

NAVY NEWS

ABC Certified

February 2024

LAUNCHING OF PAKISTAN NAVY'S
4TH OFFSHORE PATROL VESSEL

PNS YAMAMA



Pakistan Navy's major maritime exercise

SEASPAK

*Assesses war preparedness,
Validates operational plans*



NAVY THROUGH HISTORY

25TH OF RAMADAN – IN THE HISTORY OF PN

The 25th of Ramadan 1391 AH (Sunday, 14 November 1971) is a day that is etched in the Pakistan Navy's collective memory, one that few in Pakistan can afford to forget. It was on this day that our valiant submarine PNS/M GHAZI S130 with its gallant crew of 93 sailed from PN Dockyard (NB13) five days before Eid-ul-Fitr at 7:50 PM on its final fateful mission. The mission was daring in its scope, calling on the submarine to traverse 3000 miles through hostile waters to the Indian east coast to single-handedly keep the Indian Eastern Fleet, including the much-trumpeted aircraft carrier, at bay. It goes to the credit of the submarine that she not only reached Visakhapatnam safely but had commenced her mine laying mission before attaining martyrdom under mysterious circumstances.

Naval folklore has it that the C in C was personally present to see off GHAZI. A colleague CO of Submarine in the squadron had laid out a special iftar/dinner for the crew of the submarine; albeit in the highest naval traditions, and reflective of the excellent



bonding and brotherhood that always existed amongst members of the submarine fraternity. The last exchange of farewell messages with her was done by the minesweeper PNS MOSHAL M167, by light at about 8:40 PM while the two crossed each other near the Manora breakwater.

Please join us in paying tribute to the 'unsung act of valor' of the crew of GHAZI, by offering

Fateha for the departed souls of our beloved colleagues who remained steadfast, executed the tenets of the operation, and embraced Shahadat en masse in the line of National Duty. Etched permanently lie their names in the annals of our history. May the departed souls rest in eternal peace and in the highest place of Jannah (AAMEEN).

IMPRESSION OF THE ENEMY

"The strategic soundness of the decision has never been questioned. The presence of a lucrative target in the shape of the aircraft carrier VIKRANT, the pride of the Indian Fleet, in that area, was known. The plan had all the ingredients of daring and surprise which are essential for success in a situation tilted heavily in favor of the enemy. Indeed, had the GHAZI been able to sink or even damage the Indian aircraft carrier, the shock effect alone would have been sufficient to upset Indian Naval plans. The naval situation in the Bay of Bengal would have undergone a drastic transformation"...

Vice Admiral (Retd) G M Hiranandani Indian Navy

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Patron-in-Chief:

Commodore Syed Rizwan Khalid SI(M), T Bt

Chief Editor:

Cdr Zakir Hussain Khan TI(M) PN

Editors:

Lt Cdr Rubab Zahra PN

Lt Cdr Omjer Sultan PN

Contributions by:

Capt Kamran Akram PN

Cdr Saleem Ahmed Chohan PN

Managing Editor:

Fayyaz Abbasi

Creative & Designs:

Syed Razzaq Hamdani, Majid Nawaz

Photographers:

Tanveer Ahmed, Babar Shahzad, Syed Waqas Raza, Adil, Usman Farooq, Zohaib

Directorate General Public Relations (Navy), NHQ Islamabad

Tel 051-20062799

Fax 051-20062364

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Pakistan Navy's major maritime exercise

SEASPAK

*Assesses war preparedness,
Validates operational plans*





Pakistan Navy's major maritime exercise SEASPARK-24 was held at Karachi. The biennial exercise was aimed to assess war preparedness and validate operational plans of Pakistan Navy taking cognizance of emerging regional and global maritime challenges. Chief of the Naval Staff Admiral Naveed Ashraf graced the opening brief as Chief Guest.

The exercise in which all operational units of Pakistan Navy including ships, submarines, aircrafts and UAVs participated was a joint venture of Pak Navy, Special Forces, Pak Marines along with elements of Pakistan Maritime security Agency (PMSA), Pakistan Army and Pakistan Air Force.





Chief of the Naval Staff Admiral Naveed Ashraf visited Naval Ships at sea, creek areas on the coastal belt of Sindh and coastal areas of Baluchistan to oversee the conduct of Exercise Seaspark 2024 and meet the deployed troops in the exercise.

During visit of Maritime Headquarters at Karachi, Chief

of the Naval Staff was given a briefing by the Orange and Blue Naval Force Commanders on the conduct of operations by respective forces. Thereafter, Naval Chief visited Keti Bandar Post and Battalion Headquarters of Pak Marines at Shah Bandar where he was briefed on combat readiness for defence of Creek areas which constitutes the South

Eastern maritime boundary with India. During the visit, Naval Chief interacted with troops deployed in difficult marshy areas and appreciated their devotion and high morale.

Later on, Naval Chief also visited Jinnah Naval Base Ormara and Naval Ships operating at sea. CNS expressed his satisfaction on



the professional excellence, high morale and perpetual readiness of Pakistan Navy to ensure impregnable maritime defence of motherland.

Live Weapon Firing (LWF) of FM-90B Surface to Air Missile in the North Arabian Sea marked

combat readiness and war fighting potential of Pakistan Navy upon culmination of sea phase of Exercise. Commander Pakistan Fleet, Vice Admiral Muhammad Faisal Abbasi graced the occasion as Chief Guest. PN Ship successfully hit the aerial drone target. Commander Pakistan

Fleet commended officers and men for their commitment and professionalism. He reiterated the resolve of Pakistan Navy to ensure seaward defence of Pakistan and safeguard national maritime interests. ❖❖



**PAKISTAN NAVY & PMSA
SAVE LIVES OF SEAMEN AT SEA**

GUARDIANS *of the* SEA



Pakistan Navy in coordination with Pakistan Maritime Security Agency saved the lives of 9 Indian seamen at sea. An Ocean Tug SAS-5 registered at St Kitts & Nevis was disabled for last few days near the Indian coast at a position 167 NM South East of Karachi. The tug suffered a failure of its electric generators and had no electrical supply.

