

DECK MACHINERY



**CUSTOM
BUILT**

A deep knowledge of the market
makes a big difference

IBERCISA.

QUALITY OUR COMMITMENT

On a successful course since 1969

Ibercisa is a vertically integrated company, market leader in solutions for marine systems and deck machinery.

Our philosophy is to create long-standing relationships with our customers based on trust and understanding. We spend a significant amount of time studying your requests for future projects because your needs are crucial to us and we aim to work hand in hand with you to build a relationship of mutual trust geared towards your success.

Founded in Vigo (1969) on the north western Galician coast of Spain, Ibercisa has become a world player in the field of marine equipment. Today the company sells its products throughout the five continents.

We hope that this overview of our company services will show you how we can work together to achieve your goals.

Ibercisa,
Board of Directors



Our business

Today, the marine services market offers a vast array of different and often confusing, choices. Over the past 46 years however, Ibercisa has become "winch specialist" par excellence. We concentrate on what we do best which in turn, enables us to help you identify the best equipment for your project.

We are professionally qualified to deliver well-researched, proven solutions and products using our many years of maritime experience to help you make the best choice. By working together from the earliest stages of preliminary design and tailoring equipment to your needs, we are able to guarantee both high quality and cost effectiveness.

Ibercisa has an international profile. The Company is present in over 50 countries, thanks to a global network of agents and highly professional staff.

Our employees are committed to offering an impeccable after-sales service. We aim to give every client our close, personal attention, which is also both knowledgeable and informed about the very latest operating methods and equipment in all the naval sectors; fishing, offshore, oceanography, AHTS, towing, etc.

For further information please contact us at: ibercisa@ibercisa.es

Ongoing service

What we like our clients to feel about us

“That we are always professional and not pushy with sales”

“When dealing with Ibercisa, they feel confident and informed”

“Effective, professional and friendly; they see our staff as members of their team”



WorldWide Players Active on Five Continents

Getting Stronger

Since its beginnings, Ibercisa has relied on qualified labour. Our workers are an important pillar in the structure of the company with wide professional expertise.

Machinery is designed hand in hand with our clients, from the original draft of a project until its installation. Ibercisa offers personalised adjustments on its machines for both running conditions and capacities as well as on board operation.

Getting Greener

Respect for the environment is an aspect which the Company has integrated into its manufacturing and administrative systems, conscious as we are of the relevance of environmental policies in today's world, and our adherence to legal requisites goes beyond what is demanded of us. Ibercisa has been awarded a Certificate from Lloyd's Register under the rule UNE-ISO 14001:2004 guaranteeing that the Company complies with international specifications in the administration of environmental quality. In this way the Company has included in its daily routine the environmental aspects required of its activity. The ISO 14001 Rule is based on the well known ISO 9001 which has widened its commitment to environmental issues.

Improving our efficiency

Ibercisa has assigned a sizeable budget to update its production systems. The acquisition of machinery is a significant investment for the Company which is intent upon innovation and modernization of all its facilities.

The Company has CNC machinery such as milling machines with 5 shafts or a lathe connected to the CAD-CAM system in the technical office for greater accuracy of the mechanization processes.

Getting better all the time

Why you should be interested in Ibercisa equipment



TUG & WORK BOATS

Towing Winches
Anchor Towing Winches
Escort Towing Winches
Capstans

ENERGY & OFFSHORE VESSELS

Anchor Handling Towing Winches
Traction and Storage System
Heavy Lift Winches DNV 2.7.3
HPU DNV 2.7.1
ROV Winches
Spooling Operations
Mooring Winches
Anchor Windlasses & Winches
Auxiliary Deck Winches

FISHING

Trawl and Purse Seine Winches
Net Drums
Net Sounder
Auxiliary Deck Winch
Capstans
Anchor Windlasses & Winches

RESEARCH VESSELS

Coring and Deep Sea Winches
CTD and Hydrographic Winches
Traction Winches
Streamer
Piston Corer Bed

DREDGING

Auxiliary Anchor Winches
Fall Pipe Winches
Cargo Winches
Anchor & Mooring Winches
Mooring Winches

