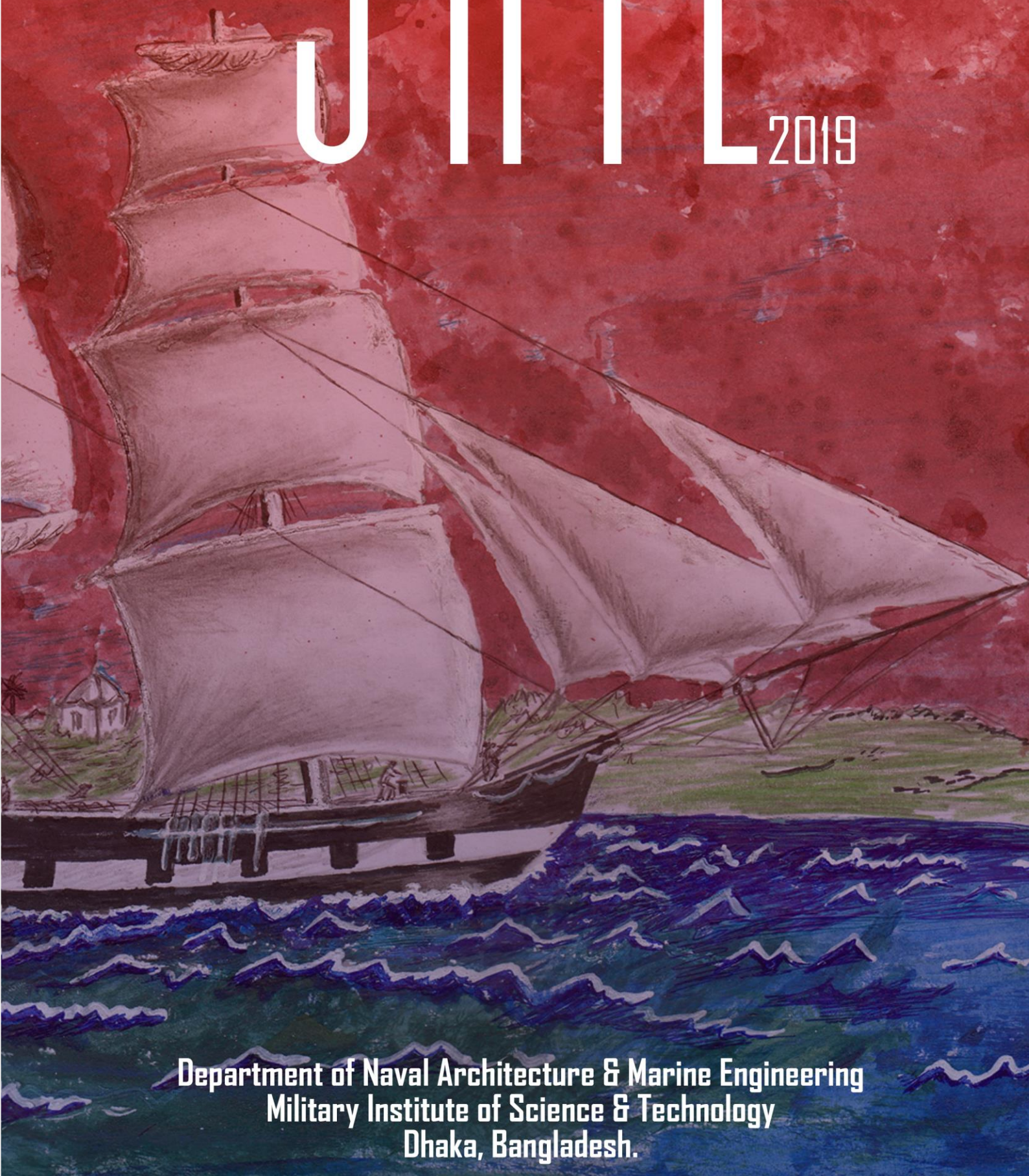


# THE SAIL 2019



Department of Naval Architecture & Marine Engineering  
Military Institute of Science & Technology  
Dhaka, Bangladesh.

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# **THE SAIL**

4<sup>TH</sup> EDITION  
2019



**A PUBLICATION OF  
NAVAL ARCHITECTURE & MARINE ENGINEERING  
DEPARTMENT  
MILITARY INSTITUTE OF SCIENCE & TECHNOLOGY**

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**Sub Editor**

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**ANTOR AHMED**

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**Graphics Design**

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**Cover Page Design**

**SALMAN SAKIB JISHAN** 

(NAME-05)

**Contents Collector**

**HASAN RUHAN RABBI** 

(NAME-06)

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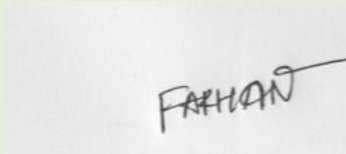
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# EDITORIAL

It gives us immense joy and satisfaction to finally re-introduce our very own departmental magazine "SAIL". We have tried to churn out creativity from this mess of science. A lot of effort has gone into the making of this issue. We hope you enjoy reading the magazine. The best thing about this issue is that it represents the creative side of NAME students to a fair degree—something that we think we all need to reconnect with. Amidst the busy schedule of semesters, with exams, surprise quizzes and all those assignments and lab reports that make us want to bang your head on the wall, we tend to lose track of all the other simpler things that we are capable of, things that we could have been proud of, that can bring one satisfaction. So this time we have made an attempt to bring out the talent concealed within our student community and also our teachers and pioneers. This issue includes articles, poems, art-works, a host of other things and also career suggestions. We hope you enjoy reading this issue as much as we have enjoyed making it. Any suggestions or criticism on the magazine would be most welcome.



FARHAN

**Farhan Mahmud Raffi**  
NAME-03



## Chief Patron

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Military Institute of Science and Technology (MIST) generates world class engineers and technologist who are capable of managing any challenges. Through the practice of using the educational text book as well as other literary content we can build an enlighten human being who can devote themselves for serving the country. We do this by providing a well-rounded educational experience that teaches people how to think creatively, solve complex problems, communicate effectively, and work collaboratively with people from diverse backgrounds.

MIST also emphasize on the learning and activities that happens outside of the classroom. Introduction of campus hour and many different student activities are few of them. MIST always encourage creativity and innovations for the students. Magazine can become a wonderful medium for the youth to express their talents and get the worthy exposure. I am really glad to know that “THE SAIL” magazine once again is being published maintaining the legacy. I am sure this magazine is a symbol of literary creativity as well as co-curricular activities among the students of NAME Department. I hope this magazine will be a renowned platform for marine communities someday and enlighten the image of MIST. Lastly, I congratulate and thank all those who work relentlessly behind this magazine.

**Maj Gen Md Wahid-Uz-Zaman, ndc, aowc, psc, te  
Commandant, MIST**



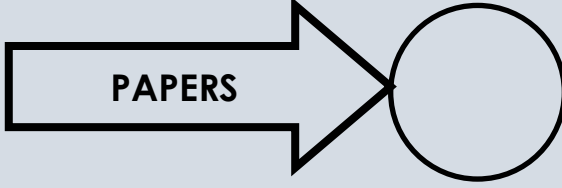
## Patron

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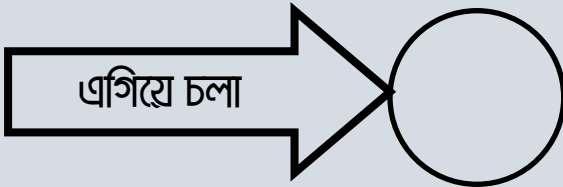
Among the vast field of creativity, magazine is a notable content that helps enhancing our creativity. A magazine is usually presented by stating biography of a scholarly figures to the entertaining content. The writer has the liberty to write as per desire and readers can enjoy accordingly. By this, a bond among the writers and the reader is being created. It is such a bond that is not only confined among the students only, but has a large array of relation in the society. In that consequence, by the grace of Almighty we are publishing 4th edition of “The Sail” magazine of Naval Architecture and Marine Engineering (NAME) department, MIST.

I strongly believe that the Sail Magazine will keep going on building skilled and knowledgeable engineers from the influential professional writings. I hope that, in near future, it will be a brand image for the students of NAME Department as well as uphold the academic standing of MIST. These innovative writings can also help to strengthen Naval Architects and Mariners communities across Bangladesh as well as the abroad. Last but not the least, I would like to thank all concern related to publishing “The Sail” magazine for their active participation and relentless support.

**Cdre M Muzibur Rahman, (E), psc, BN**  
**Head, NAME Dept**

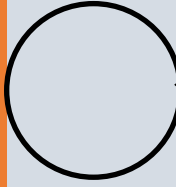
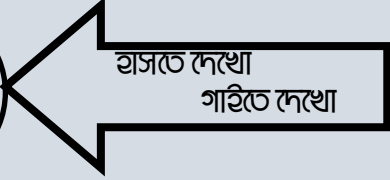
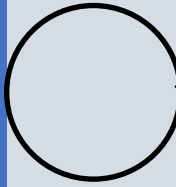
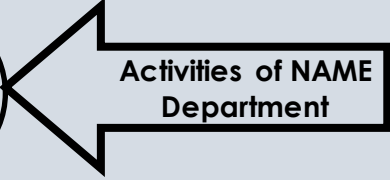
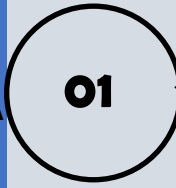


- ❖ Dockyard And Engineering Works Ltd -A Story Of Rebirth
- ❖ Inland Waterways Of Bangladesh: Challenges And Opportunities
- ❖ A Brief Note On Advances In Regulatory Framework In Shipping
- ❖ Innovations In Design & Building Of Modern Marine Vehicles

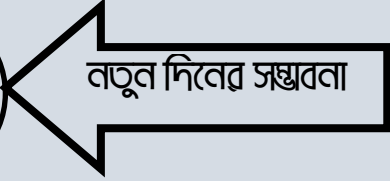
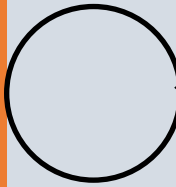


- ❖ The First Job...
- ❖ FAITH IN YOURSELF
- ❖ ইন্টারভিউ এবং অভ্যুপগম ....
- ❖ From Bangla Cat
- ❖ Female Naval Architects
  - ✚ Kaniza Islam
  - ✚ Nusrat Jahan Nisa
  - ✚ Aysha Nasrin Asha

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- ❖ How to be the best in the field



- ❖ Higher Study Opportunities for Naval Architecture and Marine Engineering Graduates in Western Countries
- ❖ Experience in Germany
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মতের আয়না  
(Student Section)

- ❖ রক্ত-জবা
- ❖ থমকে নাড়ানো ভাবনা
- ❖ MARPOL: The Decider
- ❖ WARSHIP
- ❖ 4Ocean Mobile Skimmer
- ❖ THE BLACK DOT
- ❖ USS INDIANAPOLIS:  
THE SHIP DELIVERING  
HELL
- ❖ The FLIP ship: An Amazingly  
weird research ship
- ❖ History of World Maritime  
Day

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PHOTO TALK

Graduate Batch  
Profile(NAME-04)

স্মৃতিচারণ



# From Whom We Learn



**Cdre M Muzibur Rahman, (E), psc, BN**  
**HEAD of the Department**



**Cdre M Munir Hassan, (E), psc, BN**  
**(Rtd)**



**Prof Dr Md Reaz Hasan**  
**Khondoker**



**Cdr M Golam Mohiuddin, (E), BN**



**Cdr Tasnuva Anan, (E), BN**



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**Lec Abu Afree Andalib**



**Lec Md Deluwar Hussain**



**Lec Kazi Rafi Rahman**



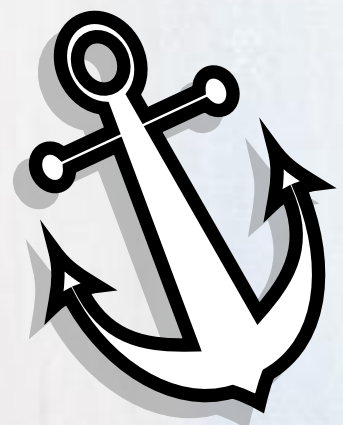
**Lec Sanbera Islam**



**Lec Tasmia Hoque**



**Lec Kaniza Islam**



## Activities of NAME Department

### Seminar

A seminar was held at Military Institute of Science and Technology (MIST) by the Naval Architecture and Marine Engineering Department on 26<sup>th</sup> September, 2019 titled “Advances of Shipbuilding and shipping in Bangladesh” to celebrate the World Maritime Day. The objective of the seminar was to draw attention to the significance and future scopes of shipbuilding and shipping industries in Bangladesh by presenting related researches to the concerned authorities and dignitaries as well as taking necessary steps in that concern. The honorable state minister of shipping Mr. Khalid Mahmud Chowdhury was the chief guest of the seminar.

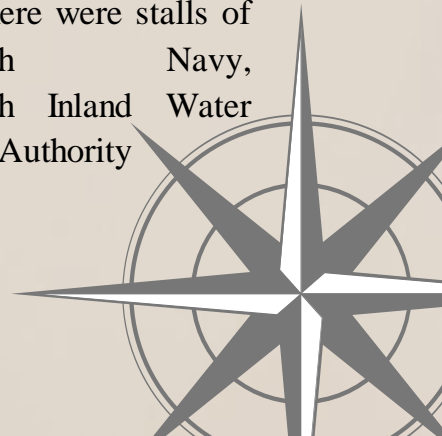


For the first time in MIST, a student seminar was conducted by the students of the NAME department on the same day. There were four topics on which the students delivered their speech on the occasion of World Maritime Day.



### Job Fair

On the occasion of World Maritime Day a job fair was arranged beside a seminar where the chief guest was the honorable state minister of shipping Mr. Khalid Mahmud Chowdhury. In the job fair there were stalls of Bangladesh Navy, Bangladesh Inland Water Transport Authority





(BIWTA), Khulna Shipyard Ltd, Dockyard and Engineering Works (DEW) Ltd, Chittagong Dry Dock Ltd, Dockyard and Engineering Works Ltd, BanglaCAT, SST Marine Solution Ltd, Metacentre Ltd and Radiant Marine Design and Services Ltd.



### **NAME Day**

On 24<sup>th</sup> October 2019, the department of NAME celebrated the NAME Day. With great enthusiasm the students participated in the NAME Olympiad. On the same day farewell of graduating student, crest handover to students with best academic results and awards to best players of sports were given with appreciation.

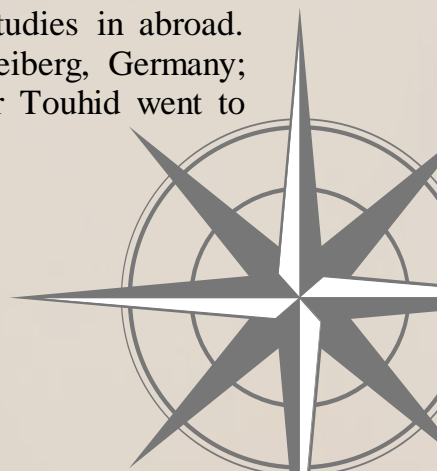
### **Industrial Training and Visit**

Every year the students of level-3 participate in the long four weeks of industrial training. In 2019, there are two groups who are attended their trainings in Khulna and Chottogram. In Chottogram the training conducted in Western Marine Shipyard Ltd and Kornofully Ship Builders Ltd. The group also visited Bangladesh Navy Dockyard and Chittagong dry Dock limited. In Khulna the student industrial training conducted in Khulna Shipyard Ltd and they also visit IMT (Bagerhat) as a part of training.



### **Faculty Members opted for Higher Studies**

In 2019 three lecturers of NAME department went for higher studies in abroad. Lecturer Kamol went to Technische Univeritat Bergakademie Freiberg, Germany; Lecturer Nubayatt went to Western University, Canada; Lecturer Touhid went to Michigan State University, USA.



## Sports Activities

Like every year in the athletics competition the students of NAME department participated in various track and field activities.

In the Interdepartmental Cricket competition our students became runner-up with their fanatic participation. Also in football competition they achieved the place as runner-up. There was active participation of the students in basketball competition.



## Cultural Activities

Every year interdepartmental cultural competition is arranged in MIST and like always the students took part in the competition. There was a good participation from NAME department in the cultural competition. A student of NAME-6, Araf Bin Islam Swapnil stood second in the patriotic song competition. Besides, students arrange cultural activities in student hours. There was good participation from the department during the debate competition of MIST.

Kausarul Islam Robin from NAME-4 won 3<sup>rd</sup> prize in a idea competition organized by KUET. Besides these two Farhan Mahmud Raffi have been a common face in club activities of MIST and also been the president of MIST Photographic Society. He also won two national level photography awards on different occasions.

## Short Course

A short course was carried out on “MAXSURF- Ship Design Software” in February 2019 for level-1 students. The course was conducted by the five faculty members of the NAME department. This short course was designed to impart basic knowledge regarding this specific software which would facilitate their project/thesis works.





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# DOCKYARD AND ENGINEERING WORKS LTD - A STORY OF REBIRTH

Cdre Shamsul Alam, (G), NUP, ndu, psc, BN  
MD, DEW



## Introduction

1. Shipbuilding had started in Bangladesh centuries ago. Due to the maritime geography, ships have been playing a vital role in all the affairs of our life in this region. In the time of British colonial rule, Narayanganj was one of the prominent business zones of this sub-continent. Well-connected river routes made Narayanganj port a potential business hub. Hundreds of ships used to berth here for goods transportation. Many of those harbored ships needed to be repaired because of long voyage. Considering shipbuilding potentials of this country the British government established “Dockyard and Engineering Works Ltd. (DEW)” on the bank of present Shitalakkha River. From that period of beginning until today, DEW has been making a long journey for nearly hundred years and has been playing its role with a succession of good and bad time regardless of the frequent regime change from British to Pakistan then Bangladesh. So, journey has been historical across lot of events and change of owners.

2. DEW’s voyage with Bangladesh started from the time of our independence. During Bangladesh regime too, DEW experienced rises and falls in regards to performance. It was at the vertex of success in early 80’s and 90’s, but the efficiency was at the rock bottom in the late 90’s. In the year 2002, finally after having consistent losses, it was declared laid off. For nearly four years this yard remained at this comatose stage. In 2006, Bangladesh Navy took over the administration of this yard with a great challenge and hope. Since then the new story had started and still continuing. Navy after taking over its operating responsibility has been trying to regain its glory back through the conduct of good management.



