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ΕΠΙΒΛΕΠΩΝ ΚΑΘΗΓΗΤΡΙΑ: ΠΑΝΑΓΟΠΟΥΛΟΥ ΜΑΡΙΑ

**ΘΕΜΑ
« NOTABLE MARINE MUSEUMS OF EUROPE »**

**ΤΟΥ ΣΠΟΥΔΑΣΤΗ: ΓΙΑΝΝΕΛΗ ΛΑΜΠΡΟΥ
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**Ο ΔΙΕΥΘΥΝΤΗΣ ΣΧΟΛΗΣ: ΤΣΟΥΛΗΣ ΝΙΚΟΛΑΟΣ
ΠΛΟΙΑΡΧΟΣ Α΄ Ε.Ν.**

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INTRODUCTION

The old saying of museums “You cannot interpret the future if you do not know the past” still holds true. However, knowing the past does not mean being immersed in it.

A **maritime museum** (sometimes **nautical museum**) is a museum specializing in the display of objects relating to ships and travel on large bodies of water. A subcategory of maritime museums are **naval museums**, which focus on navies and the military use of the sea.

The great prize of a maritime museum is a historic ship (or a replica) made accessible as a museum ship, but these are large and require a considerable budget to maintain, many museums preserve smaller or more fragile ships or partial ships within the museum buildings and most museums exhibit interesting pieces of ships (such as a figurehead or cannon), ship models, and miscellaneous small items like cutlery, uniforms, and so forth.

Ship modellers often have a close association with maritime museums; not only does the museum have items that help the modeller achieve better accuracy, but the museum provides a display space for models larger than will comfortably fit in a modeller's home; and of course the museum is happy to take a ship model as a donation. Museums will also commission models.

There are thousands of maritime museums in the world. Many belong to the International Congress of Maritime Museums (ICMM), which coordinates members' efforts to acquire, preserve, and display their material. There is a risk that too many maritime museums might dilute the experience for the public, while a poorly managed museum might put other municipalities off the idea of hosting such a museum.

At 40 acres (162,000 m²), Mystic Seaport in Mystic, Connecticut, USA, can lay claim to the title of largest museum; it preserves not only a number of sailing ships, but also a large number of original seaport buildings, including a ship chandlery, sail loft, ropewalk, and so forth. However, the UK's National Maritime Museum in Greenwich is also a contender, with many items of great historical significance, such as the actual uniform worn by Horatio Nelson at the Battle of Trafalgar.

A recent activity of maritime museums is to build replicas of ships, since there are few survivors that have not already been restored and put on display.

1.Ship Preservation

The preservation of ships in museums ensures that ancient and historic vessels are preserved for posterity in optimum conditions and are available for academic study and for public education and interest.

Remains of ancient and historic ships and boats can be seen in museums around the world. Where a ship is in a good state of preservation it can sometimes act as a museum in its own right. Many museum ships, such as HMS Victory are popular tourist attractions. Some ships are too fragile to be exposed outdoors or are incomplete and must be preserved indoors. The remains of the Mary Rose for example are kept in a purpose designed building so that conservation treatment can be applied.

In some cases, archaeologists have discovered traces of ships and boats where there are no extant physical remains to be preserved, such as Sutton Hoo, where museum displays can show what the vessel would have looked like, although the vessel itself no longer exists.

2.Museum Ships

A **museum ship**, or sometimes **memorial ship**, is a ship that has been preserved and converted into a museum open to the public, for educational or memorial purposes. Some are also used for training and recruitment purposes, a use found mostly with the small number of museum ships that are still operational, *i.e.*, capable of regular movement.

There are several hundred museum ships around the world, with around 175 of them organised in the Historic Naval Ships Association though there are also many non-naval museum ships as well, from general merchant ships to tugs and lightships. Many, if not most, museum ships are also associated with a maritime museum

2.1 Significance

Despite the long history of sea travel, the ravages of the elements and the expense of maintenance results in the eventual destruction of nearly all ships ever built, often by sinking, usually by being broken up and sold for scrap. Only a few survive, sometimes because of historical significance, but more often due to luck and circumstance. Since an old ship tied up at dockside, without attention, still decays and eventually sinks, the practice of recent years has been to form some sort of preservation society, solicit donations from governments or private individuals, organize volunteer labor from the enthusiasts, and open the restored ship to visitors, usually for a fee.

The restoration and maintenance of museum ships presents problems for historians who are asked for advice, and the results periodically generate some controversy. For instance, the rigging of sailing ships has almost never survived, and so the rigging plan must be reconstructed from various sources. Studying the ships also allows historians to analyze how life on and operation of the ships took place. Numerous scientific papers have been written on ship restoration and maintenance, and international conferences are held discussing the latest developments. Some years ago, the Barcelona Charter was signed by a variety of international owner organizations of traditional vessels, and provides certain accepted minimum criteria for the restoration and operation of traditional watercraft still in operation.

Another consideration is the distinction between a "real" museum ship, and a ship replica. As repairs accumulate over time, less and less of the ship is of the original materials, and the lack of old parts (or even "appropriate" work tools) may lead to the use of modern "short-cuts" (such as welding a metal plate instead of riveting it, as would be the case during the ships historical period).

Visitors without historical background are also often unable to distinguish between a historical museum ship and a (more-or-less historically relevant) ship replica, which may serve solely as a tourist attraction.

2.2 Museum usage

Typically the visitor enters via gangplank, wanders around on the deck, then goes below, usually using the original stairways, giving a sense of how the crew got around. The interior features restored but inactivated equipment, enhanced with mementos including old photographs, explanatory displays, pages from the ship's logs, menus, and the like. Some add recorded sound effects, audio tours or video displays to enhance the experience.

In some cases the ships radio room has been brought back into use, with volunteers operating amateur radio equipment. Often the callsign assigned is a variation on the original identification of the ship. For example, the submarine USS Cobia, which had the call NBQV, is now on the air as NB9QV. The WWII submarine USS Pampanito SS383, berthed at the National Maritime Historic Park in San Francisco, had the wartime call NJVT and is now on the air as NJ6VT. In other cases, such as the USS *Missouri*, a distinctive call (in this case *KH6BB*) is used. This radio work not only helps restore part of the vessel, but provides worldwide publicity for the museum ship.

A number of the larger museum ships have begun to offer hosting for weddings, meetings, and other events, sleepovers, and on a few ships still seaworthy, cruises. In the United States, this includes the USS *Constitution's* annual "turnaround", when the old ship is towed out into the harbor and brought back in facing the other way, so as to weather evenly. A place on the deck is by invitation or lottery only, and highly prized.

Many consider the tourism appeal of an interesting old vessel on the city waterfront strong enough that any port city should showcase one or more museum ships. This may even include building a replica ship at great expense.

3. MUSEUMS LOCATED IN ENGLAND/UNITED KINGDOM

3.1 National Maritime Museum – Greenwich, London



The **National Maritime Museum** (NMM) in Greenwich, London, is the leading maritime museum of the United Kingdom and may be the largest museum of its kind in the world. The historic buildings form part of the Maritime Greenwich World Heritage Site, and it also incorporates the Royal Observatory, and 17th-century Queen's House. In 2012, Her Majesty The Queen formally approved Royal Museums Greenwich as the new overall title for the National Maritime Museum, Queen's House, the Royal Observatory, Greenwich and the Cutty Sark. The museum is a non-departmental public body sponsored by the Department for Culture, Media and Sport. Like other publicly funded national museums in the United Kingdom, the National Maritime Museum does not levy an admission charge although most temporary exhibitions do incur admission charges.

3.1.1 COLLECTION

The Museum was created by the *National Maritime Act of 1934* Chapter 43 under a Board of Trustees, appointed by H.M. Treasury. It is based on the generous donations of Sir James Caird (1864–1954). King George VI formally opened the Museum on 27 April 1937 when his daughter Princess Elizabeth, later Queen Elizabeth II accompanied him for the journey along the Thames from London. The first Director was Sir Geoffrey Callender.



(The *Bretagne*, painted by Jules Achille Noel, 1859, at the National Maritime Museum)

Since earliest times Greenwich has had associations with the sea and navigation. It was a landing place for the Romans; Henry VIII lived here; the navy has roots on the waterfront; and Charles II founded the Royal Observatory in 1675 for "finding the longitude of places". The home of Greenwich Mean Time and the Prime Meridian since 1884, Greenwich has long been a centre for astronomical study, while navigators across the world have set their clocks according to its time of day.



Portrait of Captain James Cook by Nathaniel Dance at the NMM

A painting of the Great Comet of 1843 that was created by astronomer Charles Piazzi Smyth. The Museum has the most important holdings in the world on the history of Britain at sea comprising more than two million items, including maritime art (both British and 17th-century Dutch), cartography, manuscripts including official public records, ship models and plans, scientific and navigational instruments, instruments for time-keeping and astronomy (based at the Observatory). Its British portraits collection is exceeded in size only by that of the National Portrait Gallery and its holdings relating to Vice-Admiral Horatio Nelson and Captain James Cook, among many other individuals, are unrivalled.

An active loans program ensures that items from the collection are seen in the UK and abroad. Through its displays, exhibitions and outreach programs the Museum also explores our current relationship with the sea and the future of the sea as an environmental force and resource.

By virtue of its pairing with the Royal Observatory, the Museum enjoys a unique conjunction of subjects (history, science and the arts), enabling it to trace the movement and accomplishments of people and the origins and consequences of empire. The outcome of the Museum's work is to achieve, for all its users at home and overseas, a greater understanding of British economic, cultural, social, political and maritime history and its consequences in the world today.

The collection of the National Maritime Museum also includes items taken from Germany after World War II, including several ship models and paintings. The museum has been criticized for possessing what has been described as "Looted art". The Museum regards these cultural objects as "war trophies", removed under the provisions of the Potsdam Conference.

The Museum awards the Caird Medal annually in honour of its major donor, Sir James Caird.

3.1.2 The Caird Library

The Museum has the world's largest maritime historical reference library, including over 100,000 books, 20,000 pamphlets, 20,000 bound periodicals including 200 current titles and 8000 rare books dating from 1474 to 1850. The Caird Library is a comprehensive specialist reference library and a rich research resource for all. The reading room is open Monday to Friday, 10.00–16.45 (until 19.45 on Thursday), and 10.00–13.00 and 14.00–16.45 on Saturday.

The Archive and Library holds a fantastic range of resources for finding out more about maritime history. Material includes manuscripts, books, charts and maps dating back to the 15th century and comprising the most extensive maritime archive in the world. The collection can be used to research maritime history and exploration, the history of the Merchant Navy and the Royal Navy and much more, including astronomy and timekeeping. Many of the resources they hold are useful for family historians, including large collections of Master's Certificates dating back to 1845 and Merchant Navy Crew Lists back to the 1860s.



NMM lit at night

3.1.3 THE MUSEUM

The museum was officially established in 1934 within the 200 acres (0.81 km²) of Greenwich Royal Park in the buildings formerly occupied by the Royal Hospital School, before it moved to Holbrook in Suffolk. These buildings had previously been occupied by the Royal Naval Asylum before it was incorporated into the Greenwich Royal Hospital School. It includes the Queen's House (part of the historic park-and-palace landscape of "Maritime Greenwich", which was inscribed as a UNESCO World Heritage Site in 1997) and the Royal Observatory, Greenwich, until 1948 the home of the Royal Greenwich Observatory.

The gardens immediately to the north of the museum were reinstated in the late 1870s following construction of the cut-and-cover tunnel between Greenwich and Maze Hill stations. The tunnel comprised part of the final section of the London and Greenwich Railway and opened in 1878.

Flamsteed House (1675–76), the original part of the Royal Observatory, was designed by Sir Christopher Wren and was the first purpose-built scientific research facility in Britain.

In 1953, the Old Royal Observatory became part of the Museum. Flamsteed House, was first opened for visitors by Queen Elizabeth II in 1960.

The 17th-century Queen's House, an early classical building designed by Inigo Jones, is the keystone of the historic "park and palace" landscape of maritime Greenwich.



