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The Ghazi Mystery: What Caused the Sinking of the Pakistani Submarine near Vizag In 1971

The first rays of dawn had just illuminated the Vizag harbour on December 5, 1971, when Lieutenant Sridhar More steered the **INS Akshay** out towards the open sea. The previous day a few local fishermen had visited the Eastern Naval Command with pieces of wreckage and reported the presence of a large oil slick in the area. As a result, the fast moving patrol ship, also called a SDB (Seaward Defense Boat), had been dispatched to investigate the same. As the **INS Akshay** made its way to the spot mentioned by the fishermen, Lieutenant More saw the reported oil slick immediately, stretching out as far as the eye could see. As soon as the reached the spot, a diver was quickly sent into the water to investigate. Surfacing after a few minutes, the excited diver gasped, "Sir, it's a submarine."

A second diver was sent in to confirm that first one had not been mistaken. He surfaced half an hour later, bringing back more details and confirming that the source of the oil slick was indeed a sunken submarine. Lieutenant More immediately sent a message that he had located a bottomed submarine to the Maritime Operations Room (MOR) in Vizag. Soon after, the divers could make out the initials on the black shape. With the information they provided, Lieutenant More sent his second message to the operations room, "Confirmed submarine is Pakistani."

When the divers came back with the information that the submarine's estimated length was over 300 feet, Lieutenant More was stunned. He knew that Pakistan had four submarines and only the largest one in the fleet was longer than 300 feet. After referring to Jane's Fighting Ships to confirm his suspicion, he sent his last signal to the operations room at Vishakapatnam. The message, which sent ripples through the operations room, said, "It is the **Ghazi**."



PNS Ghazi

The sinking of **PNS Ghazi** during the Indo-Pak war of 1971 has long been an unsolved mystery. With Karan Johar sharing the first poster of his movie, *The Ghazi Attack* (India's first war-at-sea film that is based on the mysterious sinking of **PNS Ghazi**) yesterday, the debate on what caused the blast on board the Pakistani vessel has been renewed. Let's take a look at the many theories about this enigmatic incident that is believed to have tilted the 1971 war in India's favour.

In mid-November 1971, millions of refugees were pouring into India to escape the Pakistani Army's genocidal rampage in East Pakistan (now Bangladesh). In an effort to provide shelter to the refugees, the governments of West Bengal, Bihar, Assam, Meghalaya and Tripura had established refugee camps along the border. With the flood of impoverished East Pakistani refugees placing an intolerable strain on India's already overburdened economy, a full scale war only seemed a matter of time. On November 14, 1971, **PNS Ghazi**, crammed with food and ammunition, quietly sailed out of the Karachi Harbour into the Arabian Sea. While the submarine had been ostensibly dispatched to Chittagong in East Pakistan, its real mission was to target India's aircraft carrier, **INS Vikrant**.

Formerly **USS Diablo**, **PNS Ghazi** had been built during World War II. Leased out to Pakistan, it had been renamed 'Ghazi' or 'holy warrior'. South Asia's first submarine, **PNS Ghazi** was Pakistan's only submarine with a capacity to travel over 11000 nautical miles to reach Bay of Bengal and undertake operations on India's eastern coast.

Intercepted transmissions had led the **PNS Ghazi** to believe that **INS Vikrant** near Vizag. As a result, the pride of Pakistani Navy was sailing to the eastern coast of India to destroy India's flagship aircraft carrier. What the Pakistani

Navy didn't know was that this was a smart wartime ruse planned by Vice-Admiral Krishnan, the Commanding Flag Officer of the Eastern Naval Command. Signal intercepts of Pakistani Navy had indicated an imminent deployment of the **Ghazi** in the Bay of Bengal. So Vice-Admiral Krishnan decided to set a trap by letting Ghazi believe that **INS Vikrant** was in the area near Vizag. He summoned Lt. Commander Inder Singh, the captain of **INS Rajput**, and gave him an important mission.

INS Rajput, an ageing WWII destroyer had actually been recently sent to Vishakapatnam for decommissioning. As a part of the mission, the ship was to pretend to be **INS Vikrant**, sail out of the Vizag harbour and generate heavy wireless traffic – leading the **PNS Ghazi** to believe that it had received the right intel about the aircraft carrier. The wily Vice-Admiral also informed the authorities in Madras (now Chennai) that the aircraft carrier would be arriving shortly. Not leaving anything to chance, he also ordered huge quantities of food rations to indicate that the ship was in harbour near Vizag.

As he hoped, the bait was snapped up. In a signal, later recovered from the sunken **Ghazi**, commodore submarines in Karachi had sent a signal to the **Ghazi** that "intelligence indicates carrier in port. Occupy Victor Zone (a code name for Vizag) with all dispatch". Reaching Vizag on November 27, 1971, **PNS Ghazi** prowled perilously close to the Indian coast, searching for its elusive quarry. Unknown to the **Ghazi**, **INS Vikrant** and her escorts had already sailed into 'Port X-Ray', a secret anchorage in the Andaman Island, nearly a 1 000 miles away!