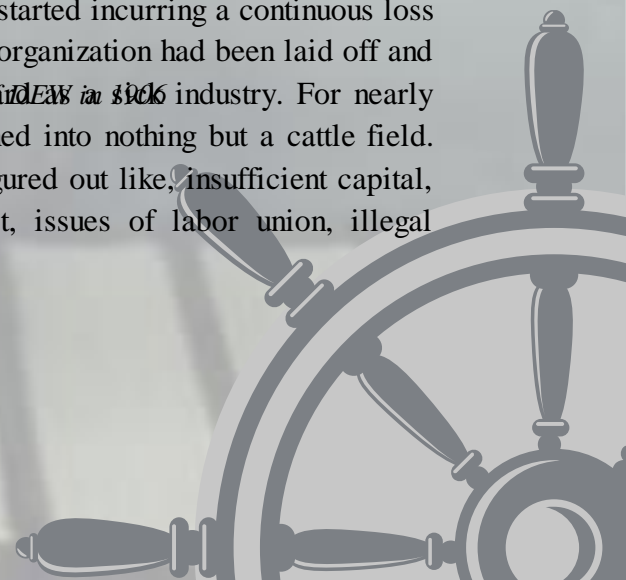
3. This paper would make an attempt to share this striking journey of DEW from its inception till to date; with an in depth examination into the circumstances on how DEW was at times in crisis, however, has finally been able to earn elevated position under BN hand in regards to its performance.



## **DEW's Unexpected End after a Centennial Journey**

**2. Centennial Journey.** “Narayanganj Dockyard Limited”, the first-ever of the Indian Sub-Continent, was established in 1926. With the expansion of capabilities, expertise and working arena the name of “Narayanganj Dockyard Limited” had been changed to “Dockyard and Engineering Works Limited” in 1956. With the departure of the British; after the division of India and Pakistan, this dockyard was handed over to *Pakistan Industrial Development Corporation* from the ownership of *Royal Indian Marine Services*. Another shift in the authority of this dockyard occurred after the glorious independence of the liberation war of Bangladesh. The new government handed over the control of this dockyard on Bangladesh Steel and Engineering Corporation (*BSEC*) to run business. But due to lack of expertise and capable management, this dockyard could not flourish rather aggravated gradually.

**3. Unexpected End.** DEW's own journey to reach this point was not easy. Initially, soon after liberation of Bangladesh, DEW was a profit-making Shipbuilding Company with a promising growth. But later in the last leg of its journey, it started incurring a continuous loss due to various reasons. Finally, in 2002, this once bustling organization had been laid off and subsequently handed over to Bangladesh Privatization Board in a sick industry. For nearly four years DEW had been in full dormancy, basically turned into nothing but a cattle field. The assessment regarding the causes of failing has been figured out like, insufficient capital, insufficient work order, unbearable load of bank interest, issues of labor union, illegal activities of CBA leaders, lack of leadership & vision etc.



## A Story of Revitalization

4. **Handing over to Bangladesh Navy (BN).** *DEW ltd bears the legacy of shipping industry of this country. On that note Government of Bangladesh decided to revive the organization. With that thinking, on 07<sup>th</sup> December, 2006 DEW Ltd was handed over to Bangladesh Navy (BN) under the Ministry of Defense (MOD) with existing obsolete machineries and haunted workshops with the land areas of 21.78 acres.* The decision of handing over DEW to Bangladesh Navy was the major breakthrough in the history of its revitalization. One of the major factors of being laid off was- lack of work orders. Being an enterprise of Bangladesh Navy, this shipyard started its production by repairing naval ships for BN. After accomplishing quality ship repairing fame, this organization started getting work order of building new ships and repairing the existing fleet from many organizations like Bangladesh Navy, Bangladesh Army, Bangladesh Coast Guard, BIWTA, BIWTC, and Chittagong Port, etc. These meticulous organizations awarded work orders to a fledgling dockyard only because of their confidence in the management of the Bangladesh Navy.

5. **DEW's Elevation at BN Hand.** DEW once went through a time when it could not pay a regular salary to its employees let alone other benefits. But those awful days have gone. Initially, an extensive renovation of yard was conducted during the first five years. Money earned at the initial stage was spent behind a major overhauling and other capacity building activities. After that this dockyard had started taking extensive orders with a ray of hope of making profit. Since last five years DEW has a consistent growth in its profitability. This profit trend is almost upward exponential. Since revival, DEW has been showing its capability in shipbuilding, ship repair, ship regeneration and repowering, engine overhauling and various types of steel works. Side by side, Dockyard & Engineering Works Ltd (DEW) has kept upgrading its engineering capabilities and facilities to cope up with ever-increasing demand for shipbuilding and repair. In this age of industrial automation DEW is not lagged behind. As a part of extensive plan of automation it has been replacing the manual work process by initiating several automated machines. Several infrastructural development works are ongoing to further upgrade the capabilities of DEW within near future. This company has also become one of the major income tax providers of the region. Now DEW is also taking various employee welfare programs in addition to its promised facilities.

## A Deep Dive on DEW's Success Story

6. **Setting up Vision.** Vision means to have a clear sense of purpose. A clear vision will help to define short and long-term goals. Under the naval leadership, this organization has reshaped its vision. Proper set of direction to achieve the vision has significantly made the difference between DEW's present and past status. DEW's vision is "To become the leading dockyard of the country for particular dimension vessels and Engineering works". Due to geographical position, DEW has a restriction to build any vessel more than four meter draught. Considering this constraint, DEW has focused on a practical and achievable vision of building high speed and high tech small and medium ships.

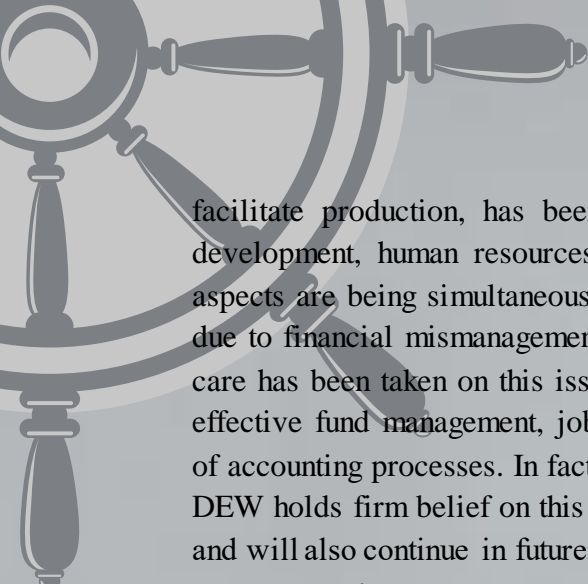
7. **Vision Community Development.** A mechanism needs to be established to reach the goal. To do so, vision community needs to be developed. To align all stakeholders to the same vision, preciously, to develop a vision community two-way communication is a prime requirement. In this method, top management set a target, mid-level management spreads it out to the working forces. By reverse, working force work as per direction and inform mid-level management who will give feedback to top management. DEW being set like a family, where all the family members are sailing a single boat to a single port. All the workers pull the oars with the same rhythm and management holds the steering strongly in a single direction.

8. **Leadership has Paid Dividend.** This yard used to be managed by other authorities in the past. Due to lack of their management skills the condition of this organization started to deteriorate. But DEW has emerged from the condition by foresighted planning and management of Bangladesh Navy. After handing over, BN accepted the challenge and started running it commercially under the leadership of the Chairman and Board of Directors (BOD) with its professional competence. All BOD members represent different corners of the society having flourished career and astonishing leadership skills. The management of DEW has been working relentlessly to turn this yard as a profitable Government-owned commercial organization. BOD involves in major decision-making processes and future planning of the yard. The Managing Director takes care of the whole yard and implements all business and production decisions with the discussion of key personnel and involves people up to the level of the senior worker. An impressive achievement in the recent past speaks highly of commitment, dedication and hard work of the entire workforce of DEW.

9. **Perks of Being an Enterprise of Bangladesh Navy.** The decision of handing over DEW to the Bangladesh Navy was the breakthrough in the history of its revitalization. An important reason for previous lay off was the external pernicious influence and internal sabotage. So, from the outset, BN started giving value to the company's interest over anything else. Naval management has always been trying to shield the organization by ruling out all types of unexpected local, social and influential manipulations. Result of this conduct has presented harmonious working environment within the institution.

10. **TO&E has been Updated.** While chasing organizational vision, capacity of this yard was expanding in every aspect. To meet expansion demands, DEW intended to maintain standard level of employees to get maximum efficiency level. To meet the growing needs, this organization was updated on 09 December, 2017. Presently, there are 54 1<sup>st</sup> class officers, 45 2<sup>nd</sup> class officers, 202 civil staff & sailors, 264 workers are regularly working in DEW Ltd. Right man for the right job is the main motive of staffing. For that reason a bunch of potential professionals are being hired from reputed universities and companies. Moreover, to facilitate production, additional workforce is hired through enlisted contractors & subcontractors.

11. **Built up Gradually.** Capacity building with proper planning was a masterstroke in the development of this yard by the naval management. The expansion of capacity, to



facilitate production, has been divided into three major segments such as infrastructural development, human resources development, and financial strength development. All these aspects are being simultaneously developed for organizational goal development. Especially, due to financial mismanagement this yard has already seen worst fate previously. So, special care has been taken on this issue. To seal those loopholes, management has adopted skill for effective fund management, job wise cost monitoring and controlling system and automation of accounting processes. In fact, capacity building in all the disciplines is a never ending task. DEW holds firm belief on this principle and working on it. Presently lot of works is going on and will also continue in future as per DEW's perspective plan.

12. **Business has been Diversified.** After being affiliated with the BN entity, DEW has been engaged in various types of engineering works which includes Dredging, Embankment Construction, Earth Filling Work and other emergency works. Recently DEW has been awarded a significant number of nation-building projects under the Direct Procurement Method of Bangladesh Government. Diversification in turn is providing positive benefit in all the segments of DEW.

13. **Training was Mandatory for Running.** The prominent most phases for DEW's revitalization were those plans taken into action for the development of human resource. Back in 2006, DEW inherited a mob, which used to work for it earlier in the ages of BSEC. DEW's effective course of training has enriched employee's skills in many ways such as higher confidence level, decision making skills, process standardization skill, better understanding of economical use of resources and adaptability skills. The first thing that DEW's management focused, for HR development, was on adopting an effective training policy that best matches with organization's vision. Employees are also given privilege with the chance of attending seminars, symposium and workshops related to their fields to gather knowledge and technological updates. Endeavour of DEW for HR development has boosted up employees moral to achieve the vision and brought this organization on a sustainable profit making platform.

14. **An Example of Ideal Workplace.** Apart from other positive attributes like strong organizational structure, modern facilities and abiding all government regulations what keeps DEW one step ahead is its collaborative and healthy workplace culture. DEW has its own set of core values, ethics and defined mission and vision. DEW always makes the employee feel that they own the yard as a part of family. In case of any critical decision making, opinion of each level of employee is sought and treated equally as a result they feel important part of the company. Thus DEW maintains an inclusive work environment. Apart from it, both inter and intra departmental relation is not competitive rather it is collaborative. It fosters team work among all the members of DEW. Celebration of any achievement, Eid reunion, yearly excursion and game competition, family get together create a festive workplace. This culture also develops the family like bonding among the team members and boost up energy level.

15. **Motivation and Welfare.** DEW is not only developing its employees professional skills and career but also getting involved in developing its employees personal and social life to motivate them. Constant motivation keeps the spirit of employees high and

with higher spirit employees can make positive difference. From this perception, welfare facilities such as health and medical, scholarships for employee's siblings, performance rewards and bonus are being provided to improve the standard of living of employees.

## **Conclusion**

16. DEW has faced many peaks and valleys and has been managed by different authorities since its outset. The history and experience have taught DEW that made this compact yard unique from others. Finally, it has set its anchor to the Bangladesh Navy. After being handed over to BN entity, DEW started building and repair of different types of Civil and Naval Ships. DEW has become a one-stop quality service provider for every type of vessel building and repairing with excellent after-sales service. As DEW is committed never to compromise with quality, the employees are also committed to keep the head high of the yard. Currently, DEW is undergoing massive infrastructural and organizational modifications. If we can uphold the current flow of improvement DEW can become a major center for shipbuilding, repairing and other engineering works today and also in future.

17. This yard used to be managed by other authorities in the past. Due to lack of their management skills the condition of this organization started to deteriorate. But DEW has emerged from the condition by foresighted planning and management of Bangladesh Navy. Adopting short and long term strategies and timely monitoring and evaluating of those strategies also have marvelous impact on today's DEW's market position. Firm commitment toward the vision made DEW different. The platform where DEW is standing today is a dividend of good leadership. Visionary management along with its competent workforce has been working relentlessly to reach DEW to its next destination. Therefore, it is expected that future DEW will live long having the potentials to play a vital role in the shipbuilding sector of Bangladesh.



# INLAND WATERWAYS OF BANGLADESH: CHALLENGES AND OPPORTUNITIES



Cdre M Mahbub-ul Islam, (N), BSP, ndc, psc, BN

Chairman, BIWTA

Bangladesh is a riverine country. Three mighty rivers, Padma, Jamuna and Meghna flow through the country with their tributaries and distributaries. A total of about 700 rivers out of which 57 rivers are trans-boundary rivers flow through the country. In 1960s the total waterways of the country was 24,000 km. However, it came down to only 5,968 km in monsoon and 3,865 km during dry season.

For the last 10 years, Bangladesh Water Development Board (BWDB) and specially Bangladesh Inland Water Transport Authority (BIWTA) took massive dredging work and could dredge about 1,700 km waterways so far.

BIWTA maintains a total of 6,000 km navigable waterways and these waterways are classified into four classes as per minimum depth maintained throughout the year. The following table shows the classification with length:

<i>Sl</i>	<i>Class</i>	<i>Route</i>	<i>Length (km)</i>	<i>Depth (m)</i>
1	I	Four Trunk Routes	683	3.66-3.96
2	II	Eight Link Routes	1,027	1.83-3.65
3	III	Twelve Secondary Routes	1,886	1.52
4	IV	Seasonal Routes	2,400	below 1.52

Inland water transport (IWT) sector transports over 50 percent of total freight traffic. Moreover, it carries around one quarter of all passenger traffic in waterways. There are 32 river ports and 427 landing stations or ghats across the country. Approximately 700,000 river vessels transport goods as well as passenger in the country. Annually 50 million passengers are carried through the waterways network. However, the transportation network by waterways in Bangladesh is not utilized to its full potential. The economic benefit of waterways transportation is still very cost effective compared to other modes of transport.

Under India-Bangladesh Protocol on Inland Water Transit and Trade (PIWTT) which was first signed in 1972, there are eight functional international routes. Two more routes are under inclusion. Under this Protocol there are ten River Ports of Call in each country.

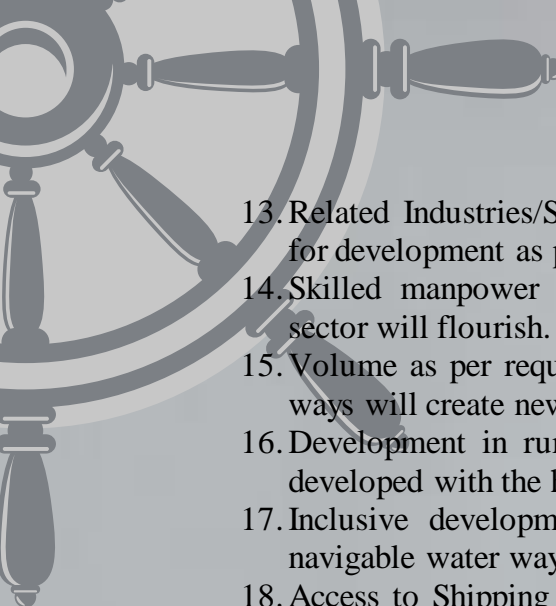
Moreover, recently signed coastal shipping agreement between Bangladesh and India will allow coastal ships from each country to ply between coastal and inland ports. Similar agreement with Sri Lanka is also on the process for signing and discussion with Maldives is in progress. The proposal from Thailand to include her port for coastal shipping is also being considered. In addition, there is a transit and transshipment agreement between Bangladesh and Nepal. Recently, MOU and Standard Operating Procedure (SOP) with Bhutan have been signed for transit and transshipment to enhance the regional waterways facilities.

Inland waterways provide following benefits.

<i>Social</i>	<i>Economic</i>	<i>Strategic</i>
<i>Health and hygiene</i>	Agriculture	<i>Regional Security</i>
<i>Secure livelihood (crops,</i>	Industry	<i>Poverty Reduction</i>
<i>Recreation/Aesthetic</i>	Transport	<i>Economic growth</i>
<i>Cultural and Spiritual</i>	Energy	<i>Food Security</i>
<i>Education and Science</i>	Tourism	<i>Energy Security</i>
<i>Good Social Relations</i>		<i>Climate Resilience &amp; DRR</i>
		<b><i>Water Security</i></b>

The following are the opportunities for inland water transportation system:

1. Low cost transportation: Inland waterways can provide a low cost transportation facility to most of the major cities.
2. Can carry bulk cargo: It is possible to carry maximum amount of bulk cargoes with minimum possible difficulties at a time through the inland waterways.
3. Low carbon foot print: As most ships carry more cargoes than road vehicles, the overall carbon exposure to atmosphere can be reduced.
4. Accessibility: With proper maintenance of navigable channels in inland waterways, it is possible to make most of the cities connected in this giant riverine network.
5. Low maintenance cost: Apart from regular dredging to maintain the navigability of the channels, riverine networks do not need expensive repair works as roadways.
6. No congestion: Apart from any natural calamities or any other emergencies such as ship sinking, there is no congestion on rivers. As a result cargoes can be transported in the shortest possible time.
7. Support to large industrialization: Rivers can provide great support to large industrialization. As new roads do not required to be constructed, rivers can provide excellent transport methods to industries built around ports.
8. New 100 SEZ: Rivers can provide excellent solutions to specialized economic zones (SEZ) regarding transportation and infrastructure building supports.
9. Dredging: As more cargoes will be transported through riverine channels, authority will need to dredge the channel for regular maintenance. This might provide an ancillary industry to grow up such as dredger building, maintenance etc.
10. Ship/vessel building: More ships and vessels will be built promoting local and class shipbuilders in this sector as more consumers will be interested to use inland waterways for their cargo transport.
11. Regional connectivity: Each river accessible area may be benefited through Inland navigation. Moreover, interconnection can be established between cities with no road connection at all.
12. Employment: Promoting inland navigation will create more employment opportunities and hence develop local as well as national economy.

- 
13. Related Industries/Services: More industries and related services have the scope for development as people will switch towards marine transportation system.
  14. Skilled manpower development: Skilled manpower will be developed as this sector will flourish.
  15. Volume as per requirement (Scalability): Scalability will increase as inland water ways will create new options for the nation.
  16. Development in rural areas: Rural areas with no road connection at all can be developed with the help of inland water ways.
  17. Inclusive development: Inclusive development can be done with the help of navigable water ways.
  18. Access to Shipping advanced technology: With the help of advanced technology adopted in shipping sector, it is possible for the riverine routes to contribute in this sector.
  19. Land filling and embankment: Embankment is easier to construct with the help of land filling and navigable routes to carry necessary items.
  20. Contribution on to agriculture and animal husbandry: Navigable channels have great contributions to agriculture and animal husbandry as well as fishing.
  21. Improving environment: It is possible to improve environmental conditions with the help of navigable channels by conduction feasibility studies and hydrographic survey.