In early morning of 04 Feb 24, Pakistan Navy Joint Maritime Information and Coordination Center (JMICC) received a distress signal from the Ocean. The Tug began its voyage from Indian port of Debol at Maharashtra on 1st Feb 24 and was heading to Sharjah, UAE.

Upon receipt of information, Pakistan Navy in coordination with HQ PMSA generated response to initiate a Search & Rescue Operation to provide assistance to the stranded Tug.

Initially, PN Long Range Maritime Patrol Aircraft was tasked to locate the tug at sea followed by

a Search and Rescue operation launched by Pakistan Maritime Security Ship (PMSS) KASHMIR which was deployed on routine Maritime Security Operations in the area.

Upon reaching the distressed Tug, PMSS KASHMIR secured the Tug alongside and after three hours of strenuous repair efforts the defect was rectified.

Besides, technical assistance, medical facilities and food items were also provided to the fatigued crew of the Tug. Upon completion of SAR operation, the tug successfully resumed its voyage towards next port of call at Sharjah UAE. The professional and timely response by PN & PMSA assets was highly acknowledged and lauded by the salvaged crew of the Tug. ✕✕



KEEL LAYING CEREMONY OF HANGOR CLASS SUBMARINE NO. 6



“Indigenization is a top priority of NHQ policy which is being manifested by construction of these state of the art Submarines at KS&EW”

CHIEF OF THE NAVAL STAFF

HANGOR CLASS



**HANGOR CLASS SUBMARINE
CONSTRUCTION PROJECT**



Achieving another milestone in indigenous submarine development project at Pakistan, the Keel Laying Ceremony of second HANGOR Class Submarine was held at Karachi Shipyard & Engineering Works (KS&EW). Chief

of the Naval Staff Admiral Naveed Ashraf graced the occasion as Chief Guest.

As per the defence agreement between Pakistan and China for development of 08 x HANGOR Class

Submarines, 04 submarines are under construction at Wuchang Shipbuilding Industry in China whereas remaining 04 are being built at KS&EW under Transfer of Technology (T o T) agreement. This is the 2nd Submarine to

CLASS SUBMARINE NO.6 KEEL LAYING CEREMONY



undergo keel laying at KS&EW. Earlier, in Dec 2022, Keel Laying of first Submarine was successfully undertaken and currently it is at advanced stage of construction.

Speaking on the occasion, Chief of the Naval Staff Admiral Naveed Ashraf said that it is a matter of great pride to witness the Keel Laying of HANGOR Class Submarine at Karachi Shipyard in collaboration with China Shipbuilding & Offshore International Co. Ltd (M/s CSOC). He lauded the joint efforts and performance of Ministry of Defence Production, Pakistan

Navy, Karachi Shipyard (KS&EW) and M/s CSOC for construction of these Submarines. Chief of the Naval Staff highlighted that indigenization is a top priority of Naval Headquarters policy which is being manifested by construction of these state of the art Submarines at KS&EW.

Earlier during his welcome address, the Managing Director KS&EW, Rear Admiral Salman Ilyas highlighted that Karachi Shipyard is fully cognizant and completely aligned with the goals set forth by Government and Pakistan Navy in pursuing self-reliance in

submarine construction. These submarines are a testimony of our commitment to this national cause. He also thanked Ministry of Defence Production and Pakistan Navy for their continuous support and cooperation.

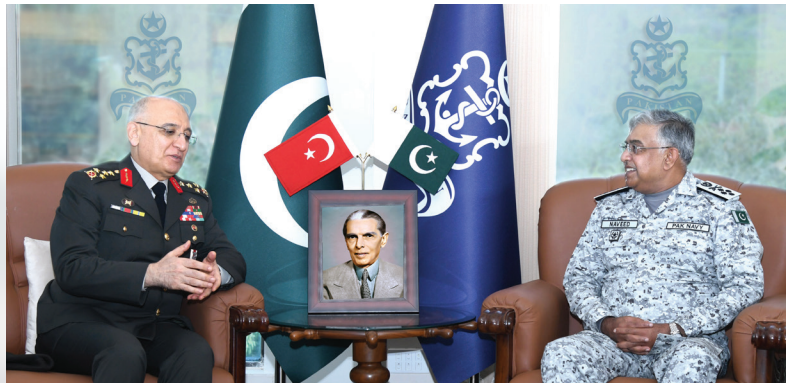
The ceremony was attended by representatives of Embassy of China, M/s CSOC (China), M/s WSIG (China) and other high-ranking government officials including distinguished guests from MoDP and armed forces of Pakistan. ❖❖

DIGNITARIES VISIT NHQ

The visiting dignitaries appreciated Pakistan Navy's efforts and initiatives in support of collaborative maritime security and stability in the region. Matters of bilateral collaborations and regional security milieu were discussed



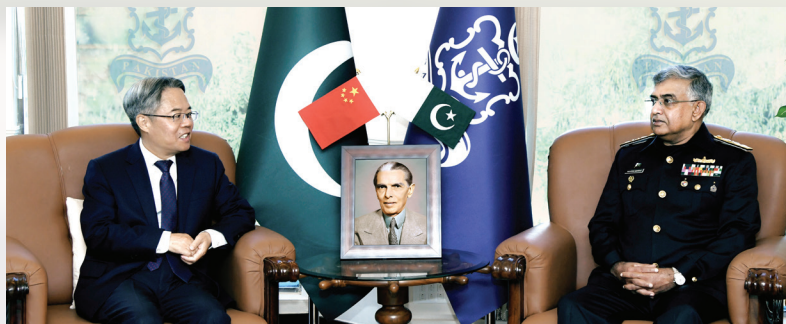
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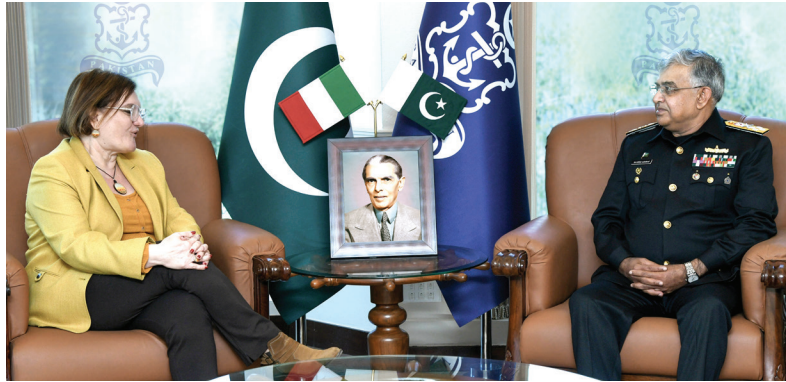


