

destroyers in 1950-1, five minesweepers in 1953-4, and six corvettes in 1954-9.

Private Shipyards

Spain's only private shipyard that was involved in the construction of major warships for the Spanish Navy until the late twentieth century was the BILBAO SHIPYARD. Bilbao is located on the Bay of Biscay along the northern coast of Spain, about 70 miles west of the French border. Bilbao produced the armoured cruisers *Infanta Maria Teresa* in 1890 and the *Vizcaya* and *Almirante Oquendo*, both in 1891.

Since 1950, most naval shipbuilding in Spain has been carried out by EMPRESA NACIONAL BAZÁN at their yards in Ferrol, Cartagena, and Cádiz. BAZÁN FERROL built one destroyer in 1959, thirteen guided missile frigates from 1973-94, and the 17,200-ton helicopter carrier *Príncipe de Asturias* in 1988. Four more guided missile frigates have been ordered from Bazán Ferrol for delivery in 2002-6. BAZÁN CARTAGENA produced eight frigates from 1950-79, eight attack submarines from 1973-86, and four guided missile frigates in 1978-80. Bazán Cartagena also provided seven frigates for the Portuguese Navy in 1970-5. The least productive yard, BAZÁN CÁDIZ, built two frigates for the Spanish Navy in 1959-60.

Foreign Acquisitions

With only a limited shipbuilding capability, Spain was required to obtain part of her naval strength from outside sources. Several ironclads were purchased from British and French shipyards. Blackwall (London) provided one ironclad frigate in 1864 and two light cruisers in 1881. Armstrong Elswick built two protected cruisers for Spain in 1886, and in 1890, the French yard of La Seyne built the battleship *Pelayo* for Spain.

With the advent of the torpedo-boat at the end of the nineteenth century, Spain purchased a number of these vessels from foreign sources. Those ships included a total of twelve torpedo-boats from the British yards of John Brown Clydebank, Thornycroft and Yarrow, three from German yards, and one each from La Seyne and Normand in France. Spain later acquired three submarines, two from Italy in 1938 and one from Germany in 1942. After the Second World War, the United States turned over two *Fletcher* class destroyers to Spain in 1957.

PORTUGAL

Even though it was known for its navigators and colonisation in the far reaches of the world, Portugal never became a significant naval power. Portugal shared the Iberian Peninsula with Spain, and its history closely paralleled that of its neighbour. There were often close royal family ties through marriage, but there was also frequent conflict between the two countries. Once associated with the Spanish states of Castile and León,

Portugal became an independent state in the twelfth century when it broke away from León. In 1317, Diniz (Denis), son of Alfonso X of Castile, began to build a navy for Portugal with the assistance of a Genoese admiral.

In 1340, Portugal assisted Spain in driving out the Moslems from the southern part of the Iberian Peninsula, but then engaged in warfare with Spain throughout the remainder of the fourteenth century. During the fifteenth century, Portugal began to explore the west coast of Africa, and by 1446, it reached Sierra Leone. Portuguese explorers also visited the islands off the African coast, including the Madeiras, Canaries, and Azores. In 1458-71, Portugal sent military expeditions into Morocco and captured Tangier and Azila. Continuing down the west coast of Africa, the Portuguese discovered Angola in 1482, and they soon began colonising that territory. Portugal established its sovereignty over Angola in 1617, and later it established a naval base at Luanda, earlier known as S. Paulo de Loanda.

In 1488, the Portuguese rounded the Cape of Good Hope and reached the east coast of Africa, which opened the gateway to India. Portugal sent its first expedition to India, headed by Vasco da Gama, in 1497. By that time, Columbus had discovered the New World, and Spain claimed all lands discovered on the far side of the Atlantic Ocean. This claim was later limited by the Treaty of Tordesillas in 1494 to lands over 1100 miles west of the Cape Verde Islands. This limitation left the eastern tip of South America open to others, and Portugal was quick to seize the opportunity. In 1500, Portuguese explorers discovered Brazil and claimed it for their country.

Vasco da Gama founded the town of Mozambique on the east coast of Africa in 1498, and the Portuguese began to settle that area in 1506. As the settlement expanded, it eventually became the colony of Portuguese East Africa with its capital at Mozambique. Portugal also established colonies at Diu and Goa on the west coast of India in the early part of the sixteenth century, and Goa was subsequently declared to be the capital of 'Portugal-East'. The Portuguese then sent expeditions to the Moluccas (Spice Islands) in the Malay archipelago. Continuing eastward around the southern coast of China, the Portuguese established a colony at Macao near the British Crown Colony of Hong Kong. The Portuguese fortified their holdings along the trade routes, and they were able to drive off incursions by the Dutch and other nations attempting to seize those possessions for their own use.