CIVIL

Anchor and Mooring Winches
Drydocking Winches

MERCHANT & TRANSPORT

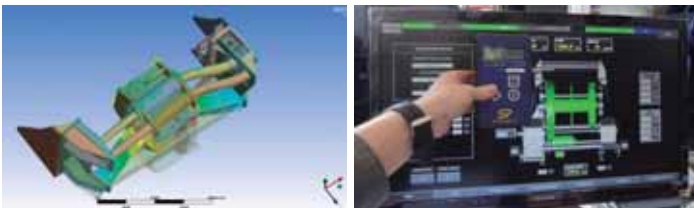
Anchor and Mooring Winches
Capstans
Cargo Winches

NAVY

Anchor and Mooring Winches
Stoppers
Capstans

Our technology

Designing and building reliable, robust and quality machinery requires the necessary technical means to ensure our maxim of excellence throughout the entire manufacturing process. Ibercisa , Deck Machinery , S.A. maintains an "up- to- date" strategy.

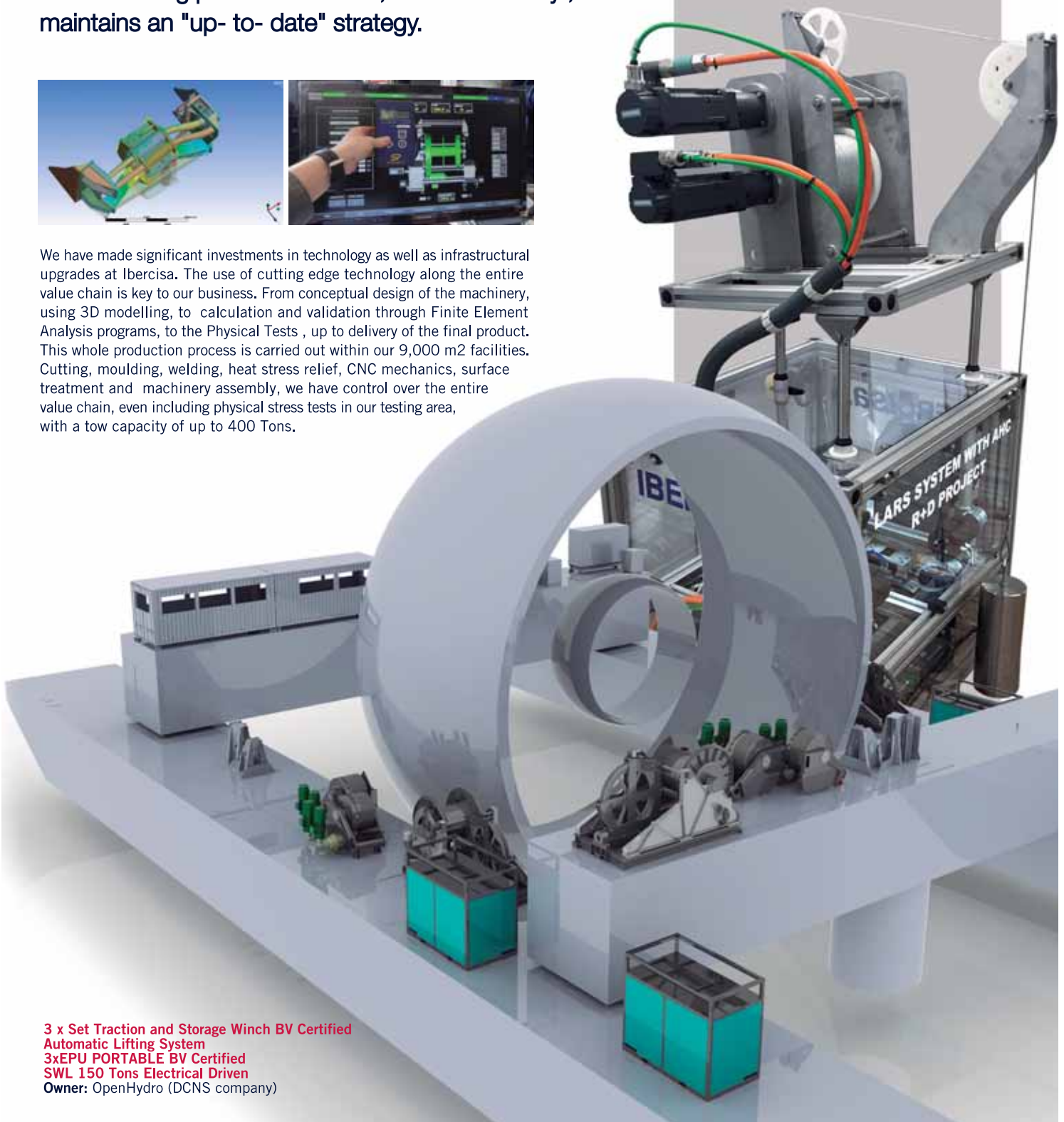


We have made significant investments in technology as well as infrastructural upgrades at Ibercisa. The use of cutting edge technology along the entire value chain is key to our business. From conceptual design of the machinery, using 3D modelling, to calculation and validation through Finite Element Analysis programs, to the Physical Tests , up to delivery of the final product. This whole production process is carried out within our 9,000 m2 facilities. Cutting, moulding, welding, heat stress relief, CNC mechanics, surface treatment and machinery assembly, we have control over the entire value chain, even including physical stress tests in our testing area, with a tow capacity of up to 400 Tons.

Investigation

At Ibercisa our production process is based on continuous innovation, by applying the latest technology to the design of our machinery.

The process begins in our Technical Department always in close contact with the production processes and with strict adherence to the specific requirements of our customers.



3 x Set Traction and Storage Winch BV Certified
Automatic Lifting System
3xEPU PORTABLE BV Certified
SWL 150 Tons Electrical Driven
