

# ZEIT

ESPECIALISTAS



[www.zeitesp.es](http://www.zeitesp.es)



# ABOUT US

- We are a team of professionals consisting of engineers, technicians and experts available for our customers in order to provide comprehensive solutions and advanced technology.
- With more than 10 years of experience in the design and manufacture of industrial equipment.
- We specialise in the supply of major equipment.
- We provide multidisciplinary technical support to enable the development of conceptual, basic and detailed engineering, as well as preventive maintenance.
- We provide EPC solutions for industrial projects.
- Comprehensive management and the implementation of turnkey projects for companies in different industry sectors



# SECTORS



**Water Treatment**



**Oil & Gas**



**Food**



**Pharmacy**



**Pulp and Paper**



**Steel Industry**



**Mining**



**Renewable Energy**

## Tribology Systems Management:

- ✓ Diagnosis and tribological audit.
- ✓ Tribology programmes and production reliability, specialised functions, and improvement in the analysis of lubricants.
- ✓ Study of certification and standardisation.
- ✓ Lubricant consumption control and indicators.
- ✓ Oil analysis system (indicators, recommendations).
- ✓ Oil conditioners installation management.

## Tribology Implementation Plans:

- ✓ Oil top-up volume in minor and major equipment.
- ✓ Top-up in minor and major equipment.
- ✓ Flushing to bearing housings.
- ✓ Chemical flushing in lubrication systems.
- ✓ Hydraulic oil flushing in lubrication systems.
- ✓ Lubrication of rotary equipment and oil sampling.



## TRIBOLOGICAL RELIABILITY

## Ultrasound Inspections

- We perform inspections using non-destructive testing (NDT), including the application of ultrasound inspections in pipelines, welding, metal structures, detection of internal leaks in heat exchangers (eco-pulse technology, transmitter-receiver, angular and normal), presentations in B-Scan, A-Scan at high and low temperatures.

## Thickness Measurement

- We are experts in carrying out thickness measurements via the use of non-destructive testing methods (ultrasound), more specifically, in storage tanks and cryogenic LNG tanks, pressure vessels, piping and metal structures.
- In both services we have highly-qualified personnel and we comply with the main quality standards in Levels I and II of NDT, according to ASNT (SNT-TC-1st recommended practice) with digital A-Scan, B-Scan and C-Scan presentations both at high and low temperatures.



## Lubrication Audits

- Lubrication audits for dynamic equipment, taking into consideration the collected data with regard to the type of lubricant, the analysis of the associated problems caused by poor lubrication, optimal storage in order to prevent contamination, the optimisation of oil stocks and their certification. All of this is aimed at cost savings in the areas of maintenance, productivity, the environment, safety and the loss of material which is associated with tribology.



## World Class Maintenance MCM

- This is intended to guarantee satisfaction and exceed the customer's expectations and maintenance requirements, as well as organisation in relation to the benefits and potential offered by technology in the social context and today's market.

## BENEFITS

- ✓ Excellence in core processes.
- ✓ Quality and profitability of products.
- ✓ Maximum reliability.
- ✓ Achieving the required production.
- ✓ Environmental protection.

## Reliability Engineering and the Optimisation of Assets

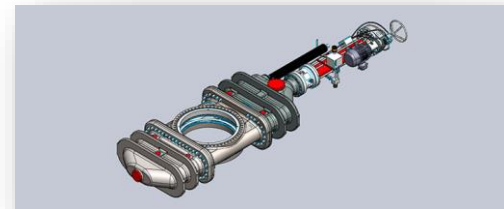
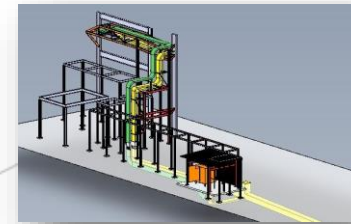
- Definition of strategies based on reliability, as well as in the areas of predictive maintenance and tribology.
- Definition and auditing of maintenance systems.
- C.A., critical analysis and R.C.A., Root Cause Analysis.
- Failure Mode and Effects Analysis (FMEA).
- Development of preventive maintenance plans.
- Vibration analysis and condition monitoring.
- Optimisation of materials management, cataloguing, Bill of Material (B.O.M.).
- Development of a hierarchy of assets, taxonomy and the comprehensive assessment of reciprocating equipment.
- Comprehensive services for the optimisation of rotary equipment maintenance strategies including severity parameters as well as the occurrence and detection of the failure mode according to SAE JA 1011/1012/J1739.



