight loss journey I have learnt a lot, things like being positive and keeping faith in the process, not to give up and keep going to get the results in your favour, not to adjust with problems and accept defeat, rather tackle them, own your mistakes and win over all the problems that come. I feel much stronger and this will help me when I sail onboard ship.

Since the course has started, I have started to enjoy the routine over here, we follow a proper schedule and work with discipline. There are so many options of playing different sports. My parents are very happy that I am part of this kind of training as they themselves had been, as part of Indian Defence forces and NCC training.

Even the teachers and are very supportive and continuously guide us to prepare for the ship service. They focus on brushing up our practical knowledge of subjects in our classes. I am confident by the end of the course in a year's time I will be more matured and calm, and be ready to face my new life as a seafarer. I know, I could not have chosen a better place to realise my dream career. .

Really feel great to be part of Sea of Knowledge: - **Samundra**

Cdt. Pranit Bakshi
GME24
SIMS, Lonavala

Pioneer Batch of Electro-Technical Officer (ETO) & 22nd Batch of Graduate Marine Engineers (GME) Celebrate Graduation

Chief Guest spurs the cadets for their forthcoming vital roles onboard

The first batch of the industry pioneer course on Electro-Technical Officers consisting of ten cadets as well as the 22nd batch of graduate marine engineers with thirty eight cadets, commemorated their graduation on the 27th of February 2018 at SIMS Lonavala.

Chief Guest Mr. SM Iyer, Resident Director ESM India, lauded the cadets on their success and encouraged them to imbibe the values learnt during their time at SIMS for onboard responsibilities. He reiterated the importance of Electro-technical officers during critical shipboard operations and emergencies.

The event witnessed an impressive guard of honour by the cadets at the parade grounds of SIMS. The proud parents of the graduating cadets along with the faculty staff also shared the joyous occasion by gracing the event with their presence

The graduated ETO cadets will now proceed on four months of onboard training whilst the GME cadets will pursue six months of training on ships as Junior Engineers. Subsequently both sets of cadets take Certificate of Competency (COC) Examination so as to be eligible to serve as an ETO officer and Fourth engineer respectively.

Following Prizes were given to GME 22 batch cadets.

Best Cadet	- Cdt. Nitesh H
Best in Academics	- Cdt. Sai Prithvi
2nd Best In Academics	- Cdt. Rahul Patekar
Best Hands On Training	- Cdt. Clyde Jofan
Best Sportsman	- Cdt. Prashant Rathi
Best Orator	- Cdt. Ankit Choudhary
Best Music	- Cdt. Royal
Best Cadet Captain	- Cdt. Neeraj Saini
Best In Hsse	- Cdt. Harsharaj
Best In Marine IC Engine	- Cdt. Abhinav Kapoor
Best In Marine Auxiliary	- Cdt. Sai Prithvi
Best in Automation & Control	- Cdt. Aniruddh Rajendran
Most Popular Cadet	- Cdt. Rajat Sood

Following Prizes were given to ETO 01 batch cadets.

Best Cadet	- Pushkar Nath Tomar
Best in Academics	- Arjun Unnikrishnan
Best Hands On Training	- Arpan Das

Chief Guest carrying out cadet parade inspection

Chief Guest meets passing out cadet's parents

Chief Guest and Faculty with prize winners of ETO 01st batch

Passing out cadets conferring oath

Chief Guest and faculty with ETO 01 batch passing out cadets

Chief Guest and faculty with GME 22 batch passing out cadets

Chief Guest and Faculty with prize winners of GME 22nd batch

SIMS convenes First inter college Olympiad

With a vision to build a strong maritime community, SIMS convened its first pentathlon championship – SIMS Olympiad for pre-sea cadets at Lonavala campus, on 19th of February'18. This event is the first of many such initiatives and witnessed high energy and enthusiasm amongst its participant teams from other leading maritime institutes.

Forging mutual regard and respect between the two teams onboard a ship – the deck and engineering team, the championship aimed to develop a strong fellowship between the two.

The Pentathlon championship tested the teams in various skills that are required onboard for running a ship efficiently and safely. These included navigation skills, workshop skills, swimming skills, stage skills and professional skills. Each team was timed in performing these tasks and ranked accordingly.

Concluding the event, Chief Guest Mr. SM Iyer - Resident Director, ESM India implored the cadets to keep up the spirit of team work, pride and safety practices in their future careers. Participant Cadet from Great Eastern Institute of Maritime studies thanked SIMS for the opportunity to be in the renown campus as he had missed his opportunity to join the institute earlier.

