





Mechanical Design
Welding Constructions
Machining
Industrial Installations
Maintenance

# FIZULO FOUR Leading Industrial Partner

Company established in 1974

Grupo Gomur is a family owned company with an extensive business experience offering industrial services through its subsidiaries Montajes Gomur, Intecma Gomur and Gomur Mecanizados y Automoción.

An exclusive dedication and knowledge acquired throughout the years have enabled these three companies to exceed the expectations of most demanding clients within the following business areas:

- Mechanical Engineering
- Mechanical and Welded Constructions
- Machining
- Insdustrial Installations
- Industrial Maintenance

With a wide multi-sector experience, Grupo Gomur provides its services in industries such as:

- Aeronautical
- Wind Energy
- Nuclear
- Steel
- Naval
- Agri-food
- Railway
- Paper
- Cemetery
- Pharmaceutical

...

Covered facilities of 10.000m2.

More than 200 employees



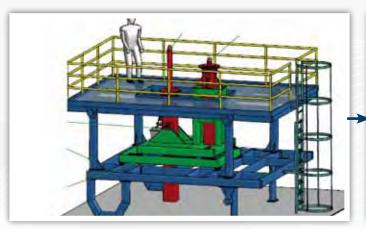




# Mechanical Engineering



- Concept and Designing of machinery.
- Designing of production lines.
- Product design and development.
- Adaptation of machinery.



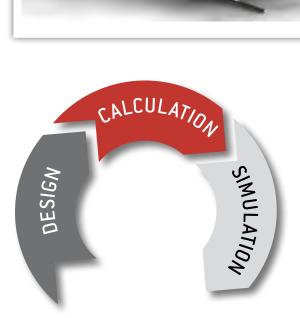












- Design as per the customer's technical specifications.
- Own Technical Department.
- 2 Designers.
- 2 Mechanical Engineers.
- 3D Design Tools (Solidworks).
- Structural calculation programs (Cosmos).
- 2D Design Programs.





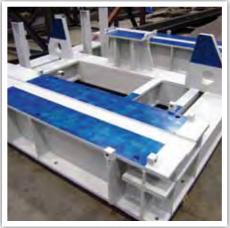


- Tailored construction of machinery.
- Tools (carts, hoisting devices, etc.).
- Prototypes and test benches.
- Metal machine shop (frames, racks, etc.).



















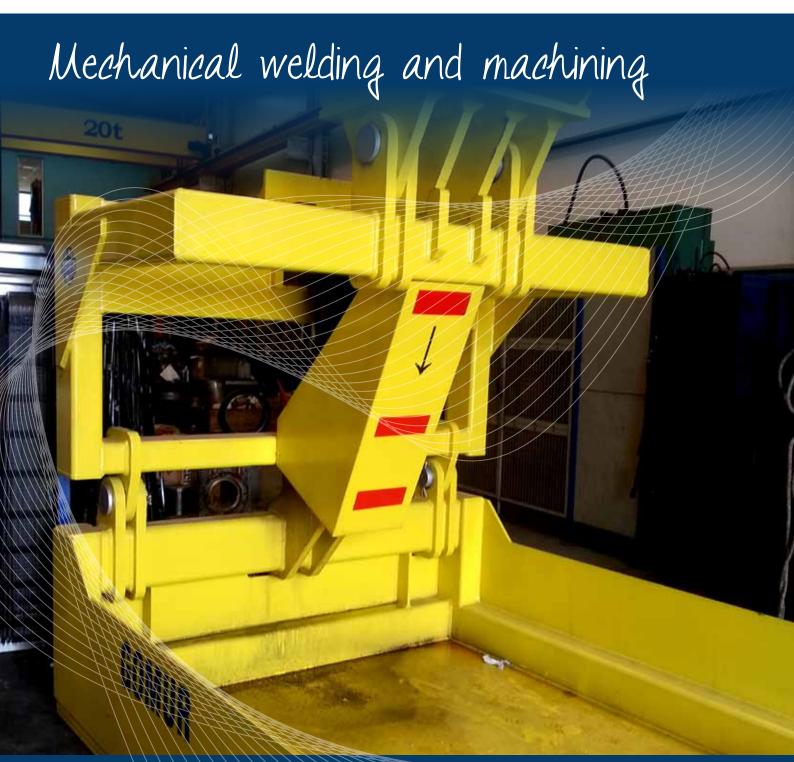
- 3000 m2 workshop.
- Technical Office.
- 32T, 20T, 15T, 10T, 10T and 5T bridge cranes.
- Internal paint (electrostatic).
- OxyCut and Plasma up to 200mm.
- Laser up to 25mm.
- Qualified welders in the use of different technologies and materials.
- Welding electrodes, TIG and Semiautomatic.
- Control of Penetrant Liquids and Laser Tracker.