The following are the challenges for inland water transportation system:

1. Loss of navigability due to natural and human inference is one of the prime challenges faced by inland navigation rules.
2. Maintaining navigability: During winter season, the river channel tends to dry up and this hampers navigability of the inland vessels.
3. Low Height Bridge: Low height bridges constructed without adequate planning also cause hindrance to shipping vessels.
4. Pollution: Marine shipping channels are also hindered by different pollutants such as plastic deposited on river bed etc.
5. Encroachment: Encroachment is another challenge for riverine routes now days. It is being capsized by illegal poachers.
6. Shortage of skilled manpower: There is not enough skilled manpower to maintain the riverine routes.
7. Unregistered and Unsafe vessels: There are quite a number of unregistered and unsafe vessels plying through the inland navigation routes. These pose a great threat to the inland shipping channels and it is one of the prime challenges.
8. Regulations: Vessels not following rules and regulations also pose great challenge to the inland navigable waterways.
9. Lack of enforcement/application of regulations: Although there are standard regulations established by appropriate authority, but the challenge remains to imply them correctly.
10. Unlawful interference: Hindrance of trade union / owner associations may also pose a threat to inland navigation routes and cause interference with the natural system as they might not follow specific regulations for vessel navigation.



11. Lack of services: Lack of services required for maintaining the channels is another prime challenge.
12. Non development of infrastructures: Under-developed infrastructures also pose a great challenge to inland navigable routes.
13. Not employing Skilled/qualified personnel: Unskilled or unqualified personnel hamper the natural work flow of the system and thus impose a challenge.
14. Lack of supervision: Lack of proper supervision of the higher and lower command is another challenge.
15. Unethical practices: Unethical practices amongst the personnel also cause a great challenge.
16. Uncoordinated development and synchronization of other mode of transports may also pose hindrance towards inland navigable channels.
17. Lack of investment in this sector is another challenge faced by the authorities.
18. River Bank Erosion and natural calamities are another problem for navigable channels and pose a great challenge to the authorities.
19. Shifting of Channel for a reason also pose a challenge to the navigational routes.
20. Building of Infrastructure without following rules as well as insufficient infrastructures can cause problems to the channels.

With the increased activities and procurement of dredgers, vessels, survey and other equipment, demand of personnel, especially skilled personnel has increased. New posts have been created and some demands are pending approval of the Government. BIWTA expects that bright and meritorious personnels from will join BIWTA and work for achieving Hon'ble Prime Minister's Vision 2042, to make Bangladesh a developed country.



# A BRIEF NOTE ON ADVANCES IN REGULATORY FRAMEWORK IN SHIPPING

Cdre Syed Ariful Islam  
DG, DOS

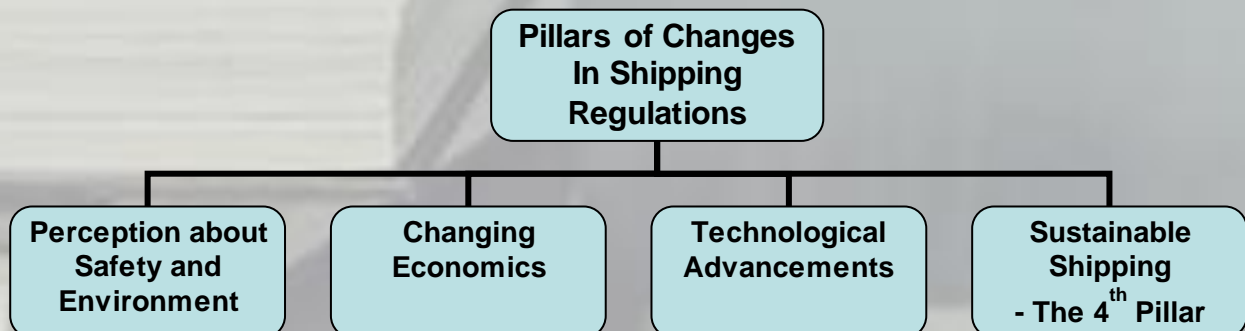


Merchant shipping is one of the most heavily regulated industries in the world and was amongst the first to adopt widely implemented international safety standards. The shipping industry is principally regulated by the [International Maritime Organization \(IMO\)](#), responsible for the safety of life at sea and the protection of the marine environment. The principal responsibility for enforcing IMO regulations concerning ship safety and environmental protection rests with the flag states (i.e. the countries in which merchant ships are registered - which may be different to the country in which they are owned). Flag states enforce IMO requirements through inspections of ships conducted by a **network of international surveyors**. Much of this work is delegated to bodies called **classification societies**.

IMO has produced four very important conventions. They are SOLAS,



MARPOL, STCW and MLC which are known as four pillars Maritime law. Safety and Environment, technological advancement, economics and sustainable shipping are the main drivers of changes in shipping regulations.



Bangladesh have 125 shipyard/dockyard classified in different categories. It is important for each of these industries to maintain their quality and improve upon. Regulatory frameworks applicable to shipbuilding needs to be followed and adhered to. All concerned involved in this industry needs to work together for a quality shipbuilding and a sustainable shipping industry.

### **Regulatory framework in various stages of Ship life cycle**

International Maritime Organization in its Maritime Safety Committee has adopted a Goal Based Standard for the construction of oil Tankers and Bulk carrier in May 2010. According to this standard it is obligatory for all member states to comply the standard through the classification society, flag states and anybody involved in to the process. The main objective of setting this standard was to ensure, safe and environmentally friendly ships throughout their service life.

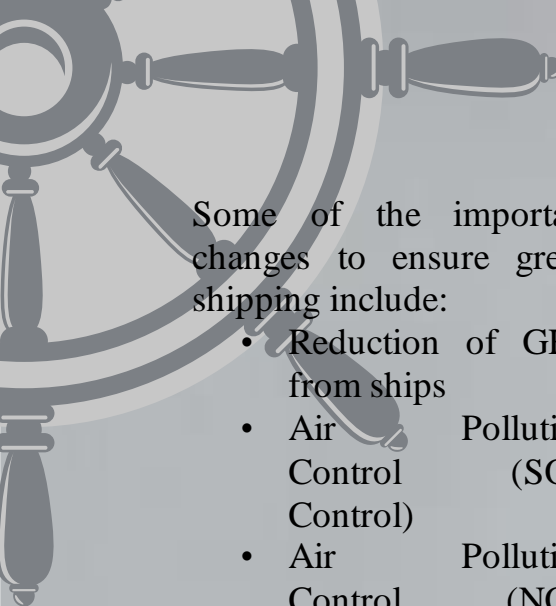
### **Basic Conventions affecting Shipbuilding**

IMO has produced two very important conventions for the Safety of Life at Sea and for the Protection of Marine Environment. Both these conventions may be considered as the basic conventions for the construction of ships.

- **SOLAS (International Convention for the Safety of Life at Sea).** SOLAS contains provisions on how ships shall be constructed to be as safe as possible, covering everything from fire protection to stability. It also addresses how the dangerous cargo be carried in packaged form or in solid form in bulk as well as carriage of liquid goods and condensed gases in bulk. SOLAS also sets standards for how ships that carry dangerous goods shall be constructed and equipped.
- **MARPOL (International Convention for the Prevention of Pollution from Ships).** MARPOL contains provisions aimed at preventing pollution from ships. The convention regulates things including how ships must be constructed and procedures for transport of petroleum products and other dangerous chemicals in bulk

### **Regulatory Framework Effecting Ship Building/ Greening Maritime Industry**

Responding to climate change is one of the greatest challenges of this era and IMO has been dealing with these issues for some time. International shipping was the first global industry sector to be subject to mandatory, binding energy-efficiency regulations and standards design to address GHG emissions throughout the industry. New and increasingly demanding requirements of reducing the environmental impact of all types of ships from all countries, along with regulatory institutions like Greening the Maritime Industry leads to the development of a series of regulations/directives, which will immediately affect both the owner and the shipbuilders worldwide.

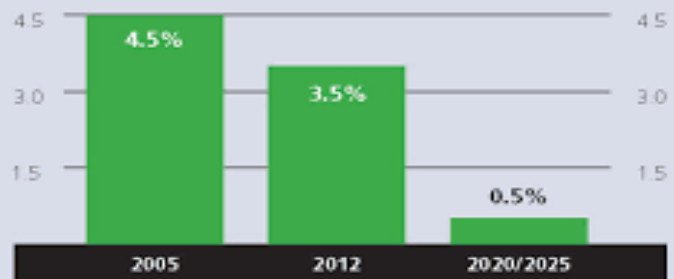


Some of the important changes to ensure green shipping include:

- Reduction of GHG from ships
- Air Pollution Control (SOX Control)
- Air Pollution Control (NOX Control)
- Ballast Water Management

#### GLOBAL SULPHUR CAP

Sulphur content of fuel permitted outside Emission Control Areas



In consonance with Paris Declaration, IMO is committed to reduce the Green House Gas Emission from Shipping Industry. Meaning that, by January 2020 all ships making international voyage have to use fuel with less than 0.5% sulphur content. Therefore world maritime industry will see a big change in the coming year.

#### Ship Building in Bangladesh for Inland Waterways

The shipbuilding industry in Bangladesh is in the process of establishing itself as a Potential growth industry. The ship building industry has a history of using Classification Society Rules for ensuring good quality ship construction. In absence of classification society construction of ships for inland water ways of Bangladesh are dealt with by Panel Supervisors and the Department of Shipping.

Lifetime of a domestic ship in Bangladesh 30 – 40 years. When the idea of ordering a new ship is born, a number of steps and people are involved in the process. The steps followed in Bangladesh are as follows:

- The first step for the owner is to apply for the name of his ship from the department of Shipping. It is done on-line and the name clearance is given on line.
- The next step is to apply for the approval of the design. While applying for design approval the owner submits all the required design along with its stability booklet to the Department of Shipping.
- Department of Shipping then Constitutes a Committee to check the designs. Upon checking the design the committee recommends for its approval.
- As per the recommendation of the committee the approval is accorded.
- On receiving the approval the ship owner applies to the Department for Keel Laying.

- Department issues the keel- Laying Certificate along with a Task Number.
- While issuing the task number a Panel Supervisor is engaged (Naval Architect) with each of the ship under construction. The Panel Supervisor is selected by the owner and is detailed by the Department.
- Panel Supervisor supervises the construction as per the approved design in 09 stages of the construction. He also records his remarks. Any violation/ noncompliance is reported to the department.
- One of the surveyor from the department also oversee the construction.
- On completion of the construction of the ship it is launched at the water and the finishing touch are given.
- Finally the ship is taken for trial. During such time its inclination test is also conducted.
- Once the test- trial report is satisfactory the owner applies to the department for the registration of the ship.

### **Ship Recycling Convention (Hong Kong Convention)**

SENSREC with joint partnership together with NORAD & IMO, which was designed with the objective of improving the standards and the sustainability ship recycling facility to meet the requirements of the Hong Kong Convention on the Safe and Environmentally Sound Recycling of Ships and to facilitate the Government of Bangladesh to accede to the Convention. Some yards in Bangladesh have already had success in improving their safety and environmental performance. Recently PHP Shipbreaking and Recycling Industry of Bangladesh bought its vessels to be recycled in accordance with the Hong Kong Convention and PHP was the first Bangladeshi recycling facility to receive statement of compliance with the convention.

### **Upcoming Changes in Different Convention**

#### **Amendments to the Maritime Labour Convention, 2006**

Harassment and bullying on board ships can have serious consequences to the physical and emotional health of seafarers and negative effects for companies. And ILO wishes to align the procedure for the renewal of the MLC certification similar to the IMO.

ILO has prepared amendments to the MLC 2006 with regards to:

#### **Regulation 4.3**

- The intention is to eliminate shipboard harassment and bullying by including relevant provisions.

#### **Regulation 5.1**

- The amendment will now allow an extension of not more than five months of the validity of the Maritime Labour Certificate issued for ships. This will apply in cases where the renewal inspection has been

successfully completed, but a new certificate cannot immediately be issued to the ship.

### **Industry 4.0 & Future Regulatory framework**

Industry 4.0, otherwise known as the fourth industrial revolution, is coming to the marine industry whether you're ready or not. While there are still some technical challenges to overcome much of the technology is already available and is starting to be applied to real world design, construction and operation problems. However, there are still regulatory, class and public perception challenges to overcome before all of these advances can become a reality.

- Smart sensors
- Networked technology (IT/IoT/Comms)
- Intelligent data analysis
- Artificial Intelligence (AI)
- Advanced robotics
- Additive manufacturing (AM)
- Augmented and mixed reality
- Constrained and fully autonomous operations

Constrained and fully autonomous operations



**Fig-Smart Ship Technology**

# Innovations in Design & Building of Modern Marine Vehicles



Engr. A B M Mahbubar Rashid

As a riverine country, ship has been the dominant means of transportation in Bangladesh for centuries. Despite the long history of local shipbuilding heritage, we are now looking forward to emerge as a modern shipbuilding nation. It is a continuous development process which relies on the shipbuilding community's access to modern technology and policy makers' vision to incorporate and patronize innovation in ship design.

## What is Innovation?

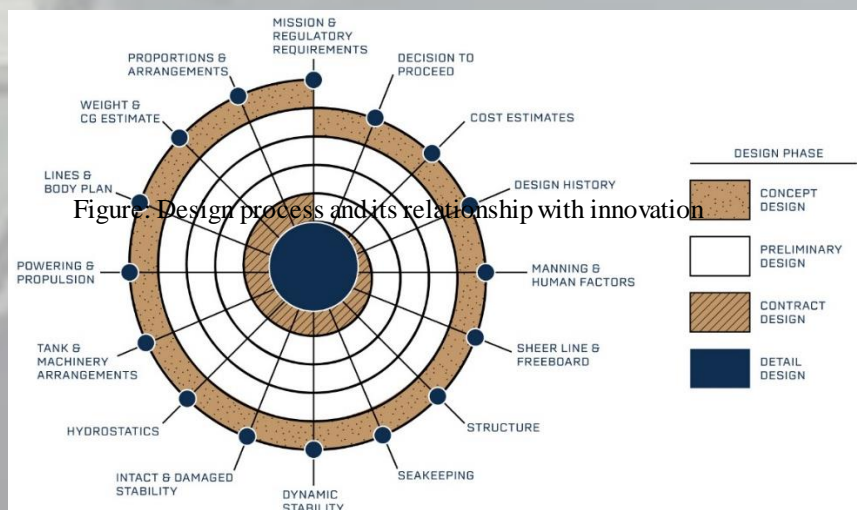
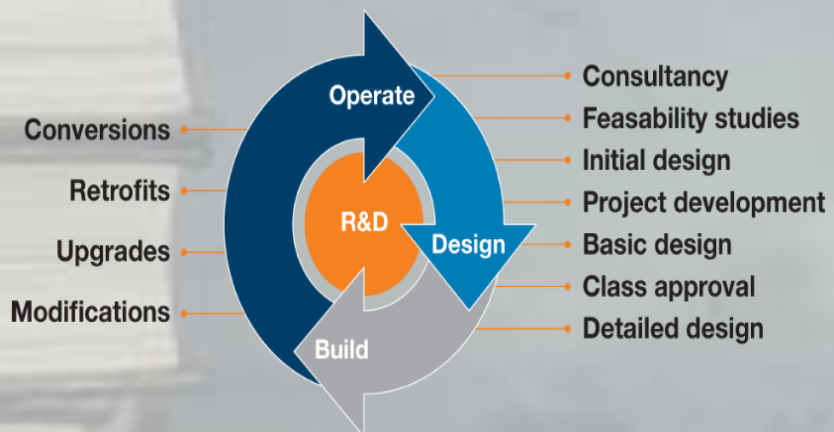
In general sense, innovation means creating/designing something which does not have any predecessor/forebearer. Naval architecture (and all other discipline of engineering) is mostly inherently derivative or incremental approach. By this definition all kind of ship design falls in the 'innovative' domain. But we would be defining 'innovation' slightly differently and more relevantly. A design that does not follow where others have gone before conventionally.

## Difference between Innovation and Invention

The definition of innovation includes the concepts of novelty, commercialization and/or implementation. In other words, if an idea has not been developed and transformed into a product, process or service, or it has not been commercialized, then it would not be classified as an innovation. Innovation differs from invention in that: innovation refers to the use of a new idea or method whereas invention refers more directly to the creation of the idea or method itself.

## Tools for Ship Design Innovation and Modern Approaches

Ship Design process involves research and development. Problems arising from practical operations should be corrected for the next projects.