We congratulate all the participating teams for their excellent sportsmanship during the competitions. The organising team at SIMS Lonavala ensured a smooth and efficient running of the daylong event, which was much appreciated by all. Below are the winning teams in the various categories –

Professional Skills:
First Position - Samundra Institute of Maritime Studies
Second Position - Tolani Maritime Institute

Stage Skills:
First Position - Samundra Institute of Maritime Studies
Second Position - Tolani Maritime Institute

Swimming Skills:
First Position - Great Eastern Institute of Maritime
Second Position - Anglo Eastern Maritime Academy

Workshop Skills:
First Position - Anglo Eastern Maritime Academy
Second Position - Tolani Maritime Institute

Navigation Skills:
First Position - Tolani Maritime Institute
Second Position - Samundra Institute of Maritime Studies.

Participating Maritime Institutes:

- Training Ship Chanakya
- Hindustan Institute of Maritime Training
- Maritime Training Institute (Shipping Corporation of India)
- Tolani maritime institute
- Anglo Eastern Maritime Academy
- Great Eastern Institute of Maritime Studies
- Samundra Institute of Maritime Studies


Cadet in action with a heaving line

Setting the stage for Workshop skills

Challenging Seamanship skills


Team from Tolani Maritime Institute


Team from Great Eastern Institute of Maritime Studies


Hosting team

Chief Guest & SIMS Olympiad participants

SIMS Olympiad inaugural ceremony

A Personal account of the Olympiad from a participant

By Cdt. Avnash Swarup Srivastava (B. Tech 05)

They say you either win or you learn. The Olympiad convened by SIMS on its first year of launch, proved to be a great learning experience for all of us. It focused on the importance of team work, especially working together as a team from engine and deck department.

Performing navigation and workshop tasks in class is absolutely different experience than competing for the trophies with the best cadets from the top marine colleges. We got a taste of how different it is to work under stress in an emergency as well as presenting in front of a learned audience from across other maritime institutes. Each team consisted of four members and most of the teams prudently selected a team of two navigation and two engineering cadets.

The competition consisted of five different events that were so planned so as to ensure active involvement of each player. They were -

1. Navigational skills
2. Workshop skills
3. Technical presentation
4. Stage skills
5. Swimming skills

Preparations for Navigation and Workshop skills

For these two events the tasks were revealed on the spot. We had to rely on our knowledge and experience acquired from our courses to complete the task. As a marine engineering student, it was indeed a challenging topic but as a team with the navigation cadets, practising these navigational

Continued on Page 16

Safety vs Productivity

Mr. Maneesh Jha
Principal
SIMS, Mumbai

Since we embarked on our journey to become professional seafarers, "Safety First" is probably one of the most oft-repeated mantras for us. Due to growing awareness in the industry, risk appetite of seafarers has decreased over the years, along with free flowing dissemination of safety information and enhanced training regime across the industry.

At the same time, the purpose of any commercial business, including shipping is increased productivity and profitability. Trading off productivity for safety indeed is absolutely unacceptable. However, plethora of available knowledge on due diligence on risk assessment and management provides necessary mitigating factors in order to make the shipping commercially viable business.

A deep understanding of risk is necessary to make a judgement on safe and unsafe act, without which many a times, we may arrive at a wrong conclusion, declare an environment unsafe and create an unnecessarily unproductive situation. Let me elucidate this with an incident from my personal experience as a seafarer.

Approximately two decades ago, I joined a 45000 dwt bulk carrier as a Chief Engineer. The vessel left the discharge port within couple of hours of my joining. We were expected to reach the loading port after seven days of sea passage. After the customary round, I found the machinery space reasonably well maintained and no major concerns related to the engine room or other related matters of the department

On the fourth day of the voyage, the steam line on the Main Engine Fuel Oil Heating System developed a minor leakage. The matter was discussed with the engine team in the morning and it was decided to fix the leakage in the load port after three days.

After a casual chat with the Master that evening, I went to the engine room for a routine round. Master had briefed me about the plan at the load port. Vessel was supposed to berth on arrival.

The moment I stepped into the engine control room, I sensed palpable stress in the environment. The Second Engineer informed me that the minor steam leakage on the Main Engine Fuel Oil Heating System had increased.

"The purifier room is full of steam and we should fix the leakage at the earliest" he insisted.

"Where is the steam exactly leaking from?" I asked the Second Engineer, who had spent three months on that vessel.

"I do not know that, as it is difficult to pin point." the Second Engineer added.

However, he persisted that the stopping the Main Engine will be necessary to fix the steam leakage.

"How much time will it take to fix the leakage?" was my next question.

"I anticipate six to seven hours at least, as the steam line will require some cooling time, before we can work on it." Replied the Second Engineer.