- Machine Tools:
  - Lathe 0420 x 2000 between points (GILDEMEISTER-CNC).
  - Lathe CNC WITH MOTORIZED UNIT 18.5 KW Axis:  $X:340 \ Z:510 \ C:360^{\circ}$ .
  - Lathe Pinacho Mustang 255 CNC Fagor.
  - Mobile Column Milling Machine. 12000 x 3000 x 1250.

Belt Milling Machine CNC-Heidenhaim 3000x1000x1000.

Milling Machine Zayer CNC 2000x1000x900. Milling Machine DECKEL MAHO MH 600W.







Manufacturing of tools and equipments under client designs for aeronautical, nuclear, renewing energies and other industries.

- Mechanical and welding constructions (toolings, chassis, elevation systems, test benches ...)
- Machining up to 12 meters.
- Steal, stainless, aluminium.
- Engineering Office. Laser Tracker
- Cranes up to 48TN.

















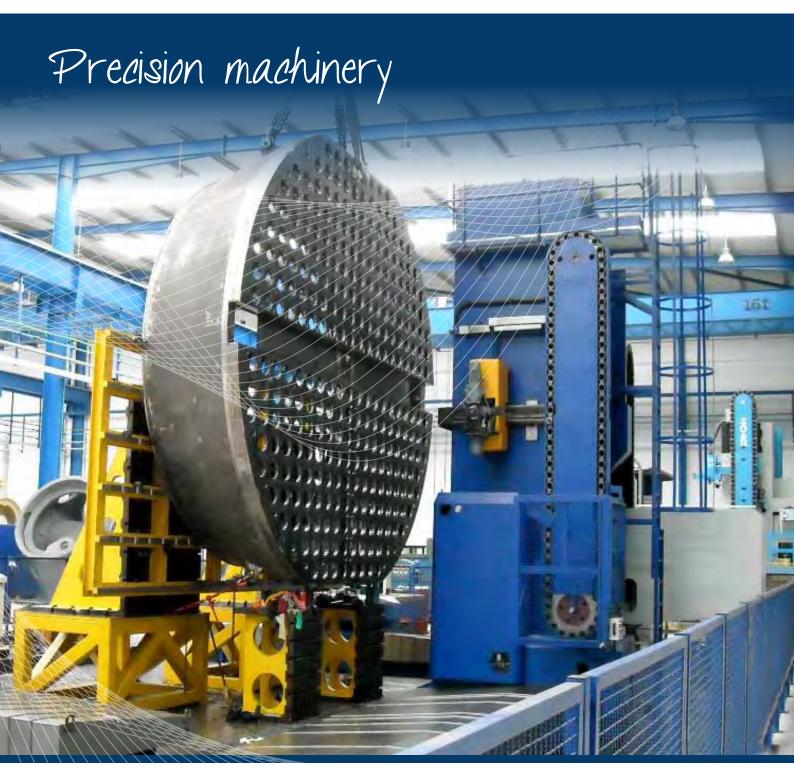










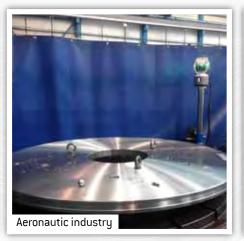




- Wind Energy
- Naval Pumps & valves
- Heavy metal structures
- Iron & Steel
- Hydro

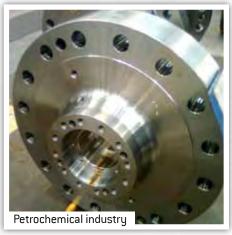
- Machine Tooling
- Engraving
- Cement
- Other sectors



















In compliance with ISO 9001:2008 the company utilizes machines with the latest technology, all fully equipped; CAD-CAM systems, purpose designed tools, three-dimensional equipment (Faro laser tracker), thus ensuring the compliance of technical specifications required by its clients.

Engineering department able to develop the **turnkey project**, supplying the raw material and manufacturing the component or sets according to instructions and technical specifications from the client.

Development and manufacture of tools and prototypes.

CNC Turning, milling, boring and drilling of large parts and sets, with a maximum weight of 25 tons, according to drawings provided by the customer.

