

INS Surat, INS Nilgiri and INS Vaghsheer

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INS Surat, INS Nilgiri and INS Vaghsheer : A New Era in Naval Dominance

Introduction

The recent commissioning of **INS Nilgiri**, **INS Surat**, and **INS Vaghsheer** at the Naval Dockyard in Mumbai marks a landmark event for the Indian Navy. For the first time, a frigate, a destroyer, and a submarine were commissioned together, showcasing India's growing maritime strength and self-reliance.

INS Nilgiri: Lead Ship of Project 17A Stealth Frigates

Key Features and Capabilities

- Developed under **Project 17A** as an advanced version of the Shivalik-class frigates (Project 17).
- Construction:
 - Built indigenously by Mazagon Dock Shipbuilders Limited (MDL) and Garden Reach Shipbuilders and Engineers (GRSE).
 - Keel laid: December 2017.
 - Launched: September 2019.
 - Delivered: December 2024.
- Weapons and Technology:
 - Supersonic surface-to-surface missiles.
 - Medium Range Surface-to-Air Missiles (MRSAM).
 - Upgraded 76 mm guns and rapid-fire close-in weapon systems.
- Versatile Roles: Capable of handling anti-surface, anti-air, and anti-submarine warfare.

Other Ships in Class

• Six other frigates (Himgiri, Taragiri, Udaygiri, Dunagiri, Vindhyagiri, and another unnamed vessel) are under construction at MDL and GRSE.

INS Surat: Advanced Guided Missile Destroyer (Project 15B)

Specifications

- **Displacement**: 7,400 tonnes.
- Length: 164 meters.
- Speed: Exceeds 30 knots (56 km/h) during trials.

Key Features

- India's First AI-Enabled Warship: Uses indigenously developed Artificial Intelligence solutions for enhanced operational efficiency.
- Equipped with:
 - Surface-to-air missiles.
 - Anti-ship missiles.
 - Torpedoes.
 - Advanced sensors for network-centric warfare.
- High-speed, maneuverable, and designed for offensive operations.

Project 15B: Stealth Destroyers Evolution

- Built as advanced variants of the Kolkata-class destroyers under Project 15A.
- **Predecessors**: INS Visakhapatnam, INS Mormugao, and INS Imphal were commissioned in the last three years.

INS Vaghsheer: Sixth and Final Kalvari-Class Submarine (Project 75)

Design and Development

- Based on Scorpene Class: Designed by French Naval Group and Spanish Navantia.
- Built at Mazagon Dock Shipbuilders Limited (MDL) under Project 75.

Key Features

- Diesel Electric Transmission: One of the world's most silent and versatile submarines.
- Armaments:
 - Wire-guided torpedoes.
 - Anti-ship missiles.
 - Advanced sonar systems.
- Designed for missions like:
 - Anti-surface and anti-submarine warfare.
 - Intelligence gathering and surveillance.
 - Special operations and naval mine-laying.

Project 75 Overview

- Six Kalvari-class submarines were built with technology transfer from France.
- Commissioned Submarines:
 - INS Kalvari (2017), INS Khanderi (2019), INS Karanj (2021), INS Vela (2021), INS Vagir (2023).
 - INS Vaghsheer: Commissioned in January 2025.

Strategic Importance

Indigenous Construction

• All three vessels are **Made in India**, highlighting the success of the **Make in India** initiative.

Enhancing Naval Strength

• These platforms significantly strengthen India's maritime defense capabilities and enable the Navy to deter regional threats.

Operational Versatility

- Each vessel serves unique roles:
 - INS Nilgiri: Multi-mission frigate with blue-water operational capabilities.
 - INS Surat: High-speed, offensive destroyer with network-centric warfare capabilities.
 - INS Vaghsheer: Stealth submarine for underwater and covert operations.

Bolstering Maritime Influence

• These ships enhance India's strategic presence in the Indian Ocean Region (IOR) and establish its role in global maritime security.

Conclusion

The commissioning of **INS Nilgiri**, **INS Surat**, and **INS Vaghsheer** is a testament to India's growing naval capabilities and self-reliance in defense manufacturing. By adding these advanced platforms, India strengthens its position as a formidable maritime power, ensuring security and stability in the **Indian Ocean Region** and beyond.