Though bit confused, I acted on the advice of Second Engineer and called up the Master and apprised him of the situation. Master appeared worried. He said that with a delay of seven hours, vessel was unlikely to make it to the berth on arrival and would have to wait at the anchorage for five to six days, with commercial implications. Nevertheless, he was supportive of the idea of stopping the engine to fix the problem, if that was absolutely unavoidable. Possibility of running the engine on diesel oil and shutting off the steam line to the fuel oil heating system was ruled out, as the diesel oil quantity was not sufficient and the engine was not designed for prolonged operation on diesel oil.

"What are the other options to safely complete the voyage without stopping the engines?" I probed a bit.

"I do not think we have any other option. We should not compromise on safety and we must stop the engine and fix the steam leakage." Second Engineer said this with conviction. With the safety mantra uppermost in our minds, I could also sense other members of the engine team supporting his decision.

"Why don't we go down and investigate little more?" I suggested my team members.

The Second Engineer accompanied me to the purifier room. I could see the steam leaking profusely through a section pipe.

"Is the steam line with the leakage common to both the fuel oil heaters?" I asked the second engineer.

After tracing the line for couple of minutes, the Second Engineer confirmed that the leakage was in the steam line for Main Engine Fuel Oil Heater number 1. This heater was in use.

"So why cannot we isolate this heater and use Main Engineer fuel oil heater number 2?" the solution appeared simple to me.

"No sir. You can see the note written on fuel oil heater No 2 -'do not use'." Said the Second Engineer

I could see this marking on the heater written in red paint.

"What is wrong with this heater?" I wanted to know the history.

"I do not know. It was like this when I joined." was the reply of the second engineer.

"The heater is not so difficult to open. Can we check this heater number 2? I mean we can take the tube stack out, clean and later pressure test. This exercise will not take long time. In the interim, we can take measures to mitigate the risk from leaking pipe of Heater 1 for couple of hours. We can cover the electrical panels in the vicinity. We can also use some

shields to divert the leaking steam to safer area. This will also provide us some shelter while working on heater 2." I chalked out a rough plan.

The engine team agreed to work as per this plan.

The heater No 2 was checked and assessed. Surprisingly no issues were found in this heater.

So we decided to put No 2 Heater in use. Heater No 1 was isolated. We monitored all the parameters including possible oil traces in the boiler water observation tank and hot well. The heater number 2 started functioning well. The steam leakage from heater 1 completely stopped. We could leave the engine room at around midnight after taking last round and putting the Engine Room in UMS mode. All of us could sleep well.

Next morning we could locate the history book for Main Engine fuel oil heater -2. The heater was reported to a have tube leakage around 7 months ago, which was plugged by the ship's staff. The heater was cleaned and pressure tested and kept as stand by. Probably the team that time forgot to remove the noting on the heater body "do not use".

The vessel continued with the voyage without any interruption and could berth at loading port on arrival as per plan.

I have come across many such situations during my sailing career where productivity tends to take a back seat due to safety concerns. The solution is not to trade off productivity by taking shelter of a perceived safety threat, till the time the situation is well analysed in details and all the possibilities to mitigate the risks or any alternative options have been explored. Little probing, analysing and evaluating the quality of information available can drastically change our understanding of the situation.

Cargo transportation is what a ship is designed for. Ensuring it is done safely is our main objective. It is true that safety is paramount, but anytime we trade off productivity, we should do that with a sense of accountability for business. There is a famous saying "A ship is safest in the harbour, but that is not what it is designed for." ■


Stage Skills


Swim Skills


Workshop Skills

Technical Presentation

Continued from Page 14

and workshop skills again proved to be of utmost help, not only for the tasks we predicted but more importantly for the ones we didn't. These tasks included navigation simulator, filing, gasket cutting, etc.

Preparations for Technical Presentation, stage skills and swim skills

For events such as technical presentation, stage skills and swimming skills, even though the main themes were circulated to the candidates beforehand, more specific preparations were required to have the refined output.

Technical Presentation

Here a 10 minutes PowerPoint presentation was to be prepared and then explained by the cadets on one of the three mentioned topics. Our topic was 'Modern Trends in Shipboard Fuels'. We first tried to make the audience and the judges aware of the challenges that HFO currently faces and then gave them a brief idea of the alternatives we have such as LNG, low sulphur HFO, bio-diesel, etc. However, our main focus was on LNG as it seems to be the most viable alternative. The presentation was followed by some confounding questions by the judges which we tried to answer to the best of our abilities.

