

## **SPANISH SHIPBUILDING INDUSTRY: DRIVING INNOVATION AND GROWTH THROUGH CLUSTERING ACTIVITIES**

Innovation is essential to realizing opportunities in the shipbuilding as in any industrial sector. An innovative industry is driven by research and development and requires a highly skilled work force and investments in new technology.

For the last years, Spanish shipbuilding industry became an innovative industry, having built highly integrated very complex vessels which required a remarkable amount of scientific knowledge as well as intelligent manufacturing technologies.

### **High technology industry**

The research, development and innovation (R&D&i) investment in the shipbuilding sector increased to €0.8 bn, about 10 percent of their annual turnover during last four years.

### **High export industry**

Spanish shipbuilding industry's export share of more than 80 percent of the annual turnover reflects the competitiveness of our industry in world market.

### **Cluster Industry**

The shipbuilding and shiprepair sector has today important links with not only the rest of the maritime industry but also other industrial and service sectors- In 2006; Spanish yards spent €1.4bn on materials, equipments and services from over 1.500 suppliers.

The subsequent impact for the Spanish economy and welfare in the whole maritime sector, including shipping, off-shore exploitation, fishing, research institutes, classification societies, maritime agencies and, last but not least, the Navy, is not only socially and economically very important but of high strategic value.

### **Supply chain Industry**

The industry is organised in a supply chain, featuring at the top end large prime or system integrator companies that contract for and deliver an end product. In the middle level there are big systems and component companies that supply systems and subsystems. In the lower level numerous smaller and medium enterprises (SMEs) exist that deliver at component level.

In 2006, Spanish yards spent on materials and services 70 per cent of their turnover; employ directly 6,200 people, which required an additional 38,000 employees in other industries for the production of indirect shipbuilding-related output.

**Newbuilding**

Spanish newbuilding yards are a international reference in the design and construction of high added-value vessels, thanks to its constant commitment to innovation and technology, developing Ro-Pax, ferries, multi purpose and advanced shuttle tankers, offshore platforms and FPSO's, chemical and gas carriers, dredges of all types and high standard yachts and fishing vessels and off-shore units.

Spanish naval yards have an extremely wide range of products, going from sophisticated frigates to aircraft carriers, submarines, corvettes, strategic projection ships, amphibious multipurpose ships, mine hunters to the manufacture of engines, platform control systems and naval weapons.

New advanced materials, modern propulsion systems, electronic and navigational equipment are being developed in close cooperation with the supply and manufacturing industry in an increasing integrated process.

**Shiprepairing**

Spanish repair and conversion shipyards offer a combined capacity of 8,946 m of berths and 4,824 m of docks (655.85 m in floating docks), able to accommodate vessels up to 400,000 dwt, 385.25m long and 66.65m wide. Two of the yards have installed shiplifts with a combined capacity of 19,928 tons. for vessels up to 180m long, 30m wide and 36,000 dwt.

Responding to customers' demands on both merchant and naval vessels, Spanish repair yards have taken a step forward by gaining a reputation for work on cruise vessels, passenger and ro-ro ferries, chemical and product tankers, gas carriers (LNG and LPG) and container ships, while maintaining the former specialization for large fishing and factory vessels, oceanographic research vessels, reefers and sophisticated naval ships.

ECONOMIC KEY DATA	
<b>NEWBUILDING</b>	<b>€2bn</b>
<b>Shiprepairing</b>	<b>275 mEuro</b>
<b>Annual materials, equipments and services procurement</b>	<b>€1.4bn</b>
<b>DIRECT EMPLOYMENT</b>	<b>6,170 people</b>
<b>INDIRECT EMPLOYMENT</b>	<b>38,000 people</b>
<b>R&amp;D&amp;i Investment (last four years)</b>	<b>800 mEuro 10% annual turnover</b>

## NAVANTIA

- ✚ Spain set a record of EUR845 million (USD1.1 billion) in defence export sales in 2006 more than doubling 2005's figure of EUR419.5 million. *More than half of sales were attributable to warships from NAVANTIA; which registered EUR445.9 million, mainly through supplying an F-310 frigate to Norway and a Scorpene – class submarine to Chile.*
- ✚ F100 class frigate is the new anti-air warfare frigate of the Spanish Navy for the first third of the 21st century. *This project meant a challenge, as the most powerful worldwide combat system was to be fitted into the smallest platform enabled for its adjustment.*
- ✚ Australia has selected Spanish designs for its new generation of air warfare destroyers (AWDs) and amphibious ships (LHDs) – programmes that combined are worth USD 9 billion. Australian government chose Navantia's in service 5,900 tonne F100 class frigate against an 8,700 tonne variant of the US Navy's flight IIA Arleigh Burke – class destroyer offered by US company Gibbs and Cox.
- ✚ *The Navantia design 27,000 tonne strategic Projection Ship proposed by Tenix Defence has been selected in preference to a 23,000 tonne Australianised version of the Mistral LHD design by Armaris – DCNS and tendered by Thales Australia.*