A Type 23 frigate propeller at the National Nautical Museum

All the Museum buildings have been subsequently upgraded. A full redevelopment of the main galleries, centring on what is now the Neptune Court, and funded by the Heritage Lottery Fund, was completed in 1999.

The Queen's House was refurbished in 2001 to become the heart of displays of art from the Museum's collection.

In May 2007 a major capital project, "Time and Space", opened up the entire Royal Observatory site for the benefit of visitors. The £16 million transformation features three new modern astronomy galleries, four new time galleries, facilities for collections conservation and research, a learning centre and a 120-seat planetarium (named after the major donor, Peter Harrison) Peter Harrison Planetarium designed to introduce the world beyond the night sky.

In 2008, the museum announced that Israeli shipping magnate Sammy Ofer, had donated £20m for a new gallery.

Under Kevin Fewster's direction, the museum has inaugurated a new wing where temporary exhibitions are held. Fewster's four year master plan includes increasing the museum's available space by 40%.

- 1937 to 1946 - Geoffrey Callender
- 1947 to 1966 - Frank George Griffith Carr
- 1967 to 1983 - Basil Jack Greenhill
- 1983 to 1986 - Neil Cossons
- 1986 to 2000 - Richard Louis Ormond CBE (born 1939)
- 2000 to 2007 - Rear Admiral Roy Clare (born 1950)
- 2007 to present - Dr Kevin Fewster



3.2 Seacity Museum – Southampton , England



The **SeaCity Museum** is a museum in Southampton, England, which opened on 10 April 2012 to mark the centenary of RMS *Titanic*'s departure from the city. It is housed within a part of the Grade II* listed civic centre building which previously housed the magistrates' court and police station. The museum contains two permanent exhibitions, one dedicated to Southampton's connection with RMS *Titanic*, and the other to the city's role as gateway to the world. A third space for temporary exhibitions is housed in a purpose built pavilion extension to the civic centre. Further phases of development may yet add to the exhibition space

The museum was designed by Wilkinson Eyre with Kier Southern serving as the main contractor. The budget for the museum was £15M, approximately £5M of which came from the Heritage Lottery Fund, with Southampton City Council and Southampton Cultural Development Trust providing the remainder. The council had planned on selling works from their municipal art collection to fund the museum, but backed down after encountering significant opposition from both within and outside the city.

3.2.1 BACKGROUND

Plans for a heritage centre in Southampton began to emerge in 2002, with the city council's formation of the Heritage Working Group to explore options and to outline the way forward for such a scheme. In 2004, the following locations were shortlisted as potential sites for the then named "Story of Southampton" heritage centre:

- Lower High Street
- Mayflower Park
- Berth 101 at the Port of Southampton
- The former Vosper Thornycroft shipyard, Woolston



All of the shortlisted sites were deemed too costly and unworkable. Following these developments, in 2006 Southampton Police announced their intention to vacate their civic centre headquarters due to a lack of space. With the magistrates' court having left the building in 2001, this would leave an entire block of the civic centre vacant. And so the civic centre became a candidate to host the heritage centre, and by 2007 was considered the front runner.

Plans were unveiled for the civic centre heritage centre in 2008. The original plans included a 3-storey extension to the building, and a water feature running from nearby Watts Park, both of which were scrapped to reduce the cost by £10M to £28M. The project was split into two phases. The focus of phase one was to be Southampton's Titanic connection, and the Sea City name was attached. Phase one had a budget of £15M and a completion date due in 2012.

3.2.2 FUNDING

Southampton City Council sought Heritage Lottery Funding towards the museum; it was awarded £0.5M in 2009 for the development phase, and a further £4.6M in 2010 for the construction.

To raise the rest of the £15M, in 2009, Southampton City Council proposed selling off works from their municipal art collection. The council selected two works to be sold, an oil painting by Alfred Munnings, *After the Race* (1937), and one of two bronzes by Auguste Rodin, either *Eve* (1880) or *Crouching Woman* (1882). The council believed that these works were not core to the gallery's focus on British modern and contemporary 20th and 21st century art. Due to space constraints at Southampton City Art Gallery, only 200 of the 3,500 works in the collection can ever be displayed there at one time; the council believed that the sale of the two works would allow space to be created in the new museum for the display of 100 further works from the collection. It was hoped that the sale would generate £5M towards the museum.

The proposed sale of the artwork had backing from the local paper, the *Daily Echo*, which had campaigned for three years for the deaccessioning of pieces from the "overflowing" municipal collection. There were voices of dissent from within the city however, in spite of Alec Samuels, the then Conservative council leader's assertion that, "If we don't sell some paintings we don't get a heritage centre." Councillors from opposition Liberal Democrat and Labour camps described the proposed sale as a "betrayal of public trust" which would damage the reputation of the city's museum. Alan Whitehead, MP for neighbouring Southampton Test described the proposed sale as an "outstandingly bad idea", which would discourage future donations and bequests to the city and destroy the national standing of its gallery. Labour politicians proposed borrowing funds as an alternative to the proposed sale, but the ruling Conservative faction dismissed this plan, arguing that

it would lead to either cuts in front-line services, or increases in council tax, to cover interest and repayments.

Opponents formed the "Save our Collection" group to campaign against the proposed art sale; they protested outside the civic centre and handed a petition with over 2,500 signatories opposing the proposed sale to the council. Nonetheless, the council voted to proceed with its plans, and in September 2009, they formally approached Baroness Scotland of Asthal, then Attorney General for England and Wales to approve the sale. Criticism came from further afield when the Museums Association stated that the proposed sale would be in breach of the association's code of ethics as Southampton City Council had not fully explored alternate sources of funding. The Munnings forms part of the Chipperfield bequest to the city, over which the Tate held an advisory responsibility. They joined in the criticism, stating that "the sale of works acquired through the Chipperfield bequest to raise funds towards a capital project is not advisable and, indeed, not in the spirit of the bequest. The Art Fund, which had previously provided funding towards the acquisition of Bridget Riley's Red Movement (2005) by the city, expressed concern at the proposed sale, wary that it would "set an uncomfortable precedent, stretching the sector's guidelines and effectively sanctioning the disposal of works of art from publicly-owned collections to support other areas of public sector cultural provision".

In November 2009, due to the strong opposition, Southampton City Council placed the proposed art sale on hold to re-evaluate their funding possibilities. By February 2010, the council had cancelled the proposed art sale. The council stated that movements in the property markets had allowed it to consider selling off assets that were previously seen as unviable for sale. The council also looked to other organisations to provide funding, such as partnerships with neighbouring Hampshire County Council through a loan of artworks scheme. And if these efforts were to fail, the council stated that any shortfall would be met through borrowing.

A charity, the Southampton Cultural Development Trust[e] was formed in 2010 to raise funds towards the project. The museum further received a grant from the Department for Culture, Media and Sport in conjunction with the Wolfson Foundation, and another from the Garfield Weston Foundation.

Over its first two years of operations income was £468 thousand (23%) lower than expected. Visitor numbers were 10 thousand lower than expected at 240 thousand.

3.2.3 EXHIBITS



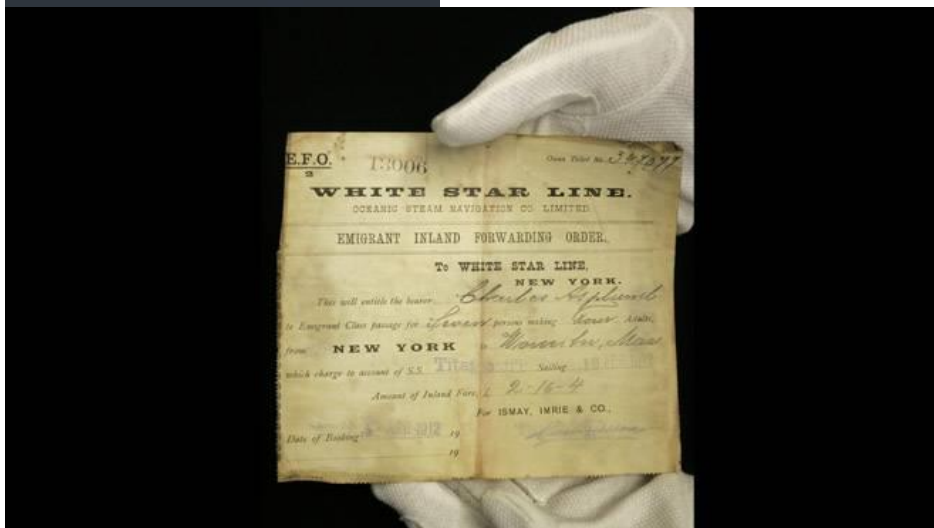
There are three exhibitions at SeaCity, all of which were designed by Urban Salon. Two permanent exhibitions are housed in the former police station and magistrates' court.

Gateway to the World examines Southampton's history, and its role as a hub for human migration. Exhibits include a one tonne, seven-metre long replica of RMS Queen Mary, rehoused from Southampton Maritime Museum. Both Southampton Maritime Museum and Southampton Museum

of Archaeology closed permanently in September 2011 to allow their exhibits to be rehoused at SeaCity and Tudor House Museum.

Southampton's Titanic Story explores the Titanic tragedy through the eyes of its crew, the majority of whom listed Southampton as their address. A preserved court room uses audiovisual elements to re-enact scenes from the British inquiry into the sinking and to explore its ramifications. The civic centre clock tower, approximately the height of a funnel on the Titanic can be viewed through a roof light as visitors enter the exhibition, giving them an impression of the scale of the ship. The story incorporates audio recordings given by the survivors and features interactive elements allowing visitors to steer the virtual ship and to stoke its engines.

The pavilion plays host to temporary exhibitions. The first of which, to coincide with the Titanic centenary, is Titanic: The Legend which explores the public's enduring fascination with the ship through its portrayal in popular culture. The exhibition hosts screens playing back scenes from films such as 1912's *In Nacht und Eis* and 1997's *Titanic*. Titanic memorabilia collected include Steiff "mourning bears", beers from the Titanic Brewery, jigsaw puzzles and many other such kitsch that SeaCity scoured the internet to find.



3.3 Merseyside Maritime Museum – *Liverpool, England*



The Merseyside Maritime Museum is a museum based in the city of Liverpool, Merseyside, England, UK. It is part of National Museums Liverpool and an Anchor Point of ERIH, The European Route of Industrial Heritage. Opened in 1980 and expanded in 1986, the museum occupies warehouse block D at the Albert Dock, along with the Piermaster's House, Canning Half Tide Dock and Canning Graving Docks.



The historic Albert Dock

The city's seafaring heritage is brought to life within the historic Albert Dock. The museum's collections reflect the international importance of Liverpool as a gateway to the world, including its role in the transatlantic slave trade and emigration, the merchant navy and the RMS Titanic. The UK Border Agency National Museum, 'Seized! The Border and Customs uncovered' is located in the basement gallery of the building.

Highlights include ship models, maritime paintings, colourful posters from the golden age of liners and even some full sized vessels.

3.3.1 Dashwood-Howard's Collection



Arthur George Maltravers ('Jo') **Dashwood-Howard** was born in Middlesex in 1911. He entered the Nautical College, Pangbourne in Berkshire in 1925 before going on to join Liverpool shipping company T and J Brocklebank as a cadet in 1929. 'Jo' left the sea in 1936 to pursue a career ashore, but continued his interest in seafarers' crafts by collecting and making ships in bottles.



He had started the hobby whilst still in his teens and pursued it intensively for the rest of his life. As well as ships in bottles, he mastered many crafts including wool pictures, decorative rope work and scrimshaw work (carving and colouring shells and ivory). He also developed an important maritime collection, of which his extensive collection of ships in bottles forms a major part.

Following Dashwood-Howard's death in 1998 the majority of his collection was donated, as he had wished, to Merseyside Maritime Museum.

3.3.2 PAINTINGS AND WORKS ON PAPER COLLECTIONS

The maritime paintings in the Merseyside Maritime Museum collection provide a comprehensive record of Liverpool merchant vessels and the city's shipping activity.



