

## **REFERENCE LIST**

## **MAIN PROJECTS**

**1987 - 2019**

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>1987</b>	<p>Detail Engineering (according to API650/620 and ASME VIII) of the following storage steel towers to be erected at the pulp mill plant of Portucel, in Viana do Castelo, Portugal:</p> <ul style="list-style-type: none"> <li>- 2700m<sup>3</sup> EUCA HD Storage Tank</li> <li>- 2700m<sup>3</sup> PINE HD Storage Tank</li> <li>- 1500m<sup>3</sup> BROKE Storage Tank</li> <li>- 1500m<sup>3</sup> HD Storage Tank</li> <li>- 1000m<sup>3</sup> WHITE WATER Storage Tank</li> </ul>	<b>PORTUCEL, S.A.</b>
<b>1987</b>	<p>Engineering study for the installation of a new ash storage plant, at Cimpor's Maceira Cement Plant, composed of:</p> <ul style="list-style-type: none"> <li>- One Silo for 600Ton.</li> <li>- One Silo for 200Ton.</li> <li>- Pneumatic Piping system</li> </ul>	<b>CIMPOR, S.A.</b>
<b>1987</b>	<p>Detail Engineering for the installation of two new steam boilers, including water feed system, demineralization system, and piping distribution systems for:</p> <ul style="list-style-type: none"> <li>- Steam</li> <li>- Cold water</li> <li>- Hot water</li> <li>- Fuel Oil</li> </ul> <p>The project included all civil works and electrical, control and command systems.</p>	<b>WANDER, LDA</b>
<b>1988</b>	<p>Cooperation in the expansion project of Fisipe's Synthetic Fiber Plant, in Lavradio, Portugal, including:</p> <ul style="list-style-type: none"> <li>- Survey of the existing piping system</li> <li>- Definition of tie-ins</li> <li>- Equipment layout</li> <li>- Piping and Piping supports layout</li> <li>- Isometrics</li> <li>- Parts list</li> <li>- Drawing of pipe supports</li> <li>- MTO</li> </ul>	<b>PROFABRIL, S.A.</b>

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YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>1988</b>	<p>Mechanical engineering for the works of expansion/rationalization of Portucel's Mill plant, in Mitrena - Setúbal, Portugal, on chemical area, compressed-air centre, pipe-racks, refrigeration towers and bio-fuel boiler, including:</p> <ul style="list-style-type: none"> <li>- Survey of the existing plant</li> <li>- Guide-plans for civil works</li> <li>- Layouts of equipments</li> <li>- Piping and Piping supports layouts</li> <li>- Isometrics</li> <li>- Drawings of supports and steel structures</li> <li>- Equipment detail drawings</li> <li>- MTO</li> </ul>	<b>JAAKKO POÿRY, OY</b>
<b>1988</b>	<p>Detail engineering for the construction of a new gasoil storage tank with 8000 m<sup>3</sup> of nominal capacity and a new pipeline of DN200, interconnecting the tank and the sea terminal in Namibe's Oceanic Terminal - Angola.</p>	<b>SPRI, LDA.</b>
<b>1989</b>	<p>Cooperation on the expansion project of Aljustrel's mines, of Pirites Alentejanas Company, S.A., executing mechanical engineering (underground and surface works), including:</p> <ul style="list-style-type: none"> <li>- Equipment and piping layouts for a new laundry</li> <li>- Equipment and piping layouts of new pumping stations</li> <li>- Equipment arrangements for new conveyor belts</li> </ul>	<b>BOLIDEN</b>
<b>1989</b>	<p>Basic and detail engineering of a new water firefighting system, for the pharmaceutical products plant of Sociedade de Produtos Farmaceuticos Wander, Lda, in Lisbon.</p>	<b>WANDER, LDA</b>
<b>1989</b>	<p>Detail engineering of three towers for storage of 3000 m<sup>3</sup> of paper pulp, with 1500 m<sup>3</sup> capacity, to be built at Soporcel's paper Plant, in Figueira da Foz - Portugal.</p>	<b>SEPSA, S.A.</b>

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YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>1989</b>	<p>Piping engineering of the following piping systems to be built in the new workshop of Solvay's chemical plant in Póvoa de Sta Iria - Portugal:</p> <ul style="list-style-type: none"> <li>- Industrial water</li> <li>- Steam</li> <li>- Caustic soda</li> <li>- Compressed air</li> </ul> <p>The piping engineering included:</p> <ul style="list-style-type: none"> <li>- Piping Dimensioning</li> <li>- Flexibility Calculation</li> <li>- Piping supports drawings</li> <li>- Piping layouts</li> <li>- Isometrics with parts list</li> </ul>	<b>SOLVAY PORTUGAL, S.A.</b>
<b>1990</b>	Detail engineering of the conveyor belts 5 and 12, to be installed at the Pirites Alentejanas mining plant, in Aljustrel - Portugal.	<b>KOCH DE PORTUGAL</b>
<b>1990</b>	Detail engineering of the conveyor belts ECA07, ECA51, ECA 59 and ECA60, to be installed at EDP Power Plant, in Pego - Portugal.	<b>KOCH DE PORTUGAL</b>
<b>1990</b>	Detail engineering of the new oil heating furnace, including the duct connecting to the chimney, in Petrogal's Oporto refinery ( $\pm 76$ Tons of steel)	<b>FOSTER WHEELER</b>
<b>1990</b>	<p>Revamping project of Tômbwa's gasoil Storage Farm, in Angola, including:</p> <ul style="list-style-type: none"> <li>- Two storage tanks for the 500 m<sup>3</sup> of gasoil each</li> <li>- One concrete storage tank with 500 m<sup>3</sup> capacity, for fire water</li> <li>- Gasoil pump station</li> <li>- Fire water pump station</li> <li>- Piping systems for: <ul style="list-style-type: none"> <li>- Gasoil</li> <li>- Fire water</li> <li>- Foam</li> </ul> </li> </ul>	<b>SPRI, LDA.</b>

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YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>1991</b>	<p>Mechanical and electrical engineering for the expansion of Sonangol's LPG storage and filling plants at Namibe, Angola, including:</p> <ul style="list-style-type: none"> <li>- One new vessel for 115 m<sup>3</sup> of LPG and respective piping systems for loading, unloading and refrigeration</li> <li>- LPG Filling station for trucks and wagons</li> <li>- A new LPG electro-compressor</li> </ul>	<b>SPRI, LDA.</b>
<b>1991</b>	<p>Basic and detail engineering for a new LPG feeding pipeline (liquid phase Ø6" and gaseous phase Ø3") for Mobil's LPG storage and filling plant in Beirolas - Portugal, measuring 3km long, and including:</p> <ul style="list-style-type: none"> <li>- All civil works</li> <li>- All mechanical/piping works</li> <li>- Materials specifications</li> <li>- Cathodic protection</li> <li>- Inquiry documents</li> </ul>	<b>MOBIL OIL PORTUGUESA, SA</b>
<b>1991</b>	<p>Detail engineering for the reconstruction of the general pump station for gasoil and gasoline (regular and super) and the jet pump station, at Nordela's storage plant, in Azores, including:</p> <ul style="list-style-type: none"> <li>- All civil works</li> <li>- All mechanical/piping works</li> <li>- Electrical systems for control and command</li> </ul>	<b>MOBIL OIL PORTUGUESA, SA</b>
<b>1991</b>	<p>Detail engineering of a new pipeline connecting Nordela's storage farm with Ponta Delgada's sea terminal (one 10" line and one 6" line, 300m long) with the installation of a new "booster pump" and new filling meters on the sea terminal and existing filling rack, including all the civil, mechanical/piping and electrical works.</p>	<b>MOBIL OIL PORTUGUESA, SA</b>
<b>1991</b>	<p>Basic and detail engineering for a new paraffin emulsions factory to be built at Mobil's plant, in Cabo Ruivo, Lisbon, including all civil, mechanical/piping, electrical and instrumentation works.</p>	<b>MOBIL OIL PORTUGUESA, SA</b>
<b>1991</b>	<p>Detail engineering design of the furnace 1305B of Heurtey Kenward Ltd., for the National Oil Distribution CO, of Qatar.</p>	<b>SETILGEST, S.A.</b>