## Specialised Calculations and Finite Elements

- Hydraulic simulations for pipelines, calculations of hydraulic pumps, the calculation and sizing of heat exchangers.
- Mass and energy balance, (PipePhase, AVEVA Diagrams, PipeFlow, INPLANT)

- ✓ PV Elite for the calculation of pressurized equipment
- ✓ HTRI for heat transmission
- ✓ Solidworks for calculating finite elements
- ✓ Flexibility studies with the use of CAESAR II
- ✓ ETAP, EDSA and SKM Power Tools for the design and installation of electric and power systems



## 3D, PDS, PDMS and SP3D Modelling Tools

- ✓ CADWorx
- ✓ AutoCAD for generating and checking drawings
- ✓ Solidworks
- ✓ Software in 2D and 3D



## Studies and Risk Analysis using Hazop, LOPA and SIL

- HAZOP studies for basic and detailed engineering, risk identification, accidents and operability problems.
- This is an innovative methodology concerning semi-quantitative LOPA ("Layer of Protection Analysis") risk analysis, as well as assigning the SIL levels for the SIS ("Safety Instrumented Systems").



- We conduct SIL ("Safety Integrity Level") and SIF ("Safety Instrumented Functions") studies in order to reduce fatal accidents, financial losses, losses in terms of the costs of own materials and loss of profit, as well as environmental damage and civil liability caused by accidents.

## Mechanical Discipline

- Basic, detailed and construction engineering which allows us to design and develop industrial plants and energy generation plants.
- Calculation and design of static equipment: atmospheric and pressurised storage tanks, fractionating columns, reactors, spheres, heat exchangers, accumulators.
- Calculation and design of rotary equipment for all industry types: pumps, compressors, fan coolers.

## OTHER SERVICES

- Analysis of manufacturers' quotations and selection of contractors' panel.
- Selection of materials.
- Supervision and technical inspections for construction.
- Pre-commissioning, commissioning and start-up.



# SERVICES - ENGINEERING

## Civil Discipline

- Supports for pipe-way and racks, electric eco-generation, roads, motorways, industrial and administrative buildings, amongst others.
- We draw up designs and calculations for structures made of steel, mixed and reinforced concrete, such as drainage systems, earthmoving works, retaining walls and equipment supports, as well as the linear layouts for paths, railways and oil and gas pipelines.
- Underground calculations, structural stress calculations, topographical surveys, laser scan and piping flexibility studies.



## Pipeline Discipline

- We have the best tools and knowledge of the applicable codes.
- Design of fire protection processes, services and systems.
- Technical office:
  - ✓ Plot-Plant y Key-Plant
  - ✓ Piping Layout
  - ✓ P&ID piping
  - ✓ Sections, cuts and tie-ins
  - ✓ Generation of the list of lines and equipment
  - ✓ Generation of isometrics (single-line and detailed)

## Instrumentation Discipline

- Development of engineering: basic, conceptual, detail, assistance in the procurement, construction, start-up and maintenance of plants in the industrial área.
- Design of control architectures DCS, ESD, CCTV, Escada's system, access control , telephony and perimeter security.
- Experience en application software (Intools and AVEVA).

## Procesess Discipline

- Elaboration of mass and energy balance, in addition to the use of advanced design tools (PipePhase, AVEVA, Diagrams, PipeFlow, INPLANT).



## SOFTWARE FOR CALCULATION AND SIMULATION

- ✓ PV Elite for the calculation of pressurised equipment
- ✓ HTRI for heat transmission
- ✓ Solidworks for calculating finite elements
- ✓ Flexibility studies with the use of CAESAR II



## Electricity Discipline

- We carry out the design, development and installation of the electrical power system in industrial plants, oil & gas, LNG satellite plants, renewable energy and water treatment, with specialised personnel and using the most advanced and renowned tools in industry (ETAP, EDSA, SKM Power Tools).
- Experience in the development of conceptual, basic and detailed engineering, both of the electric transmission system (transmission lines, high and medium-voltage connections), and the distribution system (design of electrical substations, atmospheric protection system, earthing system, illumination system), as well as calculations regarding the electrical system (load flow analysis, short-circuit, motor start-up, coordination of protections).