On the night of December 3-4, 1971, an explosion tore through the **PNS Ghazi**, blowing open its bow, crumpling the hull and cracking open the water-tight compartments. Seawater rushed in, drowning the crew as the submarine crashed to the seabed. On December 6, three days after the sinking of the **PNS Ghazi**, **INS Vikrant** launched its first airstrike. On the same day, the Indian navy's Soviet-built submarine rescue ship **INS Nistar** arrived at site of Ghazi's sinking with a specialist underwater salvage team. On exploring the sunken submarine, the team reported that the entire forward part of the submarine had been destroyed and blown outwards on the starboard side.

Four bodies had to be removed to access the submarine's interior, and as per the worldwide naval custom, they were reburied at sea with military honors. Among the objects recovered from the interiors were a chart detailing the voyage from Karachi, the captain's stationary pad, the ship's log, radio messages, a Pakistani flag, and the characteristic American "flying bridge" curved windshield.

So, what exactly caused the blast on **PNS Ghazi**? This is where the debate arises. Indian Navy claims the submarine was destroyed by depth charges fired by its ship **INS Rajput**. Pakistani authorities say the submarine sank because of either an internal explosion or accidental blast of mines that the submarine itself was laying around Vizag harbour.

According to the Indian Navy:

At 00:14 on 4 December 1971, **INS Rajput**'s sonar room reported what sounded like a submarine changing depth, about half mile ahead. Captain Inder Singh ordered a sharp turn and immediately fired two depth charges from the ship's Mk. IV DCTs. Less than a minute later, at 00:15, a massive underwater explosion shook the destroyer. The crewmen of **INS Rajput** were unsure what had happened; some sailors briefly thought their destroyer had been torpedoed due to the force of the explosion. Lookouts on **INS Rajput** saw what was possibly an oil slick in the area. Singh felt certain he had sunk a Pakistani submarine and relayed this to Vice Admiral Krishnan at Vizag.

Several minutes later, Vice Admiral Krishnan was informed that a beach patrolman in Vizag had also heard a huge explosion at 00:15. **INS Rajput** then departed the area and proceeded to join up with the **INS Vikrant** battle group. After sunrise, local fishermen saw an oil slick and some floating debris in the area. Included in the debris was an unused submariner life vest labeled "**USS DIABLO**".

According to the Pakistani Navy:

PNS Ghazi commenced laying a small minefield east of the Vishakapatnam harbor mouth on the overnight of 2-3 December 1971. Then at daybreak on 3 December, it headed out to deeper water to search for the **INS Vikrant** battle group. Not finding it, **PNS Ghazi** returned to the Vishakapatnam harbor mouth area at sunset to resume laying the minefield. As the lights ashore were blacked out, **PNS Ghazi** may have misjudged her position and doubled back into her own minefield around midnight; about 10-15 minutes before the **INS Rajput** depth charging. Thus, it was the accidental detonation of its own mines that destroyed the **Ghazi** and not **INS Rajput**'s depth charges.

Over the years, the mystery surrounding the sinking of **PNS Ghazi** has endured. Today, the submarine lies embedded in the Vizag seabed about 1.5 nautical miles from the breakwaters. Close to the harbour channel, the spot has been marked on navigational maps to help ships avoid the wreck. In 2003, an attempt was made by the Eastern Naval Command to check the condition of the debris. A team of 10 divers of the Eastern Naval Command was sent down for another look at an old enemy that had come so close and failed.

The images of **Ghazi**, taken with underwater cameras, revealed that the submarine, in death, was teeming with life. Still sitting on an even keel, the submarine's hull, rusted away to reveal its steel skeleton, was covered with thousands of fishing nets. However, the cause of the blast still remains unclear and the decades-old-puzzle still remains unsolved. As Vice Admiral G M Hiranandani (Ret), whose book, *Transition to Triumph*, gives a detailed history of the Indian Navy, says, "The truth about the **Ghazi**, which remains on what the submarine community calls the 'eternal parole', lies somewhere between the Indian and Pakistani versions of the sinking but no one knows exactly where." **Source : The Better India**

It is interesting to note that PNS Ghazi called at Simon's Town on her delivery voyage from the US

China Has Built the Biggest and Baddest Conventional Submarine in the World



In 2010, China's first - and only, so far - **Qing** - class submarine sailed out to sea following nearly six years of construction. Displacing 6,628 tons submerged and measuring exactly the length of a football field at one hundred yards long (ninety-two meters), it is by most accounts the largest diesel submarine ever built. Unlike the vast majority of diesel submarines, the Type 032 can fire not only long-range cruise missiles, but submarine-launched ballistic missiles (SLBMs) with the capacity to send a nuclear warhead across the ocean.

Beijing prefers to keep its cards close to the chest, leading to speculation about the Type 032—is it purely a missile testing submarine, as is officially claimed, or is it the precursor of a fleet of low-cost ballistic-missile subs? Or was the Type 32 actually built as a prototype vessel for export to Pakistan? In the past, nuclear submarines enjoyed an enormous advantage in submerged endurance and noise compared to traditional diesel submarines. A diesel submarine could swim quietly for days before having to resurface, but a nuclear-powered submarine can do it for months.