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<b>1991</b>	Detail engineering design for the modification of the existing firefighting systems at Esso's sea terminal, located in Trafaria - Portugal, with a sea water pump station and conversion of the existing firefighting water systems to sea water, including all civil, mechanical/piping, electrical and instrumentation works.	<b>ESSO PORTUGUESA, SA</b>
<b>1991</b>	Detail project for the new LPG and firefighting piping systems, connecting to the new LPG sphere to be erected at BP Portuguesa's storage and filling plant in Sta. Iria de Azoia - Portugal, including all civil and mechanical/piping works.	<b>BP PORTUGUESA, S.A.</b>
<b>1992</b>	Detail engineering design of propane air vaporization and storage facilities, with different capacities to feed local distribution systems.	<b>GDP, GÁS DE PORTUGAL, S.A.</b>
<b>1992</b>	Study and detail engineering for the expansion of the electrical systems, compressed air and cooled water piping systems, of the factory of Delco Remi, at Coia - Portugal, including inquiry documents and supervision of the construction works.	<b>DELCO REMI</b>
<b>1992</b>	Detail engineering of 1200 Tons of miscellaneous steel structures to be erected at Petrogal's Sines Refinery, Portugal.	<b>METALRUDA, S.A.</b>
<b>1992</b>	Detail engineering of one hospital to be built in Luanda, including all civil works and special systems and exterior arrangements.	<b>SPRI, LDA.</b>
<b>1993</b>	Detail engineering of one furnace, item AL-H-1, to be erected at Petrogal's Sines Refinery (gasoline project), with an approx. weight of 290 Tons.	<b>SETILGEST, S.A.</b>
<b>1993</b>	Supervision of mechanical construction works of the new co-generation plant at the Riopole's Vila-Nova de Famalicão textile factory, Portugal.	<b>JAAKKO POÏRY</b>
<b>1993</b>	Supervision of construction works for the expansion of Lisbon's subway network.	<b>FERCONSULT</b>

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<b>1993</b>	Basic and detail project of the water and foam firefighting systems, for B.P.'s Matosinhos fuel storage facilities, Portugal.	<b>BP PORTUGUESA</b>
<b>1993</b>	Basic and detail engineering of the mechanical systems (piping and equipments) for Gasin's industrial gas production plant, in Cacém.	<b>GASIN</b>
<b>1994</b>	Detail engineering of propane air vaporization and storage facilities, with different capacities, to feed local distribution systems.	<b>S.M.M., S.A.</b>
<b>1994</b>	Study and detail project of the drain collection and treatment system from the tank farm pumping station and filling systems existing at B.P. Matosinhos fuel storage farm, in Portugal, including the topographical survey.	<b>BP PORTUGUESA</b>
<b>1994</b>	Detail project of nine storage steel tanks, including interconnecting platforms and stairs to be erected at the Specialty Mineral's plant, near the new Soporcel's paper factory, in Figueira da Foz - Portugal.	<b>AMAL, S.A.</b>
<b>1994</b>	Detail engineering of the modification and primary treatment of the existing tanks, pumping stations and truck-filling systems draining network, at BP's fuel storage farm, in Sta. Iria de Azoia.	<b>BP PORTUGUESA</b>
<b>1994/95</b>	Detail engineering of concrete foundations for a new boiler to be installed at SIAF's Mangualde plant, including the process for licensing.	<b>JAAKKO POÿRY</b>
<b>1995</b>	Cooperation with Jaakko Poÿry in the mechanical engineering for the optimization of the industrial systems on Portucel's Setubal mill plant, including the elaboration of: <ul style="list-style-type: none"> <li>- Diagrams</li> <li>- Equipment, Piping and Pipe-supports layouts</li> <li>- Isometrics with parts list</li> <li>- Steel structures' drawings</li> <li>- Materials and equipments specifications</li> <li>- Inquiry documents</li> </ul>	<b>JAAKKO POÿRY</b>

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<b>1995</b>	Detail engineering for the piping systems to be erected at Air-Liquide Maia plant, for production of: <ul style="list-style-type: none"> <li>- Oxygen</li> <li>- Helium</li> <li>- Azote</li> <li>- Carbon Anhydride</li> <li>- Acetylene</li> <li>- Water</li> </ul>	<b>MONTELUSA, LDA.</b>
<b>1995</b>	Detail engineering for improvements of the pre-evaporation and new condensate treatment in Celbi's Figueira da Foz mill plant, including: <ul style="list-style-type: none"> <li>- Diagram updating</li> <li>- Equipment, piping and pipe-support layouts</li> <li>- Isometrics with parts list</li> <li>- Equipment detail drawings</li> <li>- Inquiry documents</li> </ul>	<b>CELBI, S.A.</b>
<b>1995</b>	Detail engineering for the debris removal system to be built at Fisipe's Lavradio synthetic fiber factory.	<b>FISIPE, S.A.</b>
<b>1995</b>	Detail engineering for the project of the evaporation system and recovery boilers, Portucel's Cacia mill plant.	<b>PORTUCEL INDUSTRIAL, LDA.</b>
<b>1995</b>	Detail engineering for the construction of the piping network systems for distribution of natural gas, to be built at Oporto during the year of 1995 by Portogás (10km).	<b>PORTOGÁS, S.A.</b>
<b>1995</b>	Detail engineering for the construction of a new chemical scouring plant to be erected on the AutoEuropa's Palmela factory, Portugal.	<b>M.C.A.V./PLC</b>
<b>1995</b>	Detail engineering for the construction of miscellaneous steel structures (pipe-racks, shelters, equipment support structures, etc.), to be erected on the new CLC's Aveiras de Cima fuel storage park, with an approx. weight of 600Tons.	<b>METALRUDA, S.A.</b>
<b>1995</b>	Detail engineering of propane air vaporization and storage facilities, with a capacity of 450 m <sup>3</sup> , to feed the Sintra's military air-base, including: <ul style="list-style-type: none"> <li>- mechanical/piping engineering.</li> <li>- civil engineering</li> <li>- electrical engineering</li> <li>- instrumentation</li> </ul>	<b>CRISMETAL/GDL</b>