Most works are involved in the concept development phase it should be dealt with ultimate priority. Because this phase determines: capacity, performance, initial cost and life cycle cost. Traditionally, a design spiral is used which is given in the following figure

The design spiral is all about selecting the right dimension to ensure the best performance at the lowest operating cost. And we go round the design spiral few more times to find a balance between initial cost of the ship and life cycle cost. In modern times, naval architects use a modified version of the design spiral. Let's have a look at the following figure

Figure: Traditional design spiral

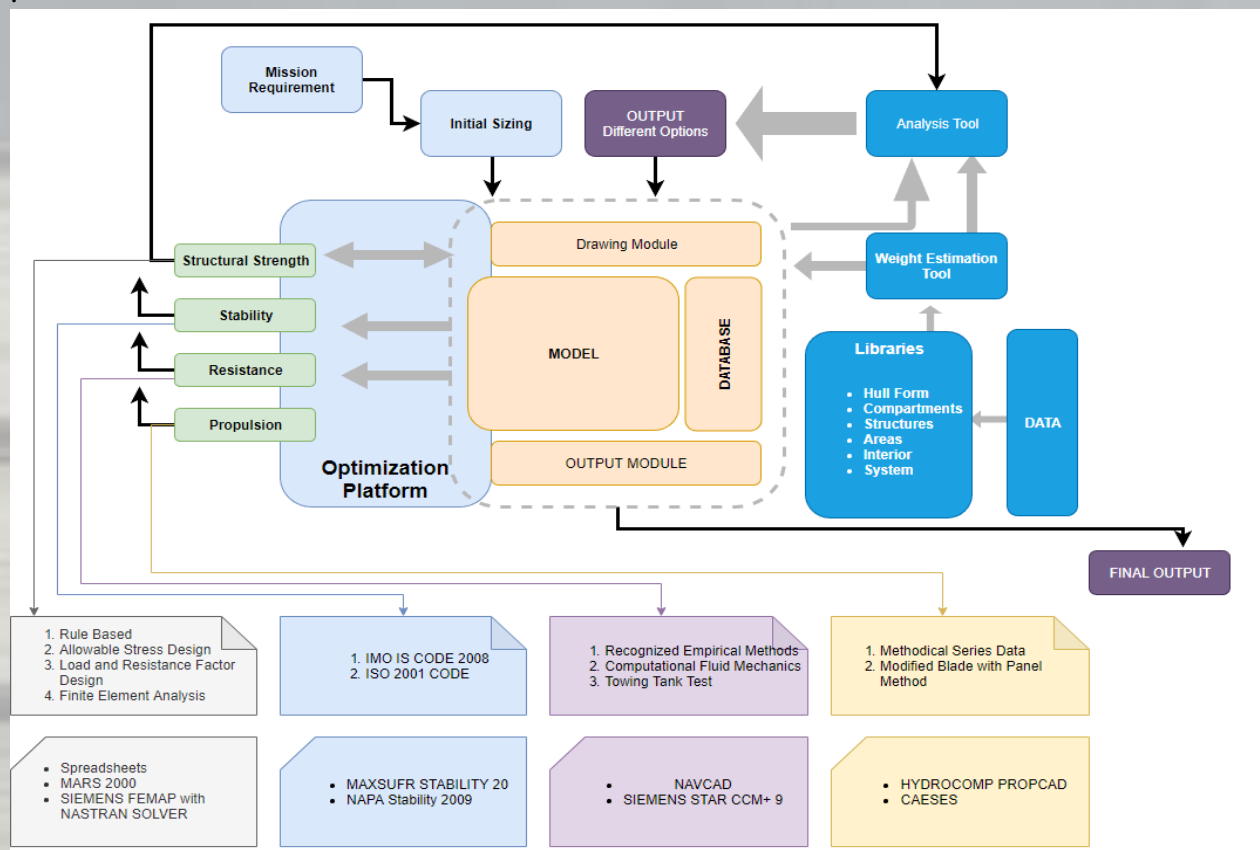


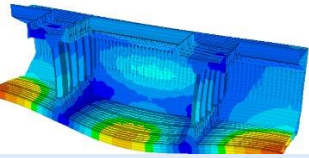
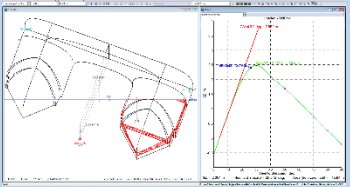
Figure: Methodology and typical tools used for modern and innovative ship design

It looks a little complex but actually it's nothing but a fancy version of a design spiral and it is used on a daily basis on modern innovative ship design. For every iteration, it is required to ensure the ship's:

1. Structural strength is adequate to withstand her external and internal load
2. Stability and survivability are according to standards set by IMO/flag state
3. Resistance is minimum
4. Propulsion system is in harmony with each other (Propeller Engine matching) and has the best fuel economy.

Innovation in ship design revolves around the Conceptual Phase. And the process of innovation is actually the rigorous application of the conceptual phase by using cutting edge CAM/CAD software. In the following table the modern approaches of structural strength and stability are given in brief.



Structural Strength		Stability	
<b>Rule based design</b>	Spreadsheets classification Society Software	IMO CODES	Maxsurf Stability NAPA Stability AVEVVA MARINE
<b>Allowable stress design</b>		ISO 2001 CODES	
<b>Load and resistance factor design</b>			
<b>Finite element analysis</b>	FEMAP as Preprocessor Nastran as Solver 		

The recognized methods (like Holtrop for Displacement hulls and Savitsky for Planing hulls) for resistance estimation and Propeller analysis using series data can be very powerful tools in an experienced hand for a usual/traditional design. But when it comes to innovation, even the most experienced Naval Architect is clueless about the resistance of that innovative hull, thus also propeller design. In such cases, Naval Architects religiously rely on Towing Tank Test, where a small physical model of a hull is constructed and towed through a water tank and the resistance is measured. The problem is Towing Tank Test is time consuming. Besides it is not economic to test ten iterations. This problem is now solved by usage of Practical Application of CFD codes. We now simulate the Towing Tank in our computer. It is far cheaper and faster solution.

#### Current barriers

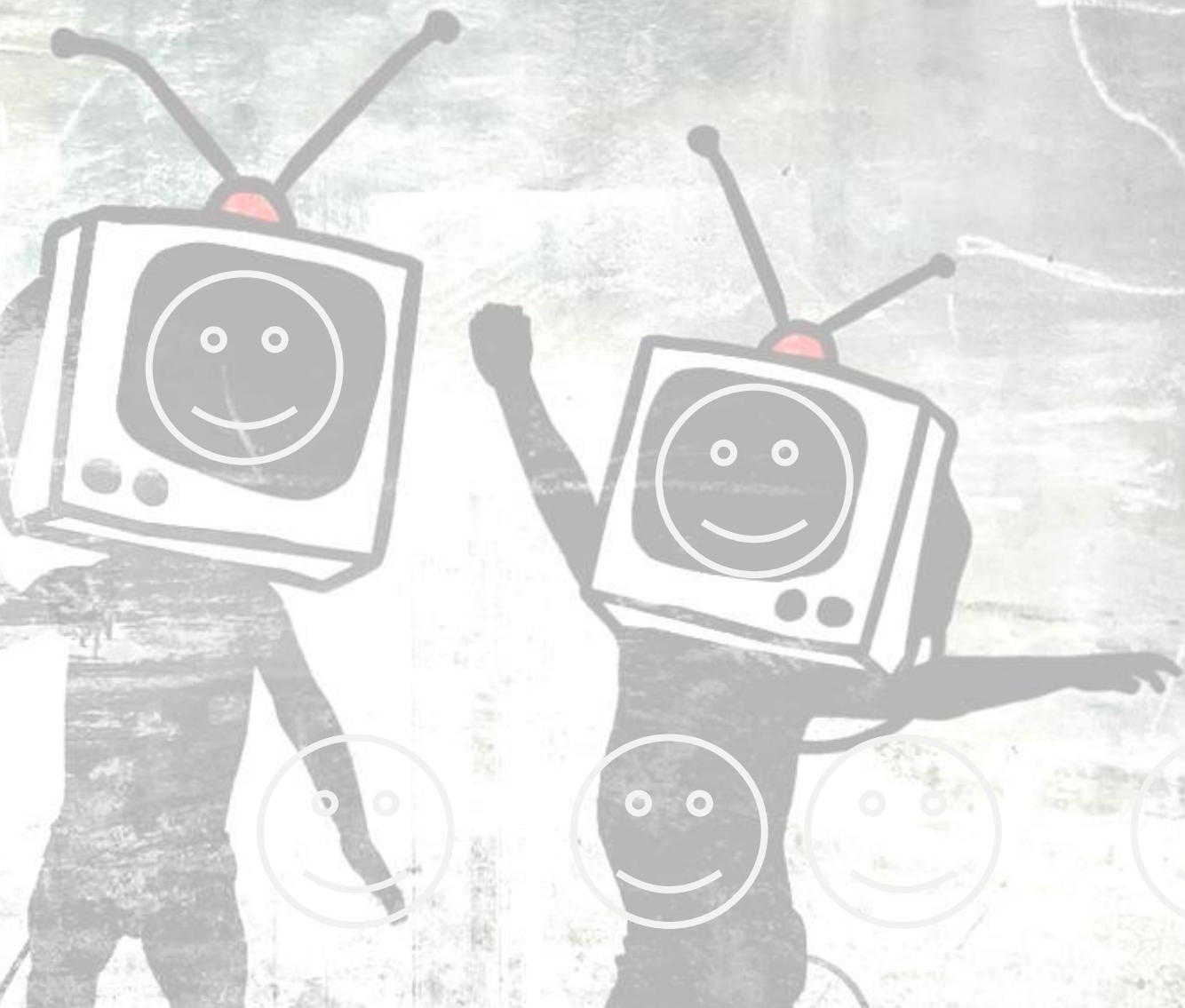
- Proven Design
- Barrier in Technical Specification
- Dependency in Foreign design
- Lack of trust in Local design
- Perception of the owner

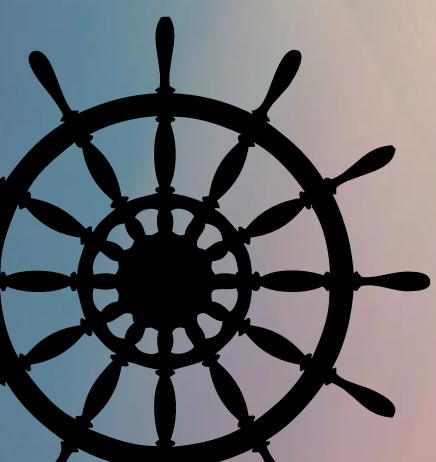
#### Recommendations

- New design instead of Proven Design
- Rewrite & Change in Technical Specification
- Dependency on Capable & experience National design firm
- To bring trust on National experts designers-knowledge/learn of capabilities of the national expert designer
- Any perception should be clarified from involved/engaged designated designer and verify with any third competent designer. And receive reply from designated I designer f any difference in opinion.



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## The First Job...

What's the dream of every graduate? — To get a job or go for higher studies. Majority of the students will say is to get a job after graduation and start the new chapter of life. It can either be related to the specific field or to the choice of individual graduates. It's not very uncommon to see the students get frustrated during their last years, they freak out and often burden themselves with what they are going to do after graduation. It's such a crucial time as we wonder around, look at the surroundings and very easily we get depressed and panic attack as well. The question is, why do we get depressed during our final stage of under-graduation? From my perspective, we tend to follow others, we compare ourselves with others and we try to live like others and many more. This is when we get the biggest shock so far and we are very often traumatized. Actually, it is not our fault, from the very childhood we are taught to be like others, we are told that we should be like that boy or that girl who has become first in his or her class and somehow we follow that without even asking anything. Day by day we become used to this and we continue this in our lives as well. During the final years, there are people who prepare for the ILETS or GRE as they intend to go abroad for higher studies, there are other who prepare for Govt. job or BCS, some are preparing themselves for multinational companies and there are some of us who don't do anything at all. We look around us and confuse ourselves whether we should prepare for GRE, IELTS or BCS or for other jobs. Some of us even gamble by advancing in both GRE and BCS or BCS and jobs. Only a handful number of people get what they want but, the rest fall apart, as a result they get depressed. The primary motive is to select what you want? — Don't try to copy others or put yourself in others shoes. Try to make a path of your own and then proceed forward. But, the decision shouldn't be made in a hurry or in a swift or just to show others that, "Yes, I am sitting for the BCS exam". There are some of us who try to act like big in front of others and make a heist decision that is not suitable at all and after a while we get depressed due to that decision. There comes a stage where we get to know what we are best suitable for. This characteristic can be found in our early days of



**Hasan Ruhan Rabbi**  
**Surveyor, RINA;**  
**NAME-02.**

graduation or after completing the graduation. If you can't find what you are capable of then it may require more time than usual to be accepted by others. There are students who study a particular subject but they have their passion in other things. It can be programming, it can be art, it can be marketing even it can be entrepreneurship. We are sometimes too much afraid to admit what we cherish for or what we want. There is always a lack in strength to accept this fact and deep down we are depressed again. I have seen my classmates who have changed their profession from Naval Architecture field to IT related fields or to banking section. Even some of them are perusing their higher education in marine related subjects or businesses related subjects. Their choice of path is different from each other but the common thing is that they had the courage, the strength to respect their own decision and they are doing well in what they have chosen. All of my friends are just in their early stages of career building and I believe that after 4 or 5 years they will all be shining and emitting their aura. Even after choosing a path to follow there are some obstacles that make the path not so easy. If we look at the current job scopes in Bangladesh, there are scopes available but we are too much immune to what we want and what we desire. To get a job is not an easy task but to get the first job is a matter of hardship on its own. As a fresher we need to drop out CV to different companies and look out for opportunities. Scopes aren't always found and hence, when one is right in-front of you it is wise to grab that one. As a fresher, the students apply for 20-30 jobs thinking they will get an interview call right back. But the truth is hundreds of applications are dropped only for one job post most of the time they don't get any call for interview at all. I had applied for more than hundreds of jobs and then got the call for an interview, this is for the second job. For the first one, the trouble was more and at the same it was challenging. Sometimes, there are no vacancy in the companies at all, still you can communicate with them and look for the scopes and this increases the probability of getting chosen at times. Last of all, there will always be some people to criticize your every decision, to di-motivate you in every step you take, laugh at you and even make fun of you. Many of us have faced this kind of situation by now and there are more to come in future. The key is to stay with your plan and don't pay attention to others, don't look down upon yourself. Your friend may have got his job even before graduation, you may need three or four months or even some more time to get your opportunity. The precision is to grab the scope when it comes to you and make the proper use of it. The first job may be a small one but if you think that you will get the best one at the beginning than you are fooling yourself. Don't try to make a big jump over the edge, try to do it step by step. Today or tomorrow you will achieve the goal. Believe in yourself and respect your decisions. Good luck... ..

## FAITH IN YOURSELF



**Md Shoyeb Hossain**  
**NAME-02,**  
**MIST**

Life of a naval Architect is full of struggle in Bangladesh. At first, I've worked as an assistant engineer in a design house which has not got the permission from DG shipping yet. I did cargo ship design & stability calculation for the company. I've worked there as the only naval architect of that company. But due to the unstable condition I had to leave the company. Now I work as an assistant technical manager at Prantik Marine Services LTD. I do multipurpose work here. Sometimes I do conditional survey as a naval architect, sometime I do load test as a mechanical engineer. Sometimes I have to play role as the in charge of diving team. I've learnt so many things from Prantik in last few months & yet a lot to learn.

In your life, always try to keep in mind that some exam paper can't decide your future. So concentrate the hidden talent inside you and nursing the beautiful things very clinically.

Keep faith on you. Accept yourself the way you are. I was academically the worst student when I was in MIST. If I can do, I believe that all of you can do.



## ইন্টারভিউ এবং অতঃপর ....

‘আচ্ছা, তুমি আজকে আসতে পারো। ইন্টারভিউ তো বিলাস। আমরা একটু চিন্তা করে দেখি তোমাকে নেয়া যায় কি না। আমরা তোমাকে পরে জানাবো।’ ইন্টারভিউ টা খুব একটা ভালো হয়নি ছিলেদি। কয়েকটা প্রশ্নের উত্তর জানা সত্ত্বেও জীবনের প্রথম ইন্টারভিউ ফেস করার নার্ভাসনেস-এ সেশলো ও তখন মাথায় আসছিলো না। তখন টাও একটা ডিভিশন!! এইরকম সময়ে নাকি বিজের সাথেই কিম্বাসম্মতকতা করে। “মনে হয় এটা হলো না”, চোখে মুখে হতাশা নিয়ে সদ্য পাশ করা গ্র্যাডুয়েট নেভাল আর্কিটেক্ট ছিলেটা তখন লিফটের বাটন চেপেছে, অপেক্ষা করছে লিফট আসার ঠিক তখনই অফিসের পিওন এসে বললো, ‘স্যার, এম ডি স্যার আপনাকে ডাকছে’ মনের মধ্যে একটু আশার আলো আবার একটু ভয় ও, কিরে ভাই, এখনই আবার ইন্টারভিউ নিবে নাকি!! ‘বসো, তোমার ব্যাপারে চিন্তা করলাম।’ মনে মনে ছিলেটা বলে উঠলো, আরে ভাই!! এর মাথা তো দেখি অনেক ফাস্ট। আমি লিফট পর্যন্ত যেতে না যেতেই এর চিন্তা করা শেষ। “তুমি তো অনেক কিছুই পারো নি। আচ্ছা, স্টিভ ব্যাপার না। এগুলো কাজ করতে করতে শিখে যাবে। তুমি আগামী ১ তারিখ থেকে জয়েন করে।” “Welcome to our shipyard.” এভাবেই শুরু হয়েছিলো আমার চাকরি জীবন। প্রায় দুই বছর হতে চলল এখানেই। শিখেছি, শিখছি এখনো। আর বছর কি পড়লাম, কি কি ডিভিশন আরো ভালভাবে পড়া দরকার ছিল তা বুঝা স্টার্ট হলো, চাকরি শুরু করার পর থেকেই, ভাগ্যটা মোটামুটি ভালই ছিল, সহকর্মী হিসেবে পেয়েছিলাম আমাদেরই সিনিওর ভাই আশুল্লাহ হিঙ্গ সান ভাই কে। সাথে অন্য কলিগরাও ছিলেন সেরিওরকম মজার মানুষ। কিন্তু বেশি সুখ তো আর বেশি দিন থাকে না। আমার ও সেরিওর কেজ। চাকরি তে জয়েন করার প্রথম দিনই আমার রিপোর্টিং বস বলেছিলেন, ‘জয়েন করেছ, খুব ভালো। আসতে আসতে আডি খাওয়ার জন্য মানসিক ভাবে প্রস্তুত হও।’ কিছুদিন পর হলোও তাই। মুখ খাবা কালা করে যখন ডেস্ক বসেছিলাম, নাকি সিনিওর ভাইরা বললেন, ‘কি মিয়া একদিন আডি খাইয়াই মুখ কালা করি বইসা আছে। সামনে তো আরও ম্যালা দিন আছেই। এখন মুখ কালা করি বইসা থাকা লাগবে না, চলো নিচে চা খাইয়া আসি।’ চাকরি জীবনে শিখছি অনেক কিছুই, শুধু যে বসনের কাছ থেকেই শিখছি তা নয়, পুরো ইয়ার্ডটিই আছে শিখে নেয়ার জন্য, আর শিখানোর জন্য আছেন যারা নিয়মিত ধরে শিপ বিল্ডিং এর সাথে জড়িত শিপইয়ার্ডেও রোড ব্রুকি ধূলাবাণি কান্দা, গ্রাইভিং এর তীর আওয়াজ, ওয়েল্ডিং এর স্পার্ক, পেইন্টের ঝাঁঝালো গন্ধ, রোদে পোড়া স্টিল পাতের গরম, ডবল বটম ট্যাঙ্কের ভিতর জমে থাকা গ্যাস, আর অগনিত মানুষের অক্লান্ত পরিশ্রমে তিল তিল করে উঠা একেকটা ডায়াজ। আপাতত এগুলো নিয়েই চলছে জীবন। আল্লাহ সহায় হলে হয়ত চলতে থাকবে, এখন অপেক্ষায় আছি, হয়ত কোন একদিন MIST এরই কোন জুনিওরকে পারো, আর বলব “কি মিয়া নতুন জয়েন করলা?? Very Good. Welcome to new life. আর আডি খাওয়ার জন্য প্রস্তুত হও।



**Ahsanur Rahman  
Himu**

*Asst Naval Architect,  
Radiant Shipyard Ltd*

**NAME-02**

## From Bangla Cat

একজন নেভাল আর্কিটেক্ট হিসেবে সবাই নিজেকে শুধু একজন শিপ ডিজাইনার হিসাবেই চিন্তা করে। আমিও তাই ভাবতাম। যদিও আমার চাকরি শুরু হয় একজন Production Engineer হিসাবে কিন্তু সেই জায়গায় আমার বেশিদিন থাকা হয় নি, পরে আমি ২০১৮ এর আগস্টে **Bangle CAT** এ যোগদান করি। **Bangla CAT** হল **Caterpillar** এর বাংলাদেশি ডিলার।

যেহেতু জানতে চাওয়া হয়েছিলো নেভাল আর্কিটেক্ট হিসাবে আমার অভিজ্ঞতা কেমন? আমি বলবো অসাধারণ, কারণ কাজ করার মত এতো সুন্দর পরিবেশ অন্য কোথাও খুব কম পাওয়া যাবে। এখানে কাজ করার জন্য যেটা দরকারি সেটা হল অনেক লোড নিয়ে কাজ করাতে পারাটা। কারণ এখানে অনেক টেম্পার নিয়ে কাজ করতে হয়, সবাইই হয়তো জানা আছে যে, টেম্পার এ কাজ করতে গেলে দেশ বিদেশের অনেক কোম্পানির সাথে যোগাযোগ করতে হয় এবং খুব ভালো একটি সমাধান বের করতে হয়। তারপর অনেক সময় আমাদের জাহাজে যেতে হয় এবং তার সমস্যা বের করে তা সমাধানও করতে হয় যে কি কারণে এটা আশাবুদ্দপ স্পিড বা বোল্ড পুল পাচ্ছে না। প্রয়োজনীয় ড্রইং এবং ক্যালকুলেশন ও করতে হয়। আমরা প্রথম বর্ষ থেকে শেষ বর্ষ পর্যন্ত অনেক বিষয় নিয়ে পড়াশোনা করি। আর ভাবি যে পড়াশোনা হয়তো শেষ, কিন্তু না, চাকরি জীবনে ও অনেক পড়াশোনা করতে হয়। তবে আগে পড়াশোনা করতে ভালো না লাগলেও, এখন খুব একটা খারাপ লাগে না।



**Mehedi Hasan**

**NAME-02**

## Female Naval Architects



### **Kaniza Islam**

Lecturer  
Department of NAME,  
MIST

My choice to become a lecturer being a naval architect was not made in a day. This decision was a culmination of a process of reflection about what I wanted to do with my life. I have chosen a career in education because I believe that it is one of the most important functions performed in our culture. I believe that teachers individually and collectively have the ability to not only change the world, but to improve it. Within the process of teaching, I hope to find both personal and professional renewal. I wanted to be a part of a noble profession with the hope of one day being counted among those in whom future teachers find inspiration.