H.E Mr. Jiang Zaidong **Ambassador of China to Pakistan**

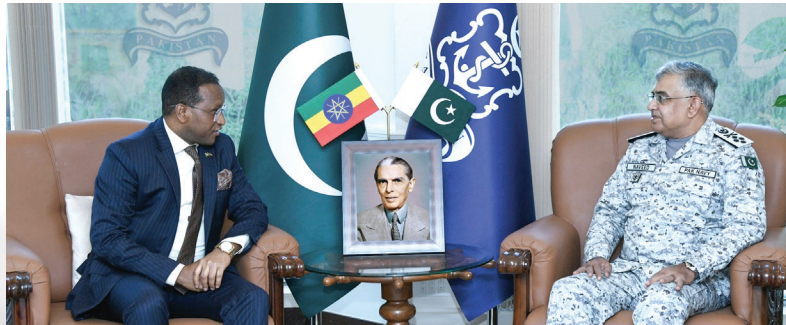




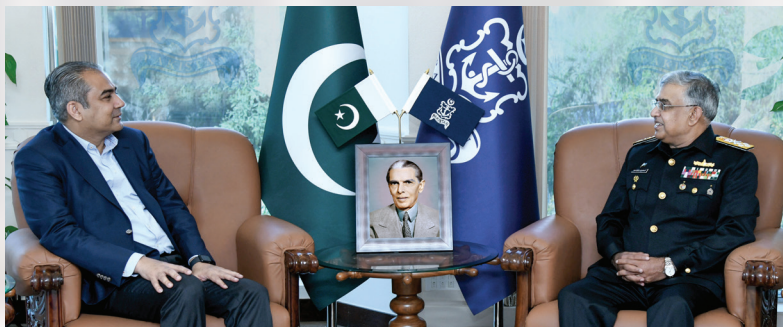
H.E Ms. Marilina Armellin **Ambassador of Italy to Pakistan**



H.E Mr. Jemal Beker Abdula **Ambassador of Ethiopia to Pakistan**



Syed Mohsin Raza Naqvi **caretaker Chief Minister of Punjab**



Vice Chief of the Naval Staff Vice Admiral Ovais Ahmed Bilgrami, sharing views with Mr Prof Andrea Margeletti, **Chairman CeSI and Strategic Advisor to Italian Minister of Defence** and Lieutenant General Ahmed Dawood **Secretary General of the Iraqi Ministry of Defence**



LAUNCHING OF PAKISTAN NAVY'S 4TH OFFSHORE PATROL VESSEL

PNS YAMAMA

Launching Ceremony of state-of-the-art 4th Offshore Patrol Vessel, PNS YAMAMA (Desig) being built for Pakistan Navy was held at M/s DAMEN Shipyard Galati, Romania. Vice Chief of the Naval Staff, Vice Admiral Ovais Ahmed Bilgrami graced the occasion as Chief Guest.

Speaking on the occasion, Vice Chief of the Naval Staff underscored the importance of maritime security under the prevailing conventional and non-conventional maritime threats to energy and trade highways passing

through Indian Ocean Region. In this context, he highlighted that Pakistan Navy has tremendous contribution in maintaining safe and secure sea environment for maritime trade. The Admiral expressed his confidence that induction of these multipurpose and highly adaptive platforms, equipped with state-of-the-art weapons and sensors will further strengthen combat capability of PN Fleet in safeguarding maritime frontiers while ensuring Maritime Security in the Indian Ocean Region, especially in the Arabian Sea.



PN has tremendous contribution in maintaining safe and secure sea environment for maritime trade

Vice Chief of Naval Staff

Earlier during his welcome address, Chief Operations Officer of M/s DAMEN Group Netherlands highlighted that DAMEN Shipyard and Pakistan Navy are enjoying historic relations since 1986. He highlighted that

**Launching Ceremony
PNS YAMAMA**

OPV 2600 Batch-II

**19 February 2024
Yard number - YN555508**

Chief Guest - Pakistan Navy





M/s DAMEN would continue to deliver cost effective, technologically advanced and potent ships to PN to meet their operational requirements.

The launching ceremony was attended by high ranking officials from Romanian Government and Navy, Pakistan Navy, M/s DAMEN and notables from Pakistani community in Romania. ❖ ❖

Pakistan Navy's COMMAND & STAFF CONFERENCE



Command and Staff Conference of Pakistan Navy concluded at Naval Headquarters, Islamabad. The Conference was chaired by Chief of the Naval Staff, Admiral Naveed Ashraf.

During the conference, maritime situation in North Arabian Sea and Gulf of Aden was deliberated and measures for safety and security of Pakistan bound shipping were reviewed. Naval Chief expressed confidence over combat readiness and significant contributions of the Navy in maritime domain. During the conference, matters related to geo strategic environment, national security, operational preparedness,

training and welfare of troops were reviewed. Comprehensive briefing on important ongoing and future developmental projects of Pakistan Navy was also given to Chief of the Naval Staff.

Chief of the Naval Staff emphasized on strengthening maritime security and maintaining combat readiness so as to effectively respond to any aggression against Pakistan. He urged on acquisition of niche and novel capabilities while exploiting indigenous sources in order to cope with modern day challenges in maritime domain. He lauded the successful conduct of major Maritime Exercise SEA SPARK-2024

followed by Live Weapon Firing of Surface to Air Missile FM-90B reaffirming operational preparedness of Pakistan Navy to meet all challenges while safeguarding the maritime frontiers of Pakistan. He specifically appreciated the prolonged deployment of Naval assets in North Arabian Sea, Gulf of Aden and Bay of Bengal during the exercise.