Stage skills

For stage skills we had to prepare a skit of less than 15 minutes based on 'SAFETY'. The theme of our skit was 'Behaviour Based Safety'. It is a universal common sense in shipping industry to religiously follow each point in the checklist. The act performed by SIMS team in inter-college competition tells about how important behaviour based safety is and how catastrophic the extent of damage could be if it is not followed. We tried to show how the various elements of danger such as fatigue, lack of knowledge, laziness, etc. can lead to fatal accidents and how they can easily be eliminated using the ' Take Five' policy.

Swimming skills

The final event for the day was a 2 x 25 relay in swimming where the first swimmer had to swim with a life jacket on while the other without it.

The fun filled competitive event was fabulous in all respects and enthusiastic participation from other prominent maritime institutes of India added special flavour to this first ever Olympiad of this kind in the country. ■

A voyage of tough learnings

Selfless seniors and mentors at sea

Mr. M. Syed
Ex- Technical Support Manager
ESM, Singapore

After having worked for more than forty seven years in the Maritime field, the much awaited retirement arrived on December 30th, 2016. I looked forward to the easy-going retired lifestyle and I started my retirement by volunteering my services to an organisation that helps the deprived in the society. That being said, I do ensure to spend a lot of time with my family and love every moment with them.

Having given you an insight into what retired life can be, let me now share a few lessons that I learned during my life as a mariner.

I started my seafaring career with Scindia Steam Navigation as a Fifth engineer. Over the next few years, I learnt a lot, in particular, from a Second Engineer who had no qualms about imparting his knowledge to me, unlike many other seniors. I left Scindia after serving as a Second Engineer and joined DDG HANSA, a German concern as a Third Engineer. I realised that to grow in the industry and in ranks, one requires different experiences in various situations and my journey ahead with and after HANSA taught me just that.

Expectations of my superiors, in HANSA, where I was the only Indian, were very high and I had to work extremely hard. As a Third Engineer, I was responsible for the Main Engine, Refrigeration Plants (Domestic as well as Cargo), and the Air Conditioning plants as well as assist the Electrician, whenever help was required. I was at a total loss as far as Aircon and the Refrigeration plants were concerned, since the ships I'd sailed on before (at Scindia) did not have air-conditioning. Also as Junior Engineers we were only taught to collect the data required to fill in the Log book for the refrigeration system and to check if the refrigeration compressor crankcase had sufficient Lube oil. We never had the opportunity to analyse the data obtained as we were not taught to do so. For that matter, we never asked our Seniors about it, out of fear. Not asking questions especially as one believes asking questions may be considered stupid by Seniors is actually dangerous. It was when reflecting on this that I realised another lesson and that is to ask questions, so that one can not only grow but one can consider options available which eventually is beneficial as it furthers your understanding.

In HANSA being in charge of the Main Engine meant that I was not only responsible for the routine jobs but also of its performance. On a weekly basis had to take Indicator and Draw cards and evaluate the performance of the Main Engine. Taking the cards were new to me as in previous company it was the job of the Chief Engineer. Spent a lot of time during the night watches whilst sailing to practice taking cards the correct way as described by the Chief Engineer. In time I became proficient at this job. Similarly, during my years with Scindia's I had never seen the Lathe, nor the Welding transformers nor the Gas cutting tools being used other than for polishing shafts etc. Whereas in HANSA, I remember being yelled at by the Chief for not being confident at operating the lathe machine. I was operating the lathe after donkey's years, machining a sleeve and the inside of an electric motor end cover bearing housing which was quite nerve racking. Arc welding and Gas cutting was carried out by the Junior Engineers on a regular basis too. This made me realise that apart

Promotions Onboard ESM-Managed Fleet During First Quarter


JE AMAN JOSHI
B. Tech 001


JE JEBIN JOSEPH
GME 16


JE SRIKANTH SRIDHAR
GME 17


JE SARTAJ SINGH
GME 18


JE KRIPAL NIRWAN
B. Tech 001


JE ANUJ PRATAP SINGH
B. Tech 001


JE VARUN DEEP THAKUR
GME 15


JE YASWINKUMAR BANDUJI BHAGAT
GME 18


JE AMARDEEP SINGH WALIA
GME 17


JE JATIN MALIK
GME 17


JE SANDEEP GAUR
GME 17


JE CHAITANYA RAMISETTI
GME 18


JE DHARAN RAO GOURAVARAM
GME 18


JE MONU K ABRAHAM
GME 17


JE VIJAY KUMAR
GME 17


JE RAVI KARAKA
GME 18


JO ANIL KUMAR
DNS 13


JO RAJAT CHOUDHARY
DNS 15


JO ALOK KUMAR
DNS 15


JO ROHIT MAHESH DOBHAL
DNS 15


JO MANINDER SINGH
DNS 13


JO NAMAN GUPTA
DNS 13


JO NIKHIL KALIA
DNS 15

from engineering programs it is necessary for me to build professional skills like Arc welding, Gas welding and cutting as I knew I was not capable of performing it. Having these skills would significantly increase one's value.