That China would even consider developing such a large diesel submarine is due to the advent of Air-Independent Propulsion (AIP) systems, which encompass a variety of technologies that allow engines and generators onboard a submarine to operate while consuming little or no oxygen. AIP systems can be even quieter than the reactors onboard nuclear submarines, and can efficiently propel the ship electrically for weeks, albeit only at slower speeds.

The first operational AIP powered submarine was the Swedish **Gotland**, which entered service in 1996. Using a Stirling engine, it could operate submerged for thirty days at a time. The small and nearly silent diesel sub successfully penetrated the antisubmarine defenses of U.S. aircraft carrier task forces in several war games. Since then, China has built fifteen Yuan-class Type 039A (aka Type 041) diesel submarines using Stirling AIP technology, with another twenty planned. The torpedo-armed Yuan-class subs are intended, like the Swedish **Gotland**, to serve as stealthy short-range boats for stalking enemy vessels in coastal waters.

The Stirling-powered Qing class, however, marks a dramatic departure from that modus operandi. Situated on the vessel's elongated sail are two or three Vertical Launch Systems (VLS) tubes used to fire JL-2A Ju Lang ("Big Wave") ballistic missiles. The JL-2A is believed to have a range approaching five thousand miles and can carry a single one-megaton nuclear warhead, or three or four ninety-kiloton independent reentry vehicles (MIRVs). The JL-2 was first

tested in 2001 and constitutes the main armament of China's Type 094 Jin-class nuclear submarines. A Type 094 sub embarked on China's first nuclear deterrence patrol in 2015. Hypothetically, the Type 032 would offer a cheaper, shorter-endurance compliment to the Type-094.

Four or five additional VLS cells on the Qing class's bow can fire JL-18B Yingji (Eagle Strike) antishipping cruise missiles, which surge to speeds of Mach 2.5 on their terminal approach. The JL-18B is supposedly satellite guided, and is variously credited with a range of 110 to more than three hundred miles. The Type 032 can also launch the slower but longer-range CJ-20A cruise missiles, a derivative of the CJ-10.

Rounding out the Qing class's armaments is an unconventional pairing of a single standard 533-millimeter torpedo tube with an extra-large 650-millimeter tube. The Type 032 also has facilities to accommodate and deploy up to fifty special-forces personnel — an increasingly common feature in modern submarines.

In other respects, the Type 032 is less impressive. It's slow—with a maximum speed of sixteen miles per hour submerged, nearly half the speed of a Virginia-class nuclear-powered attack submarine. Its maximum dive depth is reported to be 160 to 200 meters — again, less than half the depth that many modern designs can submerge. The Qing class is understandably not designed for a knife-fight.

In any case, the fact that only a single Type 032 has been built reinforces the claims that it is intended as an affordable testing platform for missile armament. It indeed appears to have replaced the sixties-era Type 031 Golf-class sub used to test the JL-2 ballistic missile. In addition to its crew complement of eighty-eight, it claimed that the Type 032 can carry an additional one hundred "scientists and technicians." The sub has also reportedly been used to test submarine-launched surface-to-air Missiles and a new underwater escape pods. Some suggest the Type 032 may be applied to deploying undersea drones.

However, a 2011 report claimed that China would sell six Type 032 submarines to Pakistan. The two countries hold a long-time alliance opposing India. China remains wary of the potential future superpower, and sees reinforcing its archrival Pakistan as a strategic hedge. However, the initial claim to a Type 032 deal was either inaccurate or fell through.

More recently, Beijing confirmed in October that it would sell eight Project S-26 and Project S-30 submarines for \$4–5 billion—a price roughly equivalent to the cost of two nuclear submarines. Four of each subtype will be constructed in China and Karachi, Pakistan, with first delivery no sooner than 2020 and completion of the contract by 2028.

However, it's unclear what type of submarines these will turn out to be. Several of official reports appear to state that these are derivatives of the Type 032, but most experts believe they are instead down-scaled version of the ship-hunting Yuan-class submarine. However, some descriptions of the S-30 imply it is based on the Type 032, with an intended armament of four Pakistani-developed Babur nuclear-capable land-attack cruise missiles as well as retaining two SLBM tubes.

Nuclear submarines still possess advantages over AIP-powered diesel submarines. Deterrence patrols tend to be lengthy, so the three-to-four-month endurance of nuclear subs still handily beats the thirty days of a Stirling-powered sub. And even though the ability to remain underwater for months at a time may be less vital for coastal defense subs, nuclear submarines can also sustain higher underwater speeds over long distances.

Still, most navies across the world aren't like United States, which operates submarines thousands of miles across the length of the Atlantic and Pacific Oceans. Countries like China, Pakistan or, hypothetically, Iran or Saudi Arabia, have naval security interests closer to home and don't need their submarines to cross vast oceans.

Particularly for countries like Pakistan with access to nuclear arms, a missile-armed diesel submarine could offer an affordable means to threaten nuclear retaliation that would remain very difficult to counter, potentially starting a new worrisome trend in nuclear proliferation. **Source : The National Interest**

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