Portugal was occupied by Spain under Philip II from 1580 until 1640, when the Duke of Braganza drove out the Spanish and became John IV of Portugal. Strife continued between Spain and Portugal, but in 1668, Spain finally recognised the sovereignty of Portugal. Although at first neutral, Portugal in 1703 joined the Grand Alliance with England, Holland, Denmark, Austria, and some German states in their war against France during the War of the Spanish Succession. In retaliation, France sacked Rio de Janeiro in the Portuguese colony of Brazil in 1711. Peace was restored in 1715, and Portugal prospered during the remainder of the eighteenth century.

Portugal was attacked by Napoleon on several occasions in 1807-10 after he had occupied Spain, but peace was restored with Napoleon's defeat in 1814.

Portugal established Brazil as a kingdom under its empire in 1815, but this did not last long with Brazil becoming an independent nation in 1825. Portugal had become a republic in 1910, and in 1914, it joined the Allies against the Central Powers. In the Second World War, however, Portugal maintained its neutrality.

Portugal had a naval shipyard at Lisbon and a naval base at Luanda in Angola on the west coast of Africa. Lisbon produced most of the wooden sailing ships used by Portugal over the years, and in 1862-4, the shipyard produced two sloops-of-war. These were followed by six gunboats, the protected cruiser *Rainha Dona Amelia*, and one destroyer from 1869 to 1903. In addition to the output of warships from Lisbon, Portugal ordered several warships from foreign shipyards late in the nineteenth century, including the coastal defence battleship *Vasco de Gama*, obtained from Thames Iron Works (London) in 1876. Portugal also acquired several protected cruisers from outside sources, including one from Orlando Livorno in 1896, two from Le Havre in 1898, and one from Armstrong Elswick, also in 1898.

In 1933-4, Portugal acquired four sloops from Hawthorn Leslie at Newcastle-upon-Tyne and two destroyers from Yarrow Scotstoun. The Lisbon naval shipyard then produced two sloops and three destroyers in 1935-6, based on the design of the ships they had just received from Britain. After the Second World War, Portugal procured three submarines from Great Britain in 1948, and those ships were followed by two 'River' class frigates from Britain in 1949. Portugal then acquired from the United States four minesweepers in 1955 and two frigates (destroyer escorts) in 1957. Also in 1957, Portugal ordered one fast anti-submarine frigate from Castellammare di Stabia in Italy. More recent naval acquisitions included three submarines from Dubigeon-Normandie Nantes and four frigates from Ateliers et Chantiers de Nantes, all in 1967-9. Portugal also procured seven frigates from Empresa Nacional Bazán Cartagena in 1970-5 and three frigates from Blohm + Voss Hamburg in 1970. In 1991, Portugal acquired two guided missile frigates from Howaldtswerke Kiel and another one from Blohm + Voss.

AUSTRIA-HUNGARY

Austria, once part of the Holy Roman Empire, became an empire in itself in 1804, just two years before the Holy Roman Empire was dissolved by Napoleon Bonaparte. At that time, the Empire of Austria included the Kingdom of Hungary, and it extended to the Adriatic Sea. As a result of the Treaty of Paris following Napoleon's defeat in 1814, Austria reacquired the Illyrian provinces which had been earlier lost to Napoleon. This territory included Trieste and a strip of land along the Dalmatian coastline south to the border of Albania. In 1867, Austria and Hungary formed the joint Austro-Hungarian Empire under the Hapsburg Emperor Franz Joseph.

Austria-Hungary established a navy and undertook a naval construction programme around the middle of the nineteenth century. To begin with,



Austria-Hungary in 1914.

Austria acquired several warships from foreign shipyards, including two steam frigates and a corvette from the Venice Arsenal. A major naval shipyard was established at Pola, and naval bases were set up at Zara, Sebenico, Gravosa and Cattaro along the Dalmatian coast. Several commercial shipyards were also engaged to produce warships for the Austro-Hungarian fleet, the most noted of which was the Stabilimento Tecnico Triestino at Trieste. Other private shipyards that produced warships for Austria-Hungary included the Cantiere Navale Triestino at Monfalcone near Trieste and Danubius Shipyard at Fiume.