## Zeit Especialistas S.L and Industrial Moreypí S.A

- The two companies share the same address and shareholders, and their prime activity is the execution of industrial projects, the manufacture of capital goods, metal structures and all kinds of support services for industry, whilst their activity is in different sectors.

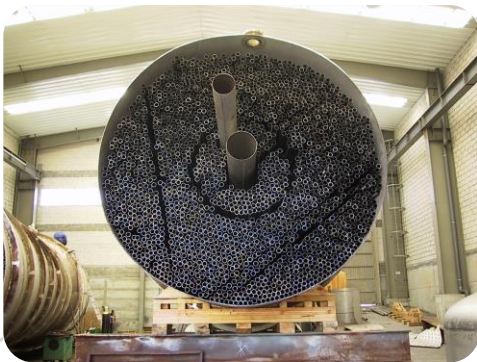


### FACILITIES

- We have an office covering an area of 600 m2 in Gijón, adjacent to the workshops, where the technical team performs engineering activities and production control.
- A central focus for work located in the Bankuni3n Industrial Estate, one kilometre from Puerto del Musel, the main communications hub for land and sea communications in Asturias which is also an advantage for freight charges and services.

# SERVICES - MANUFACTURING

- IN ZEIT ESPECIALISTAS and INDUSTRIAL MOREYPI, we execute turnkey projects for which there are computing-based calculation, design and management tools intended for the development of basic and detailed engineering.
- Our facilities have an annual production capacity of 8,000 tonnes.
- We have a team of highly-qualified engineers, designers and draughtsmen with vast experience in these types of projects.



## CAPACITY AND PRODUCTION RESOURCES

## SERVICES - MANUFACTURING

- We have a broad and modern range of machinery able to satisfy manufacturing requirements:
  - ✓ CNC plasma cutting machine for thicknesses up to 80 mm.
  - ✓ Hydraulic press with a capacity of 800 T.
  - ✓ Folding machines of up to 4 m/400 T.
  - ✓ CNC plate metal bending machines for cold thicknesses of up to 50 mm and widths of 3,000 mm.
  - ✓ Submerged arc automatic welding machines.
  - ✓ MIG and TIG semi-automatic welding machines.
  - ✓ Spot welding machine.
  - ✓ TIG-PLASMA automatic welding machine for stainless steel.
  - ✓ Turning gear of up to 100 MT.
  - ✓ 8 overhead cranes of up to 50 T.
  - ✓ Profile cutting line for widths of up to 1,000 mm.





# SERVICES - PRODUCTS



## P R O D U C T S

- Columns
- Reactors
- Helical exchangers
- Separators
- Silos and hoppers
- Tanks
- Boilers
- Air coolers
- Casing and tube exchangers
- Conveyor belts
- Bridges
- Electro-filters
- Metal structures
- Pipelines
- High pressure pipes, piping

## Heat Exchangers



- We design and supply heat exchanger equipment covering a vast range.
- We have EPC project experience, carrying out calculations according to the TEMA regulations (The Tubular Exchanger Manufacturers Association) / ASME standard.
- Assessment of the required technical specifications in order to provide the engineering associated with the procurement process to customers both on a national and international level.
- We inform the customer of the mechanical and thermal properties of each piece of equipment as well as its design in 2D and 3D.
- When providing our engineering services we run simulations with the PVElite software used for calculating mechanical properties and the HTRI programme used for calculating heat exchanges.

## LNG Spheres

- We supply cryogenic LNG spheres which have medium and low volumes.
- Technical capacity for using the best alloys for each specific case.
- Technical analyses with the use of specialised software for calculations related to pressurised vessels according to the standard safety norm applicable to each case.
- In addition to supplying the tanks, we have the ability to project LNG satellite-type plants, making the conditions in the surrounding area adequate, vaporisers, pumping systems, piping and the control elements required for such purposes.