Many of the great teachers that I have had throughout my education have become my heroes and role models. I began to understand in high school, college & beloved MIST that great teachers have skills that I wanted to learn. I wanted to follow their examples. I remember that great teachers were good at explaining content, were patient yet firm with students, were always fair, set high expectations, knew how to motivate, and used humor appropriately. They were great communicators who had a command of their subject matter content. This is the type of teacher that I intended to become, thus what I am today a proud lecturer of NAME department in MIST. However, I understand that my personal teaching style will evolve as I draw on my own strengths, knowledge, skills, values, and experiences.

Fortunately during my undergraduate in MIST I have got Naval Architecture & Marine Engineering as my department. I was lucky to get the fantabulous & most diversified teachers beside me and the lovely fellas around me. With the love I have for students, along with my education, and the experience I have had in the classroom, I know that teaching is a career that I will be successful in.

Why do I want to become a teacher? A teacher has the direct opportunity to make a difference, to change the future. I have been told that I am an idealist. I want the best for everyone. I will set high goals as a teacher and do my best to show each and every student that these goals are within their reach. I will expect every one of my students to want to learn and more importantly to understand. I want my students to fight over the seats in the front row as if they were attending a concert, not elementary school. I want to make my students wonder; make them question; make them think critically; make them write; make them read, read, read.

The chance to inspire another human being is not an opportunity it's a challenge. There are too many educators that haven't accepted this challenge, and it needs to change. Students go to school because they are forced to. Many times learning is not their top priority, but the teacher's job is to teach. Students are always learning. Unfortunately, it just may not be what the teacher is teaching. Since this is the case, a teacher must not only know his or her content area, they must also be prepared to teach other "things". Things, such as character, morals, etc., which may prove to be more valuable than knowledge itself. This is the reason I want to become a teacher.... I want to inspire the children who will represent the future of our great nation.

*At the end I want to express my heart felt gratitude to all my respected teachers and my mates who made me today's ME, a proud Lecturer.*

Currently working as assistant naval architect in Three Angle Marine Ltd

I am really thankful to all of my teachers cause whatever i am doing or I will do in future its because of their guidance .I found our professional field really challenging cause we had to compete with a lot of things. Firstly there is really small scope or hope, most of the time getting a place in professional fields is tough and the toughest is to stand out over there. I hope the hope will increase and we don't have to switch our direction in order to take a lead make a loud announcement "yes i am the naval architect".



**Nusrat Jahan Nisa**  
Assistant Naval Architect  
Three Angle Marine Ltd



**Aysha Nasrin  
Asha**

Assistant Naval Architect  
Three Angle Marine Ltd

After the completion of graduation, getting a new job always feels great and it motivates a fresher most. It opens up a vast field of opportunities as well as it gives a person wings of freedom and self-dependence. And it adds more comforts if the job is related to the subject you have graduated in!

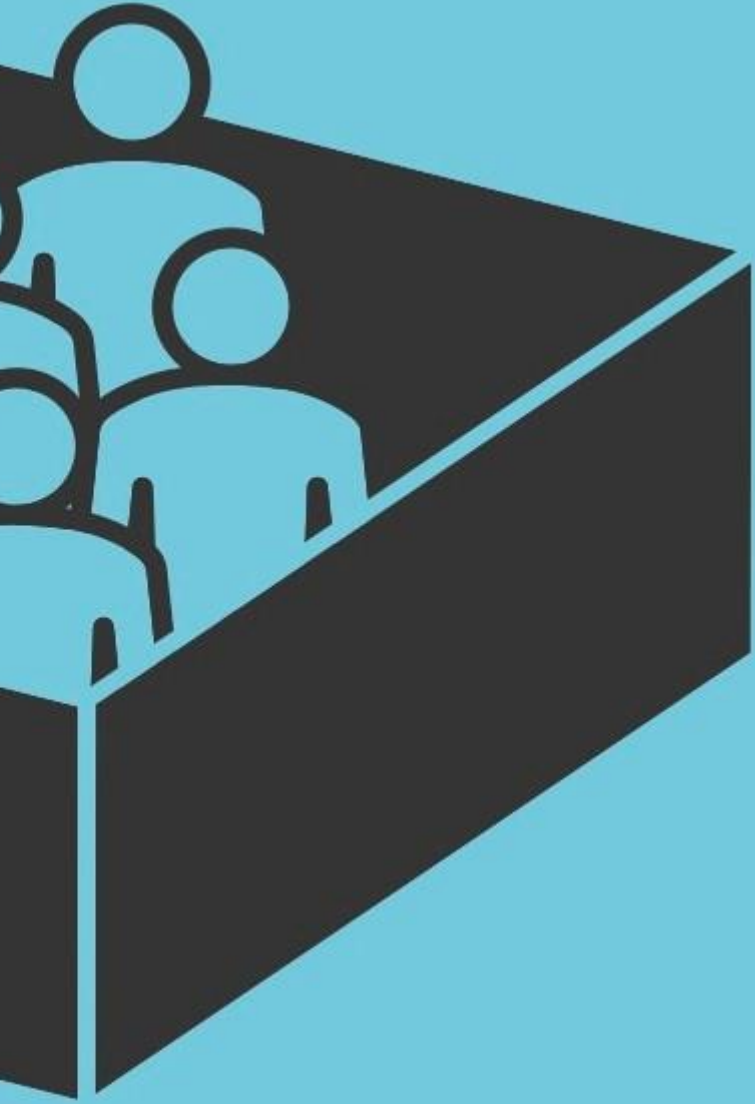
Since I have studied in Naval Architecture and Marine Engineering, I always wanted to work as a Naval Architect. Because I personally feel that my works would be easier if it is related to my own subject.

Now I am working as a Naval Architect in a Ship Design House. I always feel motivated towards my work as a Naval Architect. Ship design and building is very challenging as well as fanciful.

Considering the scenario of our society I still find this job more challenging for a woman than a man. But I would also like to say that there is hope as well as huge scope for women to take "Naval Architect" as a profession.

Let's make a better world by doing our own works perfectly!

# व्यक्ति वाचित्व



## How to be the best in the field

In the business world, there is a term called SWOT analysis of companies, SWOT stands for strength, weakness, opportunity and threat. According to me, we all should do this analysis in our personal life, time to time and find out what our strengths and weaknesses are. However, it is also very important to know what our heart truly wants. As Steve Jobs mentioned in Stanford commencement address, 2005 -

*"You've got to find what you love. And that is as true for your work as it is for your lovers. Your work is going to fill a large part of your life, and the only way to be truly satisfied is to do what you believe is great work. And the only way to do great work is to love what you do. If you haven't found it yet, keep looking. Don't settle."*

As I was continuing my studies in Naval Architecture, I started finding out that I wanted to strategize, be part of the company's decision-making hierarchy and finally do something of my own. And this requires soft skills as well as knowledge about business and management. To acquire these skills and knowledge, pursuing an MBA degree after engineering seemed logical and relevant to me. So right after my graduation, I got myself enrolled in Institute of Business Administration (IBA), University of Dhaka.

Naval architects not only design, but also undertake the quality control of the ships whether in-house or aboard. This requires managerial skills. Though at the end with experiences, people do move to the managerial role, but few engineers directly aim for such roles. Here is where the MBA course fits in. MBA aims at soft skills; it is one of the most vital skills of life. On the other hand, if after MBA, someone joins a job in the same domain as her engineering degree, they gain respect of others and become productive and effective much faster. Operations Management, Human Resources, Product Management are some of the specializations that naval architects can opt.



**Shehjad Rifat Siam**  
**MBA, IBA (DU)**  
**NAME-02**

Things like leadership, strategic insights and visionary thinking are not only what an MBA degree is about but it's also about dictating the technical personnel based on market dynamics, appropriating the skills of technical personnel, and arm twisting them to produce a value-added product or service. An MBA program gives engineers more exposure to business and management related issues which lack in an engineering program. It adds strategic & qualitative skills to students' analytical capability, making them a perfect choice for any employer. Furthermore, for those naval architects who are planning to run their own business or to do consulting, an MBA makes sense. MBA will help in better understanding of the fundamentals of business that supplements the engineering and technical side. One becomes great in finding technical solution to the problem keeping the business principles in mind.

Those who indulge in an MBA program become capable enough to deal with real-life practical issues and incorporate their skills into the human world and the digital world alike. The corporate world which we live in clearly depicts why an MBA after engineering turns out to be the best combination of knowledge and skill. An MBA doesn't only increase the pace of an engineer's career but also makes them confident. Without knowledge of management, the growth process of an engineer becomes stagnant. 2 years of an MBA after Engineering can help us see companies in a transparent way. Companies want engineers who are not only experts in their field but also know how to indulge with their counterparts in order to work as a team to solve their respective problems. Secondly, an engineer finds the confidence to pitch at a higher level because they know how much the company holds and how much his value will be as a part of the company

A silhouette of a person's head and hand holding a sword, set against a warm, orange-hued sunset background. The person is looking towards the right, and the sword is held horizontally. The overall mood is contemplative and powerful.

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ଅସ୍ତ୍ରାବତୀ





**Abu Afree  
Andalib  
Lecturer, NAME  
Dept.  
NAME-01**

## **Higher Study Opportunities for Naval Architecture and Marine Engineering Graduates in Western Countries**

As a graduate from the discipline of Naval Architecture and Marine Engineering, it can be easily mentioned that a wide range of lucrative professions are waiting for the graduates to be perceived. The main diversions that can be drawn between these professions are the academics side and professional engineering side. Academicians are the ones who does research works and involves in development of theories and methodizes. On the other hand, professional engineers are the ones who involve in providing solution and consultation to practical engineering problems as well as maintenance and manufacturing of different machineries.

In the persuasion of higher study, both academicians and professional engineers have wide range of options for themselves. Most of the cases professional engineers opt for MEng (Masters in Engineering) and PGD (Post Graduate Diploma) while academicians opt for MSc (Masters of Science), PhD (Doctorate of Philosophy) and Post-Doc research activities.

In this article, the discussion will take place mainly on higher study for academic requirement focusing on MSc Engg. and PhD. I will be discussing the procedure to pursue higher studies keeping in consideration for tentative preparation time, research approach, scholarships and country specific approaches.

### **Approach Time:**

Preparation of higher study should start from the beginning of final year. It should be planned from the last semester so that minimum time can be spent for layover. Most of the students start taking preparation after graduation. It has to be kept in mind that most of the universities set January 31<sup>st</sup> as deadline for international students' application with few exemptions. Due to late preparation it is possible to miss this small window for the higher study and applying next year. Overall two (02) years or maximum three (03) years will be postponed for the whole procedure. It is suggested to start the procedure by the final year or by last semester to minimize this year loss.

### **Preparation Time:**

A higher study aspirant student needs to be appeared before different exams and involve in searching for professors and prospective universities that are willing to take Masters and PhD student. A well-drawn plan is the first requirement is case of tackling this situation. In general, an aspirant need to appear before Graduate Record Examination (GRE) and Language test (TOEFL/IELTS). GRE exam is based on analytical writing, quantitative section and verbal section. It should take around three to four

months on average to practice and master the examination. After that around one month can be allotted for preparing and appearing before language tests. As a result, overall five months can be considered for preparation of the examinations. The next approach is to select and note down each university as per GRE and TOEFL/IELTS language test results and search for prospective supervisors. It is worth mentioning that most of the North American (USA and Canada) universities require supervisors to supervise the higher study aspirant's research works with some exemptions for the universities with central funding options. Although most of the Europe, Scandinavia, Australia and South East or Far East Asian universities does not require supervisors prior to application with some exemptions of top ranked universities with top-notch world-renowned programs. Anyway, an average time of around four months to be spent for searching universities, noting down the application procedure, noting down the required documents, checking of funding system, searching for scholarships and contacting with a prospective supervisor. And finally, the last two months are to be spent for collecting required documents and submitting applications online. It has to be kept in mind that some universities require academic transcript sent to them through postal service before application deadline. Also, some of them may need 3<sup>rd</sup> party verification of the transcripts.

On average one year is to be spent for the whole procedure. Students are suggested to start as soon as possible. Off course it is possible to parallelly conduct some of the tasks above. For example, preparation of GRE and searching of prospective universities as well as professors can be done parallelly. In this case the student must have full control on his time management and should have a well-balanced routine.

### **Scholarships:**

There are numerous scholarships available for pursuing higher studies ranging from government fund to university research grant and organizational scholarships. Few worth to be mentioned:

- (i) **Fulbright Scholarship:** One of the most prestigious scholarship for students targeting USA for higher education. Fulbright scholarship is provided to students by Bureau of Educational and Cultural Affairs, USA. Applications for the following year opens around mid-April of the previous year and is open till last of June. For Bangladeshi applicants, the procedure is supervised by US Embassy of Bangladesh under EducationUSA Scheme. Successful applicants should have excellent academic result, cocurricular activities, excellent examination score along with job experience.
- (ii) **Australian Award:** Australian Award scholarship is the most sought-after government scholarship for students targeting Australia for higher education. It is offered by the Australian Department of Foreign Affairs and Trade. The application period is around three months on average. It opens on February and Closes on April of the previous year of the tentative study year.
- (iii) **New Zealand Commonwealth Scholarship:** New Zealand Commonwealth Scholarship is the most prestigious government scholarship for students who wants to study in New Zealand for higher education. It is offered by the New Zealand Ministry of Foreign Affairs and Trade. The applications are sub divided into four groups as per countries. This is one of the most competitive Scholarships in the world. The application period is open for three to four weeks only on average. It opens on February and Closes on March of the previous year of the tentative study year.

- (iv) **Commonwealth Scholarship:** Commonwealth Scholarship is offered by the Commonwealth Scholarship Commission (CSC) under United Kingdom's Department for International Development. It is by far the most aspired scholarship in United Kingdom. It is very competitive but chances are high as there are different groups to apply. It has many divisions such as Commonwealth Professional Fellowship, Commonwealth PhD Scholarship, Commonwealth Masters Scholarship, Commonwealth Shared Scholarship, Commonwealth Distance Learning Scholarship. It has to be routed by National Nominating Agency as direct application is not accepted. In case of Bangladesh, the agency is UGC.
- (v) **DAAD:** DAAD is the short form of Deutscher Akademischer Austauschdienst, which is translated as German Academic Exchange Service. This scholarship is provided by German Government and European union. It is the largest German support organization in the field of international and academic co-operation. The application is open till September or October of each year for the students pursuing higher study next year. The application periods are categorized or sub divided according to study areas.
- (vi) **NSF Grant:** NSF is short for National Science Foundation. The organization is based on United States of America. It is the most prestigious grant in USA. They offer and accept fund throughout the year. A candidate needs to submit an extra-ordinary research proposal at first to be considered for the program.
- (vii) **Erasmus Mundus:** Erasmus Mundus Scholarship is a Joint Master's Degree scholarship program based on Europe and is conducted by partner universities. It is governed and regulated by European Union. A student is expected to have an excellent academic result and cocurricular activities for winning this scholarship. As application period is dynamic, a student is suggested to keep himself updated regularly.
- (viii) **MEXT:** MEXT or Monbukagakusho Scholarship is offered by Ministry of Education, Culture, Sports, Science and Technology of Japan for students who wants to study in Japan. It is very competitive but chances are high as there are different groups to apply. Like commonwealth, it also has to be routed by National Nominating Agency as direct application is not accepted.

### **Higher Study in Europe:**

There are quite a number of universities for pursuing higher studies in Europe. Some of them are well-renowned and high ranked universities in the world. Most of them offer Meng, MSc, PhD, PGD and Post-Doc opportunities for higher study aspirants. These universities are in choice for students not only for excellent education system but also for further scope of research.

#### **Germany:**

Germany is a great option for higher study in engineering. There no doubt about German Engineering qualities and Engineering education system. There are lots of universities to choose from. Generally, there are two types of universities, University of Applied Science and Technical University. Programs ranging from Mechanical Engineering, Structural Engineering, Materials Engineering and Applied Mathematics are to be mentioned. The best university for pursuing higher study in Germany in Technical University of Munich (TUM). TUM ranked as

1<sup>st</sup> in Germany, 2<sup>nd</sup> in Europe and 8<sup>th</sup> in the world in 2018 [Source: TIMES Higher Education].

### **Netherlands:**

Netherlands is another great option for higher study in engineering. There are lots of universities to choose from. Some of them are renowned for offering world class education and laboratory facilities for research. One university worth mentioning, University of Groningen which is nearly 400 years old. Like Germany here is also two types of universities, University of Applied Science and Technical University. Programs ranging from Mechanical Engineering, Coastal Engineering, Offshore Engineering Materials Engineering and Applied Mathematics are offered by them. Two universities worth mentioning. First one is University of Groningen which has a number of world class Masters programs and the second one is Delft Technical University which is recognized for its marine technology related programs.