Austria-Hungary quickly recognised the value of the new Whitehead self-propelled torpedo, and in 1875-9, it acquired three torpedo-boats from British yards. After gaining the technical knowledge of their construction, the Pola Naval Shipyard began producing torpedo-boats of their own design. Austria-Hungary continued the procurement of new torpedo-boats and destroyers from foreign sources, such as the German shipyard of Schichau at Elbing and the British firm of Yarrow, while also producing newer models at Pola and other domestic yards. By 1913, Austria-Hungary had a fleet of some seventy torpedo-boats and twenty-five destroyers, of which more than two thirds were produced by domestic shipyards.

As the international situation began to deteriorate during the early part of the twentieth century, Austria-Hungary kept up with the armaments race and accelerated its own naval construction programme. The rate of battleship production was increased to an average of two per year from 1910 to 1914. With the outbreak of the First World War, the naval construction



South America.

Argentina

Argentina revolted against Spain in 1810 and proclaimed its independence in 1816. A stabilised regime, however, was not established until the constitutional assembly of 1852 and the consolidation of the nation in 1860. Argentina soon began to build a navy, ordering the battleship *Almirante Brown* from Great Britain in 1880. Argentina later procured two additional battleships from Britain, the *Independencia* in 1892 and the *Libertad* in 1893. Around that time frame, Argentina also purchased an old coastal defence battleship built by Samuda Bros. Poplar (London) and four armoured cruisers from Italian sources, two from Ansaldo Genoa and two from Orlando Livorno.

By the turn of the century, Argentina had established naval arsenals (shipyards) at Buenos Aires, Bahia Blanca (Puerto Belgrano), and Rio Santiago to maintain its warships. Before the First World War, Argentina purchased four destroyers from German shipyards, two from Schichau Elbing and two from Krupp Germania Kiel. In 1914-5, Argentina acquired two battleships from American shipyards, the *Rivadavia* from Fore River and the *Moreno* from New York Shipbuilding Camden. In 1931, Argentina purchased two heavy cruisers from Italian shipyards, the *Almirante Brown* from Odero Sestri Ponente (Genoa)

and the *25 de Mayo* from Orlando Livorno (Leghorn). Argentina also acquired the light cruiser *La Argentina* from Vickers-Armstrong Barrow in 1939.

The RIO SANTIAGO NAVAL SHIPYARD built a number of small warships, including eight minesweepers in 1936-8, two frigates in 1946, and two frigates in 1956-7. The Rio Santiago yard also built one British Type 42 guided missile destroyer in 1978 and four Meko 140 guided missile frigates in 1985-90. Two more Meko 140s ordered by the Argentine Navy have already been launched and are scheduled for completion in 2002-2.

After the Second World War, the Argentine Navy was modernised by the acquisition of two American 10,000-ton light cruisers mounting fifteen 6in guns in 1951. The ex-uss *Phoenix* (CL-46) was renamed the *General Belgrano*, while the ex-uss *Boise* (CL-47) became the *9 de Julio*. The *General Belgrano* was sunk by a British submarine on 3 May 1982 during the Falklands War with a loss of over 350 lives out of a crew of nearly 1050 men. In addition to the two light cruisers, Argentina also purchased four frigates from the United States after the Second World War. Argentina continued to procure warships from foreign sources, including five destroyers from the United States in 1961 and the British aircraft carrier *Venerable*, renamed *25 de Mayo*, in 1968. A further three destroyers were acquired from the United States in 1972-3, a attack submarine from Howaldtswerke Kiel in 1974, one guided missile destroyer from Vickers Barrow in 1977, and three guided missile frigates from Lorient Dockyard in 1978-81. In 1984-5, Thyssen Nordseewerke Emden supplied another attack submarine for the Argentine Navy.

Brazil

The native population of Brazil revolted against Portuguese rule in 1789, but it was not until 1822 that Brazil was declared to be an independent nation with Dom Pedro as its emperor. The empire collapsed in 1889, and two years later, Brazil became a constitutional republic. Faced with a rivalry against its sister republics of Argentina and Chile, Brazil also began to develop a naval establishment which soon became the most powerful naval force in South America. Brazil had naval shipyards at Rio de Janeiro and Para (Belem), as well as a number of private shipyards. The shipyard of Ilha das Cobras at Rio de Janeiro was capable of building warships as large as destroyers, and Ilha Vieana, also at Rio de Janeiro, built a number of small naval vessels.