Thankfully, operation of the Refrigeration and Aircon plants went smoothly and fortunately prior to loading different Refrigerated cargoes, a Refrigeration specialist attended the vessel to check the plant and my asking questions to him certainly paid off. He imparted his wisdom, and I began to analyse the data of the compound pressure gauges of the compressors to compare it with the sea water temperature and the fridge room temperatures. He also gave me a checklist and action to take in the event of problems. This made me realise that as an Engineer, one need not only keep up with the trends of Diesel Engines but also of all other machinery on board a vessel.

From my experience at HANSA, I also learnt, that to progress in one's career, continuous education was needed to have a better understanding of the different engineering disciplines and to be better qualified. Hence, after completing my contract there, I decided to go to England to study and take the First Class Engineer's examination. While studying at South Shields, I realised that there were quite a few courses around that were relevant to further my maritime career. After obtaining my First Class certificate from Newcastle I took up a three month course in Electronics apart from a week long course in welding, gas cutting and soldering. I added that with another two-week course in Winterthur with Sulzer Brothers, where I trained on actual working machinery and equipment. I felt I lacked such practical training during my four years of College in India.

Soon after receiving my Chief Engineer's license I joined as a Second Engineer in a Swiss shipping Company that was operating tankers and product carriers in Indonesia. Once again, I was the only Indian national there amongst Norwegian, Filipino and Indonesian colleagues. I progressed well there and within a few contracts was promoted as Chief Engineer. This is when I realised the skills I had picked up in the training courses at South Shields had helped me in performing better. In my next stint, I learnt that apart from professional skills one also needed to be good in managing people.

I remember I developed a strong rapport with a Norwegian Superintendent who was an experienced Naval Architect. He was quite an inspiration and mentored me to do better in my career. I looked upto him as a role model in my career development and he pushed me in achieving more.

After sailing for a few years as Chief Engineer, I decided to get married. My wife did sail with me for a few years but we soon decided to consider settling into a life ashore. We realised, whilst sailing, one was in a different world altogether and not facing actual daily life realities. Fortunately, I did get a shore opening as a Technical Superintendent with Farsund Ship Management in Hong Kong. I worked ashore in different capacities for thirty-four years till retirement from ESM. My experience in the Maritime field is certainly an advantage, but what I learnt during my years whilst sailing which I consider important are as follows

1. Re-education in skills where one is not capable of performing, is important
2. Asking questions without fear
3. Constant education
4. Managing people by building one's strengths, of superiors one admires.
5. Role model who not only inspires but pushes you too.

I hope the few tips from my maritime experience helps in furthering your career. Wishing all young mariners the very best life has to offer! ■