Apart from these two countries there are other countries like Finland, Turkey, Poland, Czech Republic, Ukraine has universities offering Masters programs.

### **Higher Study in Scandinavia:**

Most of the Scandinavian universities offer great program on marine technology such as Offshore Engineering, Marine Engineering, Naval Architecture, Coastal Engineering etc. After all this region has a rich maritime tradition since long.

### **Denmark:**

Denmark offers a strong program for the higher study aspirant students. World class universities with excellent faculty and lab facilities can be found here. Few universities worth mentioning such as Denmark Technical University (DTU), University of Copenhagen, University of Aalborg. They have separate research institute for marine sector.

### **Norway:**

Norway also offers a strong program for the higher study aspirant students. They have two universities which are world top ranked and with excellent lab facilities. Norwegian University of Science and Technology is one of the top notch university in this sector.

### **Study in Canada:**

Among North American Countries Canada is one of the best options to study in Naval Architecture and Marine Engineering.

One of the most popular and world-renowned university in this sector is University of British Columbia (UBC). They offer a MEng program on Naval Architecture and Marine Engineering. However, there is no individual or dedicated research facility on UBC in case of Naval Architecture and Marine Engineering. A prospective student needs to pursue higher studies on Materials Science/Mechanical Engineering or relevant subject choice.

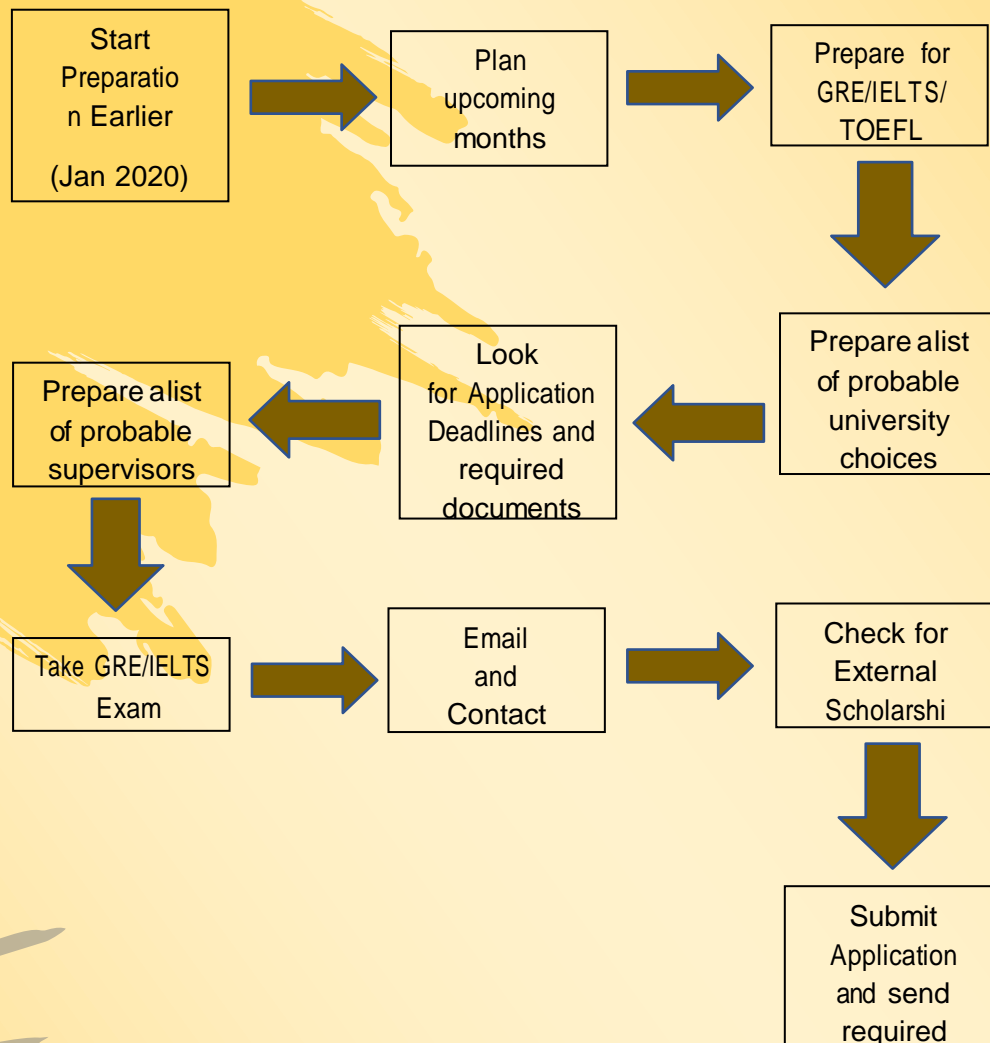
Another university for higher study persuasion in Canada is Memorial University of Newfoundland. This university offers a Masters and PhD in Ocean and Naval Architectural Engineering. They have state of the art laboratory facilities and low living cost that is why most of the students prefer it as a first choice for their higher study persuasion in Canada.

### **Study in United States of America:**

Most of the American universities offer Masters and PhD in Mechanical Engineering or other discipline. Some universities such as university of Michigan – Ann Arbor, University of New Orleans have specific Naval Architecture and Marine Engineering program. Most US

university has designated laboratory under specific program. These laboratories are supervised by professors. Each lab has different paid position such as Research Assistant, where a PhD seeking student works with the above-mentioned professors. Students are suggested to search for different laboratories on different background as per their research choice and contact with designated professors regarding positions.

Now let's have a look at the plan in a nut shell. Considering you want to apply for Fall 2021, as an international student you should come up with a plan up to December 2020 or January 2021.



Apart from these universities or countries, there are so many different areas to explore as a researcher. Of course it depends on person to person as well as each individual's perception on research interest. I would say whichever country a person selects or whatever topics they select, he or she must stick to the plan. It is not an easy task but it is not undoable. Just keep a famous quotation in mind as a famous actress Audrey Hepburn "Nothing is impossible, the word itself says 'I'm possible!'"



**Rajia Sultana  
Kamol  
NAME-01**

## **Experience in Germany**

I came to Germany two months ago for pursuing MSc degree in Metallic Materials Technology at Technische Universität Bergakademie Freiberg. I want to share some scopes of this country that one can explore after graduation. I chose Germany for its distinguished high degree of high-tech community and options. And this is apparent in all of Germany, not just a few major cities!

The reason I would recommend studying in Germany is the spark this country manages to give to your deep sense of creativity. Studies are time-dependent – you get to choose what works for you in Germany, pretty much everywhere! German universities hold a tradition of qualitative education, excelling infrastructure as well as curriculum. Packed dense with contemporary technology and a diversified professional staff that contribute to an enlightening curriculum provide a solid base for future generations of experts in whichever discipline of choice. German university degrees are recognized internationally, giving you a good start to an international career, without a doubt! And you can always give back to your home country, from the experience and knowledge gained through working in research or for a company there. Research problems are very industrial and of our time that you must continue to grow and learn each day in order to continue with your progress in the specific field you have been given the great opportunity to continue your work and studies. Even if you decide to return to your home country, you will still come back as a different person, with a lot of great experience and knowledge collected throughout your years abroad to help your country towards flourishing and prosperity! There are study programs available entirely in English. Another cherished aspect of studying here, is the open interactions and introductions to other students coming here from other countries. Getting close to your fellow students will provide more support for your study journey. Take this responsibility to enjoy this special time!

No tuition fees at public universities in Germany – literally free of charge for all students, domestic and international alike. The German



higher education system consists of 400 institutions divided into public and private institutions. Public institutions are tuition free and they host over 2.4 million students, while the private institutions host a smaller number, less than 5% of the

total student body. Prices of studying and living in Germany are very suitable for international students, while the most attractive reason remains the price of study. Every student coming to study here gets a warm welcome feeling and a deep dive into their passion and possibilities!

Looking for a job to support yourself is the best idea for new international students in Germany! There is a requirement of Residence Permit for international students to apply for a work if planning to work over the allowed student hours: 120 full days or 240 half days per year. Whereas, practice-oriented German universities have agreements with great companies to offer internships for students, which can lead to a great future job after graduation. Many campaigns are organized to raise awareness and interest to other foreign students about the conditions of studying in Germany – the world leading country in the cultivation of modern technology! “Study in Germany” campaigns are supported to raise awareness among students to benefit from the possibility of coming to study at the educational and research institutes that are abundant in German cities. Furthermore, Germany is positioned in the top list of the best industrial and technological countries in the world!

Explore all aspects of the German way of life! German people are friendly, but they also respect and value your privacy! Germans are curious and they are friends for life, once open! Outdoor activities are popular, such as cycling, hiking, skiing, and more. Most German cities are artsy and have a vivid underground music scene, fashion, books and ideals, which will further expand your horizons and understanding! Getting to join the local group of friends, you will soon learn about the real life in Germany. There are many green spaces and parks in every neighborhood – the ideal spaces to calm your mind and get it together, especially before exams! Surreal landscapes, great architecture and loads of historical data to be revealed! Its efficient and safe public transportation is another perk of studying in Germany. You get a travel card (semester ticket) for free by paying for your enrollment and administrative taxes in the university. You can also take the advantage and explore different cities and other countries in Europe at the same time. In this way you get to experience the whole Europe and its various dialects and you will absolutely have a wide-spoken language under your belt!

You can seek work after graduation easily as the law allows international graduates to stay in Germany for an additional 18 months, specifically for finding work. If you are lucky, you will stay in Germany for longer and do the job of your dreams! You will certainly learn how to apply the knowledge gained in real practical matters. Plus, a lot of the companies collaborate with the universities, giving great opportunities to find work for most students.

Many people think German language as a barrier but I think learning a new language is always somehow beneficial. This country is one of the best destinations for Engineering and Technology. Last but not the least, there is a great scope to travel 26 Schengen Countries with German Visa.

*“Be Brave. Take Risks.*

*Nothing can substitute Experience.”*

*-Paulo Coelho*

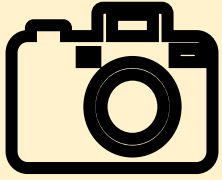


## **FROM JAPAN....**

I'm Reyana from the pioneer batch of NAME department writing this message to my beloved juniors from 3000 miles away from Bangladesh. Currently I'm doing my M.Sc. in systems design of ocean space at Yokohama National University at Yokohama, Japan as a MEXT scholarship student. Living in Japan was like a dream to me. Japan is very different than any other country you know. Japan is too quiet and peaceful. People of Japan are very polite, helpful but they are very shy to talk to anyone. You'll find older people rather than young generation in streets or any public transportation. The average age of people living in Yokohama is 49. Japanese foods are less spicy but they are very tasty. The common Japanese foods are curry-rice, udon, sushi. There're so many festivals, fireworks and events all over the year. Japanese life isn't so colorful as her festivals. People works from dawn to dusk as the living cost is very high in Japan. And there's loneliness, depression, social problems and other issues. But you'll never feel unsafe here. I lived in South Korea before coming to Japan. They are neighbors but the lifestyle is totally different. If anyone is interested in studying in Japan, I would suggest you to apply for government scholarships as it covers every expense. You'll find all the procedures in Google. Moreover, your seniors are here to guide you. Best wishes to all.



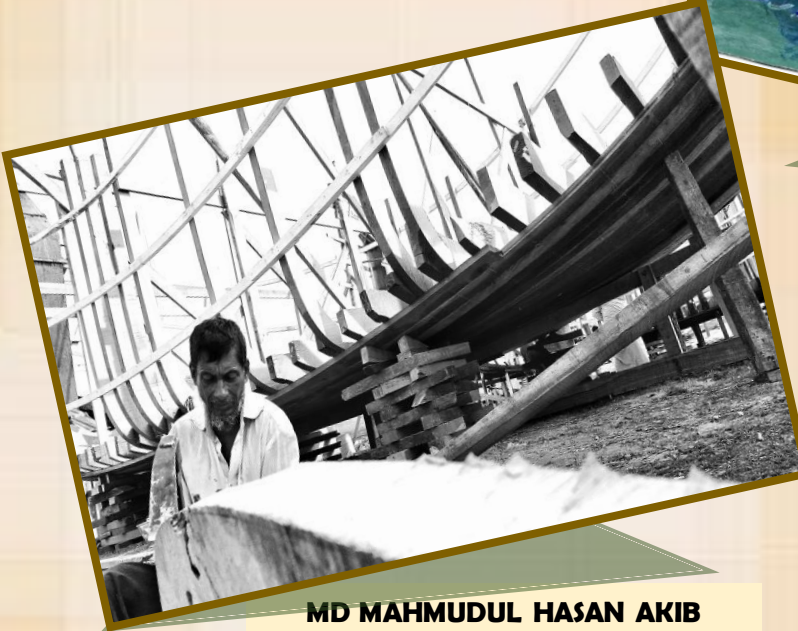
**Reyana Islam**  
**NAME-01**



**PHOTO  
TALK**



**Imrul Kayes  
NAME-07**



**MD MAHMUDUL HASAN AKIB  
NAME-06**



**ANTOR AHMED  
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**HASAN RUHAN RABBI  
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ବିର୍ଜନତାୟ ତୋମାର ମାୟା;  
ଆମାର ଶରୀରେ ମୃତ୍ୟୁ ହାୟା ।  
ଭ୍ରମ୍ୟ ମାଜାରଟି ବଢ଼ ଧାଁକା;  
ରଞ୍ଜେର ଜାଥେ କିଛି ବେନତା ମାଧା ।  
ଆକାଶ ଯଥତ ଜୋଂସ୍ନା ହୁଡ଼ାୟ;  
ଭ୍ରମ୍ୟ ତଥତ ରଞ୍ଜ ଘରାୟ ।  
ଞ୍ଜତାୟ ଭରା ଏକ ବିନ୍ଦୁ ବୀଳାଭ ଜୋଂସ୍ନାୟ;  
କଥନୋ ଗ୍ରାମାୟ,  
କଥନୋ କାଁନାୟ;  
ଆମାର ଅଜାତା କୋନୋ ଏକ ବ୍ୟଥାୟ  
ଆମାର ବିଧର ନେହ ପଡ଼େ ଥାକୁକ,  
କିଛି ରଞ୍ଜ-ଜବାୟ ।

shawon  
ନେଇମ-05

## থমকে নাড়ানো ভাবনা

পথের শেষ প্রান্তে এসে থমকে নাড়ি,  
অসীম কোম স্ফোর পিছনে ফিরে তাকি,  
কেও নেই,

চারিদিকে খান্ড কোলাহল,  
নিরন্তর প্রচারণা করে যায় !  
হাজারো হাজির মাঝে দুঃখি আমি,  
হাজারো লোকের ভিড়ে একা আমি,  
আমার ছায়া তবুও আমার সংগী ।  
পথের শেষ বাঁকে এসে পিছিয়ে যাই,  
কেনো ?

জানি না !

আবারো কি জেই ব্যর্থতার জয় ?  
আবারো কি জেই হেরে যাওয়ার জয় ?

অজানা কোম আকর্ষণ,  
আমার সামনে রুখে নাড়ায় !!  
অদৃশ্য কোম চপোটিঘাতে,  
সম্বিত ফিরে পাই (!)  
চপোটিঘাত ?

বিবেকের ? তোমার ? অবচেতন মনের ?  
জানি না, জানতেও চাই না, কেনো জানবো ?  
আমার তো কেউই নেই,  
তুই নেই, আপনি নেই, তুমি তো ছাড় ই.....!  
পথের শেষ বাঁকে এসে থমকে নাড়ি,  
কী পেলাম ?  
তুই, আপনি না তুমি ????

ফারহান মাহমুদ রাফি  
নেইম-০৩

# MARPOL: The Decider

## **Green no?**

The five words which may even soothe a child from the very beginning and even being the most concerned thing, it remains negligible most of the time...

To be very honest, thousands of steps would have been taken and results having poor efficiency put all the efforts in the ashtray. That's the scenario of taking steps to keep the environment fair. Fortunately, this thing has been taken care of in this arena, considering the so-called environment as ocean!!!

Marine vessels while sailing offshore need to do disposal of abandoned and the satisfactory thing is that each and every vessel undergoes rules and regulations for this. If reverse; they go through fines. **MARPOL** the International Convention for the Prevention of Pollution from Ships is the main international convention covering prevention of pollution of the marine environment by ships from operational or accidental causes.

The MARPOL Convention was adopted on 2 November 1973 at IMO (International Maritime Organization). The Convention includes regulations aimed at preventing and minimizing pollution from ships - both accidental pollution and that from routine operations - and currently includes six technical Annexes. Special areas with strict controls on operational discharges are included in most Annexes.

## **Annex I**

### **Regulations for the Prevention of Pollution by Oil (entered into force 2 October 1983)**

Covers prevention of pollution by oil from operational measures as well as from accidental discharges; the 1992 amendments to Annex I made it mandatory for new oil tankers to have double hulls and brought in a phase-in schedule for existing tankers to fit double hulls, which was subsequently revised in 2001 and 2003.

## **Annex II**

### **Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk (entered into force 2 October 1983)**

Details the discharge criteria and measures for the control of pollution by noxious liquid substances carried in bulk; some 250 substances were evaluated and included in the list appended to the Convention; the discharge of their residues is allowed only to reception facilities until certain concentrations and conditions (which vary with the category of substances) are complied with.

In any case, no discharge of residues containing noxious substances is permitted within 12 miles of the nearest land.

## **Annex III**

### **Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form (entered into force 1 July 1992)**

Contains general requirements for the issuing of detailed standards on packing, marking, labeling, documentation, stowage, quantity limitations, exceptions and notifications.

For the purpose of this Annex, “harmful substances” are those substances which are identified as marine pollutants in the International Maritime Dangerous Goods Code (IMDG Code) or which meet the criteria in the Appendix of Annex III.

#### **Annex IV**

##### **Prevention of Pollution by Sewage from Ships (entered into force 27 September 2003)**

Contains requirements to control pollution of the sea by sewage; the discharge of sewage into the sea is prohibited, except when the ship has in operation an approved sewage treatment plant or when the ship is discharging comminuted and disinfected sewage using an approved system at a distance of more than three nautical miles from the nearest land; sewage which is not comminuted or disinfected has to be discharged at a distance of more than 12 nautical miles from the nearest land.

#### **Annex V**


##### **Prevention of Pollution by Garbage from Ships (entered into force 31 December 1988)**

Deals with different types of garbage and specifies the distances from land and the manner in which they may be disposed of; the most important feature of the Annex is the complete ban imposed on the disposal into the sea of all forms of plastics.