**2D and 3D** precision machining with **software CAM Unigraphics NX** in a wide variety of materials: Alloy Steel, Stainless Steel Duplex, Superduplex, Inconel, gray and nodular casting, Cu-Ni-Al casting, etc.







- HUBS
- MAIN FRAMES
- BEARING HOUSES
- FLANGES
- ROTOR DISCS
- STATOR RINGS

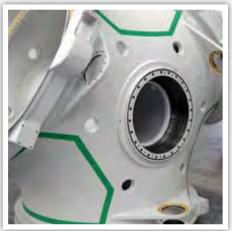
















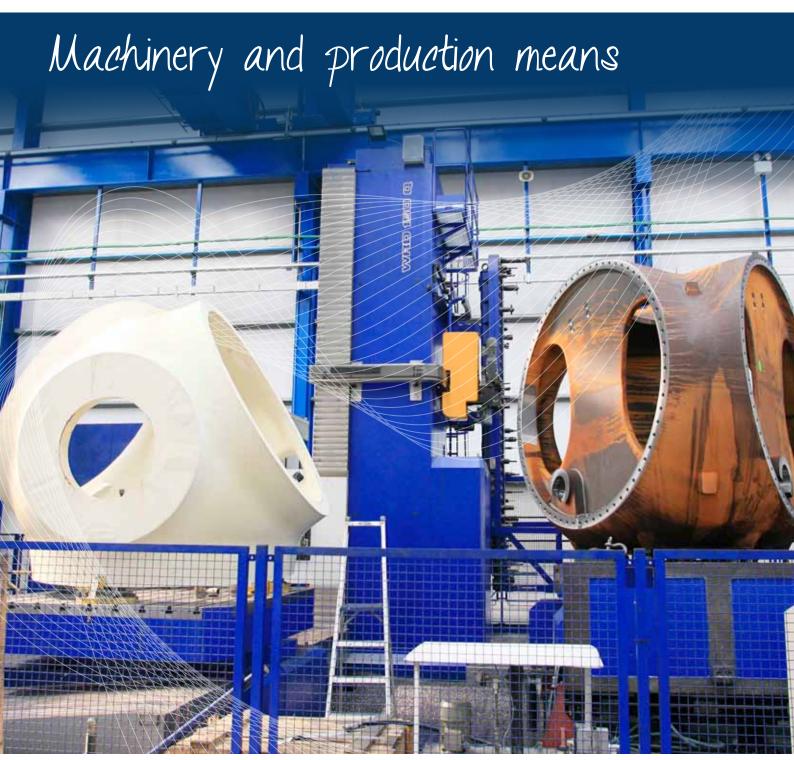


More than 20 years experience working in the wind energy market machining hubs, main frames, bearing housings, flanges, rotor discs, stator rings and other components from the main manufacturers of wind turbines. Those parts are built in nodular cast iron and steel.

The most common services offered include the machining, dimensional control, painting, packing and transport to the final destination.

Dimensional control using a Faro Laser Tracker, reaching accuracies of hundredths of mm



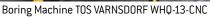






- Milling: X= 12.000 mm , Y= 3.500 mm
- Boring: X= 14.000 mm, Y= 4.000 mm
- $\bullet$  Vertical Turning: 0 5.000 mm , H= 3.300 mm
- Horizontal Turning: 0 1.000 mm , L= 6.000 mm
- Maximum weight per component: 25 Tn