JE SARATHKRISHNAN RADHAKRISHNAN
GME 16


JE VIVEK RAJARAM PATIL
GME 17


JE ASHUTOSH JHA
GME 17


JE PRASHANT S BHARMRADDI
GME 17


JE RAVI HIRENKUMAR SHAH
B Tech 002


JE ARSHDEEP SINGH
GME 16


JE NIKHIL KUMAR CHANDAN
GME 16


JE PARMINDERPAL SINGH
GME 17


JE RAJANKUMAR P KAMOTHI
GME 15


JE KRISHNA BASU V RAJAN
GME 17


JE NAVDEEP SINGH
GME 18


JE JAIPREET SINGH
GME 17


JE SHESHANK SINGH THAKUR
GME 17


JE FREAGAN ADRIAL MASCARENHAS
GME 18


JO RAJAT KAKKAR
DNS 15


JO ALLAN MATHEW PAUL
DNS 15


JO ISHMEET SIDHU
DNS 15


JO AMARJEET PRAJAPATI
DNS 14


JO VIKAS KIZHAKKE VEEDU
DNS 15


JO AKHIL PRADEEP
DNS 13


JO KARAN ARORA
DNS 15

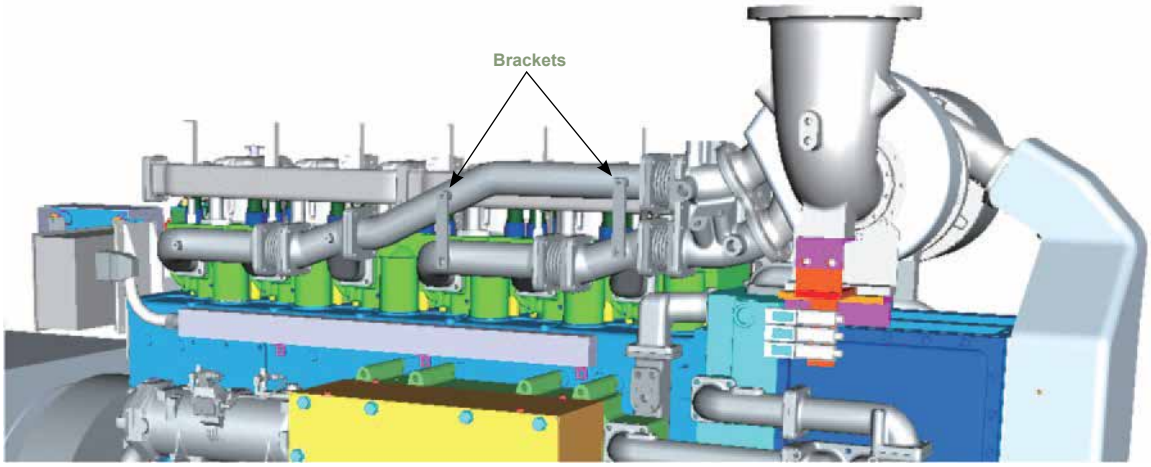

JO TEGBIR SINGH
DNS 15


JO MALKIT SINGH
DNS 15

A case study

Misplaced priority during Auxiliary Engine overhaul

* We invite responses from our learned readers as to the causes and lessons learnt through this case study. Please send your responses to samundraspirit@samundra.com.



Representative photo of an auxiliary engine

Introduction: Auxiliary engines onboard ships are one of the few types of equipment with maximum running time. It is imperative that they are maintained well for redundancy and dependability. Following is the narrative of an incorrect maintenance carried out on auxiliary engine and the consequences ship's staff had to face.

The ship was a crude oil tanker fitted with 3 auxiliary engines coupled to their respective alternators. The auxiliary engine was 8 cylinders, 4 stroke diesel engine running on marine diesel oil. As per the running hours clocked, cylinder head overhaul was due and promptly undertaken by third engineer during ballast voyage. 8 spare cylinder heads had been overhauled and kept ready earlier.

Events leading to the incident: After consulting with all concerned, Chief engineer had given permission for proceeding with the overhaul of Auxiliary engine. Third engineer was in-charge of the task and he was assisted by fourth engineer and fitter. All safety precautions were taken. The engine was isolated; cooling water drained and pipe connections including exhaust piping dismantled.

The cylinder heads and associated fittings were dismantled for all 8 units. After routine cleaning of piston crown, cylinder head landing area, overhauled heads were fitted with new gaskets. All other accessories were fitted on the heads and pipe connections were made. The exhaust manifold pipes were in two pieces for units farther out from turbocharger. The two pieces were inserted into one another with sealing rings. The outer insulation covers for exhaust piping were not fitted at that time for checking gas leakage while the engine was tested. The overhaul was completed, all checks were carried out and engine was tried out satisfactorily.

The auxiliary engine was put on service following the overhaul. After running the engine on load for a few days, exhaust gas leakage was noticed in the joint of longer exhaust piping. Some engines have bellows connecting exhaust pipes, but this engine had sealing ring arrangement. Closer examination revealed that the exhaust pipes were deformed and sealing faces were not in alignment. As the pipes were of cast iron, pipes could not be repaired or straightened on board.

Root cause analysis indicated missing brackets and bolts for fixing the exhaust pipes on to one another and entablature. Third engineer had left them unsecured and thought of fixing them after trials, a case of misplaced priority or lack of professionalism.

Extent of damage:

1. Auxiliary engine could not be used for the next two months as exhaust gas leakage could not be arrested.
2. Spare exhaust pipes were ordered incurring unexpected and additional cost.
3. Unnecessary workload was encountered by ship's staff.
4. Though the ship was fitted with three auxiliary engines, maintenance routines for remaining two alternators were hampered because of the unavailability of the third auxiliary engine. ■

From the details provided and your knowledge about the operation and maintenance of electrical equipment onboard, please provide answers to the following regarding this case study:

1. **What was the cause for deformation of the exhaust piping?**
2. **What was the critical step missed during the overhaul?**
3. **What are the hazards of running a diesel engine with exhaust gas leakage?**

S.Viswanathan, Advisor
SIMS, Lonavala

Responses to previous issue case study

Main Engine Liner Cracks due to Vibration: Issue 40 (Jan 2018)

Thank you readers for the feedbacks and responses on the previous case study. Here's a compilation of the answers received:

Q1. What is the cause of vibrations on engine?