'PS Victory' by Samuel Walters

A large number of the paintings in the collection are ship portraits, which were detailed depictions produced for people who were most familiar with this subject matter. From crew to masters. The collection also represents impressive views of the River Mersey and the port of Liverpool.

3.3.3 THE BATTLE OF ATLANTIC COLLECTION

The Battle of the Atlantic was the longest campaign of the Second World War. It was also perhaps the most crucial. For Britain it began on the first day of the war and continued until the last, almost 6 years later. The museum's Battle of the Atlantic gallery tells this story in eight sections.



A Convoy Arrives in Liverpool' by D Cobb

Liverpool was Britain's main transatlantic convoy port during the war. By early 1941 she had also become a major naval base and the headquarters of the Admiralty's entire Atlantic campaign. Recognising the port's key role, the Germans made her the target for more bombing raids (68) than any British port outside London.

As in the First World War, Liverpool's ships and merchant seamen played a crucial part in ensuring Britain's survival. So too did her dock labourers, shipbuilders and ship repairers. Finally, the unfailing spirit and warmth of the people of Merseyside had an important morale-boosting effect on Allied seafarers of all nations.

Liverpool became, also, the home port of Allied seamen of many nationalities during the war. They were warmly welcomed, and many settled in the port when the war ended. They included Chinese, West African, West Indian and Norwegian seamen.



No less than 1285 convoys arrived in the Mersey during the war, an average of four every week. Since each one might consist of up to 60 ships, this put a severe strain on the workforce and facilities of the port.

Merseyside's vast dock labour force played a vital role in clearing ships' cargoes at the port of Liverpool throughout the war. Early problems of slow turnaround(loading and unloading) of ships were mainly due to port congestion and air-raid disruptions. By 1944-1945 all cargoes were being

handled in far greater quantities than in peacetime.

3.3.4 BOAT COLLECTION

The boat collection at Merseyside Maritime Museum contains more than 70 full size vessels. These range from the pilot ship Edmund Gardner, the largest object in National Museums Liverpool's collections, to the small Dee coracle, which is just bigger than the person it would have carried.



Surf boats were used to transfer cargo to and from the beaches of Ghana in West Africa. Due to the absence of dock facilities in Ghana before 1965, cargo could not be directly loaded or unloaded onto the quayside as it could at a port like Liverpool.

The collection contains a number of types of craft, including working vessels from Liverpool's docks, leisure craft that sailed off the north-west coast, working boats from around the world, and even pleasure boats from Liverpool's Sefton Park.



Coracles like this were used extensively for fishing on the River Dee as the flexible, lightweight and flat bottomed boats were ideally suited to the strong currents and rocky bed of the river.



Ethel worked as a gig-boat around the docks of Liverpool and the Wirral. Gig-boats transported mooring ropes from deep-sea ships to the quaysides and would also transfer people and luggage between ships and land.



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Titanic Model

3.4 Hull Maritime Museum – Hull, England



Hull Maritime Museum

The **Hull Maritime Museum** is a museum in Kingston upon Hull, England, that explores the seafaring heritage of the city and its environs. The museum's stated mission is "To preserve and make available the maritime history of Hull and east Yorkshire through artefacts and documents".

3.4.1 History and Site

The museum, originally known as the **Museum of Fisheries and Shipping**, opened in **1912** in Pickering Park. It moved to its current location, the Dock Offices building, in 1974. The Dock Offices building is so-named as it is the former headquarters of the Hull Dock Company, which operated all docks in Hull until 1893. Built in 1872, it is a Grade II* listed building and a striking example of Victorian architecture. The building stands in Queen Victoria Square, opposite the Queen's Gardens, in Hull's city centre. Hull City Council currently operates and maintains the museum.

3.4.2 Exhibits and Collection

The period of time covered by the exhibits extends back to the Bronze Age and through the Middle Ages, but the museum primarily concerns itself with Hull's maritime history from the 19th century onward.^[2] The museum's exhibits are arranged along the following primary themes.



Arctic whaling heritage

The museum dedicates an entire gallery to Hull's whaling industry, which peaked in the early 19th century. Dozens of vessels ventured into the Arctic waters (particularly those around Greenland) during this period, and the gallery's collection of personal effects, shipboard items, models, and artwork (including the largest collection of scrimshaw in Europe).



Types of Whales

North Sea fishing industry

The city's fishing industry rose to prominence in the mid-19th century, and one gallery of the museum documents the history of the industry as it expanded from the North Sea into more northerly waters. This gallery makes use of models of the industry's various ocean-going vessels, from simple cobsles to large trawlers.

Maritime trade

Hull's tradition of ocean-going commerce dates from the Middle Ages and has historically targeted the nations of Scandinavia and the Baltic Sea. The Court Room in the Hull Docks building, once for use by the Hull Dock Company's shareholders and now the venue for temporary exhibitions, also pays homage to Hull's commercial past and present. The room houses a frieze containing the coats of arms of the cities with which Hull has historically had trade relations.

3.5 Scottish Maritime Museum – Irvine, Dumbarton, Scotland



Irvine, Scotland

The **Scottish Maritime Museum** currently has collections located at two sites in the West of Scotland, both with strong maritime connections. The museums, located in **Irvine** and **Dumbarton**, each portray different areas of Scotland's maritime heritage. A third museum, Clydebuilt at **Braehead**, originally opened in 1999 but was closed indefinitely during October 2010 due to lack of funding.

3.5.1 Dumbarton - Denny Ship Model Experiment Tank

The **Denny Ship Model Experiment Tank**, in *Dumbarton*, offers the opportunity to step back into the world of the Victorian naval architect. Inspired by the work of eminent naval architect William Froude and completed in 1883, it was the world's first commercial example of a ship testing tank.



The A-listed 100m Denny Ship Model Experiment Tank forms the centrepiece of the Dumbarton Museum.

Re-opened as a museum in 1982, it retains many of its original features, including the 100-meter-long ship testing tank, as long as a football pitch, which although demonstrated from time to time, lacks instrumentations and can no longer be used for hydrodynamic research and testing. The museum also tells the story of the test tank's original owners, William Denny and Brothers of Dumbarton; one of the most innovative shipbuilding companies in the world, until their closure in 1963.

3.5.2 Irvine Museum



The A-listed Linthouse Engine building forms the main exhibition hall at the Irvine Museum.

The **Irvine museum** is located at *Irvine Harbour*, situated within the **category A listed former Engine Shop of Alexander Stephen and Sons**, which was salvaged and relocated from their derelict Linthouse shipyard in Glasgow during 1991. The Linthouse engineering shop is now home to many industrial exhibits, including a model boat pond and the boatshop on the quayside, which contains an exhibition of ship models and children's activities. Visitors can step into the past by touring the Shipyard Workers' Tenement Flat where they can see a typical 'room and kitchen' worker's tenement flat, restored to its 1920s appearance.

3.5.3 Clyde Museum (not operational since 2010)

The **River Clyde** led the world of **shipbuilding**, with over 30,000 vessels in 300 years from 250 yards. The visitor could experience the sights and sounds of the building of a ship from the inside of the 'stage set' of the MV Rangitane, following all of the construction elements from design and laying the keel, through to the launch and showing the skills of the 'black squads' who made the term 'Clydebuilt' recognized the world over.

The Clyde-built coaster MV Kyles is permanently berthed at a pontoon on the River Clyde following her restoration at the Scottish Maritime Museum, Irvine. A highly significant vessel built of iron in 1872 in Paisley, **MV Kyles is the oldest iron Clyde built vessel still afloat in the UK.**



The MV Kyles, at the Braehead museum, is the oldest iron Clyde built vessel still afloat in the UK.

3.6 National Maritime Museum of Ireland - Dún Laoghaire, Ireland



The **National Maritime Museum of Ireland** (Irish: Músaem Mhuirí Náisiúnta na hÉireann) opened in 1978 in the former Mariners' Church in Haigh Terrace, near the centre of Dún Laoghaire town, southeast of Dublin city.

The church was built in 1837 for seafarers and remained open until 1971. In 1974 the Church of Ireland and the Maritime Institute of Ireland signed an agreement that led to the museum's opening. In July 2011 two stained-glass windows by artist Peadar Lamb were installed in the former church, sponsored by the Dún Laoghaire Harbour Company.

The Museum has been refurbished. In 2006 substantial funding was authorised by the Government for capital expenditure to cover the cost of the refurbishment, however this funding has since been cut off, and the Museum is now dependent upon door receipts, fund raising events and donations. It is operated by volunteers and a community employment scheme provided by the Department of Social Protection. [4] It reopened Tuesday 5 June 2012 11:30 a.m. President Michael D. Higgins officially re-opened the museum. It operates from 11am to 5pm every day.

3.6.1 Exhibits

Many exhibits in the museum tell the story of individual seamen, captains of historic ships, heroes who helped rescue others, or brave men who lost their lives as their ship was sunk during war time. There are also sections dedicated to modern day seafarers, like the crews of the Irish life boats, such as the one based in Dun Laoghaire, just around from the museum.



Popular exhibits include:

The Irish Lights: this exhibit is dominated by the Baily Optic from the Baily Lighthouse on Howth Head, which was in use from 1902 to 1972. It includes some inventions of John Richardson Wigham.

The Great Eastern display: a history of the SS Great Eastern (designed by Isambard Kingdom Brunel) including items belonging to its captain Robert Halpin and a clockwork model of the ship.

Artifacts recovered from the wreck of the RMS Leinster and some contemporary accounts of the event. It was torpedoed in 1918 off the Kish lighthouse, within sight of Dún Laoghaire. Over 500 people were drowned. There are mirror-backed half-models of the City of Dublin Steam Packet Company's ships: RMS Ulster, RMS Leinster, RMS Munster and RMS Connaught.

St Columba's Chapel: this area remembers Irish ships during World War II. There is a collection of paintings by Kenneth King and the bullet-holed flag of the MV Kerlogue.

4. Musée national de la Marine – Paris, France



The **Musée national de la Marine** (National Navy Museum) is a maritime museum located in the Palais de Chaillot, Trocadéro, in the 16th arrondissement of Paris. It has annexes at Brest, Port-Louis, Rochefort (Musée National de la Marine de Rochefort), Toulon and Saint-Tropez. The permanent collection originates in a collection that dates back to Louis XV of France.

4.1 History

In 1748, Henri-Louis Duhamel du Monceau offered a collection of models of ships and naval installations to Louis XV of France, with the request that the items be displayed at the Louvre and made available to students of the Naval engineers school, which Duhamel headed. The collection was put on display in 1752, in a room of the first floor, next to the Academy of Sciences; the room was called "*Salle de Marine*" (Navy room), and was used for teaching.

With the French Revolution, the Salle de Marine closed in 1793. The collection was added to models owned by the King personally, to others owned by the Ministry of Navy, and yet others owned by émigrés or executees (notably Philippe Égalité). A short-lived museum was opened between 1801 and 1803 at the Ministry of Navy, then located at Place de la Concorde.



Model of the frigate *Flore*, one of the items of the Trianon collection.

In 1810, Napoléon ordered a gallery of 19 models to be put on display in his offices at Grand Trianon, as to document the types of warships in usage in the French Navy at the time. Jacques-Noël Sané was put in charge of the task. Napoléon also had a model of the frigate *Muiron* in his bedroom at Château de Malmaison.

In 1827, after the Bourbon Restoration, Charles X ordered a Naval museum to be opened at the Louvre. The task was given to Pierre Zédé. Rooms were also opened or restored in Cherbourg, Brest, Lorient, Rochefort and Toulon.

In 1852, Antoine Léon Morel-Fatio became curator of the Museum. He emphasised the importance of painting, adding to the works of Joseph Vernet. He also made a catalogue of the items, and reorganised the ethnographic items of the collection.

In 1871, admiral François-Edmond Pâris became curator, and had over 400 models of small crafts indigenous to different locations of the French Empire constructed.