## PYMAR

- ✚ The Gondán shipyard delivered the “Edda Fram” to Norwegian owner Østensjø Rederi, which *is the first worldwide high sea Platform Support Vessel (PSV) of its size to be powered by a Voth Scheider cycloidal propeller system. (VSP).* However, *the new design is also the first anywhere with integrated tanks below deck for transporting large volumes of drill cutting which are remotely operated through an integrated system* and are designed for high efficiency and flexibility. The Edda Fram has been designed and built in compliance with the DNV CLEAN class notation, and has a number of features designed to further enhance the ship's green credentials.
- ✚ Vroon Offshore Services Ltd (VOSL) – formerly called Viking Offshore Services – has taken delivery of the second vessel in a £55million newbuild programme what is one of the most ambitious new-build programmes undertaken in the offshore energy sector. The 55m Viking Explorer is of the new IMT 955 design by IMT Marine Consultants of Montrose, Scotland. It carries a *series of enhanced recovery and rescue features as well as class-leading capabilities for in-field logistic services.* All the new vessels, of similar design, are being constructed at the Astilleros Zamakona shipyard and are to be delivered in a rolling programme until early 2009.
- ✚ Dredging and Maritime Management SA, part of the Jan De Nul Group, *has ordered a new mega trailing suction hopper dredger with a hopper capacity of 46,000m<sup>3</sup> with Construcciones Navales del Norte, and the vessel will be built at the La Naval shipyard in Sestao.* The main characteristics of the vessel include: a hopper capacity of 46,000m<sup>3</sup>; pumps 2 x 6,500kW; a deadweight of approximately 78,000; pumping ashore 2 x 8,000 kW; length overall of 223m; breadth of 41m; propulsion of 2 x 19,200kW; and total installed power of 41,500kW.

- ✚ **Construcciones navales del Norte is the only European shipbuilder with a construction programme involving liquid natural gas (LNG) transporter vessels capable of competing with those produced at Korean and Japanese shipyards and is in fact one of the few actually equipped to build them.**
  
- ✚ **Construcciones Navales del Norte will build the first worldwide vessel to mine the deep oceans of the world for copper, gold and zinc.** Nautilus Minerals has announced that Jan De Nul Group, one of the world's leading dredging companies, has signed a contract with La Naval shipyard in Sestao, northern Spain for construction of “Jules Verne”, a 191m vessel to be used on Nautilus's deepsea copper and gold mining project, the Solwara 1 Project, which is located in the waters near Papua New Guinea. Jules Verne will be a dynamically positioned ship capable of deploying mining equipment, pumps and riser pipes for operations at Solwara 1, which lies on the seafloor in up to 1,700m of water.
  
- ✚ **Currently, Factoria naval de Marín build a new sister vessel of the Legendary luxury sailing yachts SEA CLOUD and SEA CLOUD II (built at Astilleros Gondan in Figueras). The largest full-rigged three mast passenger ship ever built will be completed in September 2009. She will sail under the name SEA CLOUD HUSSAR.** The three-master will be 135 metres long; have a beam over 17 metres wide and a total sail area of approximately 4,000 squares metres distributed over 27 sails. Up to 136 passengers can be accommodated on board the new ship and will be cared for by 90 crew members. Just like its historic sisters the SEA CLOUD HUSSAR will be sailed in a traditional manner.
  
- ✚ **The Craig Group’s biggest ever platform supply vessel has been delivered in Astilleros Balenciaga of Spain.** “Grampian Talisman” is the ninth vessel ordered from Balenciaga by the group in five years and underlines its commitment to and confidence in the North Sea. The new platform supply vessel, designed by IMT of Montrose and measuring 78.2m in length with a 17m beam, will have 740 square metres of deck. **Although a PSV, she will also be capable of meeting the requirements of a 300 class emergency response and rescue vessel and be capable of carrying daughter craft.**
  
- ✚ **With the integration of Marseille’s facilities, Union Naval has become the shipyard with the biggest capacity in all Mediterranean, owning four docks: two in Barcelona (120 x 19, 215 x 35) and two in Marseille, (250 x 37, 320 x 53) with unbeatable facilities provided to carry out repair works and to convert any kind of vessels.** Union Naval Marseille has the possibility to operate the biggest repair dock in Europe and the second of the world (465 x 85) to accommodate almost 100 % of the actual worldwide fleet.

**More information:**

 Jesús Querol	UNINAVE Cardenal Herrera Oria, 57 28034 Madrid SPAIN Phone: +34 91 4170437 Fax: +34 91 7293647 Mobile: +34 670778496
<a href="mailto:jqueros@uninave.es">jqueros@uninave.es</a> <a href="http://www.uninave.es">www.uninave.es</a>	