In 1899, Brazil acquired the pre-Dreadnought battleships *Marshal Floriano* and *Marshal Deodora* from the French shipyard of La Seyne near Toulon, and in 1910, Brazil procured the Dreadnought battleships *Minas Gerais* and *Sao Paulo* from Vickers Barrow. Brazil subsequently ordered another battleship, the 27,000-ton *Rio de Janeiro*, from Armstrong Elswick, but the country ran out of funds, and the incomplete ship had to be sold to Turkey in 1913. Renamed the *Sultan Osman I*, the ship was confiscated by the British at the outbreak of the First World War, and she joined the Royal Navy as *HMS Agincourt*.

In 1937, three destroyers of American design were laid down at the ILHA DAS COBRAS shipyard in Rio de Janeiro, and these were completed in 1943 for the Brazilian Navy. In 1940-1, six destroyers of British design were laid down at

that yard, but due to the absence of parts from Great Britain during the war, the ships could not be completed until 1949-51. Warships obtained from foreign sources included three submarines delivered by Odero-Terni-Orlando of Spezia, Italy in 1938 and eight US destroyer escorts, which were transferred to Brazil in 1944.

In 1951, Brazil purchased two American 10,000-ton light cruisers that carried fifteen 6in guns in five triple turrets. The ex-USS *Philadelphia* (CL-41) became the Brazilian cruiser *Barroso*, while the ex-USS *St Louis* (CL-49) was renamed the *Tamandare*. Brazil then ordered ten corvettes from The Netherlands, and these were delivered in 1954-5. In 1956, Brazil acquired the former British 13,200-ton aircraft carrier HMS *Vengeance*, which was renamed the *Minas Gerais*. Further naval acquisitions by Brazil included eleven destroyers and seven submarines from the United States in 1972-3. From Great Britain, Brazil received three submarines in 1973-7, and four destroyers and four guided missile frigates in 1976-8. Subsequently, one submarine was acquired from Howaldtswerke Kiel in 1989, four guided missile frigates from American shipyards also in 1989, and four guided missile frigates from Yarrow Scotstoun in 1995-7.

In the 1970s, Brazil made a determined effort to establish a domestic naval shipbuilding capability. The ARSENAL DE MARINHA in Rio de Janeiro built two destroyers in 1978, two guided missile frigates in 1979-80, and two corvettes in 1989-91. The Arsenal de Marinha is currently also building submarines, having completed three boats based on a Howaldtswerke design in 1994-9.

Chile

The Chilean population rose up against Spain in 1817, and the country immediately began to build a navy to clear the coastline of Spanish ships. After rebel victories at Chacabuco in 1817 and Maipo in 1818, freedom was assured, and Chile became an independent nation under the dictatorship of Bernardo O'Higgins. In 1831, a republic was established, and with a stabilised political structure, the country began to flourish. Rivalry with Argentina and Brazil caused Chile to begin building a strong navy at the beginning of the 20th century. A naval shipyard was established at Talcehuano, about 300 miles south of the capital city of Santiago.

Two 28,500-ton Dreadnought battleships designed to carry ten 14in guns were ordered from Armstrong Elswick. The *Almirante Latorre* was laid down on 1911, and it was followed by its sister-ship, the *Almirante Cochrane*, 2 years later. Work was suspended on both ships at the outbreak of the First World War, but construction was soon resumed on the *Almirante Latorre* after it had been acquired by the British government. The ship was completed, and it served in the Royal Navy during the war as HMS *Canada*. After the war, the ship was returned to Chile. The hull of the *Almirante Cochrane* was retained by the British, and the ship was eventually completed as the aircraft carrier HMS *Eagle*.

In 1928-9, Chile received six destroyers ordered from Thornycroft Southampton, as well as three submarines ordered from Vickers-Armstrong

Barrow. After the end of the Second World War, Chile purchased six frigates from Canada in 1946 and two 10,000-ton light cruisers from the United States in 1951. Of the former American cruisers, the ex-USS *Brooklyn* (CL-43) was renamed *O'Higgins* after the Chilean liberator, Bernardo O'Higgins, and the ex-USS *Nashville* (CL-40) was renamed *Prat*. In 1955, Chile ordered two destroyers from Vickers-Armstrong Barrow, and these were commissioned in 1960.

Chile subsequently acquired one *Balao* class submarine, four destroyers and three frigates from the United States in 1961-5. In 1971, the Swedish light cruiser *Göta Lejon* was purchased and renamed *Almirante Latorre*. Acquisition from Great Britain included two *Leander* class frigates in 1973-4, an *Oberon* class submarine in 1976, and four 'County' class guided missile destroyers in 1982-7. Chile also acquired two submarines from Howaldtswerke Kiel in 1984, and in 1998, two more submarines were ordered from DCN Cherbourg for delivery in 2004-5.