From 1905, ethnographic items were transferred to other museums, and in 1920, the administration of the Museum was transferred to the French Navy. In 1937, part of the Palais de Chaillot was devoted to harbouring the museum, which opened on 15 August 1943.

From 1971, the museum became an autonomous body under the Ministry of Defence. In 1975, it was instrumental in the restoration of Port-Louis fortress. In 1992, it purchased Éric Tabarly's *Pen Duick V*, now serving in the French Navy as a sailing school ship.

4.2 Exhibits - Collections



1/16-scale model of the *Océan* at the entrance of the museum



Tresors d'ocean



"récit" d'un voyage de plus de dix ans à travers la France

5. Maritime Center “Velamo” - Kotka, Finland



The **Maritime Museum of Finland** is a national maritime museum operating under the National Board of Antiquities whose role is to preserve and interpret the history of Finnish seafaring. The Maritime Museum collects and preserves objects, photographs, archival material and literature pertaining to seafaring and boating. Mercantile marine and the history of the Maritime Administration of Finland are among the special interests of the museum.

The Maritime Museum of Finland opened at the Maritime Centre Vellamo in **Kotka** on the 11th of **July 2008**. Besides the Maritime Museum of Finland other attractions at the Maritime Centre Vellamo are the Museum of Kymenlaakso, the Information Centre Vellamo, restaurant Laakonki and the Museum Shop Plootu.

In its main exhibition "**North Star, Southern Cross**" the Maritime Museum of Finland portrays the history of seafaring in Finland through different key themes. Maritime trade, voyagers, ships, travelling by sea and navigation are the main themes of the exhibition. Winter navigation is also one of the central elements of the exhibition.

5.1 Collections

The Maritime Museum of Finland collection comprises some 15,000 objects, 2,000 historical maps, ship drawings and 30,000 photographs. The museum also houses an extensive library collection. The library customer services are based at the Information Centre Vellamo.



Miniature of Lyyli, a Koivisto-style schooner

A large proportion of the Maritime Museum of Finland's collection has been recovered during maritime archaeological fieldwork activity and includes ship fragments, cargo items, personal effects of the passengers and crew as well as nautical equipment. The Helsinki-based Archaeological Field Services of the The Finnish National Board of Antiquities' together with the Maritime Museum of Finland are responsible for the handling and transfer of all underwater discoveries to the Maritime Museum of Finland collection.



Luotsi Pilot Services

The **Maritime Museum's Picture Collections** comprises of ca. 30,000 pictures. Collections include photographs of Finnish merchant vessels, work and free-time on board a ship, portraits of the crews as well as various activities of the Finnish Maritime Administration, such as pilot stations, lighthouses and icebreakers. One could mention sea captain Sten Lille's photographs of sailing ships and Pelastusyhtiö Neptun's (Salvage Company Neptun) collection as examples of the picture archive's interesting material donated by numerous individuals and organisations. Furthermore, the archives contain digitised images of various documentation projects on contemporary seafaring as well as an extensive searchable database of the Finnish merchant marine.

5.2 Boat Hall

The centre of the boat hall houses a magnificent 49er sailing boat, with which Thomas Johanson and Jyrki Järvi of Finland won the Olympic gold medal in the Sydney Olympics in 2000. The small wooden yawl from 1928, also used in the Olympic games, represents older Olympic history.

The Marino Family Sport launched on the market in 1960 is an American-style outboard motor boat designed for the whole family. The body is of glassfibre, but the deck and interior are still of wood. The Finnish technology magazine Tekniikan Maailma named it the Finnish boat beauty.



The wooden Victoria boat reflects the likings of the creator of the Moomins. The wooden boat, which used to belong to Tove Jansson, was built on the island of Pellinki in 1962. In the summer, Jansson used to live on the small island of Klovharu, to where people travelled on the Victoria.

5.3 Museum Vessels

The floating cultural legacy cherished by the Maritime Museum of Finland and Museum of Kymenlaakso, in other words the museums ships and boats, are moored to the museum vessel pier which is open to the public in the summer period. During the sailing season, traditional vessels in private ownership may also visit Vellamo's pier occasionally.



Icebreaker Tarmo (1907) was a familiar sight in Kotka and on fairways leading there when the ship was still in active service. Decommissioned at the end of the 1960s, the Tarmo has served museum purposes since 1992. In the summer, visitors have access to the Tarmo, from the bridge to the engine room along a guided route. The history of this steam ship built in Great Britain involves hard work on the sea, but also dramatic events during the world wars. **In the summer of 2015 the Tarmo is being repaired and therefore closed to the public.**

Another old vessel which used to be owned by the National Board of Navigation, **the lighthouse ship Kemi** built in Pori in 1901, is being renovated at the docks at the northern end of Vellamo. The Kemi will be opened to the public as soon as the renovation is finalized.

The museum vessel pier is now also home for **the pilot boat Pitkäpaasi** (1898). Pitkäpaasi was built in Norway at the boatyard of the famous boat designer Colin Archer. The wooden boat still in running condition may be at sea, but if you are lucky, you can become acquainted with it at the pier.

Patrol vessels **RV 125** (1960) and **PV 210** (1984) are moored to the outer edge of the museum boat pier. **The RV vessels** capable of moving in ice were the basic craft used at coast guard stations until quite recently. They were especially useful during the thawing season providing a lifeline to the archipelago. **PV 210** belongs to a class of patrol boats designed in the 1980s. These patrol boats were the foremost tool and means of transport of coast guard stations during the open water season from the 1980s until the present day. PV 210 was preserved in full working condition in the Coast Guard Museum, and it spends the winters at a dock like during its active service.

6. Aalborg Søfarts- og Marinemuseum – Aalborg, Denmark



Aalborg Søfarts- og Marinemuseum is a marine museum located on the wharf of Aalborg, Denmark. Inaugurated on 24 May 1992, in the presence of Her Majesty the Queen, the museum's collections have since been expanded considerably, including with an extensive collection of ship radios and navigation instruments, showing the development of such tools. The museum has over the years evolved to become one of Aalborg and North Jutland's most important attractions that is visited annually by thousands of tourists from home and abroad.

6.1 History

The submarine **SPRINGEREN** will always be a part of the Museum's history, because it was the reason for its establishment and later expansion. When the Danish Navy took the **SPRINGEREN** and her sister ships of the **DELFINEN**-class, the last submarines to be fully designed and built in Denmark, out of active service, many people were of the opinion that at least one of these submarines should be preserved for posterity. Enterprising people in Aalborg heard about this, and negotiations between Aalborg City Council and the Navy began in 1986. The **SPRINGEREN** arrived in Aalborg in 1990, at the same time as plans for a maritime and naval museum developed.

Soon afterwards the Navy offered the last decommissioned, gas turbine torpedo boat, **SØBJØRNEN**, to the Museum. Many government institutions like Farvandsvæsenet (Navigation and Hydrography Authority) as well as private companies, Aalborg Havn, (the Port), Aalborg Værft (the Shipyard), shipping companies and individuals donated objects worth preserving to the new museum.

Kind assistance from the City of Aalborg made it possible to place the Museum in an ideal maritime setting by the Limfjord next to Skudehavnen. The architecture of the museum is designed to make the buildings blend in with its maritime environment. The green areas, where many of the larger exhibits are placed, give, together with the scattered buildings a feeling of space and interaction between in- and outdoor exhibitions.

On Saturday the 10th of September 2011 a large fire unfortunately started in the wheelhouse where the museums virtual sailing simulator is. The fire was caused by a short circuit in the wiring of the simulator. The fire caused extensive smoke and soot damage to the entire museum, which damaged

almost every exhibited object. Among the object which could not be salvaged were the ship radios and the collection of Greenland artefacts.

On the 24th of May 2012 the museum received a new name 'Springeren – Maritimt Oplevelsescenter' and on the 4th of August 2012 the museum was once again open to the public, who are invited in for exiting stories of the Danish maritime life and a journey on-board of the submarine.

6.2 Collections

6.2.1 The Port of Aalborg Hall

The exhibition in the second hall shows The Port of Aalborg and its development. At the entrance to the hall is a photomontage of the passenger ship service between Aalborg and Copenhagen, which ran for many years. From 1928 until the service closed down in 1970 there was a daily connection to the capital. In 1970 the steamship company – DFDS – was forced to give up due to the competition from the faster air traffic. A model of JENS BANG, for many years the flagship of the line; can be seen in the exhibition. Next to it you see a working radar unit, through which you can watch the neighboring part of the Limfjord.

The walls of the hall are hung with pictures, illustrating the development of the Port of Aalborg from the late middle Ages until the present time. The port was granted a Royal Charter in 1476, so it celebrated its 500th Anniversary in 1976. But even before that Aalborg was an important trade Centre, as it was ferry station for north and south bound traffic in addition to the fact, that all travelling to Norway and Iceland started in Aalborg.

From the beginning of the 16th century Aalborg became an important commercial town with a brisk export. Herrings, grain and cattle were exported to many trade centers in Europe. The port also developed an extensive traffic to and from Norway. The original harbor at the mouths of the two streams, Vesterå and Østerå, gradually spread itself onto both sides of the fiord. Until the 1950's the traffic was concentrated in the area from the Limfjord Bridge, built in 1933, to Aalborg Shipyard and Rørdal Cement Works. During later years the harbor's expansion has been to the east, so that most of the heavy traffic today is concentrated on Østhavnen (The East Harbor) and Grønlandshavnen (The Greenland Harbor), whereas the old waterfront gradually is changing into an attractive area of residence and recreation.

/planlaeg-dit-besoeg/360Just inside the hall you will see a shipbroker's office, as it would have looked during the interwar period. The office is equipped with office machines and furniture from the period, such as the tall writing desk, telexes and old telephones. The walls are decorated with paintings and pictures relating to ships and the Port of Aalborg. On the desk are a cash book and a journal of ships' calls. The journal shows several years of traffic on the Port of Aalborg.

Next to the shipbroker's office is an impressive collection of small ship models made of paper and sewing thread. The models are very accurate and are comprised of ships from the Danish merchant fleet as well as warships from various nations.

A photomontage and some primitive working tools, used by Dockers, illustrate how much hard labor, loading and unloading ships, involved, before modern equipment was introduced.

Hals Barre, the sand bank at the eastern entrance to the Limfjord, has always affected the development of the harbor and the shipbuilding industries, as it limits the size of ships able to enter the fiord. The channel across the sand bank of Hals Barre was first deepened as early as in the 1870s and since then huge quantities of sand have been removed at regular intervals. One of the exhibition cases illustrates the amount of sand removed from Hals Barre between 1971 and 1981 comparing it to the size of the Aalborg Tower. The dredged sand used to be dumped into the northern Kattegat, so that it shortly afterwards would reappear at Hals Barre. Today we know better.

Nowadays most of the sand is used in the building industry. Of course the difficult channel through the sand bank and into the fiord had to be buoyed. This is illustrated on the chart hanging on the wall. You can also see models of some of the fixed lights that mark the channel.

The cannon ball was found during a dredging of Hals Barre. The ball originates from one of the two batteries placed at the entrance to the Limfjord during the war against Great Britain 1807-14. The war began with the siege and bombardment of Copenhagen which resulted in the surrender of the Danish fleet to Great Britain. After that Denmark had to fight its naval war with small oared gunboats, a few small sloops and a number of privateers, fitted out at the expense of private citizens and given a Royal license. These privateers tried to conquer ships from the British convoys bound for the Baltic. This privateering was run on a large scale by merchants and ship owners from Aalborg. The British convoys were protected by warships usually superior in power to the Danish gunboats and privateers. So in order to protect the privateers and the gunboats against the British men-of-war, several coastal batteries, like the ones at Hals and Egense at the entrance to the Limfjord, were established along the Danish coastlines.

6.2.2 The Model Hall

Leaving the hall of the “Farvandsvæsenet” you enter the “Model Hall” which contains an exhibition of various ship models. First you see models of sailing-ships from the Merchant navy, and in the far end of the hall, there are models of warships, several of which took part in the 2nd World War.