Owner: OpenHydro (DCNS company)

TUG & WORK BOATS



Escort Towing Winch
Vessel: Fairplay IX and X
Country: Netherlands



Waterfall Type Towing Winch
Owner: Pemex
Country: Mexico
Delivery: 7+9 winches

REFERENCES /PRODUCTS

More than 300 tugboats
working worldwide

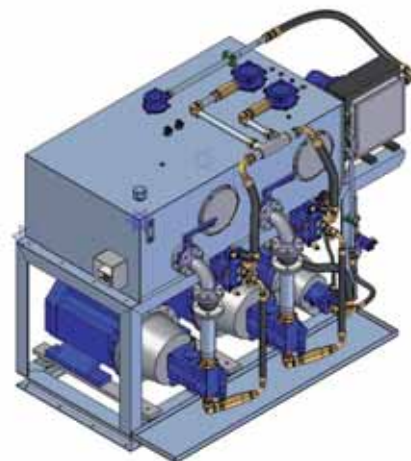
Mexico's state-owned petroleum company PEMEX (Petróleos Mexicanos) invests in a modern tug fleet and has equipped with IBERCISA equipment. 16 new tugs built with technical assistance of spanish shipyard Armon.

POWER PACK

Ibercisa also supplies Power Pack to drive hydraulic winches and other on board consumers such as cranes, towing pins, shark jacks, frames, etc., both by means of electro hydraulic group or pumps connected to PTO. The sizes and powers are adapted to the oil flows and working pressure on vessel.

Power packs are installed on Oceanographics, Supply vessels, Tugs, AHT, etc.

IBERCISA's technical department is in charge of designing and issuing detailed hydraulic circuits, closed or open circuit, with piping sizes, installation procedures, fluxing requirements, etc.



IBERCISA manufactures winches for Oceanic & Port tugboats (Harbour and Escort Tug) with capacity up to 350 tons direct pull, combined and waterfall type winches. They are designed according to customer requirements, in dimension, pull and configuration.

Custom built machinery

Strong, precise and trustworthy machines which are easy to manoeuvre. Our range of products for the towing sector (TUG) is used for both Harbour and Escort tugs. At IBERCISA we design our products in close collaboration with our clients, according to their needs both in size and pull and positioning on board.