## OTHER SUPPLIES



- ✓ Tanker unloading installation.
- ✓ Storage installation.
- ✓ Natural gasification installation.
- ✓ Gas reheating installation.
- ✓ Security system and cold shut off valve.
- ✓ Odorization installation.
- ✓ Regulating station.

# SUPPLIES

## Gasification Skids

- We supply the vaporisation skid providing specialised engineering for its design and manufacturing. Just as in the section on LNG spheres, the supply of such equipment can be associated with a satellite-type plant or individual equipment. Our technical capacity allows us to adapt depending on the project and the gas volume associated with it.



## Carbon Fibre - Resin Coating

- By means of the use of structural composite materials, we offer our customers Permanent Structural Repair Systems, aimed at strengthening and extending the lifetime of structures at a fraction of the cost of conventional repairs.
- POWERWRAP allows us to supply a wide range of products intended for different industries: construction, marine, military, mining, petrochemicals, distribution, transmission and oil and gas refining.



# SUPPLIES

## Motor Control Centre

- The technical features of the design of our MCCs enable economising operation and maintenance services.
- We offer the marketing and supply of Motor Control Centres (MCCs) through our commercial partner KONEX.
- Our MCCs are comprised of high-density energy columns and removable units that are configured according to technical specifications and our customers' needs.



## Instrumentation and Control Booths

- We have experience in the design, manufacture and supply of instrumentation and control booths, offering the best result, meeting technical specifications and manufacturing quality standards, both at a national and international level.
- The industrial sector is one of our main targets, in particular: booth control systems (DCS), safety (ESD), PLC, marshalling booths, etc.



# SUPPLIES - HANDLING SOLIDS



**Radial-draft Stackers**



**Conveyors**



**Feeder Breakers**



**Vibrating Tables**



**Lorry Washing Stations**

We have an agreement with the company IPE for the supply of equipment manufactured by the most renowned names on the market.

# SUPPLIES

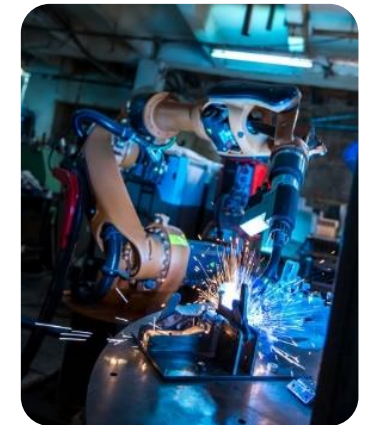
## Mist Lubrication Systems (OIL MIST)

- Representation of manufacturers of mist lubrication systems (OIL MIST) and automatic grease lubrication systems (state-of-the-art technology).
- We resolve problems with supply systems for grease, lubricants and, in general, any solution related to the lubrication system of equipment requiring assisted lubrication.



## Automatic Welding

- Various types of automatism which adaptable to industry, combining the latest technology with the most common welding procedures (A.S.,MAG-MIG,TIG, TIG-Plasma, electrode, etc.).
- Technical support, facilities and equipment for welding in accordance with the European safety standard, accompanied by updated technical documentation.



## EXPERIENCE - PARTNERSHIPS

- Participation in projects on a national and international scale.
- We currently enjoy strategic and commercial partnerships that have helped us to penetrate the market in other countries such as Venezuela, Peru and, in the near future, Germany and the United Arab Emirates (Abu Dabi).



**STRATEGIC PARTNERSHIPS**



# NOTEWORTHY PROJECTS

PROYECTO	TIPO DE PROYECTO	CLIENTE	DESCRIPCION	HH
EPC Detailed Engineering Project involving the replacement of the boilers' feeding pumps, Unit 1 located in the Power Generation Plant AES-Gener de Ventanas, Chile..	Detailed Engineering	ABENGOA - AES GENER- Chile	Complete revamping of the boiler's water supply system. Optimizing the design of the various suction, download and recirculation pipelines.	6820
Basic and Detailed Engineering for the supply and installation of pipeline materials for the "SER" Project in Maasvlakte Rotterdam, Holland.	Basic and Detailed Engineering	E-On Maasvlakte	EPC Project. Including the design of the new pipe bridges, pipes with special metallurgic requirements to enable them to resist high temperatures and pressures, and developing the selection and specification of steam reducing stations. (Desuperheaters)	11810
Riyadh Strategic Reservoirs	Basic and Detailed Engineering	National Water Company – Saudi Arabia	Design of the all the Instrumentation and Control for the 250 stations of SALBOUKH and TGSW, which consist of drinkable water reservoirs comprised of 6 tanks (1,000,000 m3 each), to supply the city of Riyadh in Saudi Arabia.	3250