#### **Annex VI**

##### **Prevention of Air Pollution from Ships (entered into force 19 May 2005)**

Sets limits on Sulphur oxide and nitrogen oxide emissions from ship exhausts and prohibits deliberate emissions of ozone depleting substances; designated emission control areas set more stringent standards for SO<sub>x</sub>, NO<sub>x</sub> and particulate matter. A chapter adopted in 2011 covers mandatory technical and operational energy efficiency measures aimed at reducing greenhouse gas emissions from ships.



INFORMATION  
ACCUMULATED  
BY: RIDOY  
KARMOKAR  
ID-201924018  
NAME-07

# WARSHIP

A **warship** or **combatant ship** is a naval ship that is built and primarily intended for naval warfare. Usually they belong to the armed forces of a state. As well as being armed, warships are designed to withstand damage and are usually faster and more maneuverable than merchant ships. Unlike a merchant ship, which carries cargo, a warship typically carries only weapons, ammunition and supplies for its crew. Warships usually belong to a navy, though they have also been operated by individuals, cooperatives and corporations.

In wartime, the distinction between warships and merchant ships is often blurred. In war, merchant ships are often armed and used as auxiliary warships, such as the Q-ships of the First World War and the armed merchant cruisers of the Second World War...*The Cannon Shot* (1670) by Willem van de Velde the Younger, showing a late Dutch 17th-century ship of the line

## Evolution

### ➤ First warships

Assyrian warship, a bireme with pointed bow circa 700 BC. In the time of Mesopotamia, Ancient Persia, Ancient Greece and the Roman Empire, warships were always galleys (such as biremes, triremes and quinqueremes): long, narrow vessels powered by banks of oarsmen and designed to ram and sink enemy vessels, or to engage them bow-first and follow up with boarding parties. The



The development of catapults in the 4th century BC and the subsequent refinement of this technology enabled the first fleets of artillery-equipped warships by the Hellenistic age.

### ➤ The Age of Sail

Naval artillery was redeveloped in the 14th century, but cannon did not become common at sea until the guns were capable of being reloaded quickly enough to be reused in the same battle. The size of a ship required to carry a large number of cannons made oar-based propulsion impossible, and warships came to rely primarily on sails. The sailing man-of-war emerged during the 16th century.

By the middle of the 17th century, warships were carrying increasing numbers of cannon on their broadsides and tactics evolved to bring each ship's firepower to bear in a line of battle.



➤ **20th century**

The dreadnought era: Another revolution in warship design began shortly after the start of the 20th century, when Britain launched the Royal Navy's all-big-gun battleship Dreadnought in 1906. Powered by steam turbines, it was bigger, faster and more heavily gunned than any existing battleships, which it immediately rendered obsolete. It was rapidly followed by similar ships in other countries.

The Royal Navy also developed the first battlecruisers. Battlecruisers were faster and more powerful than all existing cruisers, which they made obsolete, but battlecruisers proved to be much more vulnerable than contemporary battleships.

➤ **Decline of battleships**

During the lead-up to the Second World War, Germany and Great Britain once again emerged as the two dominant Atlantic sea powers. Germany, under the Treaty of Versailles, had its navy limited to only a few minor surface ships. But the clever use of deceptive terminology, such as "Panzerschiffe" deceived the British and French commands. They were surprised when ships such as Admiral Graf Spee, Scharnhorst, and Gneisenau raided the Allied supply lines. The greatest threat though, was the introduction of the Kriegsmarine's largest vessels, Bismarck and Tirpitz.

**Types**

- Amphibious assault ship
- Aviso, a kind of dispatch boat
- Capital ship, the largest and most important ships in a nation's fleet. These were previously battleships, battlecruisers, and aircraft carriers, but the first two warship types are now no longer used.



*Fig: Russian Typhoon-class submarine*

- Destroyer, a fast and highly maneuverable warship, traditionally incapable of independent action. Originally developed to counter the threat of torpedo boats, they are now the largest independent warship generally seen on the ocean.
- Fast attack craft
- Fire ship, a vessel of any sort set on fire and sent into an anchorage or fleet with the intention of causing destruction and chaos. Exploding fire ships may be called hellburners.
- Frigate, a ship used in modern navies (Although they date back to the 17th century) that are typically used to protect merchant vessels and other warships.

NAHID HASAN  
RONY  
NAME-07



## 4ocean Mobile Skimmer

The world's oceans are a magical, diverse and abundant ecosystem that mankind needs in order to survive. The oceans cover over 72 percent of the planet's surface, provide over 97 percent of the world's water supply and over 70 percent of the oxygen we breathe.

We have so much to thank the oceans for. However, they are threatened daily by natural and manmade pollution. Ocean pollution comes in many forms, but the largest factor affecting the oceans is plastic.

Over the last decade, we have produced more plastic than we have in the last 100 years. This sharp increase in plastic entering our waters harms not only marine life but also humanity.

Plastic kills fish, birds, marine mammals and sea turtles, destroys habitats and even affects animals' mating rituals, which can have devastating consequences and can wipe out entire species.



**About:** The one-man marine debris collection vessel for all waterways.

### **4ocean:**

4ocean is a for profit company founded in Boca Raton, Florida in 2017 that sells bracelets made mostly from recycled materials, as well as apparel and other merchandise for which the materials are environmentally and socially responsibly sourced. The company uses a portion of the profits to remove one pound of trash from the ocean and coastlines for each bracelet that is sold in an effort to clean up plastic pollution in oceans. The company has cleanup operations in Bali, Haiti and Florida

Founded: January 4, 2017

Founders: Alex Schulze, Andrew Cooper

### **The Machine:**

**Purpose:** Recover marine debris from any waterway using this fuel-efficient vessel. Articulating arms on the front guide marine debris onto a conveyor belt that leads to a super sack with the capacity to hold up to 220 pounds of debris.

### **Functions overview:**

The 4ocean Mobile Skimmer was designed and engineered as an efficient and cost-effective solution to extract floating debris from a variety of waterways.

The Mobile Skimmer acts as a surface skimming vessel as it moves through the waterway. Utilizing forward-facing, hydraulically-controlled skimming arms, a single operator can gather a large volume of marine debris and redirect it under the unit. As debris accumulates under the unit, a hydraulically-controlled conveyor belt system transfers debris from the surface to strategically placed, custom-made debris sacks. A hydraulically controlled, aft-mounted boom crane is designed and placed to safely move and offload sacks containing up to 1,000 pounds of marine debris. It can also be used to onboard large pieces of floating debris and/or move additional gear. Powered with midrange horsepower four stroke fuel-injected outboards, the Mobile Skimmer can run all day while consuming minimal fuel. The entire hydraulic system runs on 12-volt motors to keep energy consumption at a minimum while the engines return charge to the battery bank. The conveyor belt system is constructed with aluminum framing and stainless components.

The belting sits well below the waterline while in service and can be raised for trailering or for operation in shallow waterways. From the custom-built cab, the operator has complete control of the vessel including the hydraulics systems, conveyor belt system, all navigation and



electrical systems, communications, and motor functionalities. The helm was designed to be both ergonomic and functional to make long shifts less fatiguing; it's even fitted with an air ride adjustable captain's chair. With forward-folding arms, a recessed conveyor belt, and narrow beam, no component removal is required to transport the Mobile Skimmer on its custom trailer. The vessel can also be completely disassembled to fit within a standard 40' ocean freight shipping container if needed.

### **Specifications:**

1. 5083 and 6061 aluminum frame and construction
2. Stainless steel components and hardware
3. HDPE molded removable pontoon system
4. Non-skid decking on all flat surfaces
5. Safety railing system on exterior perimeter
6. Coast Guard compliant lighting and navigational lights

7. Self-contained hydraulic pump systems
8. 40HP four stroke EFI outboard engines (electric / trim / tilt)
9. Redundant engine motor and gauges
10. Dual hydraulic steering for outboard
11. EPA-compliant fuel system and tank
12. NMEA 2000 connectivity for onboard electronics and engine monitoring
13. 9" Simrad touchscreen display (GPS / sonar / gauges / fuel monitor)
14. VHF radio with hailer
15. 28" LED forward-facing light bar with strobe and dual spreader deck lights
16. Bluetooth stereo unit with (2) 4" speakers
17. Backlight rocker switch panel
18. 12-volt power throughout battery bank system
19. Onboard battery / shore charger
20. Independent hydraulic controls for arms and conveyor
21. Air ride adjustable helm seat
22. Manufacturer Statement of Origin
- 23.

For more information visit : <https://4oceantechnology.com/>



SYED  
AURONGZEB  
AHMED  
201824011  
NAME-06

## THE BLACK DOT

One day a professor entered the classroom and asked his students to prepare for a surprise test. They waited anxiously at their desks for the test to begin. The professor walked around the class and handed the question papers with the text facing downwards.

Once he handed them all out, he asked his students to turn the page and begin. To everyone's surprise, there were no questions, but just a black dot in the center of the page. The professor thoroughly read through everyone's bewildered expressions and said- "I want you to write what you see there."

The perplexed students began to do what they had been asked to do.



At the end of the class, the professor took all the answer papers and started reading each one of them aloud in front of all the students. All of them with no exceptions described the black dot, trying to explain its position in the middle of the sheet,

etc. After all had been read, the classroom silent, the professor began to explain:

"I am not going to grade you on this test; I just wanted to give you something to think about. No one wrote about the white part of the paper. Everyone focused on the black dot – and the same happens in our lives. This is exactly what we end to do with our lives. We have a white paper to hold onto and enjoy, but we are so busy contemplating about the dark spots that's in there. Life is a special gift and we will always have reasons to celebrate. It is changing and renewing everyday- our friends, jobs, livelihood, love, family, the miracles we see every day."

And yet we insist on focusing only on the dark spots – the health issues that are bothering us, the money that we need to have, the

luxuries we don't have, complications in any relationship, problems with a family member, the disappointment with a friend and so on. You need to realize that the dark spots are very small and only few. And yet we allow these to pollute our minds. Take your eyes away from the black spots in your life. Enjoy each one of your blessings, each moment that life gives you. So, count your blessings, not your problems.

**Rakibul Azad  
Tawhid  
ID-201924014  
Name-07**

## **USS INDIANAPOLIS: THE SHIP DELIVERING HELL**

**USS Indianapolis**, in full **United States Ship Indianapolis**, U.S. Navy heavy cruiser that was sunk by a Japanese submarine on July

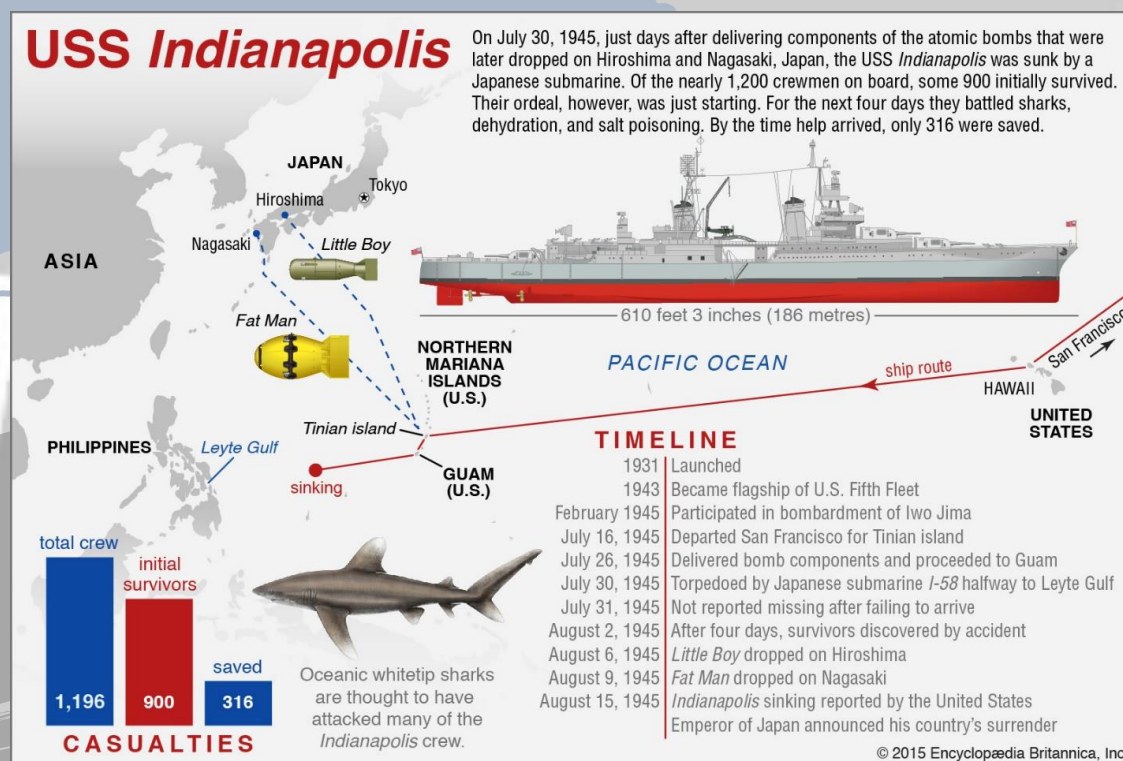


30, 1945, shortly after delivering the internal components of the atomic bombs that were later dropped on Hiroshima and Nagasaki, Japan. Up to 900 men initially survived the sinking, but many succumbed to

shark attacks, dehydration, and salt poisoning as they awaited rescue; only 316 were saved.

## Construction and Dimensions

The USS *Indianapolis* was built in Camden, New Jersey. The ship was launched in 1931 and commissioned by the U.S. Navy the following year. A Portland-class heavy cruiser, the *Indianapolis* was 610 feet 3 inches (186 metres) long and displaced 9,950 tons. It carried a main battery of nine 8-inch guns and eight 5-inch anti-aircraft guns. Powered by eight boilers turning four steam turbines, the ship could reach speeds of more than 32 knots (nautical miles per hour). In its first years, the *Indianapolis* operated in the Atlantic and Pacific oceans. The ship carried U.S. Pres. Franklin D. Roosevelt on three cruises, including a “Good Neighbor” visit to South America in 1936.



## World War II: Delivery of Atomic Bomb Parts and Sinking

After the United States entered World War II, the ship was assigned to aircraft-carrier task forces in the Pacific theatre. In 1943 it became the flagship of the U.S. Fifth Fleet under Vice Admiral Raymond Spruance. The *Indianapolis* participated in the bombardment of the Japanese island of Iwo Jima in February 1945. The following month the *Indianapolis* was damaged by a Japanese kamikaze plane off

Okinawa island, but it was soon repaired and returned to active service.

In late July 1945 the *Indianapolis* was sent on a high-speed voyage to deliver cargo to a U.S. air base on Tinian, one of the Mariana Islands, in the western Pacific. No one on board knew that the cargo consisted of parts for atomic bombs. The *Indianapolis* traveled from San Francisco to Tinian in only 10 days. After completing the delivery on July 26, it proceeded to Guam and then was sent to Leyte Gulf, in the Philippines. The ship had traveled about halfway to Leyte when it was hit on July 30 by two torpedoes from the Japanese submarine *I-58*. The *Indianapolis* sank in about 12 minutes.

### **Discovery of Wreckage**

Over the years numerous efforts were undertaken to find the *Indianapolis*. However, given its depth—some 3.4 miles (5.5 km) below water—and uncertainty about its location, the wreckage remained lost until August 2017, when it was discovered by a team of researchers led by Paul Allen, cofounder of Microsoft.

WRITTEN BY:

- [Andrea Field](#)



MD.REJWAN AL  
FOYSAL  
ID:201924039  
NAME-O7

## **The FLIP ship: An Amazingly weird research ship**

Can we imagine a vessel flipping? One would rather take the vessel as capsized than flipped. What if I told you there's a ship which is meant to capsize? Sounds funny, right? But of course science has always offered us the opportunity to witness some things that are beyond our imagination. One of the most unique inventions of science that has taken Naval Architecture to a new height is "The FLIP ship". It is considered the most unique designed vessel that has been ever built.



Floating Instrument Platform (FLIP) is a unique oceanographic research vessel owned by the Office of Naval Research (ONR) and operated by the Marine Physical Laboratory at Scripps Institution of Oceanography. FLIP lives up to its name; it's designed to do what no other boat does without sinking—flip a full 90 degrees by submerging

300 feet of its hull and leaving just 55 feet of bow above the water.

### **Construction and maintenance of the research vessel**

Launched in June 1962 by The Gunderson Brothers Engineering Company of Portland, the FLIP was designed by two MPL scientists, Dr Fred Fisher and Dr Fred Spiess, to create a more stable space than a conventional research ship to study wave forms. The FLIP Maintenance Availability began at the Campbell Shipyard in December 1994 and was completed in January 1996. FLIP underwent constant dry dockings in 2001, 2003, 2006 and 2010, and completed 50 years of successful operations in 2012.

### **The FLIP transformation**

FLIP's unique design makes it the only vessel in the world capable of operating both horizontally and vertically. The transition from horizontal to vertical positioning takes nearly 30 minutes, after which 300m of the buoy is submerged underwater, keeping the 700 long-ton mass steady, providing a stable research platform for underwater acoustics research. When flipped, most of the buoyancy for the platform is provided by water at depths below the influence of surface waves, hence FLIP is a stable platform mostly immune to wave action. At the end of a mission, compressed air is pumped into the ballast tanks in the flooded section and the vessel returns to its horizontal position so it can be towed to a



new location. During the flip, everyone stands on the outside decks. As FLIP flips, the decks slowly become bulkheads and the bulkhead becomes the deck. Most rooms on FLIP have two doors; one to use when horizontal, the other when FLIP is vertical. Some of FLIP's furnishings are built so they can rotate to a new position as FLIP flips. Other equipment must be unbolted and moved. Some things, like tables in the galley (kitchen) and sinks in the washroom, are built twice so one is always in the correct position. The entire flip operation takes twenty-eight minutes. When FLIP stands vertically, it rises more than five stories into the air.

### **Purpose**

The main reason why this Research Ship is designed in this manner is because, generally the horizontal position of the ship does not allow accurate readings of waves and other oceanic data relevant because of the movement that a ship's natural shape reduces the potency of the measuring devices. Therefore, the Flip Ship was created which could solve the problem of the potency of the measuring devices by providing the flexibility to the Research Ship to stand vertical and independent of waves in the water and carry on its research accordingly. The ship can face waves up to 80 ft. and is maneuverable in both shallow as well as deep water. Also, since the Flip Ship's main purpose is to aid and play a pivotal role in researching the oceanic waters, it does not have any engines and in order to maneuver it into the waters, tows are used to carry out the operation. This unusual purposes affect every part of the boat's design, including the quirky and cramped living quarters, which must work for life in two orientations. Despite this, or perhaps because of it, FLIP is a favorite among the researchers who spend weeks aboard. ***"It was built in the decade that people were trying to reach the Moon and so thinking big was on everyone's mind,"*** says Robert Pinkel. Pinkel is a professor emeritus at Scripps Institution of Oceanography at the University of California, San Diego, and has been using FLIP for research nearly as long as it has been in service.