“Know-how”

Companies from all over the world have confidence in the experience, quality and know-how of IBERCISA. Tugs from Turkey, Spain, Brazil, Singapore, Italy, Australia, Thailand or the U.S.A. incorporate our latest technology R+D+i in storage winches, mooring and towing winches and capstans.

Latest technology incorporates electrically driven towing winches with dynamic control of pull.



14 Units Hydraulic towing winch
Vessel: Cerro Itamut
Owner: Panama Channel Authority
Country: Panamá



Waterfall type Towing Winch
Vessel: Statia Sunrise/Owner: Seabulk/Country: USA



Render Recovery Winch
Project: Wheatstone, Australia
Owner: Svitzer



Anchor Towing Winch
Client: Damen



TUG & WORK BOATS

- Towing Winches
- Anchor Towing Winches
- Escort Towing Winches
- Capstans

Damen Shipyards

5 Hydraulic Anchor Towing Winch with compact design and friction clutch for escort towing operations.



Wheatstone Project

The danish owner Svitzer, recently has committed to IBERCISA a set of 4 render recovery winches and 2 towing winches for their new 4 tug boats which will be operating at Wheatstone LNG terminal in Australia.

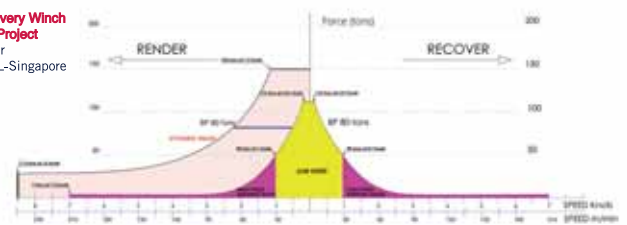
Cheoy Lee Shipyards (Hong Kong), Recently has ordered 4 new electric escort tugs, prepared for indirect tug operations, up to 8 knots.

Ibercisa's **render-recovery** winches offer a dynamic, reliable and adjustable line tension control, which automatically optimizes both **direct** and **indirect** towing. Depending on the selected mode, they will perform a large range of operations.

- Safety first, preventing slack wire.
- Wave compensation.
- 2-speed gearbox allows average speed of 210 m/min and line tension up to 150 tons.

- Integrated dynamic brake to work in even harder conditions of speed and force, protecting gearbox and motor.
- Direct and instant information of pull and brake forces.

Render Recovery Winch
Wheatstone Project
Owner: Svitzer
Shipyards: ASL-Singapore



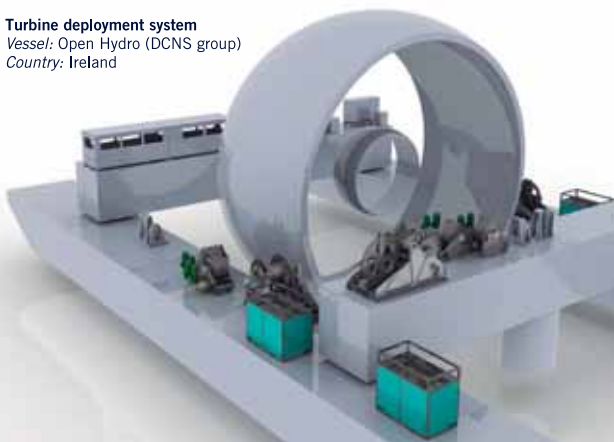
ENERGY & OFFSHORE VESSELS



REFERENCES
/PRODUCTS

Machinery of up to 600 tons
on braking holding capacity

Turbine deployment system
Vessel: Open Hydro (DCNS group)
Country: Ireland



In search of Marine Energy

Recent deliveries include traction machines, stowage and EPU's (electric power units) which operate on a deploying platform for turbine generators of tidal electricity.

Machines are electrically driven, with safer technology, more environmentally friendly and affording greater control during turbine mooring manoeuvres. The machinery is designed with high precision electronic stowage to limit cable spoilage: high security instant "Pawl brake"; software

controlled dynamic pull control and non-slip traction control. The system is also furnished with three point level control, maximum error at 50 mm depth among them, technology which allows more precise control and total safety for our client.