You also see a rather large model of the training ship KØBENHAVN, which belonged to the East Asiatic Company. The ship was lost in the South Atlantic during a voyage from South America to Australia just before Christmas in 1928. It is not known why the ship was wrecked. No piece of wreck from has ever been found. Maybe the five-masted bark carried too many sails when it was hit by a heavy squall and thereby capsized. Her last Danish port was Aalborg (Nørresundby), where she loaded cement for South America, and from here again grain for Australia.

In 2008 the museum received a testamentary gift of 60 models from Mr. John Clarke, London. Most of these beautiful models can be seen in the exhibition.

6.2.3 The SPRINGEREN Submarine

The museum's greatest attraction is probably the submarine, SPRINGEREN, which as hull number no. S.329 was commissioned into the Danish Navy in 1964. She was in active service until 30th June 1989 and was finally decommissioned on 31st March 1990. The SPRINGEREN and her sisters of the DELFINEN (DOLPHIN) class were the last submarines to be designed and built by the Royal Dockyard in Copenhagen (now closed). Originally three units of the DELFINEN class were built from 1956 to 1961. In 1959 the Danish and US Governments agreed on a cost sharing program, which would build 23 ships in five years as replacement for ships about to be decommissioned. This program made it possible to build another submarine of the DELFINEN class, SPRINGEREN. The keel was laid down on 3rd January 1961; she was launched on 26th April 1963 and commissioned on 22nd October 1964.



The DELFINEN class was coastal-submarines, designed for operations in Danish waters and in the Baltic. They have, however, participated in NATO exercises in the Atlantic. Their displacement was 575 ton surfaced and 646 ton submerged. They were 53.9 meters long, had a beam of 4.7 meters and a draught of 4.2 meters. The periscope depth was 11 meters. Max. diving depth in peacetime was 100 meters which during time of war could be extended to 200 meters. The reason for diving restrictions in peace time was that the submarine was more exposed to corrosion when diving at greater depths. Surfaced the boat was propelled by 2 B&W diesel engines and submerged by two Brown Boveri battery powered electric engines.

The speed was 16 knots, surfaced as well as submerged. She had two propellers. A snorkel, operated like a periscope, made it possible to run on diesel-engines if the boat was just below surface.

The DELFINEN-class were the first Danish submarines not to be supplied with guns and designed - literally - as submarines, meaning that they were designed to operate submerged. The submarines operating during World Wars I and II were designed to operate surfaced, and only dived in order to escape a counter-attack.



The SPRINGEREN was armed with eight torpedoes which could be fired through four 53 cm bow torpedo tubes. During the two World Wars the commander of a submarine had to aim with the boat, when firing torpedoes. It was a difficult operation where the speed of target as well as the speed of the torpedo had to be taken into consideration. The SPRINGEREN was supplied with a so-called TCI-firing-system – a wire guided system, by means of which the torpedoes could be guided en route and fired at a considerably longer distance.

Her crew consisted of 33 men: 8 officers and 25 petty officers and sailors.

To give our guests an impression of the life on board a submarine, all the technical installations on board the SPRINGEREN have been preserved with the exception of the 224 batteries (weighting 100 ton). The illusion of being in an operational submarine is supported by a soundtrack of the noise and communication normally occurring in a submarine. Every 15 minutes the diving alarm is sounded, the lights are extinguished, and the red night lighting is turned on.

Entering the submarine visitors come into the forward torpedo room, which also served as sleeping and living quarters for the crew. For the comfort of our guests, we have removed several bunks, tables and benches. Normally there would be 13 bunks (2 men shared one bunk, as half of the crew was on duty) and tables/benches for 26 men. In the room you will also see the equipment for emergency-supply of oxygen, to be used if the boat was wrecked, and flooded, ready for crew-escape.

Passing through a watertight door you enter a passage with the wardroom for 8 officers on the port side. The toilets and the galley are on the starboard side. Further on, you will find the sonar-, the

radar- and the radio rooms. There is also a rack with suitcases in the passage. Submariners literally "live in a suitcase". The TCI-system and the radar mast are at the entrance to the combat room. In the combat room there are two periscopes, one for navigation and one for attacking. The plotting board is placed between the two helmsmen's chairs. The vertical-helmsman is placed aft at the port side, while the horizontal-helmsman is in the front. Through the second watertight door you will enter the engine room and leave the boat from the starboard side.

During your visit you will have gained a first-hand impression of daily life on board a submarine. You have seen the rough and cramped conditions under which the crew had to live and work – sometimes for weeks. It requires a special attitude of mind and a lot of adaptability to work in a submarine, and the crew had to be very skilled and familiar with all installations. Training of submarine-officers and –commanders took considerably time.

It is obvious why we consider the SPRINGEREN to be the main attraction of the museum. With this submarine Springeren – Maritimt Oplevelsescenter has preserved a splendid example of Danish shipbuilding know-how. An expertise and know-how now disappearing, since the political defense agreements from 2005 definitively abolish the submarines from the Danish navy – regardless of the fact, that our coastal submarines have proved to fulfill the requirements of NATO's fight against terror.

6.2.4 The Heli-boat Hall



The Boat Hall is located behind the SØBJØRNEN. In the Centre you see the Danish Navy's first helicopter, a French ALOUETTE III produced by Aerospatiale. This helicopter was used by the Danish Naval Air Squadron. A total of eight helicopters of this type were purchased. The first ALOUETTE was flown in from France in June 1962, and the last of this type was decommissioned in 1982, when it was succeeded by the British LYNX helicopter, which according to the defense agreement from 2005 will be supplemented with the British Merlin-type. The ALOUETTE carried a crew of 1-2 men and could carry up to 5 passengers or two stretchers. The undercarriage of the ALOUETTE consisted of two floats enabling her to land on the sea.

The Navy's helicopters are mainly used on board the inspection ships in the waters around Greenland and the Faeroe Islands. Here they carry out fisheries inspections, sea rescues, transport and surveillance. Prior to the introduction of helicopters fisheries inspection and sea rescue at Greenland and the Faroe Island were done solely by inspection-ships and cutters. Due to a great ship disaster (the HANS HEDTOFT) and the extension of the fishing limits, the Navy extended its capacity by introducing helicopters. This meant that larger areas at sea could be kept under surveillance, and the helicopters could direct the inspection vessel to the actual scene of operation.

You also find a motorboat from the training ship DANMARK. When Denmark was occupied by German troops in 1940, this ship was in American waters. The ship was then placed at the disposal of the US Coast Guard, who during World War II trained more than 5000 cadets onboard her. The Coast Guard supplied the ship with this motorboat at the time, and it remained on board until 1997 when it was replaced by a new one.

7. Vasa Museum – Stockholm, Sweden



The **Vasa Museum** (Swedish: Vasamuseet) is a maritime museum in *Stockholm, Sweden*. Located on the island of Djurgården, the museum displays the only almost fully intact 17th century ship that has ever been salvaged, the 64-gun **warship Vasa** that sank on her maiden voyage in 1628. The Vasa Museum opened in 1990 and, according to the official web site, is the most visited museum in Scandinavia. Together with other museums such as Stockholm Maritime Museum, the museum belongs to the Swedish National Maritime Museums (SNMM).

7.1 History-Collections

From the end of 1961 to 1988, Vasa was housed in a temporary structure called Wasavarvet ("The Vasa Shipyard") where she was treated with polyethylene glycol. Visitors could only view the ship from two levels and the maximum distance was only 5 m (17 ft). In 1981, the Swedish government decided that a permanent Vasa museum was to be constructed and an architects' competition for the design of the museum building was organized. A total of 384 architects sent in models of their ideas for the most suitable building to house the Vasa and the final winners were Marianne Dahlbäck and Göran Månsson with Ask ("box"). The construction of the new building began on and around the dry dock of the old naval yard with an inauguration ceremony hosted by Prince Bertil on 2 November 1987. Vasa was towed into the flooded dry dock under the new building in December 1988 and during the summer of 1989, when visitors were allowed onto the construction site, 228 000 people visited the half-finished museum. The museum was officially opened on 15 June 1990. So far Vasa has been seen by over 25 million people. In 2008 the museum had a total of 1,143,404 visitors.

The main hall contains the ship itself and various exhibits related to the archaeological findings of the ships and early 17th century Sweden. Vasa has been fitted with the lower sections of all three masts, a new bowsprit, winter rigging, and has had certain parts that were missing or heavily

damaged replaced. The replacement parts have not been treated or painted and are therefore clearly visible against the original material that has been darkened after three centuries under water.



Vasa Museum Interior

The new museum is dominated by a large copper roof with stylized masts that represent the actual height of Vasa when she was fully rigged. Parts of the building are covered in wooden panels painted in dark red, blue, tar black, ochre yellow and dark green. The interior is similarly decorated, with large sections of bare, unpainted concrete, including the entire ceiling. Inside the museum the ship can be seen from six levels, from her keel to the very top of the stern castle. Around the ship are numerous exhibits and models portraying the construction, sinking, location and recovery of the ship. There are also exhibits that expand on the history of Sweden in the 17th century, providing background information for why the ship was built. A movie theatre shows a film in alternating languages on the recovery of the Vasa.



Vasa Warship 1

The museum is in the process of publishing an 8-volume archaeological report to commemorate the 50th anniversary of the salvage. *Vasa I: The Archaeology of a Swedish Warship of 1628* was published at the end of 2006. Subsequent volumes will be published annually.

The museum also features four other museum ships moored in the harbour outside: the ice breaker *Sankt Erik* (launched 1915), the lightvessel *Finngrundet* (1903), the torpedo boat *Spica* (1966) and the rescue boat *Bernhard Ingelsson* (1944).

The collections include the more than 40 000 objects that were found in and around the ship. Among the objects are equipment and decorative elements from the ship as well as personal belongings of the crew, different types of weapons, tools and coins. There are also the remains of the about 25 people who died in the catastrophe.

The objects and ship give a unique picture of everyday life at sea and on land, and of shipbuilding techniques and nautical warfare in the early 1600s. Documentation, research and analysis of the objects and ship are continuing.

7.2 Last Finding of Vasa

The **last find** raised from the Vasa wreck site in 1967 was the ship's longboat or *Espingen* as it was also called. Esping was the name used in the 17th century for a large ship's rowed and sailed service boat.

The esping was found close under Vasa's port side, which did not by itself mean that it belonged to the ship, but during the excavation of the interior of the ship, two leeboards and a windlass that fitted the boat were found on the lower gun deck. On the basis of these finds there was no doubt that the esping was associated with Vasa. Vasa's esping was recovered largely intact and shortly thereafter diving work on the site ceased.



The esping is nearly complete and no significant parts of the construction are missing. Certain parts of the boat were found detached, lying in and around the main structure, and could be replaced after being raised. The boat is in generally good condition but no longer has its original form. A break in the inwale and port side planking that occurred during the raising has allowed the bow to droop 15-20 cm, and the sides have bulged outward as the boat has been displayed without side supports. The boat is now about 7 cm wider than originally.

8. Vikin Maritime Museum – Reykjavik, Iceland



Icelanders have from the time of settlement depended on fishing. Settlement at Faxaflói Bay was founded on fishing and fish processing. Since the 19th century, the growth of Reykjavik and nearby Hafnarfjörður was largely based on the fisheries, as well as improved living conditions in the 20th century. The fishing industry has been the foundation of prosperity in Iceland.

The role of **Vikin-Maritime Museum** in Reykjavik is to present a living record of this most dynamic aspect of Iceland's history.

8.1 History

Vikin opened in 2005, in a building built in 1947 as a fish freezing plant. It is built on a landfill called Grandi and housed, at the time, one of the best fish processing operations in Scandinavia. In 1959, BÚR (Reykjavik Municipal Fishing Company) bought the plant, which became one of the largest processors of redfish fillets. In 1985 the freezing plants operation was moved to another location and for most of the next 20 years, the building remained unused until the maritime museum opened. For the first three years the museum occupied the second floor only, before a closure for reconstruction during winter 2007-2008 made the first floor available too. In June 2008 the museum reopened, with four new exhibitions and a new entrance.