Vibrations in marine engines are a result of periodic or random oscillations caused about an equilibrium point. When these same vibrations occur in machines with bigger size, operating under heavy loads (2-stroke marine propulsion engine) the intensity of vibration levels would magnify because of large mass rotation and combustible gases forces inside the machinery.

In a 2 stroke marine propulsion engine there are basically 3 types of vibrations that act on the engine when it is in operating condition:

1. Longitudinal Vibration

This type of vibration occurs as a result of guide forces resulting from transverse reaction forces on the crossheads. The transverse reaction forces are generated when connecting rod and crankshaft mechanism converts reciprocating motion in to rotary motion. Such vibrations move the engine top athwart ship causing rocking or twisting.

2. Axial Vibration

Axial vibration is a kind of longitudinal shafting vibration which occurs in the crankshaft because of the radial as well as tangential forces.

3. Torsional Vibration

Torsional Vibration occurs in the crankshaft of the engine mainly because of the tangential forces acting on the crankshaft when rotating at some RPM.

Q2. How does top bracing assist in reducing the vibration?

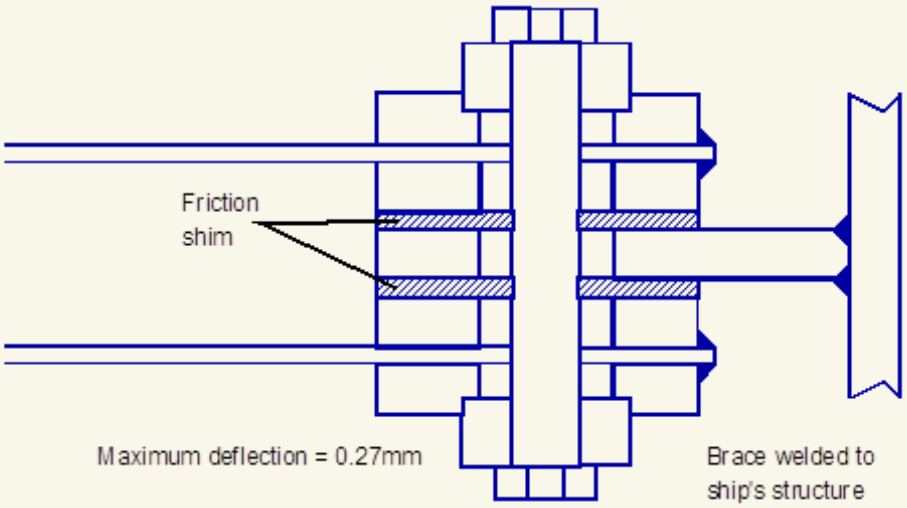
By introducing this bracing we increase the stiffness of the engine to ship attachment, thus increasing the natural frequency of the engine and the ship structure. Hence resonance of the engine structure will not occur within the normal operating range.

For counteracting the longitudinal vibration of the ship, engine bracings are used. One end of the bracing is attached to the top part of the engine and the other to the ship's structure. This stiff connection dampens and transmits the engine's rocking vibration to the ship's hull. Basically there are two types of bracing are used in common:-

– Frictional type bracing
– Hydraulic bracing

Q3. How is the condition of the top bracing assessed?

This consists of friction shims clamped between two steel plates by a hydraulically fastened bolt. The pressure on the bolt is nominally set at 60 bar. However if movement occurs which exceeds +/- 0.02mm, then the bolt can be tensioned up to 120 bar maximum, or until the engine structure vibrations or brace movement have disappeared. ■