Command & Staff Conference is the apex decision making body of Pakistan Navy in which Chief of the Naval Staff along with all Principal Staff Officers and Field Commanders undertook review of Pakistan Navy's Policies and Plans. ❖❖

Vice Chief of Naval Staff VISITS Türkiye

Vice Chief of Naval Staff Vice Admiral Ovais Ahmed Bilgrami visited Istanbul Naval Shipyard (INSY). During the visit, VCNS called on CO INSY Rear Admiral Recep Erdiñç YETKİN, matters of mutual interest and construction of PN MILGEM Ships were discussed.

Later, VCNS arrived onboard PNS BABUR (Lead Ship of PN MILGEM Class) where he was received with Guard of honor. After interacting with ship's officers and men VCNS visited Bridge and Ops Room and he was briefed about ship's capabilities. He also had discussions with senior officials of M/s ASFAT and M/s ASELSAN onboard.

After departing BABUR he visited TCG ISTANBUL (Lead Ship of ISTIF (I) Class). Onboard TCG ISTANBUL he was briefed about ship's capabilities followed by tour of the ship whereby he was briefed by senior ASELSAN officials on latest indigenous weapons and sensors developed by ASELSAN and installed onboard TCG ISTANBUL. VCNS appreciated the relentless efforts of Türkiye on indigenization. ❖❖



PN RECKONER IN FEBRUARY

Source: PN History & Archives Centre

- Feb 14, 1948:** Frigate HMPS DHANUSH of the RPN undertook its first cruise to Chittagong.
- Feb 1971:** English words of command used for conducting the parade were replaced with Urdu/Bengali words.
- Feb 22, 1972:** Rear Admiral Haji Mohammad Siddiq Choudri MBE became the first Muslim Pakistani C- in-C of the RPN.
Gunboat PNS RAJSHAHI (P140) accorded a rousing reception at Karachi, including the firing of a gun salute by PNS BABUR to welcome her and commemorate her 'Heroic Escape' from Chittagong, on 16 December 1971 after breaking the Indian Navy Blockade of that port.
- Feb 26, 1973:** Fast Patrol Crafts PNS BAHAWALPUR (P-149) and SEHWAN (P-148) were commissioned and inducted into PATRON 10.
- Feb 04, 1976:** Maritime Headquarters (MHQ) and the first ever 'Computer-Assisted Coastal Surveillance system' inaugurated at PNS HAIDER.
- Feb 17, 1979:** The first of two AGOSTA class submarines, built in France, delivered to PN and commissioned as PNS/M HASHMAT (S-136).
- Feb 1980:** Second Agosta Class Submarine PNS/ M HURMAT (S136) commissioned in France.
- Feb 18, 1982** The first ever live firing of a Surface to Surface Missiles was conducted in the North Arabian Sea. A Hegu Class missile boat PNS JALALAT (1022) fired a Shangyo-1 missile on the de-commissioned destroyer ex-PNS JAHANGIR used as a target vessel.
- Feb 18, 1989:** The second pair of Brooke/ Garcia Class ships PNS ASLAT (F-265) and KHAIBAR (DDG-163) were commissioned in the USA.
- Feb 23, 1997:** The PN signed an agreement with the Postal Insurance Union for providing group insurance to civilian employees of the Pakistan Navy.
- Feb 07, 2000:** Bahria University was established and the first campus was inaugurated in Islamabad.
- Feb 25, 2016:** Pakistan Navy conducted Exercise "TAHAFUZ-E-SAHIL' to validate defence Plans for Jinnah Naval Base Ormara.
- Feb 15, 2020:** Commissioning Ceremony of the 2300 Tons Corvette PNS YARMOOK (F-271) was held at Constanta Port, Romania.
- Feb 24, 2021:** Pakistan Navy and the Anti-Narcotics Force (ANF) conducted a joint operation near the coast of Ras Pishukan, Baluchistan and seized (700 Kg) of Narcotics valued at approximately Rupees 2.2 Billion.

NAVAL LENS INTERNATIONAL FEATURED NEWS



MEDIUM RANGE BALLISTIC MISSILE TARGET WITH COUNTERMEASURES

Aegis Weapon System Capabilities

The Aegis Weapon System, tracked and discriminated a complex target scene of a Medium Range Ballistic Missile target with countermeasures and fired a Standard Missile – 3 Block IIA (SM-3 Blk IIA), which intercepted the same



Medium Range Ballistic Missile target, verifying additional functionality of the SM-3 Blk IIA. With the primary objective of collecting data on the target scene from multiple sensors. This data collection will help anchor modeling and

simulation for future tracking and discrimination capabilities and improvements. The Aegis Weapons System demonstrated additional reserve capability with the successful hit.

TURKISH NAVY GÜR-CLASS SUBMARINES UPGRADE



Gür-Class Submarine Mid-Life Modernization Program to the content of the Preveze-Class Submarine Mid-Life Modernization Program, was signed between the STM-ASELSAN-ASFAT-HAVELSAN Joint Venture (JV) and the SSB. The JV will modernise some of the critical navigation, machinery and communication systems on board the Gür-Class Submarines. The program, in which STM is undertaking responsibility for system procurement and platform integration, is expected to be completed in 6 years.

Securing high seas navigation, through Regional Maritime Security Patrol ...

PNS SAIF

VISITS SRI LANKA



Pakistan Navy Ship SAIF visited Colombo, Sri Lanka during its Regional Maritime Security Patrol (RMSP) Deployment. Upon arrival at port, the ship was received by officials of Pakistan Embassy and Sri Lankan Navy.

During the stay at port, Commanding Officer of PNS SAIF called on senior Naval and Military officials of Sri Lanka. During the interactions, matters of mutual

interests were discussed and enhancement of bilateral ties in all spheres was re-affirmed.

The Commanding Officer also conveyed good wishes of Chief of the Naval Staff, Admiral Naveed Ashraf for the people of Sri Lanka in general and Sri Lankan Navy in particular.

During stay at port, ship's crew visited different Sri Lankan Navy training facilities Sri Lankan Navy



officers and men also visited Pakistan Navy Ship. At the end of port call, PNS SAIF participated in Passage Exercise with Sri Lankan Navy Ship out at sea. Pakistan Navy ships are regularly deployed on RMSP with the objective to fulfill international obligations for Maritime Security while ensuring freedom of navigation on high seas.