In 2009 the museum expanded with another new exhibition installed in a former storage area, and a museum café which opened in a space formerly rented by the museum. Vikin now has seven halls, with seven exhibitions ranging from photographic displays to full exhibits of 100-year-old boats, including the former Coast Guard vessel Óðinn, acquired by the museum in February 2008. The ship is secured to the pier next to the museum and has been made accessible for guests to visit in guided tours.



Surroundings : The *Old Harbour* is fast becoming a new boom area. Apart from it being a beautiful place to walk with stunning views across the bay to Mount Esja, the Harbour area is where the majority of marine activities, such as whale watching and puffin tours are concentrated. Now with the impressive addition of Harpa the city's award winning new concert hall a growing number of other interesting places and businesses like small coffee shops and restaurants are rising.

8.2 Exhibitions

There are three permanent exhibitions in the museum: "The history of sailing"; "From poverty to abundance"; and "The Coast Guard Vessel Óðinn"

8.2.1 The history of sailing



This exhibition recounts Iceland's maritime history and the growth of Reykjavík Harbor which was a natural haven, with the inlet at Grandagarður being well sheltered for pulling boats safely ashore. For centuries, the Reykjavík harbor was one of the country's main fisheries and trading centers, and over the years, it grew to become Iceland's largest port. As the 19th century progressed fishing greatly increased in Iceland, particularly in Reykjavík. The city's first Harbor Committee was commissioned in 1855, but it was not until 1913 that the actual construction began and it was finished in 1917. The expansion of Reykjavík Harbor became the largest construction project ever undertaken in Iceland, a project that would solidify the capital's dominance in the fisheries,

commerce and seafaring. In December 2010 there were two temporary exhibitions: a painting exhibition featuring Bjarni Jónsson; and a photographic display covering the arctic convoys. Iceland experienced a social and economic transformation at the dawn of the 20th century, with the fisheries and other maritime activities playing a major role. Rowboats and sailing smacks made way for motorized vessels. In 1914, Eimskip the first Icelandic steamship company, was established. These changes were representative of Iceland's rebirth from centuries of poverty to a modern, mechanised society, and Reykjavík was at the center of these changes. The exhibition is partly displayed in one space which was the Reykjavík Municipal Fishing Company's fish-processing room. The high-ceiling room has a specially designed and constructed wooden pier that is 17 meters long and 5 meters wide. Seawater flows below the pier. The entrance is through the reconstructed deck of the steamship Gullfoss from 1915. The deck was reconstructed to give visitors the feel of being on board, and visitors actually become part of the exhibition: those on the pier experience visitors on Gullfoss's deck as passengers. Along the wooden pier flows sea from the harbour and one can see the beautiful life in the seawater.

8.2.2 From poverty to abundance



From the time of Iceland's settlement, the fisheries have been vital for survival, and the fish a valuable export. The Maritime Museum's permanent exhibition portrays the Icelandic fisheries at the turn of the 20th century, and realistically depicts the lives of Icelandic fishermen. In the late 19th century, fishing the coastal waters in rowboats was the most common method of commercial fishing.



On display is Farsæll, a four- person rowboat built around 1900. For a long time, dried fish was the main export, but as the 19th century progressed, salted cod became an evermore important commodity.

As the century drew to a close, exports of salted cod had quadrupled while its value had grown sixfold. This was result of increasing demand from Spain, technological advances, bigger fish markets and inexpensive, quality salt imported from Spain. As the industrial revolution developed Rowboats began disappearing from Icelandic waters and larger vessels such as decked boats and cutters, which could go further out to sea and fish larger hauls, were becoming more common. This created more work on land processing fish and servicing ships. The history of Iceland's fishery in the 20th century is full of technological advance and new methods of working. In 1907 one of Iceland's most famous trawlers of the time, Jón forseti, was specially built for Iceland. In the following years, the fleet grew rapidly. The Municipal Fishing Company is also an important part of the museum's exhibition – from 1947 until 1991, the company operated in the same building as the museum.

8.2.3 The Vessel Óðinn

The Coast Guard Vessel Óðinn is one of the Maritime Museum's main exhibitions. Óðinn was built in Aalborg, Denmark in 1959. It has a displacement of 910 tons, a length of 63 m, a beam of 10 m and a specially reinforced bow and hull for sailing through ice. Óðinn proved a particularly good rescue vessel and it patrolled Iceland's territorial fishing grounds, monitoring both Icelandic and foreign vessels. This involved determining who was fishing and where, and the type of fishing equipment being used. Óðinn took for example part in the three Cod Wars where the most effective and famous weapon was the trawl warp cutter, which is displayed on the afterdeck. The vessel was also often called on for assistance when weather conditions made transportation on land extremely difficult, particularly in remote communities.



The Coast Guard Vessel Óðinn is one of the Maritime Museum's main exhibitions.

9. MUSEUM SHIPS

9.1 Steam frigate “Jylland” - Ebeltoft, Denmark



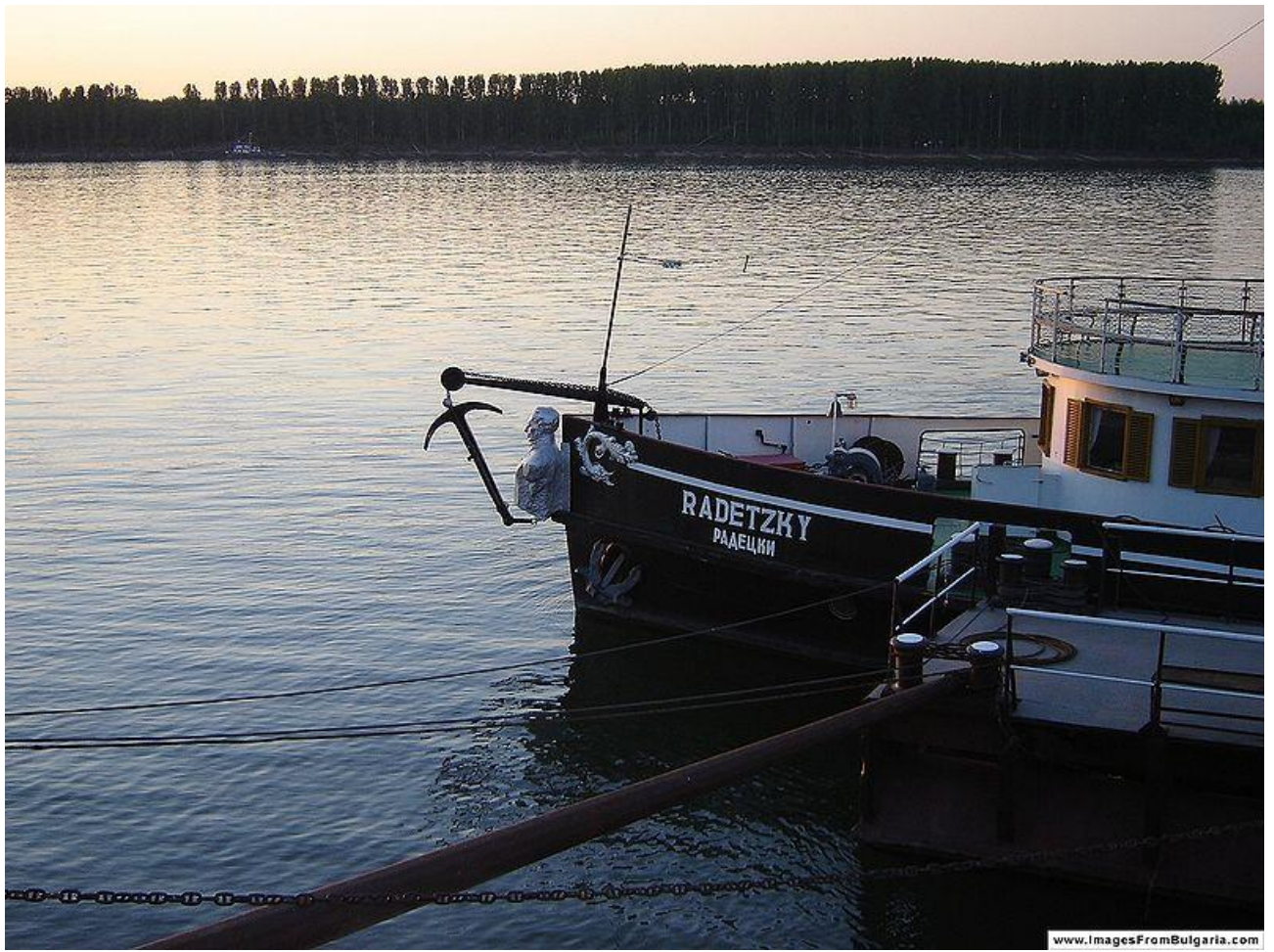
Jylland is one of the world's largest wooden warships, and is both a screw-propelled steam frigate and a sailship. During the Second War of Schleswig in 1864, she participated in the naval action against the Austrian-Prussian fleet in the Battle of Heligoland on 9 May 1864. *Jylland* along with the *Niels Juel* and *Heimdall* bested two Austrian frigates and three small Prussian gun boats, but was unable to maintain the blockade of the Prussian North Sea ports. *Jylland* sustained considerable damage during the battle.

In the 1890s she was reduced to stationary use and barely escaped scrapping in 1908. It was, however, decided to preserve her and she was towed to Ebeltoft in 1960. The hulked frigate further deteriorated until she was placed in dry dock in 1984. Restoration proved to be a major task; over 60% of the timber had to be replaced in addition to the rigging, armament, engines and loose gear.

In Danish, she is known as simply *Fregatten Jylland*, although several ships have used this name. The restoration efforts were completed in 1994 and she is on permanent display in dry dock at the town of Ebeltoft, Denmark. A commemorative coin was issued by the National Bank of Denmark.



9.2 Steamship “Radetzky”- Kozloduy, Bulgaria



The *Radetzky* (Bulgarian: „Радецки“, „*Radetski*“) was an Austro-Hungarian passenger steamship built in 1851 in the shipyard in Óbuda, Hungary, and used for regular services on the Danube, mainly between Orșova, Austria-Hungary and Galați, Romania. Named after Bohemian nobleman and Austrian general Joseph Radetzky von Radetz (1766–1858), it is most notable as part of the history of Bulgaria as the ship which revolutionary and poet Hristo Botev and his band bloodlessly hijacked and used to reach Kozloduy, Bulgaria.

On **29 May 1876**, after the ship left the port of Bechet, the Bulgarian revolutionaries, who had boarded her from different ports disguised as gardeners, forced the captain Dagobert Engländer to change course and transport the band to the Bulgarian port of Kozloduy, from where they would attempt to organize an anti-Ottoman uprising as a follow-up to the already crushed April Uprising of the same year. Botev sent the following message to the crew and the passenger,

“ Mr Captain!
Dear passengers!

I have the honour to notify you that Bulgarian rebels, whom I have the honour to be the voivode of, are located on this steamship.

At the price of our livestock and our agricultural instruments, at the expense of great efforts and sacrifice of our goods, finally at the price of everything which is dear in this world (without the knowledge and despite the pursuit of the authorities in the country whose neutrality we respected), we have provided ourselves with what is necessary to us, in order to come to the assistance of our revolting brothers, who are fighting so

”

brave under the Bulgarian lion for the liberty and independence of our dear Fatherland
— Bulgaria.

We kindly ask the passengers to not worry at all and remain calm. As for you, Mr. Captain, I have the hard duty to invite you to place the ship at our disposal until our very getting-off, while at the same time I declare that even your smallest resistance will put me in the sorrowful necessity to use force and against my will to revenge for the disgusting incident on board the *Germany* steamboat in Rousse in 1867.

In one case or the other, our battle cry is the following:

Long live Bulgaria!
Long live Franz Joseph!
Long live Count Andrassy!
Long live Christian Europe!