Mooring Winch
 Vessel: Lay Vessel North Ocean 105
 Owner: McDermott
 Country: USA



Anchor Handling Towing Winch
 350 Tons Electrically Driven
 Vessel: Bylgia
 Owner: Heerema Marine Contractors
 Country: Netherland



Waterfall Type Towing Winch
 2x1000 m ø64 mm

Ibercisa specializes in the manufacture of large machinery seen on the offshore fleet and AHTS with large but compact equipment.

Electrical Drive

Ibercisa invests in the continued development and improvement of driving systems. Years of developing our electric drive enables us to offer our clients clean, efficient and reliable systems.



By using AFE technology, we make the most of the energy generated in gear shooting operations, returning clean energy to the boat. Our experience includes from the pioneering use of permanent magnet motors (PM) on AHT's to the development of our own AHC system (active heave compensation).



ENERGY & OFFSHORE VESSELS

- Anchor Handling Towing Winches
- Traction and Storage System
- Heavy Lift Winches DNV 2.7.3
- HPU DNV 2.7.1
- ROV Winches
- Spooling Operations
- Mooring Winches
- Anchor Windlasses & Winches
- Auxiliary Deck Winches

Country:
USA

Country:
Brazil

Country:
USA

Country:
Italy

Country:
Holland

Customer:
McDermott

Customer:
Muliceiro

Customer:
Chouest

Customer:
Tripmare s.r.l

Customer:
Fairplay

"Lay Vessel North Ocean 105" to McDermott
 Ibercisa has supplied deck equipment for the "Lay Vessel North Ocean 105" for the North American Company McDermott. The supply includes combined anchor winches for 60 mm diam. chain, mooring winches machinery and pedal driven Capstan bollards.



Winches for rental fleet

- Comply with:
- 2.7.3. portable offshore units. Class R60.
 - 222 lifting appliances.
 - ATEX regulations.

Portable Winches

Our portable winches are designed to be easily transported and installed as well as for optimum user safety. They do this in compliance with the most demanding certifications DNV 2.7.3 DNV 2.7.1 DNV 2.22 mark etc.



FISHING

Electric Trawl Equipment
Vessel: Volstad
Owner: Volstad
Country: Norway

REFERENCES /PRODUCTS

More than 100 fishing trawlers worldwide are using Main Trawl winches from Ibercisa

Markets

Today, Ibercisa has an important role in Russia, Norway and Iceland, three powerful fishing nations which are betting strongly on improved technology for fishing vessels.



Twin pelagic trawlers electrical driven
Owners: Rederiet Ruth A/S and Fridalvur Tindskard
Vessels: Ruth & Beinur
Country: Denmark

Ibercisa originated in the fishing sector. In 1969 it began its activities manufacturing power blocks for purse seining and thanks to the quality of its products and the improvement in fishing operations it began to increase its market share in the segment of big trawlers and pelagic vessels. Since then, the company has diversified both in markets and products. Today, one of the great technological advances has been electrical drive for deck machinery which has enabled the Company to leap into the most demanding international markets.



Electric Sweepline Winches
Vessel: Andenesfisk 1
Owner: Andenesfisk
Country: Norway

Electric Sweepline Winches
Vessel: Volstad
Owner: Volstad
Country: Norway

Machinery is designed with the owner and the skipper of the fishing vessel so that all machinery meets the requirements of the fishing operation in hand. Electric drive and the frequency control variation means better control for each of the drums depending on its function at the time, enabling the handler to make the most of better efficiency on the pull and speeds necessary for each operation. Machinery can be remote controlled from the bridge.



FISHING

Trawl and Purse Seine Winches
Net Drums
Net Sounder
Auxiliary Deck Winch
Capstans
Anchor Windlasses & Winches



RECENT DELIVERIES: Complete electric winch package for Fisherman Finest (USA), Osprey (Canada) and Vessel Pechora, from Collective Farm Andeg (Russia).
EQUIPMENT DELIVERED TO NORWAY: Complete electric winch package for 74 m trawler - Owners: Volstad, Andenesfisk, REM Maritime...