Sri Lanka and Pakistan enjoy friendly relations, which have strengthened over the period of time. Visit of PNS SAIF to Sri Lanka contributed significantly towards promoting naval collaboration between the two friendly countries that strengthening bilateral relations with Sri Lanka. ⊗ ⊗



لَا إِلَهَ إِلَّا اللَّهُ مُحَمَّدٌ رَسُوْلُهُ

المعالييس

22 FEB

KSA FOUNDING DAY

CELEBRATIONS
AT PNS JAUHAR

Kingdom of Saudi Arabia Founding Day was celebrated on 22 Feb at PNS JAUHAR. Commandant PNS JAUHAR graced the occasion as Chief Guest. Director Saudi Naval Liaison Officer (DSNLO) Captain Zeyad Farag Almohawes RSNF and Cdr Fahad Althafgi also attended the ceremony.

Cake cutting ceremony was held followed by serving of

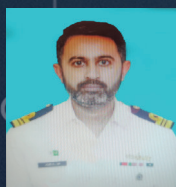
refreshment to the attending guests. Subsequently, Commandant addressed the audience and congratulated all RSNF Officers on the auspicious occasion of KSA Founding Day and informally interacted with FCTs. At the end, Founding Day souvenir was presented to DSNLO and Group Photograph was held with all attendees. ⊗ ⊗



OPERATIONAL RESEARCH IN THE NAVY

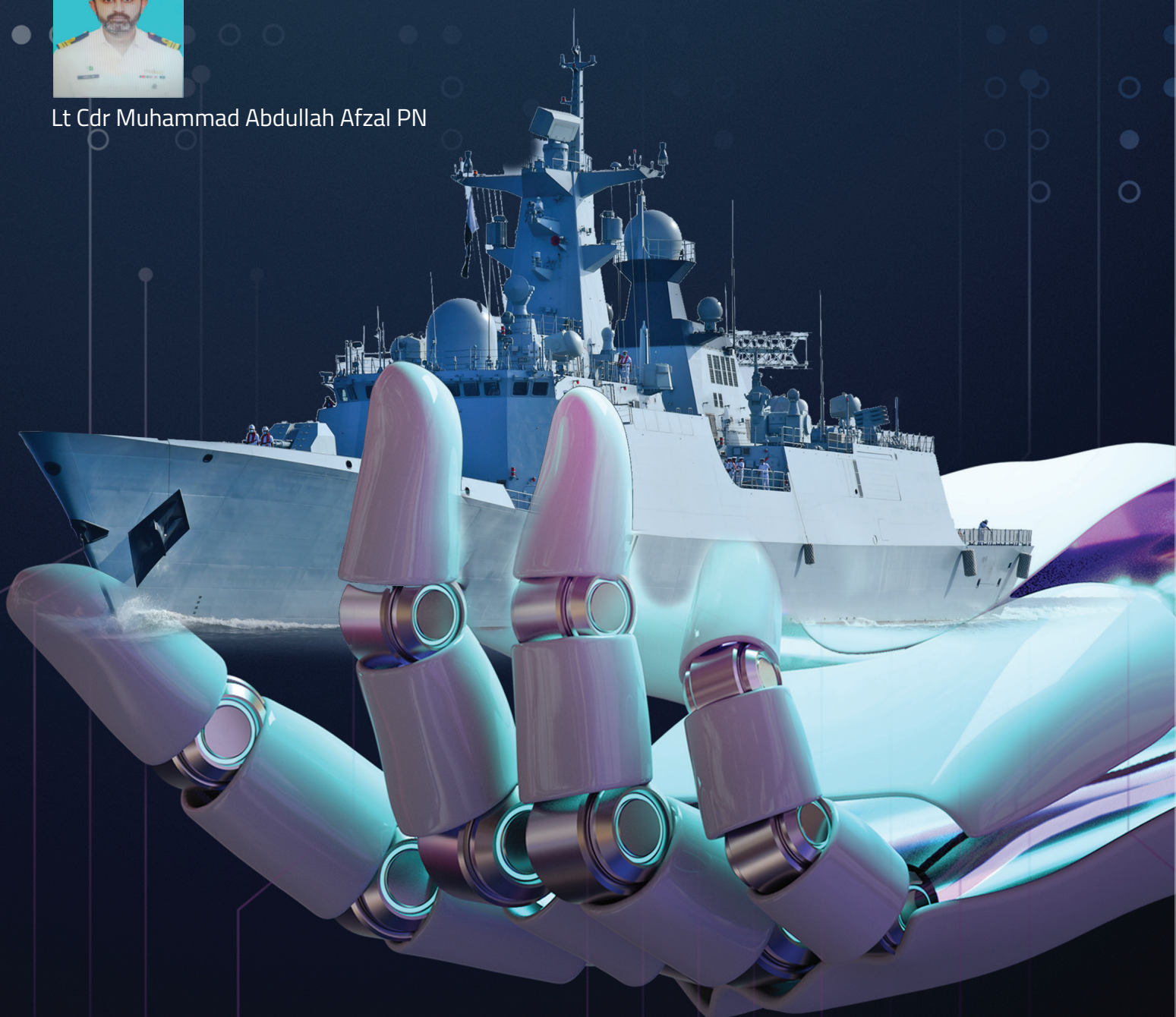
ENHANCING MARITIME EFFECTIVENESS

WHY & HOW



Lt Cdr Muhammad Abdullah Afzal PN

Article Part 1 of 3



From industrialization to age of digitization, we are now glaring at the climax of phenomenal change in the way human has lived and survived over centuries. Buzz word of Artificial Intelligence (AI) is now at the center of all research and has found its way in all chronicles of academia. For a reader, such as a mariner, the black box of AI is difficult to understand in its concept, perhaps not in application. Yet, irrespective of comprehension, the technology has already swept across all fields with cross domain linkages and therefore, the author felt the need to take onto the subject. Though building up understanding to answer 'Why' and 'How' may only be justified through series of writings to build the perspective. With an easy to understand structure of article, using commonly used words and jargons as weapons to unlock the black box

At the core of it, AI is all about data or simply analytics-numbers. We do utilize numbers in our daily life, sometimes intentionally and sometimes unintentionally. Have you ever wondered consciously that 'How do we solve an acquisition problem; Let's say buying a car?