Boring machine TOS VARNSDORF WRD-150-Q



Milling machine ZAYER 30 KCU 12000-AR



Vertical lathe STANKO



Vertical lathe TV-3500



Vertical lathe UMARO

### **FACILITIES**

Covered area: 10.000m<sup>2</sup> Total area: 14.000m<sup>2</sup>

Lifting equipment: 13 overhead cranes up to 48TN

# **MACHINERY & PRODUCTION MEANS**

Milling Machines: 2 CNC **Boring Machines:** 4 CNC

1 Manual

Vertical lathes: 3 CNC

1 Manual

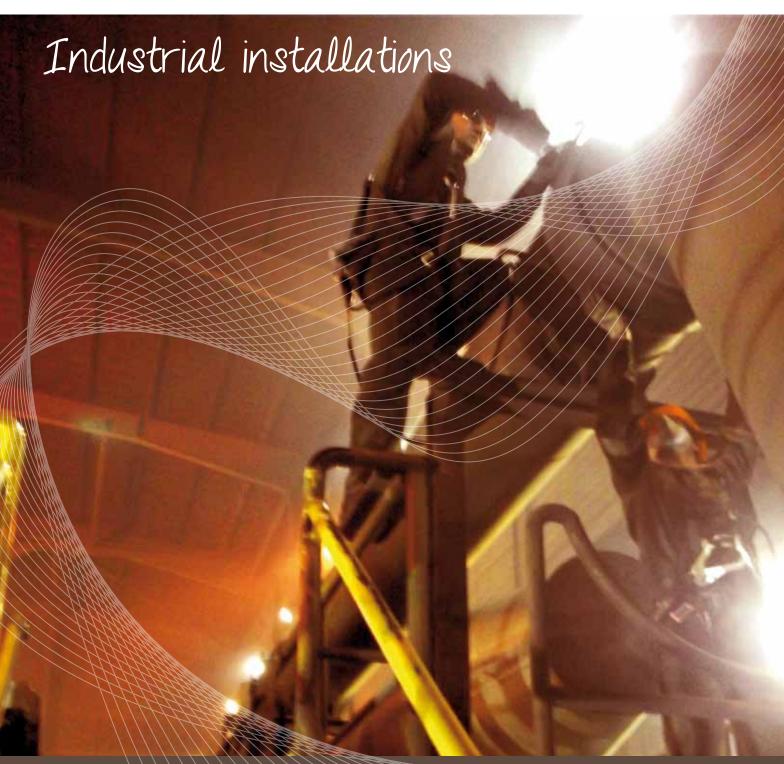
Horizontal lathes: 2 Manuales Vertical drilling: 1 CNC

Dimensional control: 1 Láser Tracker (Faro) CAD-CAM (Unigraphics NX) Engineering:



Milling Machine Zayer Kairos 12000





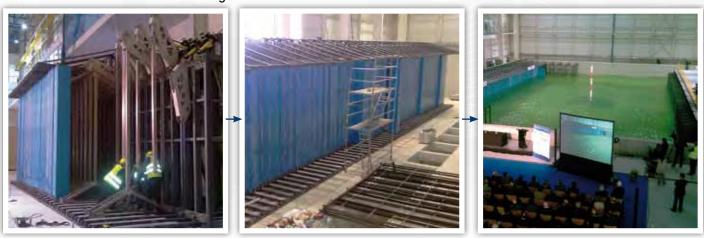


- Mechanical installations "Turnkey".
- Assembling of Machinery.
- Transferring of production lines.

### Construction and installation of silos.



## Construction and installation of hydraulic reservoir.



### **INSTALLATION SERVICES:**

Commissioning of production plants.

Turnkey installation of all types of machinery:

- 1. Plants for handling materials in bulk: Conveyer belts, lifts, chain hoppers, suction filters, mixing machines, crushing machines, down pipes
- 2. Iron and Steel Sector: Continuous casting lines, heating ovens for Rolling Mills.
- 3. Food Sector: Chocolate, flour and milk production lines.
- 4. Naval Sector: Main and auxiliary engines for ships, drive shafts, tail shafts and propellers.
- 5. Specific machinery for clients with special needs.
- 6. Bridge cranes up to 250T.

### TRANSFERRING SERVICE:

- 1. Moving of production lines within the factory due to changes in the Lay-out.
- 2. Transferring of production lines to another production center.
- 3. Transfer of entire factories to other locations.







- Comprehensive turnkey maintenance services.
- Predictive maintenance.
- Maintenance engineering.
- Maintenance technologies.