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<b>1995/96</b>	Supervision of construction works of the piping network systems for natural gas distribution, at the municipalities of Setubal and Almada.	<b>SETGÁS, S.A.</b>
<b>1996</b>	Detail engineering of the ducts and hydraulic equipments (gratings, flood-gates and valves) to be installed on the dams of Carregal and Paredes.	<b>MONTELUSA, LDA.</b>
<b>1996</b>	Detail engineering and licensing of the electrical systems (lighting and power) for furnace A at Cive's Marinha Grande glass factory.	<b>S.M.M., S.A.</b>
<b>1996</b>	Detail engineering of a new steel silo with capacity for the storage of 300 m <sup>3</sup> of limestone, including the respective support and access steel structures, to be erected at Inapa's Setubal paper factory.	<b>AMAL, S.A.</b>
<b>1996</b>	Detail engineering of the new filling system of column SR-107 to be installed on Fisipe's Lavradio Synthetic Fiber plant, including:  - Mechanical engineering - Civil engineering	<b>FISIPE, S.A.</b>
<b>1996</b>	Detail engineering for the expansion of Sonangol's Luanda gas storage and filling plant, by means of the installation of a new LPG sphere and two LPG horizontal storage vessels and respective piping and pumping systems, including:  - Mechanical engineering - Civil engineering - Electrical engineering - Instrumentation	<b>PERINI INTERNATIONAL CORPORATION</b>
<b>1996</b>	Supervision of the construction works of the new building for the co-generation, to be installed at Barbosa e Almeida's Marinha Grande glass factory.	<b>GEDETEC, LDA.</b>
<b>1996</b>	Detail engineering for the new pipe-rack to be fabricated in steel structure (+/- 220Tons) and to be erected in Petrogal's Oporto refinery.	<b>SOCOMETAL, S.A.</b>

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<b>1997</b>	Detail engineering of the water firefighting system to be installed at Barbosa e Almeida's Marinha Grande glass factory.	<b>S.M.M., S.A.</b>
<b>1997</b>	Detail engineering for a new steel chimney to be fabricated in stainless steel, Ø 2100, to be erected on DAI's Coruche beetroot sugar factory.	<b>AMAL, S.A.</b>
<b>1997</b>	Detail engineering of the new natural gas distribution piping systems on the industrial installations of Pavigrés, Novagrés, Grespor, Cerespor I/II, Decocér, Cerev and Cinca.	<b>C.M.E., S.A.</b>
<b>1997</b>	Detail engineering for the new water and foam firefighting system at Sonangol's Luanda LPG storage park.	<b>PERINI INTERNATIONAL CORPORATION</b>
<b>1997</b>	Detail engineering for the piping systems (natural gas, water, oil, exhaustion gases, etc.) for the new natural gas co-generation plant to be built at Fábrica Nacional's Lisbon cookie factory.	<b>M.C.A.V, S.A.</b>
<b>1997</b>	Detail engineering for the AN scrubber to be installed into Fisipec's Lavradio synthetic fiber plant, including: <ul style="list-style-type: none"> <li>- Equipments</li> <li>- Piping systems</li> <li>- Concrete structures</li> <li>- Foundations</li> <li>- Steel structures</li> </ul>	<b>FISIPEC, S.A.</b>
<b>1997</b>	Detail engineering for a steel structure tower with 8m x 8m x 40m (height), to feed fluids and access ships and off-shore platforms, to be built at Lisnave's Mitrena shipyard.	<b>PROMAN, S.A.</b>
<b>1998</b>	Audit to the working conditions of Sonangol's Lobito LPG storage and distribution plant, with recommendations for modifications to be implemented in the future.	<b>SONANGOL</b>
<b>1998</b>	Pre-engineering and inquiry documents for the works of expansion/revamping of Sonangol's Lobito LPG storage and distribution plant.	<b>SONANGOL</b>

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<b>1998</b>	Detail engineering of the new ethylene truck-filling station, to be built on the Borealis storage area at Sines' oil sea terminal.	<b>PORTUMASA, S.A.</b>
<b>1998</b>	Detail engineering for the expansion/revamping Sonangol's Luanda LPG storage and filling plant, including: - Mechanical/piping engineering - Civil engineering - Electrical engineering - Instrumentation	<b>PERINI INTERNATIONAL CORPORATION</b>
<b>1998</b>	Detail engineering for the construction of six steel storage silos for paper pulp, at Soporcel's Figueira da Foz paper plant: - 3x 4000 m <sup>3</sup> - 3x 2000 m <sup>3</sup>	<b>AMAL, S.A.</b>
<b>1998/99</b>	Supervision of construction works of the piping network systems for natural gas distribution, in the municipalities of Setubal, Almada, Sesimbra, Barreiro, Alcochete and Seixal.	<b>SETGÁS, S.A.</b>
<b>1999</b>	Basic and detail engineering and technical assistance for the transfer of Spel's gelatinous explosives factory from Corroios to Alcochete.	<b>SPEL, S.A</b>
<b>1999</b>	Detail engineering of the utilities' piping systems to be erected on the platforms of the new hydrolift docks, to be built on Lisnave's Setubal Shipyard.	<b>ENTREPOSE, S.A.S</b>
<b>1999</b>	Flexibility analysis of the steam lines existing on the Portucel's Cacia pulp mill plant.	<b>PORTUCEL INDUSTRIAL S.A.</b>
<b>1999</b>	Supervision of civil works required for the expansion of the storage capacity for bitumen, naphtha and oil on units 5100, 5600 and 6000 of Petrogal's Oporto refinery.	<b>ENTREPOSE /S.M.M.</b>
<b>1999</b>	Supervision of the construction works of domestic infrastructures for the use of natural gas.	<b>SETGÁS, S.A.</b>
<b>1999</b>	Detail engineering for the construction on Petrogal's Sines refinery of a new tank to store 4000 m <sup>3</sup> of demi-water, including its foundation, piping systems, electrical systems and instrumentation.	<b>AMAL, S.A.</b>

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YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>1999</b>	Civil and detail engineering for the revamping of the granulation line on ADP's Setubal plant.	<b>METALGRUPO, LDA.</b>
<b>1999</b>	Detail engineering for the installation of a new oxygen compressor and associated piping system at Celbi's Figueira da Foz pulp mill plant.	<b>AIR LIQUIDE</b>
<b>1999</b>	Detail engineering of the piping systems for the new co-generation plant to be installed at Soporcel's Figueira da Foz paper plant.	<b>A.B.B, S.A.</b>
<b>1999</b>	Civil and mechanical detail engineering for the revamping of the vegetable oils extraction existing on Tagol's Almada alimentary oil plant.	<b>ALCO, S.A.</b>
<b>1999</b>	Civil and mechanical detail engineering of two steel storage tanks with capacity for 5000 m <sup>3</sup> and 15000 m <sup>3</sup> of fuel, on Tanquisado's Setubal storage farm.	<b>S.M.M., S.A.</b>
<b>1999</b>	Civil and mechanical detail engineering for the revamping of the vegetable oils extraction existing on Iberol's Alhandra alimentary oil plant.	<b>IBEROL, S.A.</b>
<b>1999</b>	Detail engineering for the construction of a new steel storage tank, with capacity to store 2000 m <sup>3</sup> of gasoil at Enacol's Cape Verde storage farm.	<b>AMAL, S.A.</b>
<b>2000</b>	<p>Civil, mechanical, electricity and instrumentation detail engineering for the expansion of FINA's Luanda refinery's storage farm - Project 2000, including:</p> <ul style="list-style-type: none"> <li>- One steel tank for 20000 m<sup>3</sup> of JetA1</li> <li>- One steel tank for 10000 m<sup>3</sup> of Gasoline</li> <li>- One steel tank for 8000 m<sup>3</sup> of water (open top)</li> <li>- Piping and piping supports layouts</li> <li>- Tank foundations, expansion of the retention bay, paving and draining system layouts</li> <li>- Electrical feeding systems (lighting and power), control and command</li> </ul>	<b>S.M.M., S.A.</b>