# NOTEWORTHY PROJECTS

PROYECTO	TIPO DE PROYECTO	CLIENTE	DESCRIPCION	HH
Consultancy Services for Advance Pre-Feasibility Study on Butane Alkylation Project	Construction Engineering	Qatar Petroleum-Ras Laffan, Qatar	Construction of 13 low pressure vessels for the venting system of the Laffan refinery.	13400
Central Processing Facility	Construction	Groupement Touatgaz. Algeria.	52 kilometres condensing pipe welding and 96kilometres of 24" and 34" gas pipeline.	55550
OPTARA Project, Lot 2A & 2B	Construction Engineering	TOTAL. Antwerpen, Belgium.	Engineering, Procurement and Construction.	16070
Upgrader update including a new Diluent Recovery Unit, a new Vacuum Distillation Unit and a new H2S stripping unit	Ingeniería-Construcción	Canadian Natural Resources Limited (CNRL) -Alberta, Canada.	Characteristics: 250 KBPSD of Synthetic Crude Oil. Description: Engineering, Procurement and Construction.	19800
Gasoil Hydrodesulphurization Unit (HDS)	Engineering	TOTAL Normandy, France.	Characteristics: 3,840 units. Licensor: AXENS. Description: LSTK	42890

# NOTEWORTHY PROJECTS

PROYECTO	TIPO DE PROYECTO	CLIENTE	DESCRIPCION	HH
Expansion of a Flow and Separation Station. Berkine, Algeria.	Detailed Engineering	TECNA – ISOLUX CORSÁN	Expansion of the capacity for pumping oil and compressing gas, as well as the optimisation of the electric power systems, control systems and emergency shutdown.	3020
Combined Cycle	Construction	ENDESA Granadilla, España	Automatic welding of salt pipelines (more than 26 kilometres)	16410
Slide Valves	Technical Support	TOTAL-Venustiano Carranza, México	Technical support for the installation of slide valves in 6 wells.	1600
Slide Valves	Engineering	PEMEX	Engineering for the demolition and installation of 2 slide valves.	8700
Slide Valves	Consulting	Petro - Perú	Assistance with the supply of spare parts for slide valves F-K3 ZIMMERMANN & JANSEN	1800
Slide Valves	Consulting	PDVSA-Monagas, Venezuela	Assistance to a Multinational Company for the Validation of the Master Plan involving the replacement of slide valves.	500

# NOTEWORTHY PROJECTS

PROYECTO	TIPO DE PROYECTO	CLIENTE	DESCRIPCION	HH
Consultancy Services for Advance Pre-Feasibility Study on Butane Alkylation Project	Consulting	Qatar Petroleum-Ras Laffan, Qatar.	Consulting.	12100
Central Processing Facility	EPC	Qatar Petroleum Algeria.	Engineering, Procurement and Construction.	23820
Combined Cycle	Construction	ENDESA Granadilla, España.	EPC-LSTK. High pressure steam three-phase vessel welding.	337580
Hydrocracking VGO Unit	Engineering	LUKOIL Volgogradneftepererabotka-Russia.	<ul style="list-style-type: none"> <li>•Hydro catalytic cracking Unit</li> <li>•Sulphur Recovery</li> <li>•Hydrogen Unit</li> <li>•Amine Regeneration Unit</li> <li>•Sour Water Stripper</li> </ul>	454870
Diesel Hydrotreater H2 Plant	Engineering	Laffan Refinery-Ras Laffan, Qatar.	54,000 BPSD, 12,500 Nm3/h Licensor: HALDOR TOPSOE, KTI.	35000

# CUSTOMERS



ROSNEFT



ABENGOA

SINCOR

INABENSA



## CONTACT DETAILS



CONTACT US



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