

油彈補給艦 - 磐石軍艦

Panshih Fast Combat Support Ship

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Overview

The Panshih Fast Combat Support Ship (AOE-532), under the command of the Republic of China Navy's Flotilla 151 and homebased at Zuoying Naval Base, was co-designed by the Naval Shipbuilding Development Center and the Maritime and Oceanic Technology Research and

Development Center. She is one of the few domestically developed warships in Taiwan. With displacement of 20,859 tons, the AOE-532 stands out as the largest new-generation warship in the Republic of China Navy's fleet.

Commissioned at the end of March 2015, the AOE-532 has served as the flagship





of the Navy's Midshipmen Cruising and Training Squadron 2016. Its onboard Culture Propaganda Gallery is open to public visitors, including those from friendly nations and overseas compatriots, to experience Taiwanese culture. The Navy Band and the Marine Corps Taikuandow Team, stationed on the ship, contribute to cultural exchange efforts. Since its commissioning, the AOE-532 has been served as the flagship for the annual MCTS mission.

The hull design of the AOE-532

The AOE-532 features a design with low radar cross-section and an upper structure incorporating sloping planes, giving it an aesthetically pleasing appearance. With length of 196 meters, width of 25.5 meters, and draft of 8.6 meters, the ship is larger than its counterpart, the Wuyi Warship. Despite its increased size, the AOE-532 has a smaller turning radius compared to the Wuyi Warship. Her maximum speed is 22 knots, which is 2 knots faster than the Wuyi Warship.

The ship is equipped with two 4-ton cranes and two 6-ton cranes for rapid loading and unloading of supplies. At the

stern, there is a helicopter deck measuring 36 meters in length and 26.5 meters in width. This deck can accommodate a maximum weight of 33.3 tons, facilitating the takeoff and landing of active-duty CH-47SD transport helicopters and S-70C anti-submarine helicopters of the ROC military. It is also capable of accommodating U.S. military CH-53E special operations and search and rescue helicopters, supporting the replenishment of supplies and the evacuation of casualties.

The facilities of supplying

The midsection of the AOE-532's hull is equipped with two dry cargo replenishment stations and four fuel replenishment stations on each side. This setup allows the ship to simultaneously supply fuel and provisions to two vessels on either side. Each dry cargo replenishment station can transfer 2 tons of ammunition and supplies per hour. The fuel replenishment stations use 7-inch fuel hoses, with each station capable of transferring 110,000 gallons of fuel per hour. This dual replenishment capability enhances the ship's efficiency in supporting naval operations by providing a swift and continuous supply of essential

resources to other vessels during operations at sea.

The facilities of medical treatment

The AOE-532 is equipped with medical facilities comparable to a field hospital, featuring various essential components to provide comprehensive healthcare. The medical facilities on board include:

Clinic Rooms, Operating Room, Dental Clinic, Disinfection Room, General Wards and Negative Pressure Isolation Wards

All patient rooms are equipped with oxygen systems to support medical care. In addition to these fundamental facilities, the ship also features specialized medical equipment, including:

ENT (Ear, Nose, and Throat) Examination Table, Endoscope Unit, Blood Analyzer, Ultrasound Equipment, Mobile X-ray Machine, Dental Cleaning Machine, Anesthesia Equipment, Sterilization Autoclave and UV Disinfection Box. The overall medical setup on the AOE-532 is more comprehensive than that of some regional hospitals, allowing it to function effectively as a field hospital during naval operations.

The system of the engineering control

To enhance the overall automation and management capabilities of the AOE-532, it adopts an integrated propulsion control system designed by the Chiyoda Corporation. This system, known as the Integrated Propulsion Control System, is subdivided into six subsystems: Propulsion, Power, Auxiliary Machinery, Fuel and Water, Damage Control, and Others. The system features a graphical interface that provides real-time displays of the entire ship's status, and it includes self-diagnostic capabilities as well as the ability to generate reports. The graphical interface not only allows for real-time monitoring but also facilitates user-friendly interactions, enabling the crew to respond effectively to the ship's status. The system's self-diagnostic capabilities enhance its reliability, and the reporting function helps in maintaining a record of the ship's performance. The adoption of such an integrated and sophisticated control system contributes to the overall efficiency, safety, and automation of the AOE-532.