Lastly, what does the future hold for FLIP? I would be shocked if there are no imitators. It is such a self-evidently pragmatic design that there's little reason not to replicate it as we expand our long-term offshore scientific presence. But as research budgets shrink, and fewer people go into oceanographic research, it's hard to say what is on the horizon for FLIP. "The future of FLIP is totally determined by the future of people in science," says Pinkel. "FLIP has been a kind of quiet resource for the country for 50 years and it's not so much the ship, but that the next generation of people who are willing to use it—that's what hangs in the balance."

SARAH JABIN  
CHOWDHURY  
201824031  
NAME 6

# History of World Maritime Day

Kingdom, and the United States. Many maritime organizations and unions hold special events and activities to celebrate this day. These activities and events range from symposiums to luncheons, as well as school lessons that focus on the day. Some classes may organize a trip to a maritime museum so students can understand the significance of the maritime industry in shaping world history and its importance in world trade.

## Public Life

World Maritime Day is a global observance and not a public holiday.

## Background

- Throughout history, people have understood that international regulations that are followed by many countries worldwide could improve marine safety so many treaties have been adopted since the 19th century. Various countries proposed for a permanent international body to be established to promote maritime safety more effectively but it was not until the UN was established that these hopes were realized. An international conference in Geneva in 1948 adopted a convention formally establishing the IMO, a specialized UN agency that develops and maintains a comprehensive regulatory framework for shipping.
- The IMO's original name was the Inter-Governmental Maritime Consultative Organization (IMCO) but the name was changed in 1982 to IMO. The IMO focuses on areas such as safety, environmental concerns, legal matters, technical co-operation, maritime security and the efficiency of shipping.
- World Maritime Day was first held on March 17, 1978 to mark the date of the IMO Convention's entry into force in 1958. At that time, the organization had 21 member states. It now has about 167 member states and three associate members. This membership includes virtually all the nations of the world with an interest in maritime affairs, including those involved in the shipping industry and coastal states with an interest in protecting their maritime environment.
- **Note:** The dates below are a rough guide on when World Maritime Day is observed, based on the most recent previous dates it was observed by the UN. It is also important to note that the exact date is left to individual governments but is usually celebrated during the last week in September.

## World Maritime Day Observances

- Showing: 1950–1999–2000–20492015–20252050–20992100–21492150–21992200–22492250–22992300–23492350–23992400–24492450–

24992500–25492550–25992600–26492650–26992700–27492750–  
 27992800–28492850–28992900–29492950–29993000–30493050–  
 30993100–31493150–31993200–32493250–32993300–33493350–  
 33993400–34493450–34993500–35493550–35993600–36493650–  
 36993700–37493750–37993800–38493850–38993900–39493950–3999

<b><u>Year</u></b>	<b><u>Weekday</u></b>	<b><u>Date</u></b>	<b><u>Name</u></b>	<b><u>Holiday Type</u></b>
<b>2015</b>	<b>Thu</b>	<b>Sep 24</b>	<b>World Maritime Day</b>	<b>United Nations observance</b>
<b>2016</b>	<b>Thu</b>	<b>Sep 29</b>	<b>World Maritime Day</b>	<b>United Nations observance</b>
<b>2017</b>	<b>Thu</b>	<b>Sep 28</b>	<b>World Maritime Day</b>	<b>United Nations observance</b>
<b>2018</b>	<b>Thu</b>	<b>Sep 27</b>	<b>World Maritime Day</b>	<b>United Nations observance</b>
<b>2019</b>	<b>Thu</b>	<b>Sep 26</b>	<b>World Maritime Day</b>	<b>United Nations observance</b>
<b>2020</b>	<b>Thu</b>	<b>Sep 24</b>	<b>World Maritime Day</b>	<b>United Nations observance</b>
<b>2021</b>	<b>Thu</b>	<b>Sep 23</b>	<b>World Maritime Day</b>	<b>United Nations observance</b>
<b>2022</b>	<b>Thu</b>	<b>Sep 22</b>	<b>World Maritime Day</b>	<b>United Nations observance</b>
<b>2023</b>	<b>Thu</b>	<b>Sep 28</b>	<b>World Maritime Day</b>	<b>United Nations observance</b>
<b>2024</b>	<b>Thu</b>	<b>Sep 26</b>	<b>World Maritime Day</b>	<b>United Nations observance</b>
<b>2025</b>	<b>Thu</b>	<b>Sep 25</b>	<b>World Maritime Day</b>	<b>United Nations observance</b>

INFORMATION  
 ACCUMULATED  
 BY:

MD. TASDID  
 HASAN  
 201924036  
 NAME-07

NAME 04

PROFILE



Maj Md Faruke Mehedi, Engrs  
ID: 201624002

১. **MIST** থেকে তোমার প্রাপ্তি কি? - তেমন বিশেষ কিছুবা
২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে? - অন্য কোন ক্যান্টিনমেন্ট এ চাকরি করতাম
৩. **MIST** তে তোমার স্মরণীয় কিছু কথা? - প্রশ্ন তো খুবই সোজা ছিল।তোমরা উত্তর দিতে পারলো না কেন!!
৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও? - Within 100 Institutes of the world

সেয়েছি life partner Mr. Mehedi কে ১. **MIST** থেকে তোমার প্রাপ্তি কি? কোন চয়েস ছিল না .আসতেই হতো ২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে? অনেক কথাই বলতে হয় আবার বলার কিছুই নাই ৩. **MIST** তে তোমার স্মরণীয় কিছু কথা? উন্নতির সর্বোচ্চ শিখরে ৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও?



Lt Ruby Akter, (E), BN  
ID: 201624003

১. **MIST** থেকে তোমার প্রাপ্তি কি? চ্যালোড্রিং পরিস্থিতির সাথে খাপ খাইয়ে বেয়া শিখতে পারা
২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে? এলেকট্রিকিউটিভ ব্রাঞ্চ অফিসার
৩. **MIST** তে তোমার স্মরণীয় কিছু কথা? চারটি বছরের প্রতিটি মুহূর্তই মনে রাখার মত
৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও? বুয়েটের থেকেও উপরে



Lt M Asiful Mahedi, (E), BN  
ID: 201624004

Some good coursemates - ১. **MIST** থেকে তোমার প্রাপ্তি কি? Maybe would have been serving in a ship - ২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে? Everyday is memorable - ৩. **MIST** তে তোমার স্মরণীয় কিছু কথা? আর ভাল জায়গায় - ৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও?



Lt Zahid Mohsin Kabir, (E), BN  
ID: 201624007

১. **MIST** থেকে তোমার প্রাপ্তি কি? - Thousand unforgettable memories together with my coursemates, many little brothers and sisters
২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে? - Maybe would have been serving in ship
৩. **MIST** তে তোমার স্মরণীয় কিছু কথা? - all the memories I had here.
৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও? - In a better place for sure



Lt M Asif Ahmed, (E), BN  
ID: 201624008



**Md. Jafrul Hasan**  
ID: 201624010

১. **MIST** থেকে তোমার প্রাপ্তি কি? - Rules & Regulation
২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে? - Engineer
৩. **MIST** তে তোমার স্মরণীয় কিছু কথা? - নাই
৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও? - প্রাক্তর MIT

ইঞ্জিনিয়ার হিসেবে পরিচিতি - ১. **MIST** থেকে তোমার প্রাপ্তি কি?  
খুলনা বিশ্ববিদ্যালয় - ২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে?  
শিরোনামহীন এর কনসার্ট - ৩. **MIST** তে তোমার স্মরণীয় কিছু কথা?  
অন্যতম সেরা বিশ্ববিদ্যালয়ের স্মৃতি - ৪. **MIST** কে তুমি ভবিষ্যতে কোথায়  
দেখতে চাও?



**Md. Sakhawat Hossen**  
ID: 201624012

১. **MIST** থেকে তোমার প্রাপ্তি কি? - Friend
২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে? - DU te geography পরীক্ষা
৩. **MIST** তে তোমার স্মরণীয় কিছু কথা? - বড় যা কিছু হও বা কেন ,আগে ভাল মানুষ হও
৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও? - আর ভাল জায়গায়, নাম বলেই যাতে সবাই চিনতে পারে



**Nazifa Hussain Nisha**  
ID: 201624013

I have gain discipline, knowledge- ১. **MIST** থেকে তোমার প্রাপ্তি কি?  
Wanted to join in military- ২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে?  
Every Moment here is special- ৩. **MIST** তে তোমার স্মরণীয় কিছু কথা?  
it should be "MUST"- ৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও?



**Mahrab Alam**  
ID: 201624014

Discipline ফুল লাইফ গঠন - ১. **MIST** থেকে তোমার প্রাপ্তি কি?  
একজন ভালো মানুষ হতে পারি- ২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে?  
হল ( hall) লাইফ এবং ক্যাম্পাস- ৩. **MIST** তে তোমার স্মরণীয় কিছু কথা?  
সেরা শিক্ষা প্রতিষ্ঠান হিসেবে- ৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও?



**Musa Al Kazim Apon**  
ID: 201624015



**Md. Nazmul Hasan Tushar**  
ID: 201624016

১. **MIST** থেকে তোমার প্রাপ্তি কি? - Bsc certificate আর বন্ধুদের দেরা ভাই বাজমুল নাম
২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে? - Textile engineer
৩. **MIST** তে তোমার স্মরণীয় কিছু কথা? - স্মরণশক্তি দুর্বল তাই স্মরণ রাখার মত কিছু মনে বাহি
৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও? - মিরপুরে আছে মিরপুরেই দেখতে চাই দূরে কোথাও না

- Some good friends & Eng.tag -১. **MIST** থেকে তোমার প্রাপ্তি কি?  
Allah knows better -২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে?  
প্রতিটি দিনই স্মরণীয় -৩. **MIST** তে তোমার স্মরণীয় কিছু কথা?  
A renowned Engineering University -৪. **MIST** কে তুমি ভবিষ্যতে  
কোথায় দেখতে চাও?



**Eshadul Haque**  
ID: 201624017



**Sk. Hasib Mahmood**  
ID: 201624018

১. **MIST** থেকে তোমার প্রাপ্তি কি? - Engineer হইছি
২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে? - আল্লাহ ভাল জানেন
৩. **MIST** তে তোমার স্মরণীয় কিছু কথা? - তেমন কিছু নেই
৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও? - দেশের জেরা জার্সিটি হিজরে

- Knowledge, discipline, punctuality, regularity-১. **MIST** থেকে তোমার প্রাপ্তি কি?  
Textile engineer-২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে?  
-৩. **MIST** তে তোমার স্মরণীয় কিছু কথা?  
I had missed my first class in MIST which was conducted by Cdr. Mohiuddin sir  
Best of the best in bangladesh-৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে  
চাও?



**Neamul Alom**  
ID: 201624021



**A S M Salin**  
ID: 201624022

১. **MIST** থেকে তোমার প্রাপ্তি কি? - Love from seniors and teachers and the respect from juniors
২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে? - কিছুই মনে হয় হতাশ না
৩. **MIST** তে তোমার স্মরণীয় কিছু কথা? - প্রতিটি দিনই স্মরণীয়, কারণ একেদিন একে কহিনি হত্না..
৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও? এমন অবস্থায় যাতে স্টুডেন্টরা MIST নিয়ে proud থাকবে!



Saiful Karim  
ID: 201624024

১. **MIST** থেকে তোমার প্রাপ্তি কি? - Degree in an well educational environment
২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে? - May be a Veterinary Doctor
৩. **MIST** তে তোমার স্মরণীয় কিছু কথা? - Every moment in Osmany Hall
৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও? - A renowned Engineering University with a brand value like BUET

- B.Sc Degree- ১. **MIST** থেকে তোমার প্রাপ্তি কি? Chartered accountant (CA)- ২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে? Will miss MIST cafeteria- ৩. **MIST** তে তোমার স্মরণীয় কিছু কথা? A University with no dress- ৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও?



Md. Obaidullah  
ID: 201624025



Abdul Aziz  
ID: 201624026

১. **MIST** থেকে তোমার প্রাপ্তি কি? - বিজেকে rules & regulation মধ্যে আনতে পেরেছি
২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে? - Textile Eng.
৩. **MIST** তে তোমার স্মরণীয় কিছু কথা? - study hard and go abroad
৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও? - গবেষণা খাতে উন্নত বিশ্ববিদ্যালয়গুলোর মধ্যে অন্যতম হিসেবে দেখতে চাই

- ভাল এবং খারাপ - ১. **MIST** থেকে তোমার প্রাপ্তি কি? May be Agricultural Student - ২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে? Every Moment - ৩. **MIST** তে তোমার স্মরণীয় কিছু কথা? it should be "MUST"- ৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও?



Shahiduzzaman  
ID: 201624027



Md. Kausarul Islam  
ID: 201624028

১. **MIST** থেকে তোমার প্রাপ্তি কি? ভাল এবং খারাপ
২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে? Wanted to be Cricketer
৩. **MIST** তে তোমার স্মরণীয় কিছু কথা? Every Moment
৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও? it should be "MUST"





**Shoumik Mojumder**  
ID: 201624029

১. **MIST** থেকে তোমার প্রাপ্তি কি? - কিছু ভালো বন্ধু
২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে? - Engineer
৩. **MIST** তে তোমার স্মরণীয় কিছু কথা? - study hard and go abroad
৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও? - As a university

- Some Good Friends.-১. **MIST** থেকে তোমার প্রাপ্তি কি?  
Textile Eng.-২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে?  
Everything is memorable-৩. **MIST** তে তোমার স্মরণীয় কিছু  
কথা?  
As a university.-৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও?



**S M Taukir Rahman**  
ID: 201624030



**A S M Araf Raihan**  
ID: 201624032

১. **MIST** থেকে তোমার প্রাপ্তি কি? - Some good Friends & Juniors
২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে? - I don't know.
৩. **MIST** তে তোমার স্মরণীয় কিছু কথা? - "study hard and go abroad"
৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও? - One of the Best

- B.Sc degree & discipline -১. **MIST** থেকে তোমার প্রাপ্তি কি?  
Allah knows -২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে?  
Everything is memorable -৩. **MIST** তে তোমার স্মরণীয় কিছু  
কথা?  
The Best -৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও?



**Nazmus Shakib**  
ID: 201624034



**Md. Ridoanul Haque**  
ID: 201624036

১. **MIST** থেকে তোমার প্রাপ্তি কি? - কিছু ভালো মানুষ
২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে? - আল্লাহ জানেন ভালো
৩. **MIST** তে তোমার স্মরণীয় কিছু কথা? - লাল বিল্ডিংয়ের চার চালায় হেটে উঠা
৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও? - ক্যান্টনমেন্টের বাহিরে



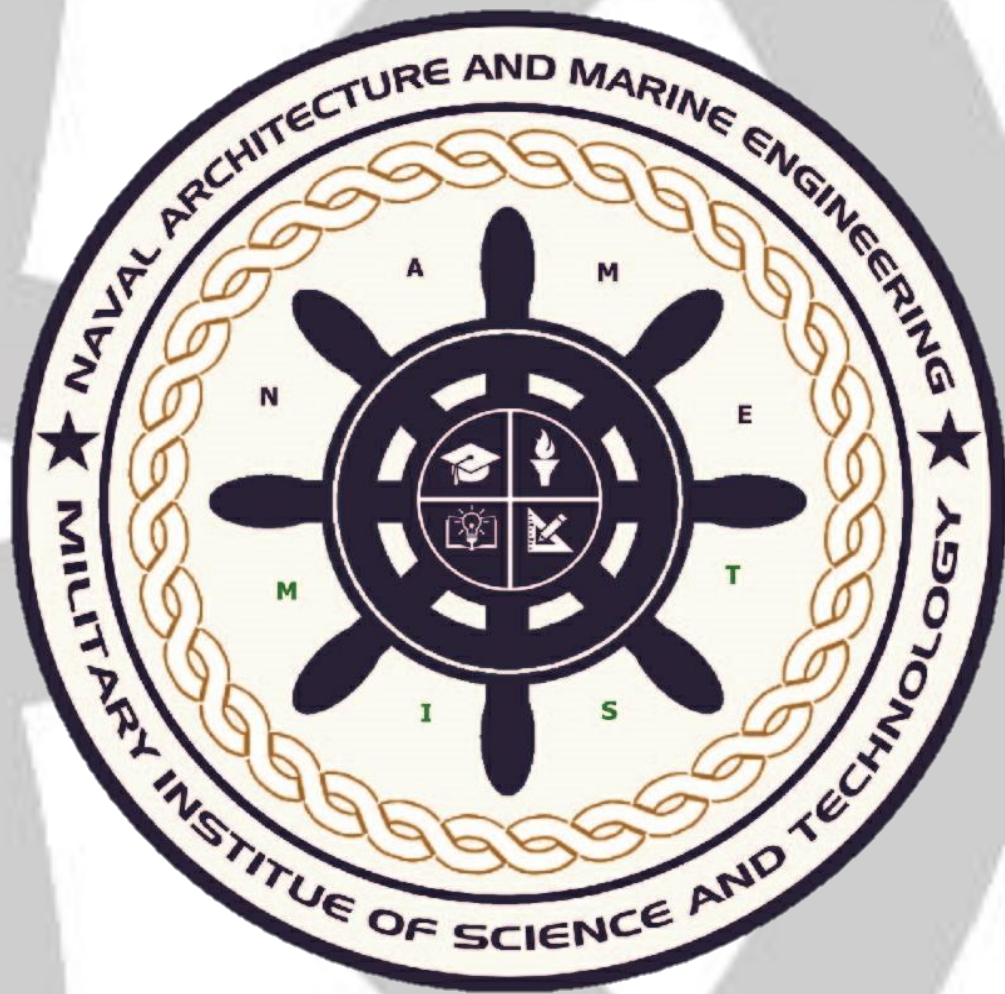
**Abu Sufian**  
ID: 201624039

১. **MIST** থেকে তোমার প্রাপ্তি কি? Some Good friends and teacher
২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে? - Wanted to be pilot
৩. **MIST** তে তোমার স্মরণীয় কিছু কথা? - No memorable story
৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও? - Best University in Bangladesh and Within 10 in the whole world

Makes me practical guy-১. **MIST** থেকে তোমার প্রাপ্তি কি?  
A RUETian Engineer-২. **MIST** তে তুমি ভর্তি না হলে অন্য কি হতে?  
My last picnic reminded me the last stage-৩. **MIST** তে তোমার স্মরণীয়  
কিছু কথা?  
It will be University ৪. **MIST** কে তুমি ভবিষ্যতে কোথায় দেখতে চাও?



**Rahim Bin Foyshal Arnob**  
ID: 201624040



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Mob : +88- 01755-629743  
Fax : +88- 02-7661027  
E-mail : [secy@dewbn.com](mailto:secy@dewbn.com)  
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**Proclamation of “*Maritime Zone Act 1974*” even before the formation of UNCLOS by United Nations**