The captain wrote of Botev's "civility, energy and temperament", and agreed to transport the band to Kozloduy. Upon arriving in Bulgaria, the revolutionaries dropped on their knees and kissed the earth, saying goodbye to the captain and the passengers, who saluted them by waving his peaked cap.

The Radetzky was decommissioned in 1918 and destroyed in 1924, although most of its relics were preserved, such as the flag with a coat of arms, a seal, the original licence, etc., which were handed by Adolf Engländer, a brother of the captain, to Boris III of Bulgaria. Between 1964 and 1966, On the occasion of the 90th anniversary of Hristo Botev's death, money was collected by 1,200,000 Bulgarian pupils on the initiative of the journalist Lilyana Lozanova, and the steamship was reconstructed based on the original design and technical data given by the ship's dyer Király József. The reconstructed Radetzky was officially opened as a museum ship on 30 May 1966 at Kozloduy. It is a composite of a 1953 soviet paddle tug, and pieces of the original Radetzky saved in 1918.



The steamship **Radetzky** is a national relic of Bulgaria. A village in Sliven Province bears its name, Radetski, and national writer Ivan Vazov wrote a poem based on the events of May 1876, which is today a popular patriotic song called Still White Danube Undulates.

9.3 SMS “Leitha” – Budapest, Hungary



SMS Leitha or Lajta Monitor Museumship was the first river monitor in Europe and the oldest and also the only remaining, fully restored warship of the Austro-Hungarian Navy.

The monitor was an innovation in the history of warship construction. The first European river monitors were constructed by the Austro-Hungarian Monarchy, namely the SMS Leitha and SMS Maros, and since then the river warships of the Monarchy were built in pairs. According to the customs of that time, river warships were named after the rivers of the Austro-Hungarian Empire. The names were given in the spirit of dualism, thus one of the ships received an Austrian name, the other one a Hungarian. This is the reason why this warship was named after the Austrian river Leitha (in Hungarian “Lajta”), while her sister ship was named after a Hungarian river, the Maros.

The construction of the first Danube monitors was dictated by the Monarchy's foreign policy ambitions, and the military and economical situation of the times. The ambition of becoming a great continental power, turned the attention of the Austro-Hungarian Monarchy in the direction of the Balkans as it could not expand towards the West. However, the Monarchy had to be prepared to compensate the states along the Danube, which had been newly liberated from Turkish rule, and that of Czarist Russia. To gain more influence in the Balkans[1] therefore the commander of the Monarchy's naval fleet, admiral Wilhelm von Tegetthoff suggested the construction of monitor type warships. Finances were raised, the necessary funds having been voted from the budget of 1869. The cost of the Leitha amounted to 425,000 HUF.



9.4 Ship “*Mercator*” – Ostend, Belgium



The barquentine **Mercator** was designed by the Antarctic explorer *Adrien de Gerlache* (1866–1934) as a training ship for the Belgian merchant fleet. She was named after Gerardus Mercator (1512–1594), Flemish cartographer. She was built in Leith, Scotland[2] and launched in 1932.

Besides being a training a ship, she was also used, mainly before **World War II**, for scientific observations, or as **ambassador for Belgium** on world fairs and in sailing events. This ship went through an incredible history.

In 1961, she became a floating museum, first in Antwerp, and finally from 1964 in the marina of Oostende, just in front of the city hall. Now in 2013, she remained there in the heart of the city where people can go in the ship.

9.4.1 History

Mercator's real career started off in 1934 when the ship sailed from Pitcairn Island, Tahiti, Papeete, to the Marquis Islands and Honolulu for a Belgo-French scientific expedition. This was her seventh cruise and known to be a fairly remarkable one to those preceding World War Two.

In 1936 Ostend's Mercator had the great honor to bring over Flemish missionary and apostle of the lepers, Pater Damiaan's mortal remains from Molokai island.

On February **21, 1940**, Mercator was off for its last cruise before World War 2. It sailed to Rio de Janeiro and afterward arrived in Boma.

From early 1945 to mid 1947, the ship was taken under custody of the British Admiralty as a "Submarine Depot Ship". Unfortunately after 1947 the elegant ship that it once was, wouldn't be able to be put to sea again until January 20, 1951. After the horrible experience in Great Britain it went back to Belgium to work greatly on its maintenance.

Until the year of 1960, Mercator came back into service as a training ship and completed 41 voyages where it sailed almost all seas. After that it completed quite a few scientific missions. Besides that it completed even races in Torbay-Lisbon (1956), Brest-Canary Islands (1958) and Oslo-Ostend (1960).

All these Historic events of the ship couldn't be done without the captains: **Captain R. Van de Sande** (from 1932 till 1955), **Captain R. Ghys** (from 1955 till 1960).



Night view on the Mercator, located in the harbour, just west (5 mins) of the downtown of Oostende.

9.5 Papyrus Boat “*RA II*” - Oslo, Norway



In 1969 and 1970, **Heyerdahl** built two boats from papyrus and *attempted to cross the Atlantic Ocean from Morocco in Africa*. Based on drawings and models from ancient Egypt, the first boat, named ***Ra*** (after the Egyptian Sun god), was constructed by boat builders from **Lake Chad** using papyrus reed obtained from Lake Tana in **Ethiopia** and launched into the Atlantic Ocean from the coast of Morocco. The *Ra* crew included Thor Heyerdahl (Norway), Norman Baker (USA), Carlo Mauri (Italy), Yuri Senkevich (USSR), Santiago Genoves (Mexico), Georges Sourial (Egypt) and Abdullah Djibrine (Chad). Only Heyerdahl and Baker had sailing and navigation experiences. After a number of weeks, *Ra* took on water after its crew made modifications to the vessel that caused it to sag and break apart after sailing more than 6440 km (4000 miles). The crew was forced to abandon *Ra* some hundred miles before Caribbean islands and was saved by a yacht. The following year, 1970, another similar vessel, *Ra II*, was built of papyrus by Demetrio, Juan and Jose Limachi from Lake Titicaca in Bolivia and likewise set sail across the Atlantic from Morocco, this time with great success. The crew was mostly the same; only Djibrine had been replaced by Kei Ohara from Japan and Madani Ait Ouhanni from Morocco. The boat reached Barbados, thus demonstrating that mariners could have dealt with trans-Atlantic voyages by sailing with the Canary Current. The *Ra II* is now in the Kon-Tiki Museum in Oslo, Norway.

The book *The Ra Expeditions* and the film documentary *Ra* (1972) were made about the voyages. Apart from the primary aspects of the expedition, Heyerdahl deliberately selected a crew representing a great diversity in race, nationality, religion and political viewpoint in order to demonstrate that at least on their own little floating island, people could cooperate and live peacefully. Additionally, the expedition took samples of marine pollution and presented their report to the United Nations.

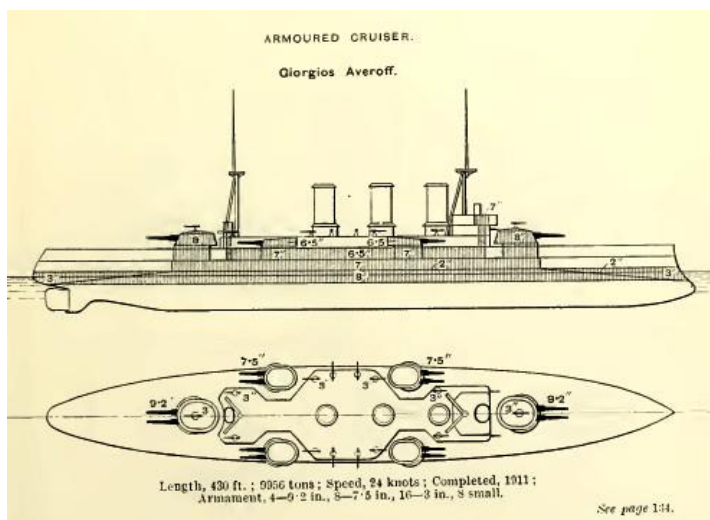
9.6 Armored Cruiser “Georgios Averof” – Piraeus, Greece



Georgios Averof (Greek: Θ/Κ Γεώργιος Αβέρωφ) is a Pisa-class *armored cruiser* built in Italy for the Royal Hellenic Navy in the first decade of the 20th century. The ship served as the Greek flagship during most of the first half of the century. Although popularly known as a battleship (θωρηκτό), she is in fact an armored cruiser, the only ship of this type still in existence.

9.6.1 History

9.6.1.1 Delivery to Greece



At the beginning of the 20th century, Greece decided to reinforce its fleet, whose ships were fast becoming obsolete due to the rapidly advancing naval technology of the era. The navy procured four destroyers (then a relatively new type of ship), but the most important addition was *Averof*. The ship, a *Pisa*-class cruiser like her Italian sisters *Amalfi* and *Pisa*, was being built at Orlando Shipyards at Livorno in Italy. When the Italian government cancelled the third ship of the class due to budgetary concerns, the Greek government immediately stepped in and bought her with a one-third downpayment (ca. 300,000 gold pound sterling), paid with the help of a wealthy Greek benefactor, George Averoff, whose name she consequently received.

The ship was fitted with an extraordinary combination of Italian engines, French boilers, British artillery and German generators. Such was the earnestness of the Greek Navy to acquire and put her into service that she was delivered with a known deficiency in the barrel of one of her 7.5 inch guns (a gouge in the barrel produced by a slipping of the rifling cutting tool), and hastily accepted for service on the opinion of Armstrong Whitworth's chief ordnance engineer (a totally informed opinion, as it turned out), who judged the defect as inconsequential to the gun's safety and performance.

The ship was launched on March 12, 1910. Her first captain was Captain Ioannis Damianos, who took command of her on May 16, 1911. *Averof* sailed for Britain, in order to participate in the festivities for the coronation of King George V and to receive her first load of ammunition. The stay in Britain was troubled, however, including running aground at Spithead on June 19, forcing her to be drydocked for repairs, brawls with locals and a near-mutiny resulting from the unfamiliarity of the Greek sailors with blue cheese. It was clear that Captain Damianos was inadequate, so he was replaced by the highly esteemed Captain Pavlos Kountouriotis, who quickly reimposed discipline and set sail for Greece. During the journey, Kountouriotis took care to train the crew, with the notable exception of gunnery practice, since ammunition was limited. *Averof* finally sailed into Faliro Bay, near Athens, on September 1, 1911. *Averof* was at the time the most modern and powerful ship in the navies of either the Balkan League or the Ottoman Empire.

9.6.1.2 The Balkan Wars

With the outbreak of the First Balkan War, Kountouriotis was named Rear Admiral and Commander-in-Chief of the Hellenic Royal Navy. *Averof*, under Captain Sofoklis Dousmanis, served as the flagship of the fleet, and she took part in the takeover of the islands of the northern and eastern Aegean. During the naval battles at Elli (December 3, 1912) and Lemnos (January 5, 1913) against the Ottoman Navy, she almost single-handedly secured victory and the undisputed control of the Aegean Sea for Greece. In both battles, due to her superior speed, armor and armament, she left the battle line and pursued the Turkish Fleet alone. During the Battle of Elli, Kountouriotis, frustrated by the slow speed of the three older Greek battleships, hoisted the Flag Signal for the letter Z which stood for "Independent Action", and sailed forward alone, with a speed of 20 knots against the Turkish fleet. *Averof* succeeded in crossing the Turkish fleet's "T" and concentrated her fire against the Ottoman flagship, thus forcing the Ottoman fleet to retreat in disorder. Likewise, during the Battle of Lemnos, when the older battleships failed to follow up with *Averof*, Kountouriotis did not hesitate to pursue independent action.

In each battle the ship suffered only slight damage, while inflicting severe damage to several Turkish ships. These exploits propelled her and her Admiral to legendary status in Greece. After Lemnos, the crew of the *Averof* affectionately nicknamed her "Lucky Uncle George". It is a notable fact that, due to the aforementioned delays in the delivery of ammunition, *Averof* fired her guns for the first time during the Battle of Elli.

