



Navantia's F-110 programme for Spanish Navy ahead of schedule with the first cut of steel of the second frigate

- The first steel of the F-112 has been cut in Navantia's shipyard at Ría de Ferrol (A Coruña, Spain)
- A total of 24 out of the 33 blocks of the F-111 are already under construction and assembly
- Navantia sets the fifth block of the F-111 on the slipway

Ferrol (A Coruña, Spain), December 19th 2023 – Navantia has started the construction process of the second frigate of the F-110 class for the Spanish Navy, thus confirming the speeding up of this programme valued at €4.325 million.

The cut of the first steel of the F-112 took place last Saturday 16th December at Navantia's shipyard in Ferrol (A Coruña, Spain), in the presence of the President of the Spanish Government, Pedro Sánchez; the Fourth Vice-President of the Spanish Government and Minister of Finance and Public Function, María Jesús Montero; the President of SEPI, Belén Gualda and the President of Navantia, Ricardo Domínguez.

The programme -whose execution order was signed in 2019- foresees the construction of five frigates. The start of production of the F-112 is four months ahead of schedule, thanks to the high degree of maturity of the design and the progress of engineering work.

The first frigate of the series, the F-111, under construction since 2022, has been also sped up and has gained momentum with a total of 24 out of the 33 blocks (compared to the 18 planned in the schedule) currently in various stages of construction and assembly. Of these, five blocks are already on the slipway, after the fifth of these blocks was set in place on Monday 18th December. Moreover, terms of procurement, 98% of the program's equipment has already been acquired, with materials reaching 95% for the F-111 and 70% for the F-112.

The Spanish Navy's F-110 frigates are multi-purpose escort vessels, with anti-aircraft, anti-surface and anti-submarine capabilities that will enable them to perform their force protection and naval projection functions. These ships, which are intended to operate in combination with other units, make them versatile platforms that can perform maritime security-related functions.

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The design of this new frigate includes advanced technological features, such as an integrated mast with different sensor and antenna solutions, a multi-mission space that expands the ship's capabilities in all defence segments and a new hybrid propulsion plant, more efficient and silent, giving the ship great versatility. The frigates will be equipped with the Spanish combat system, SCOMBA, developed by Navantia Systems.

BLOCK FACTORY

The F-110 programme is the main driver of Navantia's Digital Transformation Plan in Ferrol (A Coruña, Spain), which will involve the implementation of a new digital ecosystem that will renew the production centres. In the case of Ferrol's shipyard, it will be materialised through the construction of a new digital block factory with an investment of €110 million (the largest investment made in a shipyard in Spain in this century).

The factory, which first stone was laid on 16th December, will be a fully digitalised, automated and robotised plant, including advanced technology machinery, which guarantees product optimisation, versatility and reduced delivery times. In this new open unit manufacturing line, the traditional welding process is replaced by hybrid laser technology, substantially improving performance and minimising distortions.

All of this will boost the region of Ferrol, placing it on the map of excellence in the design and manufacture of frigates worldwide thanks to an infrastructure of these characteristics, fully digitised, automated and robotised, including advanced technology machinery.

On the other hand, the F-110 programme has an important impact on the supply chain, with more than 500 Spanish companies participating in the programme and a significant generation of employment of up to 9,000 people, including the generation of induced employment.

DIGITAL TWIN

The F-110 frigate will be a smart ship, the first Spanish naval programme designed to have a Digital Twin: a virtual replica of the ship that constantly receives information from the vessel, data permanently supplied by a network of sensors distributed throughout the ship, constituting a cyber-physical system that through the use of behavioural models and technologies such as Cloud Computing, Machine Learning and

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the Internet of Things (IoT) allows to support its maintenance and operation even thousands of miles away through the Digital Twin deployed ashore.

The Digital Twin is complemented by an Integrated Services System (ISS), developed along with the Universities of Vigo and Coruña (Galicia, Spain), which will provide the ship with integrated sensors in its light points, substantially reducing its wiring. The F-110 will also have 3D printers on board for the manufacture of spare parts.

These will be the first ships in the fleet to have an integrated cybersecurity system to protect the vessels against increasing cyberthreats. This will enable the ship to have a reduced crew complement for operation, which will result in improved habitability.

About Navantia:

With a history of more than 300 years linked to the construction of ships for the Navy, Navantia is a state-owned and strategic technology company for the defense of Spain. Its areas of specialization range from shipbuilding (surface and submarine), to the design and integration of systems with a high technological content and life cycle support and high value-added services. Additionally, with its brand NavantiaSeanergies, it is a global supplier for the development of offshore wind energy and other green energies such as hydrogen. Navantia employs nearly 4,000 people directly in Spain, mainly at its offices in Ferrol and Fene (A Coruña), Puerto Real, San Fernando, Cádiz and Rota (Cádiz), Cartagena (Murcia Region) and Madrid.

Committed to building a safe and sustainable future through technological excellence and industrial collaboration, Navantia has contracts with Governments and companies around the world and ties with universities and technological and academic centers. It contributes to sustainability and innovation through its daily commitment to people and the planet, with responsible practices from the point of view of labour, the environment and economic and technological development that are viable regionally, nationally and internationally. It is owned 100% by the Sociedad Española de Participaciones Industriales (SEPI), attached to the Ministry of Finance and Public Function of Spain).

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