IBERCISA designs electrically driven machinery, definitely one of the big technological advances of this field. The system will greatly affect a vessel's efficiency and running costs by reducing fuel costs. The electrical drive on the machines not only reduces the space needed for installation of the main operation system, but it is also lighter in weight and more efficient giving improved performance on automatic winches. However, these are not the only reasons for favouring an electrically driven system: we should also note the following:

- **Lower installation costs** as the machine is free of piping.
- **Lower energy consumption, maintenance and noise levels.**
- **Higher efficiency on the machine** (input/output power) and energy regeneration during the free pay out improve vessel's energy consumption.
- Provides **better control than hydraulic systems** with a variable stepless control from 0% to 100% of maximum rpm and the whole torque on any rpm level.
- **Environmental Friendly:** no oils involved, vessel complies with Green Passport.



Electric winches for Fishing Trawler
Vessel: Hopen/Owner: REM Maritime/Country: Norway

The efficiency of electrically driven machinery is around 85-90% as opposed to the hydraulic system which is 60%; giving better control than hydraulic drive with a variable speed of 0-100% maximum rpm and the whole torque at any level of rpm.

RESEARCH VESSELS

Vessels. "Ramón Margalef" and "Ángeles Alvariño"
Owner. IEO
Country. Spain

Winches for fishing and oceanographic research vessels comprising of a double net drum and capacity of 2 x 3 m³, the main trawling winches with a pull of 12 tns and a sounding winch for 2,500 m of 9,4 mm cable, all electric. The oceanographic

machinery comprises two electrical winches with 4,000 m capacity and another for 6,000 m and 8 mm diam.

Other relevant research vessels Supplied: Arni Fridriksson-Iceland, Cefas Endeavour-U.K., Miguel Oliver and Sarmiento de Gamboa-Spain, Noruega-Portugal, Cabo de Hornos-Chile, BIPO INAPESCA México.



REFERENCES /PRODUCTS

Ibercisa has provided these machines for oceanographic research vessels all over the world

"Research V" for NARL

IBERCISA supplied oceanographic winches to NARL (National Applied Research Laboratories) from Taiwan for their new Oceanographic "Research V". The main equipment supplied was designed to load 8,500 m of Ø38.1 mm cable. It is made up of a constant tension tractor winch, with a pull of 15 tons and a maximum speed of 80 m/min, designed to work with Technora Aramid fibre cable.

Oceanographic winches are provided with a spooling device driven both mechanically from the drum or electronically by an independent electrical moto-reducer.

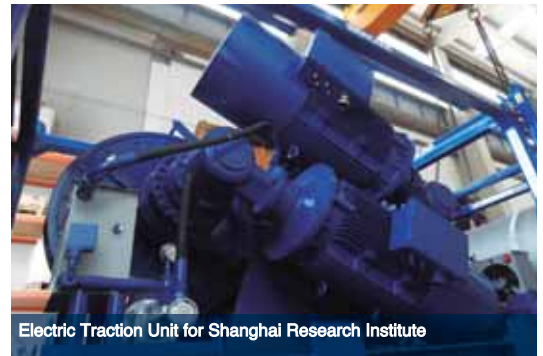
Nowadays oceanographic boats have better technology on board, not only from an electronic point of view but also the deck machinery requires the most demanding type of anti-vibration methods and noise reduction. Machines have also to be flexible, portable and easily adapted to any function needed.

Ibercisa offers extremely precise equipment for this sector and special attention is paid to the care of electro-mechanical cables.

The boat is equipped with complete systems including the integration of winches with frame operations. Ibercisa offers the possibility of installing these machines over a rotating base to work at starboard and aft frames without dismantling the winch.



Tractor unit: Research Vessel NARL- Taiwan



Electric Traction Unit for Shanghai Research Institute



Research winch on board CSIC vessel, stainless steel buit

Precise Machinery

The independent units which are installed on board oceanographics can be used on other types of vessels. Adapted to the requirements of scientific teams, the winches have a large cable storage capacity as well as pull to enable them to be used for deep research operations.