Weapon system

The AOE-532 is equipped with a variety of defensive weaponry to ensure its protection in different scenarios. Here are five key armaments included Sea Chaparral AAW Missiles, Phalanx Close-In Weapon System (CIWS), Bofors 40mm/70 Caliber Rapid-Fire Cannons, T-75 20mm Gatling Guns and M2

Browning Heavy Machine Guns

These weapon systems collectively provide the AOE-532 with a well-rounded defense capability, addressing threats from both air and surface domains. The combination of weapons mentioned above ensures a comprehensive defense fire power to safeguard the ship and her crews.

前言

隸屬於海軍一五一艦隊，駐地於左營軍港的磐石油彈補給艦（AOE-532）是由海軍造船發展中心及船舶暨海洋產業研究發展中心共同設計，也是我國目前少數自主研發的軍艦，此外，20859 噸的排水量也讓磐石軍艦躍身成為目前中華民國海軍排水量最大的新一代軍艦。磐石軍艦自 2015 年 3 月底成軍後即擔任海軍 105 年敦睦支隊之旗艦，其上設置的文宣館可讓友邦民眾與僑胞參觀，讓各地民眾親身體驗我國文化，隨艦的海軍樂儀隊與陸戰莒拳隊也能達到文化交流的效果。自此至今，每年的敦睦支隊皆由磐石軍艦擔任旗艦。

艦體設計

磐石軍艦引進低雷達回波設計，上層



結構帶有傾斜平面，外型相當優美。全長 196 公尺，寬 25.5 公尺，吃水 8.6 公尺，雖然艦體較同型艦 - 武夷軍艦更為龐大，但磐石軍艦的迴旋半徑比武夷軍艦還小，最大航速 22 節更是比武夷軍艦還快上 2 節；此外，全艦設有 2 座四噸吊臂與 2 座六噸吊臂，用以快速裝卸載物資；艦艉有一長 36 公尺、寬 26.5 公



尺的直升機甲板，其最大載重可達 33.3 噸，可供國軍現役 CH-47SD 運輸直升機與 S-70C 反潛直升機起降，也可讓美軍 CH-53E 特戰救難直升機降落，利於物資整補與傷患後送。

補給設施

磐石軍艦的艦體中部兩舷設有 2 座乾貨整補站與 4 座加油整補站，可同時為兩側各一艘船艦補給油料與物資。其中每座乾貨整補站每小時可傳送 2 噸的彈藥與物資，加油整補站則採用 7 吋油管，每座每小時可傳送 11 萬加侖的燃油。

醫療設施

磐石軍艦上具備野戰醫院等級的醫療設施，其中包含診療室、手術室、牙科室（附設 X 光室）、消毒間、一般病房 12 床與負壓隔離病房 3 床，且所有病房均含有供氧系統。除此之外，艦上還配備耳鼻喉科診療台、內視鏡機組、血液

分析儀、超音波設備、移動式 X 光機、洗牙機、麻醉設備、滅菌釜與紫外線消毒盒，整體設備比部分地區醫院更加完善。

輪機控制系統

為提升整艦的自動化程度與管理能力，磐石軍艦採用協聚德公司設計的整合式輪機控制系統。此系統分為推進、電力、輔機、油水、損管與其他共六項子系統，可以圖形化介面即時顯示全艦的狀態，並具備自我檢測與報表列印等功能。

武裝

磐石軍艦於艦艏配備海欏樹防空飛彈，艦體前後各設有一座方陣近迫武器系統，機庫兩側則各設有波佛斯 40mm/70 倍徑快砲，並且於艦上備有 2 組 T-75 20 毫米機砲與 2 把 M2 白朗寧重機槍。