Let's take this task to understand a famous method of Value Focused Thinking (VFT).

But, are you thinking that why this task?

Because that's something we routinely do, buy commodities and it will be easy to understand and correlate. So let's dive into the problem, where we have two approaches. Either subjective;

where you think of some factors and make a decision to buy a car mainly bounded by dominating equation of your budget versus condition based value (make-model). Or we may go for VFT-analytical approach-core of AI engine.

Try to think of some factors, to fancy the word 'factors' and sound like an AI engine, call it variables. So here is what I can think of:

- Budget.
- Make & Model.
- Reputation of car maker.
- Mileage.
- Cost of maintenance.
- Availability of parts.
- Market value – popularity
- Power and features.
- Can you think of more.....

With the background in Operational Research, I might be able to map the problem by assigning weightages to each of these variables based on my belief system. Let's say what I prefer over other, ranking these variables; an arrangement which may look something like:

- Budget.
- Reputation of car maker.
- Market value-popularity.
- Availability of parts.
- Mileage.
- Cost of maintenance.
- Power and features.

And then assigning them values, how well an option A performs over options B over my VFT matrix in total score. I will urge that we exercise the problem both subjectively and through VFT and may find interesting opposite result. That's because modern psychology has established that the judgment of human being

The goal is to maximize presence and readiness in strategically important areas while minimizing costs and vulnerabilities

as a decision maker suffers irrationality bounded by limits of his biases. Means, we are biased and we are irrational, and that is what gave birth to operational research which transformed into AI due power of processing of machines. The only difference I draw between the two is the processing speed and data mining capability of our computer systems which has transformed OR into giving intelligence to the machines.

Base line remains, data..... numbers. So now it is more appropriate to write - why Operational Research has remained and will continue to remain so significant enabler for maritime forces. Why it's important to grasp the necessity of it and quickly adapt to modern trends.

It goes without over emphasizing that Operational Research (OR) plays a vital role in contemporary military decision making process, contributing to improved accuracy, enhanced operational efficiency and mission success. By employing mathematical models, simulations, and data analysis techniques, OR helps

naval forces address complex challenges, allocate resources effectively, and optimize strategies.

The Role of Operational Research in the Navy

The Navy, with its multifaceted missions, faces a myriad of complex operational challenges. From strategic planning and force deployment to logistics and resource allocation, naval commanders must make informed decisions to achieve mission objectives while minimizing risks. This becomes more pronounced and critical for resource constraint organizations or states. Well of course, resources are never unlimited even for world power operating Blue Water Navies, but in relative sense. You may have a problem of distribution of resources, National power differential form perceived adversaries and tilt in National policy to spend more on human capital. That is where methods used in Operational Research provides a systematic approach

to tackle these challenges and has been an integral part of naval operations for decades. Let's take on an example.

Example: Fleet Deployment Optimization

One of the critical aspects of naval operations is determining the optimal deployment of naval assets, including aircraft carriers, submarines, and surface vessels. The problem is even pronounced now due complex and chaotic Geo-political situation where states are asserting their will in distant regions through deployment of maritime forces. The goal is to maximize presence and readiness in strategically important areas while minimizing costs and vulnerabilities. Such as Red Sea; where extra regional forces have increased presence to ensure safety of merchant traffic against possibility of attacks by Yemeni forces. A commander must decide:

How many ships would do the task with certain degree of

risk? Risk and gains are to be optimized - what is that perfect equation.

To commander's aid and give him a shoulder, an OR analyst may use mathematical models to simulate various deployment scenarios. He will consider factors such as geopolitical tensions potential threats, maintenance schedules, and transit times by turning them from subjective assessment in to analytical data. By running simulations and analyzing the results, an AI engine can suggest a commanders to make informed decisions about what, where when - wouldn't that make our jobs easy! Is it something new? No. It's as old as submarines and aircrafts. The best document example is of World War II where we shall reach in our next article

And that is how analytics and modern trends is revolutionizing maritime domain. We will continue to discuss that to share awareness. ☒☒
To be continued.....





The National Radio Telecommunication Corporation

is a high tech industry engaged in manufacturing of telecommunication equipment in Pakistan

Reliability
Quality and
Self-Reliance



About NRTC

Since 1965, NRTC has been a highly stable and reliable partner for customers who require high-tech Communication and Security Solutions. Our success comes from the innovative value proposition we bring to electronic manufacturing.....proof of its uniqueness is in our enviable track record for decades.

Business Areas

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- Jammers
- Anti Drone Solution
- Border Security & Surv. Solution
- Security (UAVs/ Quad Copters)
- Security (Mini UAV/ Copters)
- EOD & Robotics
- Electronic Warfare
- Artificial Intelligence

Common Use Technologies

- Safe & Smart Cities
- RFID Licence Plates
- IT & Cyber Security
- Electro Medical
- Renewable Energy Solutions
- IP Exchanges
- Intelligent Transport System
- Forensic Solutions



For Further Details

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Plot No.JLT- PH1-11A, Jumeirah
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MENTAL HEALTH



Surg Lt Cdr Hina Mahmood

Mental health is the balanced development of individuals' personality and emotional attitudes which enables them to live harmoniously with others. It is not merely the absence of mental disorders but encompasses a state of emotional, psychological and social well-being. By definition "mental health is a state of well-being in which an individual realizes his or her own abilities, can cope with normal stress of life, can work productively and is able to make contribution to his or

her community" Mental health is a dynamic state involving emotional resilience, cognitive flexibility and the ability to maintain healthy relationships.