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<b>2000</b>	<p>Detail project for the construction of ten steel vertical cylindrical tanks to be erected on Euroresinas' Sintra industrial plant, as follows:</p> <ul style="list-style-type: none"> <li>- Storage tank for 2650 m<sup>3</sup> of water</li> <li>- Storage tank for 1600 m<sup>3</sup> of methanol</li> <li>- Storage tank for 1500 m<sup>3</sup> of UFC</li> <li>- Storage tank for 850 m<sup>3</sup> of 55% Formaldehyde</li> <li>- Storage tank for 350 m<sup>3</sup> of Resin</li> <li>- Storage tank for 250 m<sup>3</sup> of Urea solution</li> <li>- Storage tank for 160 m<sup>3</sup> of Phenol</li> <li>- Storage tank for 100 m<sup>3</sup> of Resin</li> <li>- Storage tank for 50 m<sup>3</sup> of 30% Formaldehyde</li> </ul>	<b>AMAL, S.A.</b>
<b>2000</b>	Basic engineering and inquiry documents for the reconditioning and revamping of Oven-2 at Leca Portugal's Avelar plant.	<b>S.M.M., S.A.</b>
<b>2000</b>	Detail engineering and licensing of the expansion of Haironville Portugal - Industria de Perfilados, in Cartaxo - Portugal, on the areas of architecture, stability, mechanical and electrical installations.	<b>HAIRONVILLE PORTUGAL, S.A.</b>
<b>2000</b>	Mechanical detail engineering of the pipe-rack, and complementary conclusion of the GT and BOP piping systems project, for the new co-generation to be built at Solvay Portugal's Sta. Iria da Azoia industrial plant.	<b>ALSTOM POWER</b>
<b>2001</b>	Detail project for the construction of E-0907 "Methanol Column Feed Exchanger", to be erected at Borealis' Sines plant.	<b>COMPELMADA INTERNACIONAL, S.A.</b>
<b>2001</b>	Detail project for the construction of steel galleries and support columns for the BC1, BC2 and BC3 conveyor belts to be built at General Company for Phostate and Mines' Syria plant.	<b>KOCH DE PORTUGAL, S.A.</b>
<b>2001</b>	Detail engineering for the construction of the exterior piping of the new "FCC Gasoline Hydrotreater" unit, to be built at Petrogal's Sines refinery, connecting the unit to the "tie-ins" to be done on the existing process and utility piping systems.	<b>FLUOR DANIEL, B.V.</b>

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<b>2001</b>	<p>Detail engineering for the construction of all piping systems (415+ lines) and respective supports within the limits of the new “FCC Gasoline Hydrotreater” unit to be built at Petrogal’s Sines refinery, including:</p> <ul style="list-style-type: none"> <li>- 3D modeling (in CadPipe)</li> <li>- Layouts</li> <li>- Isometrics with parts list</li> <li>- Flexibility calculation for the piping system</li> <li>- Calculation of supports</li> <li>. Layout and detail drawings of the piping supports</li> <li>- MTO</li> </ul>	<b>FLUOR DANIEL, B.V.</b>
<b>2001</b>	<p>Basic engineering, detail engineering, licensing and rendering of technical assistance in the areas of mechanical, civil, electricity and instrumentation engineering for the construction of the new fuel reception and storage system to be built at LBC Tanquipor’s Lavradio plant, including two steel vertical cylindrical tanks with 4500 m<sup>3</sup> capacity each, process and utility piping systems and respective supports, tank foundations, piping and equipments, expansion of the retention basin and its insulation, draining systems as well as lighting and power systems.</p>	<b>LBC TANQUIPOR</b>
<b>2001</b>	<p>Detail engineering for the fabrication and erection of the equipments that compose the new leca (expanded argil) transport system between Ovens 1 and 2 and the storage areas, at Leca Portugal’s Avelar plant, including:</p> <ul style="list-style-type: none"> <li>- Steel galleries and columns for the installation and support of the following seven conveyor belts: <ul style="list-style-type: none"> <li>- 35.8m long conveyor belt</li> <li>- 25.8m long conveyor belt</li> <li>- 32.8m long conveyor belt</li> <li>- 39.8m long conveyor belt</li> <li>- 58.8m long conveyor belt</li> <li>- 8.8m long conveyor belt</li> <li>- 4.9m long conveyor belt</li> </ul> </li> <li>- Steel shuts for the aforementioned conveyor belts</li> <li>- One steel vertical cylindrical silo for the storage of 280 m<sup>3</sup> of leca, including the respective support structure, top platform and access ladders.</li> </ul>	<b>SIMI, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2001</b>	<p>Mechanical, civil, electrical and instrumentation detail engineering of the works necessary for the revamping of the LPG reception, storage and expedition facilities of Sonangol, in Lobito - Angola, including:</p> <ul style="list-style-type: none"> <li>- One 2200 m<sup>3</sup> LPG Sphere</li> <li>- Two horizontal cylindrical tanks for 150 m<sup>3</sup> of LPG each</li> <li>- Two LPG bottling systems for the filling of 13Kg bottles (1200/H)</li> <li>- One LPG truck-filling station.</li> <li>- All pumping and associated piping systems</li> <li>- Firefighting water systems</li> <li>- All necessary civil construction works, namely the reconstruction of roads, construction and revamping of buildings, draining systems and foundations.</li> <li>- All lighting, power, ground, control and command electrical systems.</li> </ul>	<b>S.M.M., S.A.</b>
<b>2001</b>	<p>Mechanical detail engineering for the expansion of the Sonangol's Luanda fuel storage facilities, designated as IBV1 and IBV5, by building new steel vertical cylindrical tanks for the storage of JET-A1 on IBV5 and gasoil on IBV1, respective connection piping system for fuel and refrigeration water.</p>	<b>S.M.M., S.A.</b>
<b>2001</b>	<p>Mechanical, civil, electrical and instrumentation detail engineering for the new Jet-A1 temporary storage on Luanda's airport, composed by:</p> <ul style="list-style-type: none"> <li>- Three vertical cylindrical steel tanks with 2500 m<sup>3</sup> of capacity each</li> <li>- Installation for the reception and expedition of Jet-A1 on tanker-trucks</li> <li>- Firefighting water and foam systems</li> <li>- Electrical lighting, power and ground systems</li> <li>- Electrical control and command system</li> </ul>	<b>S.M.M., S.A.</b>
<b>2002</b>	<p>Detail project for the erection of a fuel storage tank with 50000 m<sup>3</sup> capacity at Fina's storage farm, in Angola.</p>	<b>S.M.M., S.A.</b>
<b>2002</b>	<p>Project for the modification of Sonangol's Lobito LPG storage farm, with the inclusion of a new 2200 m<sup>3</sup> sphere.</p>	<b>S.M.M., S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2003</b>	Mechanical and civil detail engineering for the modification of the Jet-A1 tanker-wagon filling system at Petrogal's Sines storage facilities.	<b>SOTREPE INTERNACIONAL</b>
<b>2003</b>	Detail project for the construction of the new tanker feeding sealines at CLCM's Caniçal storage facilities, in Madeira Island, including: <ul style="list-style-type: none"> <li>- 1 Sealine Ø14" for Jet-A1, gasoline and gasoil</li> <li>- 1 Sealine Ø14" for Fuel oil</li> <li>- 1 Sealine Ø8" for LPG</li> </ul>	<b>SETH, S.A.</b>
<b>2003</b>	Mechanical, civil and instrumentation project of the new Namibe fuel storage farm, in Angola, including: <ul style="list-style-type: none"> <li>- Two new horizontal cylindrical steel tanks for the storage of 150 m<sup>3</sup> of LPG each.</li> <li>- New piping systems for reception, transfer and expedition of LPG.</li> <li>- New piping systems for firefighting water and refrigeration water.</li> <li>- New foundations, retention basin and access roads.</li> </ul>	<b>ANGOFABRIL</b>
<b>2003</b>	Detail project for the fabrication and erection of the following three vertical cylindrical steel tanks (API 650), for Bencom, in Faial Island - Azores: <ul style="list-style-type: none"> <li>- Two 750 m<sup>3</sup> fuel tanks</li> <li>- One 50 m<sup>3</sup> fuel-contaminated water tank, including the foundations, retention basin and associated piping systems project.</li> </ul>	<b>CRISMETAL, LDA.</b>
<b>2003</b>	Basic and detail engineering, on the civil, mechanical, electrical and instrumentation fields, of the new pipelines to feed the airport "4 de Fevereiro" and ENE's power plant, in Luanda, respectively with Jet-A1 and Jet-B, including: <ul style="list-style-type: none"> <li>- 26km long 10" pipeline for the connection of Fina's Luanda refinery to Sonangol's IBV-5 fuel storage farm, and from here to the airport "4 de Fevereiro"</li> <li>- 7km long 6" pipeline for the connection of Sonangol's fuel farm at Estrada do Cacuaco, designated as IMUL, with ENE's power plant at Cazenga - Luanda.</li> <li>- New Jet-A1 pumping station at IVB-5</li> <li>- Expansion of the JET-B storage farm at IMUL</li> <li>- Expansion of the JET-B storage farm at ENE's power plant</li> </ul>	<b>LYON, S.A.</b>



## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2003</b>	<p>Basic and detail engineering on the civil, mechanical, electrical and instrumentation fields, for the revamping and expansion works of Sonangol's Tômbwa fuel storage farm, Angola, including:</p> <ul style="list-style-type: none"> <li>- New fuel storage tanks</li> <li>- New docking-bridge</li> <li>- Shore stabilization works</li> <li>- Reception, racking and expedition piping systems (gasoil and kerosene)</li> <li>- Firefighting water and foam piping systems</li> <li>- Utility piping systems, foundations, roads, retention basin, exterior arrangements, fencing and stabilization.</li> </ul>	<b>ANGOFABRIL</b>
<b>2004</b>	<p>Basic and detail engineering on the civil, mechanical, electrical and instrumentation fields, of the new fuel oil storage farm at Empresa de Electricidade da Madeira (EEM)'s Praia da Vitória thermal power plant - Madeira Island, including:</p> <ul style="list-style-type: none"> <li>- New vertical cylindrical steel tank for the storage of 5000 m<sup>3</sup> of fuel oil</li> <li>- All fuel oil reception, pouring and expedition piping system</li> <li>- All firefighting water and foam piping systems</li> <li>- Piping system for steam and condensates</li> <li>- New retention basin, foundations and roads</li> </ul>	<b>AMAL, S.A.</b>
<b>2004</b>	<p>Detail engineering and licensing for the expansion and modernization of Viana do Castelo's shipyard, in the scope of the PROM XXI state program, including the project of:</p> <ul style="list-style-type: none"> <li>- New workshop buildings in steel structure with a total covered area of 27.250 m<sup>2</sup>.</li> <li>- New foundations for buildings and equipment</li> <li>- New roads and material parks</li> <li>- Modification to the adaptation of the sewer systems to the new layout</li> <li>- Adaptation and expansion of the drinking, industrial and firefighting water piping systems</li> <li>- Adaptation and expansion of the compressed air and industrial gases' distribution piping systems.</li> <li>- Adaptation and expansion of the lighting, power and ground electrical systems</li> <li>- Revamping of the telecommunication and CCTV systems</li> </ul>	<b>ENDEL, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2004</b>	<p>Detail engineering for the revamping, modernization and expansion of the Temar's fuel storage area, in Luanda, including:</p> <ul style="list-style-type: none"> <li>- Two new steel tanks with capacity for 5000 m<sup>3</sup> of gasoil each</li> <li>- Two new steel tanks with capacity for 3000 m<sup>3</sup> of gasoline each</li> <li>- One new steel tank with capacity for 800 m<sup>3</sup> of fire water</li> <li>- All piping systems for the reception, racking and expedition of fuels (Oils, gasoil, gasoline, Jet-A1, Jet-B, with total storage capacity of 33600 m<sup>3</sup>)</li> <li>- New pumping and piping systems for firefighting water including both new and existent tanks</li> <li>- New fuel pumping station</li> <li>- New tanker-trucks filling stations, with 9 loading arms each.</li> </ul>	<b>SONANGOL</b>
<b>2004</b>	<p>Detail engineering for the expansion of the existing junk scraps reception shelters, electrical oven and evacuation billets at S.N.'s Paio Pires steel mill.</p>	<b>SIDERURGIA NACIONAL (S.N.)</b>
<b>2004</b>	<p>Basic and detail engineering on the civil, mechanical, electrical and instrumentation fields, of the fuel feeding system for the new power plant to be built in Quileva, Angola, including:</p> <ul style="list-style-type: none"> <li>- The new gasoil pumping station at TOL's Lobito storage facilities.</li> <li>- One 8500m long Ø6" pipeline</li> <li>- Two steel tanks with capacity for 3000 m<sup>3</sup> of gasoil each</li> <li>- Piping systems for the reception, racking and expedition of gasoil</li> <li>- Firefighting water and foam piping systems</li> <li>- All associated civil construction works such as foundations, retention basins, buildings, rainwater and sewage piping systems, etc.</li> </ul>	<b>LYON, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2004</b>	<p>Detail engineering for the construction of the piping system and respective supports and access, which constitute the system for reduction of gaseous Nox emissions, derived from the combustion process of Group IV, at Sines Thermal Power Plant.</p> <p>The projected system contemplates the connections to the boiler's primary air supply system, bypass dumpers, connections to the vents, the vents' aspiration and compression systems and feeding systems for the B.O.F.A. gates (Booster Over Fire Air)</p> <p>The approx. weight of the projected elements is:</p> <ul style="list-style-type: none"> <li>• Piping systems: 53 Ton</li> <li>• Steel structures: 133 Ton</li> </ul> <p>The piping systems were dimensioned by the finite elements method, resorting to the SAP 2000 V9.1 calc software. The steel structures were dimensioned according to Portuguese regulations, Eurocode 3, and resorting to the SAP 2000 V.9.1 calc software. All drawings were produced in Autocad.</p>	<b>MITSUI BABCOCK / METALGRUPO</b>
<b>2005</b>	<p>Detail engineering in the civil, mechanical, electrical and instrumentation fields, for the construction of a new fuel storage at CLCM's Caniçal fuel storage farm, in Madeira Island, including:</p> <ul style="list-style-type: none"> <li>• Two vertical cylindrical steel tanks with capacity for 3500 m<sup>3</sup> of fuel, each one.</li> <li>• Piping and pumping systems for the reception, racking and expedition of fuel</li> <li>• Slops collection system</li> <li>• Piping system for steam and condensates</li> <li>• Firefighting water and foam systems</li> <li>• All associated civil works, such as foundations, retention basin, pumping station, roads, rainwater and sewage draining systems, etc.</li> <li>• Power, lighting and ground electrical systems</li> <li>• Command and control systems</li> </ul>	<b>AMAL, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2005</b>	Production of “As-Built” drawings of the natural gas secondary distribution systems, built in Setgás’ concession area, during the year of 2005.	<b>SETGÁS, S.A.</b>
<b>2005</b>	<p>Elaboration, on the fields of mechanical/piping, civil, electrical and instrumentation engineering, of the basic design and detail engineering required for the construction, by the consortium Entrepose Contracting/Bouchamaoui, on a turn-key basis, of the new LPG storage and bottle filling plant at Goulette/Rades – Tunisia, composed of:</p> <ul style="list-style-type: none"> <li>• Four steel spheres, inserted in a concrete sarcophagus, with storage capacity for 4000 m<sup>3</sup> of LPG, each one.</li> <li>• Three bottle filling units (6, 13 and 25 kg) with a production capacity of 1200 bottles/hour for those of 6 and 13 Kg and of 1000 bottles/hour for those of 25 kg.</li> <li>• A filling station for cistern trucks.</li> <li>• A programmable self-operating command system.</li> <li>• A set of auxiliary utilities’ systems (fresh water, fire-fighting water, compressed air, etc.).</li> <li>• Lighting, power and ground electrical systems.</li> <li>• Instrumentation and control systems.</li> <li>• All civil engineering works associated, including roads, buildings, sea water impounding, draining systems, etc.</li> </ul>	<b>ENTREPOSE CONTRACTING</b>
<b>2005</b>	<p>Basic and detail engineering on the civil, mechanical, electrical and instrumentation field, of mini-installations for storage and filling of gas bottles (6, 12 and 51kg) with LPG, to be built in different places of the Angolan territory, each including:</p> <ul style="list-style-type: none"> <li>- Main building and gate</li> <li>- Building with auxiliary equipments</li> <li>- LPG Storage area (2x 50 m<sup>3</sup>)</li> <li>- Container unit for bottle filling.</li> <li>- Platforms for reception and expedition of bottles</li> <li>- Platforms for the storage of damaged bottles</li> <li>- Platform for the reception of LPG by truck</li> <li>- Drinking water tank (30 m<sup>3</sup>)</li> <li>- Firefighting water tank (360 m<sup>3</sup>)</li> <li>- Piping systems for LPG (liquid and gaseous phase), drinking water, cooling and firefighting water and valve automation oil.</li> <li>- Roads, parks, fencing, exterior arrangements and draining systems</li> <li>- Electrical (lighting power and ground), instrumentation, control and command systems</li> </ul>	<b>LYON / SONANGOL</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
2005	<p>Detail engineering of the revamping of Sonangol's IBV-5 fuel storage farm, in Luanda - Angola, for the installation of command and control means, to ensure increased efficiency and security in the farms operation, including:</p> <ul style="list-style-type: none"> <li>• Installation of new equipments for control and security, namely water refrigeration and foam systems, level control, pressure and vacuum valves, sample collection system, etc. in 19 Jet-A1 and gasoil storage tanks.</li> <li>• Remodeling of the fuel piping circuits with a rationalization of its routing and installation of motorized valves on the entry and exit circuits of each group of tanks</li> <li>• New tank for firefighting water (3000 m<sup>3</sup>)</li> <li>• New water pumping station for firefighting services</li> <li>• New refrigeration water, firefighting water and foam piping systems</li> <li>• New SLOPS collection, storage and expedition system</li> <li>• Reconfiguration of the retention basins</li> <li>• Remodeling/modernization of the drinking water distribution system</li> <li>• All associated civil works, such as: <ul style="list-style-type: none"> <li>- Construction of a support building integrating the following services: <ul style="list-style-type: none"> <li>▪ Security room</li> <li>▪ Operation and maintenance personnel</li> <li>▪ Production expedition personnel</li> </ul> </li> <li>- Adaptation of the main building's entry hall for the installation of a reception desk (receptionist and communications central)</li> <li>- Foundation for the new firefighting water tank</li> <li>- Building for the firefighting water pumping station</li> <li>- Building for the foam pumping station</li> <li>- Construction of the firefighting control room on steel structure</li> <li>- Building for the drinking water pumping station</li> <li>- All foundations/sleepers for piping systems</li> <li>- Foundations for the steel towers of the remote control monitors</li> <li>- Foundations for equipment and piping support</li> <li>- Shelters for the new control valves and foam and refrigeration systems' manifolds, by the retention basin</li> <li>- Pits and channels for the installation of piping and electric wiring</li> <li>- Reconfiguration of the pumping station for truck filling</li> <li>- Disassembly and demolition of the existent firefighting pumping station</li> </ul> </li> <li>• New control and command systems</li> <li>• Lighting, power, power plugs and grounding electrical systems</li> </ul>	SONANGOL