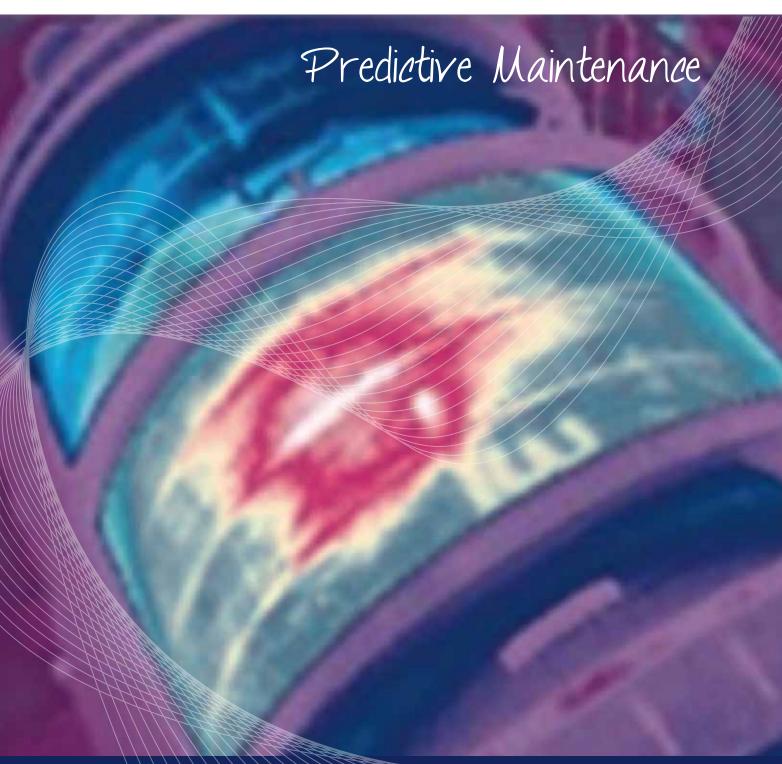




### **SERVICES:**

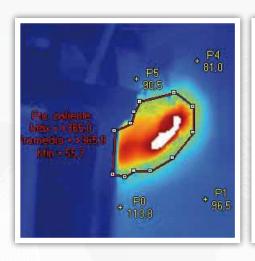
- Consulting, Installation and commissioning of a CAMM (Computer Assisted Maintenance Management).
- Design tailored to each client, of a Predictive (analysis of vibrations, thermography, ferrography, ultrasounds, oil analysis, etc.) and Preventive Maintenance Program.
- Design and implementation of maintenance organization systems such as:
  - » TPM: Total Productive Maintenance.
  - » RCM: Reliability Centered Maintenance.
- Preventive and Corrective Maintenance: Provision of work equipment.
- Maintenance Engineering and Proactive Maintenance: Execution of works and repeat discrepancies.
- Technical and organizational management and control of the results.
- Maintenance Technologies: Laser alignments (shafts and pulleys). On-site balancing of rotors.
   On site machine works.







- Vibrations.
- Thermographs.
- Oil analysis.
- Ultrasounds.
- Courses and training.
- Laser alignments of shafts and pulleys.
- Balance of rotors: On-site balancing on Hztal bench.







# ANALYSIS OF VIBRATIONS (IMPLEMENTATION AND PERIODIC MONITORING ADAPTED BY CLIENT AND NEEDS)

Monitoring equipment and analysis of vibrations:

- > Vibration analysis collector brand DLI, model DCA-50B (4 channels).
- > Triaxial accelerometer model 629 M18
- > Analysis software Expert Alert (triaxial technology), for spectrographic analysis in Manual using an analyst or with computerized Expert System.
- > Availability of standard: ISO 10816, ISO 2372, ISO 7919-1, ISO 1940-1, VDI 2056 or envelope averaging system by machine to real ALARM and FAULT values.
- ULTRASOUNDS (DETECTION OF FAULTS IN MATERIALS, BEARING FAULTS AND LEAKS IN PRESSURIZED GASSES
- THERMOGRAPHY APPLIED TO: SUBSTATIONS, ELECGTRICAL PANELS, THERMAL INSULATION AND MECHANICAL SYSTEMS

### Thermographic camera:

- > Camera model Fluke // Ti 40.
- > Amp clamp meter ISO Tech ICM 134.
- > Analysis software Smart View 2.1.
- > Availability of standard: ISO / TC 108 / SC5. N 240 and U.S. Steel I.R. Standard for high and low voltage.

# OIL ANALYSIS (HYDRAULICS, LUBRICATION, THERMAL DIELECTRICS, ETC.)

Oil analysis equipment Mode A.

- > Viscosity meter brand SKF model YMVM 1.
- > Status analyzer brand SKF model TMEH 1. Obtaining of the degree of kinematic viscosity of the sample, the degree of degradation and general contamination of the oil.
- > Analysis adapted to the needs and machine type.
- > Availability of standard for:
  - > Viscosity at 40°C ASTM D 445.
- > Contents of additives, wear metals and contamination ASTM 5185.

### LASER ALIGNING OF PULLEYS

- > Laser alignment tool SKF TMEB-2
- > SKF calibrated supplements

### • LASER ALIGNING OF SHAFTS

- > Laser shaft alignment tool Pruftechnik Rotaling Ultra.
- > SKF calibrated supplements.
- > Digital distance meter Leica Disto D3.
- > Alignment tolerance system Pruftechnik.
- > Results reports.