Crossword Puzzle

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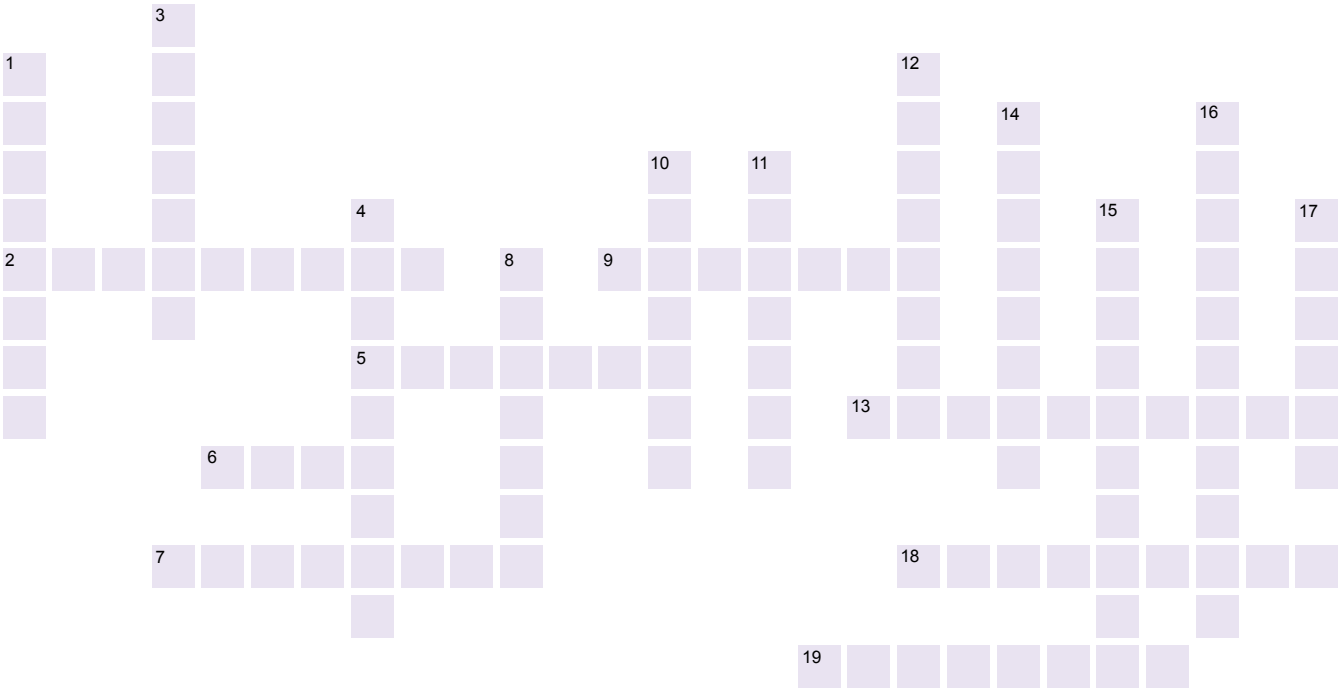

Across

2. The coefficient used to obtain an approximate power of a ship without resorting to model experiments.
5. Term used if the ship structure is damaged and it is flooding.
6. A member or series of members, running longitudinally that forms the structural base of a ship.
7. The moment which tends to restore the vessel after any small rotational displacement.
9. Tank which holds the water to provide the stability to the ship when there is no cargo.
13. Force exerted by the water on the ship, when a ship moves through the water at any speed.
18. The experiment which is carried out on the completed ship to determine the metacentric height.
19. The type of stress acting on ship in which in and out motion of the shell plating caused by fluctuation in water pressure because of water waves during rough sea.

Down

1. The term given to the up thrust exerted by the water on the ship.
3. The vertical line in a ship midway between forward and aft perpendiculars.
4. Measure of the tendency of a ship to return to the upright if inclined by an external force.
8. Type of stress acting on a ship when the deck structure is in tension while the bottom plating is in compression.
10. Vertical distance between the waterline and the bottom of the keel.
11. The rails provided on exposed decks to prevent personnel falling or being washed overboard.
12. Term use to represent the ratio of density of the substance to the density of fresh water.
14. The term used to denote the geometric centre of a ship.
15. Formation of water vapour in the propeller blades when pressure falls below the vapour pressure.
16. The height between the centre of gravity of a ship and its metacentre
17. A primary control surface used to steer ships through water.

Answers

Across:
2. ADMIRALTY 5. BILGING 6. KEEL 7. RIGHTING 9. BALLAST 13. RESISTANCE 18. INCLINING 19. POUNDING

Down:
1. BUOYANCY 3. MIDSHIP 4. STABILITY 8. HOGGING 10. DRAUGHT 11. BULWARK 12. RELATIVE 14. CENTROID 15. CAVITATION 16. METACENTRIC 17. RUDDER

Visitors' Comments
First Quarter, 2018

Congratulations and complements on establishing a truly world class facility in the field of Marine Engineering. It is truly remarkable to witness the infrastructure in imparting education in this space. Thanks to all faculty member for showing us the campus and facilities. Good Luck!

Mr. Wolfgang Marx,
Mr. Rajesh Jaising, Managing Director
Mr Peter Peters,
Teknic Euchner Electronics Pvt Ltd

World class facility and school. Very proud moment to see such facilities in India and run by very professional and motivated staff. I wish Samundra Institute the very best in future.

Capt. Anuj Sahai
Managing Director
Resolve Salvage & Fire (Asia) Pte Ltd

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