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
2005	Basic engineering consolidation and detail engineering, in the fields of mechanical, civil, electrical and instrumentation, for the expansion of CLC's Aveiras storage farm, by installing two new steel tanks, each to store 25000 m <sup>3</sup> of gasoil, their respective piping systems for gasoil, refrigeration water, firefighting water and foam, draining system, new retention basins, roads, foundations, steel structures and all electrical, instrumentation, control and command systems.	AMAL/CLC
2005	Detail engineering for the installation of four horizontal cylindrical steel tanks, with capacity for 150 m <sup>3</sup> of LPG each, at Namibe's sea terminal, Angola, including the LPG (liquid and gaseous phase) and refrigeration water piping systems, necessary civil construction works (retention basins, draining systems, roads, foundations, etc.) and electrical and instrumentation systems.	LYON/SONANGOL
2005	Detail engineering for the installation of a new vertical cylindrical steel tank, to store 2000 m <sup>3</sup> of gasoil at Lobito's sea terminal, Angola, including all piping systems for the interconnection of the existing facilities, civil construction works as well as electrical and instrumentation systems.	LYON/SONANGOL
2005	Basic engineering for the reconfiguration of the firefighting water and foam systems at Galp's Porto Brandão fuel storage farm, in order to ensure its conformity with NFPA and national legislation.	GALP ENERGIA, S.A.
2005	Basic engineering consolidation and detail engineering, in the fields of mechanical, civil, electrical and instrumentation engineering, of Bencom's new fuel storage farm (black products) at Praia da Vitória, Terceira Island, Azores.	BENCOM, S.A.
2005	Basic engineering consolidation and detail engineering, in the fields of mechanical, civil, electrical and instrumentation engineering, of Bencom's new fuel storage farm (white products) at Praia da Vitória, Terceira Island, Azores.	SOMAGUE EDIÇOR