Other important features:

- Grooved drums
- Remote control (radio and cable control, control from laboratory and bridge, etc)
- Easy modification of winch parameters: torque, speed, cables to be used, automatic payout, others.
- Wireless access to parameters from land or remote station: easy to check and correct parameters when vessel is at sea.



RESEARCH VESSELS

**Coring and Deep Sea Winches
CTD and Hydrographic Winches
Traction Winches
Streamer
Piston Corer Bed**



For best performance with this fibre cable, the tractor winch has been designed to work with individual driven sheave. 8 of 11 sheaves are operated by 8 motors in total. Each motor works individually over its sheave. Motors are controlled automatically changing the sheave speed according to the enlargement produced during the cable loading. In this way, cable deformities are absorbed and friction damages are avoided.

CIVIL



REFERENCES /PRODUCTS

Ibercisa Deck Machinery's technical office answers the needs arising from civil works.

▲ Hydraulic Mooring System
Designed for Valemax class
Up to 100 Ton dynamic pull
Integrated Desing, HPU and
Winch in the same frame

**Mooring
guaranteed
with tidal
variations up
to 10m**



The economic strategies of coastal countries are focusing on blue growth, stimulating activities related with the sea. In recent years we have supplied equipment designed for docks, dykes, exterior piers etc.



CIVIL

Anchor and Mooring Winches
Drydocking Winches

Dry Docks

Ibercisa supplies a variety of machinery for dry docks with a docking capacity of vessels up to 5500 Tons and 120 m length. Repnaval in Las Palmas and Pella in Leningrad have recently been supplied by the Company.



Dry dockings
Owner: Repnaval
Country: Spain

Ibercisa Deck Machinery has recently supplied hydraulic mooring equipment for the Acciona Infraestructuras m Kugira II floating dry dock, a structure measuring 64 m length and 42 width with a maximum draft of 24,5 metres.



Hydraulic Mooring and Anchor Winches
Submersible Pontoon: Kugira II
Owner: Acciona / Country: Spain

**LAST
DELIVERY**



Ibercisa Deck Machinery has supplied 26 hydraulic winches with a 180 ton capacity for one of the most important mining companies in the world. The winches are hydraulically driven and will operate in port with their respective hydraulic systems.

Hydraulic Anchor Winches
Owner: Erin Shipyard
Country: Brazil



Nature always represents a challenge for civil works

The construction of a 3,5 km bridge over the Rio Negro in Brazil has been a huge challenge in terms of maintaining navigation during the swelling seasons. In order to resolve the problem 12 barges were built for installation on the bridges for which Ibercisa built 24 anchor winches for 64mm diam. chain.



REFERENCES /PRODUCTS

Ins Shakti (AOR Vessel)
Ins Deepak (AOR Vessel)
Indian Navy
Anchor Windlasses & Mooring Winches

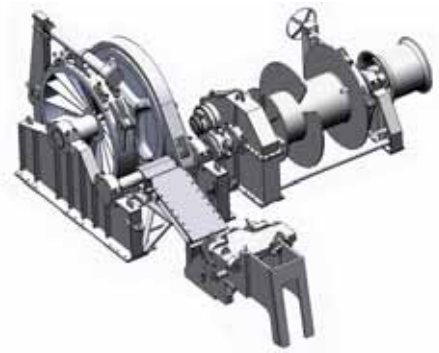
4 off Patrol Ships
Iraqian Navy
Anchor Windlass&Capstans

Juan Carlos Primero (BPE)
Spanish Navy
Anchor Windlasses,
Mooring Winches & Capstans



3 Hydraulic Mooring Winches
Vessel: Juan Carlos Primero (BPE)
Country: Spain

Navy vessels require versatile, reliable machinery which is also easy to operate and maintain. Machinery approved by the Classification Societies in accordance with the extremely demanding working conditions of Navies.



For this sector of the fleet, Ibercisa supplies both vertical and horizontal anchor winches, docking winches and capstans. Winches are robust and low maintenance. Ibercisa produces equipment for patrol vessels, frigates, support vessels and aircraft carriers.