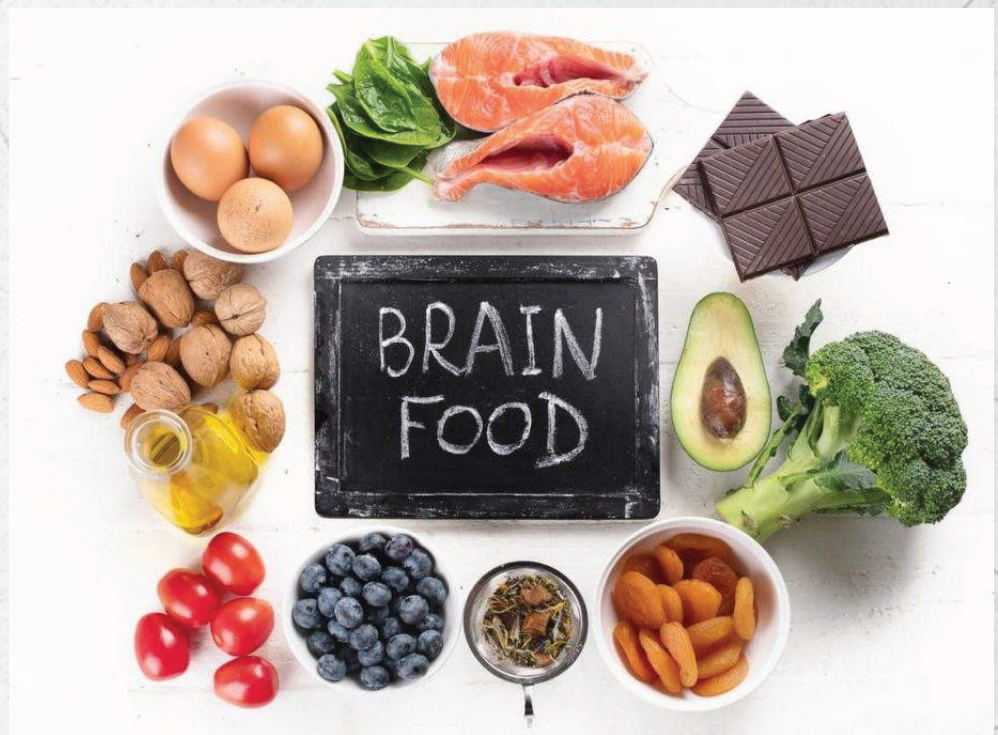
A mentally healthy person has characteristics such as he feels comfortable about himself, feels reasonably secure and adequate, neither underestimates nor overestimates his own ability, accepts his shortcomings and has self-respect. He feels right towards others, maintains

satisfying and lasting friendships and trusts others and takes responsibility for people around him. In addition, mentally healthy person is able to meet the demands of life, find solution to problems (when they arise), is able to think for himself and take his own decisions, sets reasonable goals for himself and is not overtaken by his own emotions of fear, anger, love or guilt.

Mental and behavioral disorders are found in people of all regions,

all countries and societies. Many different mental disorders prevail with different dynamics. These are generally characterized by a combination of abnormal thoughts, perceptions, emotions, behaviors and relationships with others. Unfortunately, the burden of mental disorders is continuously growing as modern life has brought us stresses such as work pressures, financial challenges and constant barrage of information through digital devices significantly impacting health of an individual hence, the promotion, protection and restoration of mental health can be regarded as a vital concern for individuals, communities and societies throughout the world these days.

Warning signs of poor mental health are changes in mood, social withdrawal, difficulty maintaining work responsibilities, difficulty in



Prioritizing mental health is a necessity for a balanced life. Moreover, fostering mental health is a journey therefore, small steps can make a significant difference in the overall quality of life

performing routine tasks, sleep disturbances, appetite changes, unexplained physical complaints such as headaches, digestive issues, unexplained aches or pains in the absence of any medical causes, difficulty in concentrating and making decisions, increased substance abuse, feeling of hopelessness and helplessness, persistent and overwhelming feeling of anxiety, fear or panic, drastic changes in behaviour etc. Mental health may also be affected by chronic diseases such as cancer, cardiovascular diseases, etc.

Engaging in mindfulness practices and meditation, regular exercise (physical exercise helps reduce symptoms of anxiety and depression), good self-care, intake of a balance diet, adequate hydration, building and nurturing positive social relationships, healthy sleeping habits, seeking professional help when needed, etc play crucial role in health of an individual. To conclude, it can be said that prioritizing mental health is a necessity for a balanced life. Moreover, fostering mental health is a journey therefore, small steps can make a significant difference in the overall quality of life.

LEGACY OF VALOUR

Type 16 Frigate (1949 – 1980)



Gearing Class Destroyer (1980 – 1993)



Type 21 Frigate (1994 – 2020)



Type 054/A Guided Missile Frigate (2023)

Source: PN History & Archives Centre

**PNS TIPPU SULTAN...
HISTORIC VOYAGES
THROUGH TIME**



A Tribute to a Great Leader
The name "Tippu Sultan" holds a place of great honour in the Pakistan Navy, a testament to the rich legacy of great Muslim Warriors and military genius such as General Tippu Sultan whose reign (1749 - 1799) left an indelible mark on history. He was not merely a ruler but a visionary administrator who is credited for a multitude of significant & transformative reforms; including the introduction of a new coinage system, calendar, and land revenue system. Tippu Sultan was also a pioneer in the use of rocket artillery, earning him the title "Lion of God" from military historians. His name became synonymous with bravery and a relentless spirit in the face of adversity.

Adoption of the name in the Pakistan Navy

The adoption of the name "Tippu Sultan" in the Pakistan Navy represents a profound tribute to this iconic historical figure along with apt recognition of the valour of a naval commander. The history of dedicating ships in the name of the great warrior dates back to 1949 when the Pakistan Navy acquired from the Royal Navy the World War II battle-hardened, 'O' Class Destroyer ex HMS Onslow. Decorated with several campaign medals, the Onslow earned its principal honours while

protecting Russia-bound convoys, navigating the treacherous arctic waters, crème-à-la crème being the defeating of the much larger German raider Hipper. The Onslow commanded by Captain Sherbrooke RN demonstrated the British naval forces' unwavering commitment in most strenuous times. The ship's legacy of valour was commemorated by a 'Victoria Cross' being conferred on its CO and commander of the Escort Force for his extraordinary heroism in these missions. The commissioning of ex-HMS Onslow as HMPS TIPPU SULTAN (F-260) by the then RPN, graced the legendary hull as well as served as a powerful reminder of the unwavering courage and remarkable contributions, and heroism of the exceptional leader, both in the realm of military strategy and administrative innovation.