9.6.1.3 World Wars and aftermath

During World War I, *Averof* did not see much active service, as Greece was neutral during the first years of the war, and in deep internal turmoil (see National Schism). After the *Noemvriana* riots of

1916, she was seized by the French, and returned only after Greece's formal entry in the war in June 1917. After the war's end, *Averof* sailed with other Allied ships to Constantinople, receiving an ecstatic welcome from the city's Greeks. She continued as the flagship of the RHN under Rear Admiral I. Ipititis, participating in landings in Eastern Thrace and bombardments of the Turkish Black Sea shore during the Greco-Turkish War (1919–22) and helped in the evacuation of the refugees after the Greek Army's defeat. In 1925-27 she underwent major reconstruction in France, in which she received modern anti-aircraft armament, a new foremast and improved fire control equipment, while the obsolete torpedo tubes were removed.

The ship is regarded as in active service, carrying the Rear Admiral's Rank Flag a square blue flag with white cross, like the Greek jack, with two white stars in each of the two squares on the flagstaff side atop the mainmast with the Masthead Pennant (a long triangular blue flag with a white orthogonal Greek cross) displaced downward. Every Hellenic Navy ship entering or sailing in Faliro Bay honours the *Averof* while passing.



A naval band plays under *Averof*'s main guns, shortly before celebrating Independence Day.

After Germany's attack against Greece in 1941 and the collapse of the front, the ship's crew disobeyed the orders to scuttle her to avoid capture by the Germans, and sailed to Souda Bay, Crete, under the constant threat of German air strikes (which had sunk many Greek and British warships in the evacuation of Greece). Her Commanding Officer embarked from a rope ladder when she was already underway.

From Souda Bay she sailed to Alexandria, arriving there on April 23. From August 1941 to the end of 1942 she was assigned to convoy escort and patrol duties in the Indian Ocean, based at Bombay. After that, she was anchored at Port Said. On October 17, 1944, once again as the flagship of the exiled Hellenic Navy, under the command Captain Theodoros Koundouriotis (the Admiral's son), she carried the Greek government-in-exile back to liberated Athens. She continued as Fleet Headquarters until she was decommissioned in 1952. She remained anchored at Salamis until she was towed to Poros, where she remained from 1956 to 1983.

9.6.2 Museum Ship

In 1984 the Navy decided to restore her as a museum, and in the same year she was towed to Palaio Faliro, where she is anchored as a functioning floating museum, seeking to promote the historical consolidation and upkeep of the Greek naval tradition. Free guided tours are provided to visiting schools and on holidays. She is berthed at Trocadero quay, next to Faliro Marina and the Resteion swimming pool and park.



Georgios Averof with gangway in place for visitors in 2013

9.7 SS “Hellas Liberty” (Arthur M. Huddell) – Piraeus ,Greece



SS Arthur M Huddel, IMO: 5025706, is a Liberty ship built by St. Johns River Shipbuilding Company with keel laid 25 October 1943 and the yard workers working overtime to launch on 7 December 1943 and complete outfitting nine days later.

9.7.1 Wartime Operation

Huddell carried explosives and general cargo first being loaded in Jacksonville, Florida for London after joining a convoy out of New York, then after return to Norfolk, Virginia and carrying coastal cargo departed Charleston, South Carolina, for Oran, Algeria with a cargo of high explosives.

During the summer of 1944 she was converted to a pipe carrier and transported pipe in her aft two holds from the United States to England that was used in the construction of a fuel pipeline under the English Channel, Operation PLUTO, following the Normandy landings. She made the first and last pipe transport voyage carrying 70 miles (112.7 km) of pipe departing New York on 22 September 1945 and then spending eighty-four in London discharging 17 miles (27.4 km) of pipe into pipe laying ships and unloading the remainder at the dock. For the remainder of the war and immediate post war period Huddell carried coal, general cargo and personnel in voyages involving the United States, France, Italy and Algeria before a final return to Baltimore, Maryland in July 1945 and a voyage to New York before lay up.

9.7.2 Post war Operation

After the war she was laid up at Suisun Bay. She was chartered by AT&T in 1956 and was converted to a cable transport and layer. After operations in support of Distant Early Warning (DEW) line she was transferred to the US reserve fleet from 1957 until 1964. The ship was used to support cable operations for the Sound Surveillance System (SOSUS) until 1984. Huddell was classified as a barge and again laid up at James River. After that date many components, including the rudder, were removed and used as spare parts for SS John W. Brown. As of 2008 Huddell was

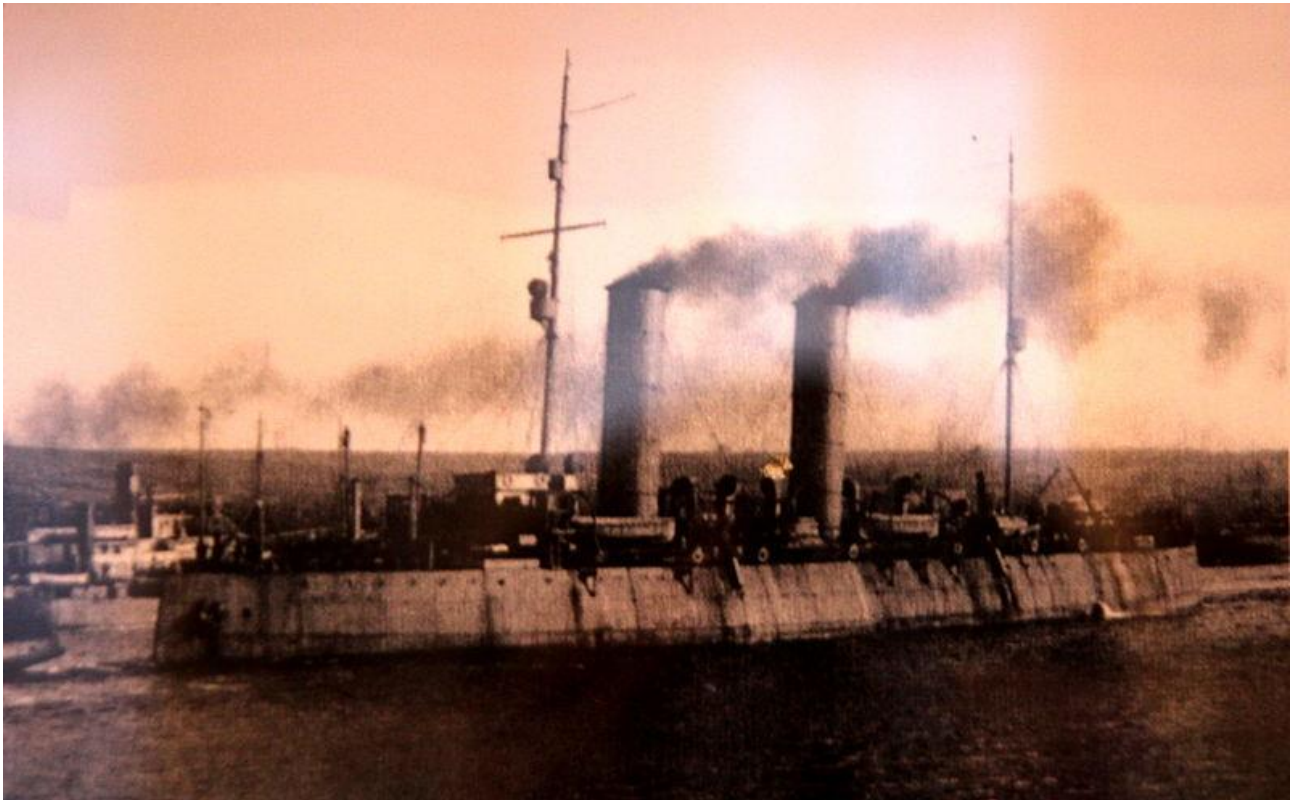
one of three Liberties remaining afloat in the United States with the others being Brown and Jeremiah O'Brien.

9.7.3 Museum Ship

In **2008** she was transferred to Greece for conversion to a maritime museum and was renamed Hellas Liberty. On December 6, 2008 she left Norfolk, Virginia under tow for Piraeus harbour in January 2009. General repairs and conversions took place at Perama and Salamis during 2009 and 2010, including installation of a new rudder and propeller. In June 2010 she was presented to the public in her restored form in Piraeus harbor.



9.8 Icebreaker “Krasin” – St.Petersburg , Russia



The first icebreaker **Krasin** (Russian: Красин) was built for the Imperial Russian Navy as **Svyatogor**. She had a long, distinguished career in rescue operations, as well as a pathfinder and explorer of the Northern Sea Route. She has been fully restored to operating condition and is now a museum ship in Saint Petersburg.

9.8.1 History

The icebreaker was built by Armstrong Whitworth in Newcastle upon Tyne under the supervision of Yevgeny Zamyatin. The vessel was launched as the Svyatogor on 3 August 1916 and completed in February 1917. Up to the beginning of the 1950s she remained the most powerful icebreaker in the world.

During the allied intervention against the Bolsheviks in Northern Russia (1918–19) she was scuttled by the Royal Navy. They raised her for use in the White Sea and later brought her to Scapa Flow for minesweeping.

Svyatogor was returned to the USSR under the Krasin trade agreement in 1921. In 1927 this icebreaker was renamed by the Soviet government to honor a recently deceased early Bolshevik leader and Soviet diplomat Leonid Borisovich Krasin.

Perhaps the most famous duty the Krasin performed was rescuing General Umberto Nobile and his surviving crew when their airship Italia crashed on the ice upon returning from the North Pole in 1928. Later in the same year, Krasin rescued the German passenger ship Monte Cervantes, with 1835 passengers on board, after it hit an iceberg and its hull was severely damaged.

In 1933 Krasin became the first vessel to reach the inaccessible northern shores of Novaya Zemlya in the history of navigation. In 1938, the Krasin rescued Icebreaker Lenin and her convoy, trapped in ice at the end of the previous summer.

During World War II, Krasin participated in many Russian convoys. In 1941 the US Government entered into negotiations with the Russian Government for the purchase or lease of one or more of their modern ice breakers for use by the US Coast Guard on the east coast of Greenland. The Krasin was offered, and crossed the Pacific to Bremerton, Washington. She was surveyed and found to be in need of repairs totalling about \$500,000. Funds were allocated from President Franklin D. Roosevelt's "Emergency Fund for the President", but negotiations came to an abrupt end on 25 November 1941. Although the Krasin never served in the Coast Guard, the service gained valuable knowledge about icebreakers that was put to use in the design of the Wind class icebreakers.

She continued her journey through the Panama Canal to Great Britain, where she was armed with surface and anti-aircraft guns and proceeded to Reykjavik, Iceland to join convoy PQ-15. She escorted the convoy through the North and Barents Seas, around the Kola Peninsula and into Murmansk. In 1942 the Krasin and Lenin were spotted at the Mona Islands in the Kara Sea by a Kriegsmarine plane during Operation Wunderland. The heavy cruiser Admiral Scheer rushed to find them, but providential bad weather, fog and ice conditions saved the icebreakers from destruction.



Reconstruction of the Krasin in East Germany, 1959

Between August 1953 to June 1960, under the East German war reparations program, Krasin was extensively reconstructed at VEB Mathias-Thesen-Werft, Wismar, Germany. Until 1971 she served the Arctic Northern Sea Route. Then the icebreaker was used as an Arctic scientific vessel. As of 1998, she was owned by the International Fund for the History of Science, Murmansk and registered at St. Petersburg, where she is docked as a floating museum.

9.8.2 Today

After the war, the historic icebreaker took an active part in research expeditions in the Polar Ocean and led Soviet cargo convoys through the polar region. Rather than being destroyed (like the Icebreaker Yermak) to make way for more modern ships, the Krasin was preserved and restored. The vessel is now a museum ship in Saint Petersburg, the only icebreaker maritime museum commemorating the Arctic convoys. She has been fully restored to operating condition and there are plans to sail her to various European ports.

An island in the Nordenskiöld Archipelago was named after this icebreaker. Postage stamps and a coin have been issued in her honour.

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