NAVY

Anchor and Mooring Winches
Stoppers
Capstans

Cantabria (BAC)
Spanish Navy
Anchor Windlasses
& Capstans

Galicia (LPD)
Spanish Navy
Anchor Windlasses
Mooring Winches & Capstans

Camberra (ALHD)
Australian Navy
Anchor Windlasses,
Mooring Winches & Capstans

Adelaide (ALHD)
Australian Navy
Anchor Windlasses,
Mooring Winches & Capstans

Hobart, Brisbane
and Sydney (Frigates)
Australian Navy
Electric Capstans



2 Hydraulic Combined Anchor & Mooring Windlass (Chain Ø100 mm)
Vessel: Camberra (ALHD)
Country: Australia

DREDGING



Auxiliary Winch
Vessel: Willem de Vlamingh
Owner: Jan de Nul
Country: Belgium

REFERENCES /PRODUCTS

"Willem de Vlamingh" Jan De Nul

The Belgian Company has chosen Ibercisa to supply deck machinery for the new dredger "Willem de Vlamingh". Machinery supplied includes a huge winch electronically driven by frequency converter and comprises an electric motor of 110 kW giving a direct pull of 33 tons., and a second auxiliary motor for emergencies of 20 kW giving the same pull at a slower speed. The winch also features 2 drums working

Country:
Belgium

Customer:
Jan de Nul

Shipyard:
La Naval

**New
Umbilical
Winches for
Dredging
ROV**





Auxiliary Anchor Winch
 Vessel: Charles Darwin/Owner: Jan de Nul/Country: Belgium



Anchor Windlasses and Mooring Winches
 Vessel: Omvac Diez/Country: Spain

Companies specializing in dredging works have entrusted Ibercisa with the supply of equipment for this task. These are highly resistant machines, easy to maintain, and designed from the start to work in the hardest of conditions, in a corrosive atmosphere with hard and damaging materials.

Consistent working in conjunction with the client, which in the case of the Dredging sector is especially important due to high security and resistance demands of each machine, combined with the "know-how" of the company, has given Ibercisa the opportunity to enter in to this highly competitive sector.



DREDGING

- Auxiliary Anchor Winches
- Fall Pipe Winches
- Cargo Winches
- Anchor & Mooring Winches
- Mooring Winches

"Charles Darwin" by Jan De Nul

Ibercisa delivered for the "Charles Darwin" a Dredger owned by the Belgian company Jan De Nul, with a capacity of 30,500 m³ and 181 m length deck machinery. The supply includes two combined windlasses with Ø81 mm chain, which have been designed to work without stoppers due to the limited

deck space. For this, the brakes have been calculated to support 80% of the chain breaking load (394 tons). The complete supply includes double mooring winch, the auxiliary dredging winch, as the aft-anchor winch, with constant tension, for cable of Ø64 mm and 100 tons of direct pull, and the Bow-connection winch, for the assembly of the pumping pipeline.



MERCHANT & TRANSPORT

- Anchor and Mooring Winches
- Capstans
- Cargo Winches

MERCHANT & TRANSPORT

For the Merchant vessel sector, Ibercisa offers electric and hydraulic anchor winches for chain diameter of 20 to 120 mm, combined with mooring drums, with constant tension, manual or hydraulic clutches, ATEX Explosion Proof notation.

The machinery can be adapted to any configuration required by the client. They are compact and simple machines both in size and geometry. Ibercisa offers these machines which take up as little space as possible, easy to install and

maintain; constant tension on those winches as option. Auxiliary adaptable loading and cargo winches, electrical and hydraulic, with pull and speed according to client requirements.



Mooring winch 2x220 m Ø96 mm rope



Hydraulic combined anchor and mooring windlass Ø44 mm
 Hydraulic combined anchor and mooring windlass Ø46 mm
 Owner: CHOUËST



Mooring Winches for Offshore Terminal
• Compact Design,
all components in the same frame
• 100 Tons dynamic pull
• Fine Load Line Control, local & remote