Founder unit of the 25th Destroyer Flotilla of the RPN, HMPS Tippu Sultan and her sister ship Tariq (ex HMS Offa) were acquired at £305,000 per ship. She and Tariq were handed over to Pakistan in Plymouth on September 30, 1948. The four high-angle capable 4.7-inch guns and depth charge throwers on each ship gave a great boost to the firepower of the nascent navy. The ship underwent various modifications, including

conversion to a Type 16 ASW Frigate in the UK between 1957 and 1959, the United States under the Mutual Defense Assistance Pact funded the conversion.

During the conflict with India in 1965, PNS Tippu Sultan saw action, participating in an offensive alongside the cruiser Babur and six other destroyers bombarding the Indian coastal town of Dwarka on September 8. In the 1971 war, she carried out attacks on a subsurface contact and fortified the AA defence of the Karachi Port. In the summer of 1980, the illustrious ship was removed from the active list, decommissioned and assigned its new role as a 'barrack ship (PNS Muhafiz)' moored in Gwadar Bay. Eventually, she was broken at scrap at Gaani in 1983.

Reincarnation in 1980

The name Tippu Sultan reappeared in the Pakistan Navy with the acquisition of ex-USS Damato, an ex-Gearing Class FRAM 1 Destroyer, commissioned as PNS TIPPU SULTAN (D-168) in the winter of 1980. The Gearing-class destroyers were originally built for anti-submarine warfare and convoy protection during World War II. USS Damato, commissioned in the U.S. Navy in 1946, had a long and storied history, participating in various



missions worldwide. Pakistan's decision to purchase USS Damato in 1978 and her five sister ships between (1978 and 1982) marked the fortifying of the ASW punch of the ships transition and enlargement of the PN surface fleet operating envelop in several dimensions, in comparison to the erstwhile ex-RN origin ships. The ship served as a part of the 25th Destroyer Squadron from (01-09-1980 to 12-11-1993). With a displacement of 3,460 tons (full load), she measured (390.5 x 40.9 feet) and a draught of 14.3 feet. Powered by General Electric steam turbines and four boilers, she could reach speeds of up to 32 knots and had a range of 4,500 nautical miles at 20 knots. The complement comprised 350 personnel. The weapon sensor suite consisted of four 5-inch/38 calibre guns, an ASROC 8-cell launcher, two triple Mark 32 torpedo tubes, SQS-23 sonar, SPS-10 surface search radar, and ULQ 6B ESM. On decommissioning, she was transferred to the Pakistan Maritime Security Agency as the headquarters ship MSS NAZIM in November 1993. PNS Tippu Sultan's motto is adopted from a Quranic verse and reads: *"And strive for Allah with the endeavour which is His right."*

Platform for rejuvenating Trial & Ingenuity 1994 - 2020

The quagmire ensuing the withdrawal of ships on lease from USN in 1993, led to the acquisition by the PN of Type 21 Class ships. The last of the batch of eight RN Amazon Class Frigates (ex HMS Avenger) was

the sixth and last Type 21 to be inducted into the PN fleet. She was commissioned as PNS TIPPU SULTAN (F-185) at Devonport in the UK on 23 September 1994. Built by: Yarrow Ship Builders, Glasgow Commissioned in 1978, Commissioned as PNS TIPPU SULTAN: 23rd September 1994 Length, Beam, Draft: (117 x 12.7 x 6.7 meters) Displacement: 2062 Tons Main Machinery: COGOG Arrangement 02 Rolls-Royce Olympus (2500 SHP) 02 Tyne Gas Turbines (5000 SHP) Speed: 30 Knots, Complement: 17 Officers and 228 CPO/Sailors Command Management System, Main Gun: 4.5" Mk8 Anti Air Gun: 12.7 mm Close in Weapon System. These weapons and sensors on Tippu Sultan were of old vintage and were not compatible with modern Naval Warfare trends, hence, a comprehensive modernization was carried out. In 1997 TIPPU SULTAN received a weapon outfit comprising a Chinese-made LY-60 / FD-60 / PL10 (Hunting Eagle - Navy version) anti-air missile launcher, a new set of sensors, a command control system, and a Vulcan Phalanx CIWS; making her well poised to meet her operational commitments; as an ASW and AAW unit of 25th Destroyer Squadron of Pakistan Navy. On the expiry of her service life, the ship was decommissioned and expended as a target ship during live weapon firings in May 2020.

Enter the Fleets Mainstay – Platform for the 21st Century

- PNS TIPPU SULTAN (FFG-263) is the fourth of four Type

054 A/P multi-role Frigates built at Hudong-Zhonghua Shipyard for the Pakistan Navy. She was launched in August 2021 and commissioned into service on 03 May 2023. A multi-role Guided missile frigate, she is equipped with state-of-the-art self-defence capabilities which can simultaneously execute several naval warfare missions in a highly intense multi-threat environment. Compared to previous Chinese Type 52 frigates in service with the PN, the TIPPU SULTAN has better air defence capability, as it is equipped with an improved 3D radar system and 32 HQ-16 vertical launch missiles with a long-range and 2x Type 730 30mm CIWS. The ship displaces 4,200 tonnes and measures (439 X 52 feet X 18 feet). The CODAD propulsion utilises four Shaanxi STC diesel engines, giving the ship a top speed of 27 knots and an operating range of 8,025 nautical miles. The ship has a complement of 165 personnel. The advanced weaponry and sensors suite comprises an array of radar systems including SR2410C AESA radar, Type 517 (SUR17B) VHF air-search radar, Type 344 fire-control radar for its four CM302 anti-ship missiles, four MR-90 Front Dome systems for SAM and a Type 347G fire-control radar for the H/PJ-26 76mm main gun. The sonar systems include the MGK-335 medium frequency active/passive sonar system and the H/SJG-206 towed array sonar Communication systems feature the ZKJ-5 combat data system (developed from Thomson- CSF TAVITAC), the HN-900 data link (Chinese equivalent of Link 11). ❖❖

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