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2006</b>	<p>Elaboration of mechanical/piping detail engineering, based on the Basic Design package prepared by Sofresid, of all piping systems required for the new LPG Mounded Storage at the Al Shaiba LPG Filling Plant of Kuwait Oil Tanker Company (S.A.K.), composed of:</p> <ul style="list-style-type: none"> <li>• A storage area with six tanks</li> <li>• A pumping station with pumps and compressors</li> <li>• A truck loading/unloading area with six stands</li> <li>• Instrument air production</li> <li>• A sheltered parking for about 30 trucks</li> <li>• A truck washing area</li> <li>• An administrative building</li> <li>• A weight bridge</li> <li>• A technical building</li> </ul>	<b>ENTREPOSE CONTRACTING</b>
<b>2006</b>	Supervision of the construction works of Setgás' natural gas distribution systems on the municipalities of Almada, Seixal, Sesimbra, Setubal, Alcochete, Montijo, etc.	<b>SETGÁS, S.A.</b>
<b>2006</b>	<p>Basic and detail engineering for the revamping of São Roque's fuel storage farm, at Pico Island – Azores, including:</p> <ul style="list-style-type: none"> <li>- All new piping systems</li> <li>- Four storage tanks</li> <li>- Pump stations</li> <li>- Pipeline connecting to the harbor</li> <li>- New firefighting water and foam systems</li> <li>- Electrical systems (power, light and lightning)</li> <li>- Instrumentation</li> </ul> <p>Etc.</p>	<b>BENCOM, S.A.</b>
<b>2007</b>	<p>Elaboration of detail engineering for the construction of vertical cylindrical and atmospheric steel tanks, that M.C.A.V. intends to build for erection in Tagol's industrial plant, namely:</p> <ul style="list-style-type: none"> <li>- Four tanks with Ø 11000 x 16350 for the storage of 1500 m<sup>3</sup> of biodiesel, each one.</li> <li>- One tank with Ø 4500 x 10000 for the storage of 150 m<sup>3</sup> of biodiesel of approval lots.</li> </ul>	<b>M.C.A.V., LDA.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2007</b>	Elaboration, on the field of mechanical, of the study and detail engineering of the new piping systems for products, to be erected in Tagol's industrial plant, located in Palença de Baixo – Almada.	<b>TAGOL, S.A.</b>
<b>2007</b>	Elaboration of mechanical detail engineering of the pipe systems required for the oxygen (VSA) and oxidation of white liquor (TOWL) units of Ar Líquido in Celtejo, in Vila Velha de Rodão – Portugal.	<b>AR LÍQUIDO, LDA.</b>
<b>2007</b>	Elaboration of mechanical detail engineering of the new piping system, composed of 99 new pipe lines, to be erected in the heavy products distillation unit of the aniline factory existent in CUF's industrial plant, located in Estarreja - Portugal.	<b>CUF – QUÍMICOS INDUSTRIAIS, S.A.</b>
<b>2007</b>	Elaboration of mechanical detail engineering of the new piping system, composed of 173 new pipe lines, to be erected in the reaction unit of the aniline factory existent in CUF's industrial plant, located in Estarreja – Portugal.	<b>CUF – QUÍMICOS INDUSTRIAIS, S.A.</b>
<b>2008</b>	Elaboration of mechanical detail engineering of 125 pipe lines that will form the new production unit of sodium hypochlorite to be erected on the existing aniline factory in CUF's industrial plant, in Estarreja - Portugal.	<b>CUF – QUÍMICOS INDUSTRIAIS, S.A.</b>
<b>2008</b>	Elaboration of mechanical detail engineering of 105 new pipe lines to be incorporated in the steam, absorption, compression and liquefaction of chlorine units, existing in the aniline factory, in CUF's industrial plant, located in Estarreja - Portugal.	<b>CUF - QUÍMICOS INDUSTRIAIS, S.A.</b>
<b>2008</b>	Elaboration of mechanical, civil and electrical detail engineering, required for the expansion of Bencom's fuel storage farm, in the Island of Santa Maria – Azores.	<b>BENCOM, S.A.</b>
<b>2008</b>	Elaboration of mechanical and civil detail engineering of the complementary facilities of 4 new turbines that Lyon intends to erect in the Power Station of Quileva, in Angola.	<b>LYON, S.A.</b>



## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2008</b>	Elaboration, on the fields of mechanical, civil, electrical and instrumentation engineering, of the basic and detail engineering, as well as the supply of technical assistance, required for the construction of a reception, storage and expedition area of liquid fuel (diesel, gasoline 95, premium gasoline, Jet A1 and Kerosene) that Lyon intends to build at Menongue – Angola, for Sonangol.	<b>LYON, S.A.</b>
<b>2008</b>	Elaboration of mechanical/piping and civil detail engineering, required for the construction of new piping systems and structures in the nitric acid production unit, in the aniline factory, located in CUF's industrial plant, in Estarreja - Portugal.	<b>CUF – QUÍMICOS INDUSTRIAIS, S.A.</b>
<b>2008</b>	Elaboration, on the fields of mechanical and civil, of the study and detail engineering for the erection of a new battery of air coolers, composed of nine identical units with 2250 x 11300 each one, in the aniline factory, located in CUF's industrial plant, in Estarreja - Portugal.	<b>CUF – QUÍMICOS INDUSTRIAIS, S.A.</b>
<b>2008</b>	Supervision of the construction works of Setgás LNG distribution networks on the municipalities of Almada, Seixal, Alcochete, Barreiro, Moita, Montijo, Setúbal, Benavente, Palmela and Sesimbra, in the year 2008.	<b>SETGÁS, S.A.</b>
<b>2008</b>	Rendering of civil, mechanical and electrical engineering services to assist Celbi's "Department of Engineering Techniques", regarding the preliminary design, the design, the procurement, the implementation, the erection and the start-up of the project for the expansion of the production capacity of its industrial unit, located in Figueira da Foz, named "Project C09".	<b>CELBI, S.A.</b>
<b>2008</b>	Analysis and correction of the mechanical engineering project (AUGE project) of the Thermal Power Station expansion works in the Airport of Santa Maria's Island - Azores, including the re-dimensioning of the foam, fire-fighting and effluents systems.	<b>SIEMENS, S.A.</b>
<b>2008</b>	Elaboration, on the fields of mechanical and civil engineering, according to the basic engineering supplied by Fluor Projects, of the detail engineering required for the construction of the new gasoil storage tank farm (80.000m <sup>3</sup> ), that Amal intends to build in the area of Porto's Refinery.	<b>AMAL, S.A./GALP</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2008</b>	Elaboration of mechanical, civil and electrical detail engineering, required for modification and expansion of the system for oily effluents treatment of the Thermal Power Station of Caldeirão, in São Miguel/Azores.	<b>CRISMETAL, LDA.</b>
<b>2009</b>	<p>Elaboration, on the fields of mechanical, civil, electrical and instruments engineering, of the detail engineering, required for the construction of all new systems for the interconnection of the new units to be erected in Porto's Refinery, with the existent industrial plant, including the project of the new electrical substations Z and A/Y, comprising:</p> <ul style="list-style-type: none"> <li>• 259 new piping lines, with the total length of <math>\pm</math> 25 kms</li> <li>• 118 tie-in</li> <li>• 403 special piping supports</li> <li>• 23 special structures</li> <li>• 2 electrical sub-stations</li> </ul> <p>The project included the elaboration of the following documents and drawings :</p> <ul style="list-style-type: none"> <li>• 45 static stress calculations</li> <li>• 30 flexibility calculations</li> <li>• 204 piping layouts</li> <li>• 230 civil layouts</li> <li>• 849 isometrics with parts lists</li> <li>• 403 special support drawings</li> <li>• 50 concrete structure drawings</li> <li>• 122 steel structure drawings</li> </ul>	<b>FLUOR PROJECTS LIMITED</b>
<b>2009</b>	Rendering of civil, mechanical and electrical engineering services to assist Celbi's "Department of Engineering Techniques", regarding the preliminary design, the design, the procurement, the implementation, the erection and the start-up of the project for the expansion of the production capacity of its industrial unit, located in Figueira da Foz.	<b>CELBI, S.A.</b>
<b>2009</b>	Supervision of the construction works of Setgás LNG distribution networks on the municipalities of Almada, Seixal, Alcochete, Barreiro, Moita, Montijo, Setúbal, Benavente, Palmela and Sesimbra, in the year 2009.	<b>SETGÁS, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2009</b>	Elaboration, on the fields of mechanical, civil, electrical and instrumentation, of the basic and detail engineering for the construction of a new pipeline with thermal oil heating system for the transfer (reception) of asphalts between the ships moored near the Pit2 on the harbor dock and Bencom's Fuel Storage Farm, in Praia da Vitória, Azores, Portugal.	<b>BENCOM, S.A.</b>
<b>2009</b>	Elaboration, on the fields of mechanical, civil, electrical and instruments engineering, of the basic and detail engineering, including licensing project, required for the expansion/modernisation of the Bencom's Fuel Storage Farm in Graciosa Island, Azores, Portugal.	<b>BENCOM, S.A.</b>
<b>2009</b>	Elaboration, on the fields of mechanical, civil, electrical and instrumentation engineering, of the basic and detail engineering, as well as the supply of technical assistance required for the construction of a Storage Tank Farm for Reception, Storage and Expedition of Jet A1 and diesel, that BENCOM, S.A. intends to install at the Airport of Pico, in Pico Island, Azores, Portugal.	<b>BENCOM, S.A.</b>
<b>2009</b>	Elaboration of detail engineering and licensing of the construction works of several foundations and steel structures, included in the project for the "improvement of the energy efficiency", being developed by APS Engineering Roma S.P.A. for Galp's Refinery in Sines, Portugal, concerning the Units PP4, PP7 and VV6.	<b>APS ENGINEERING ROMA S.P.A.</b>
<b>2009</b>	Elaboration of detail engineering of industrial facilities and equipments, for the reactivation of the gold mining of Semico, located in Tabakoto, Mali, by a multidisciplinary team (mechanical, civil, and electrical engineering) displaced on the site.	<b>SEGALA MINING COMPANY, S.A. (SEMICO)</b>
<b>2010</b>	Rendering of civil, mechanical and electrical engineering services to assist Celbi's "Department of Engineering Techniques", regarding the preliminary design, the design, the procurement, the implementation, the erection and the start-up of the Expansion Project of the production capacity of its industrial unit, located in Figueira da Foz.	<b>CELBI, S.A.</b>
<b>2010</b>	Dimensioning and stability analysis of the firefighting piping system to be built in the new electrical power station in Bachaquero, Venezuela.	<b>FERROSTAAL, LDA.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2010</b>	Elaboration of the structural analysis of the main steel structures (with bolted connections), and including the overhead crane tracks, of the buildings for the new changehouse and new workshop to build by Avion at the mining site of Tabakoto, in Mali.	<b>SEGALA MINING COMPANY</b>
<b>2010</b>	Supervision of the construction works of Setgás LNG distribution networks on the municipalities of Almada, Seixal, Alcochete, Barreiro, Moita, Montijo, Setúbal, Benavente, Palmela and Sesimbra, in the year 2010.	<b>SETGÁS, S.A.</b>
<b>2010</b>	Basic and detail engineering, on the mechanical, civil, electrical and instrumentation fields, as well as the rendering of technical assistance required for the remodelling of the fuel storage facilities ICLI and ICLII, in Lubango, Angola.	<b>LYON, S.A.</b>
<b>2010</b>	Study and detail engineering required for the modifications on the rain and chemical sewers systems existing in the industrial plant of Nova AP, in Lavradio, Portugal.	<b>NOVA AP, S.A.</b>
<b>2010</b>	Basic and detail engineering and licensing of the civil works required for the installation of a new packing line in Lusosider's industrial plant, in Paio Pires, Portugal.	<b>ENSULMECI, S.A.</b>
<b>2010</b>	Basic and detail engineering, on the mechanical, civil, electrical and instrumentation fields, for the erection in Sonangol's IBV5 storage area, in Luanda, Angola, of three new truck loading stations with two loading arms for gasoil, each one.	<b>LYON, S.A.</b>
<b>2010</b>	Mechanical, civil and instrumentation Basic and Detail engineering, for the erection of a new steel structure tank for 7500 m <sup>3</sup> of fuel and another one for 5000 m <sup>3</sup> of gasoil, including all piping, electrical and control systems required for the connection with the existing systems of the storage farm of Praia da Vitória, Azores, Portugal.	<b>BENCOM, S.A.</b>
<b>2010</b>	Elaboration of the static calculation and (as an option) the detail design, for the main steel structure (with bolted connections), including stairs, handrails, steel floors and foundations for the installation of the new cyclopack and other complementary equipment that Avion Gold Corporation intends to erect at the Tabakoto's gold Plant, in Mali.	<b>SEGALA MINING COMPANY</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2010</b>	Flexibility analysis of the fuel and gasoil pipelines existing in the sea harbour of S. Roque, in Pico Island, Azores, including the specification of the new expansion joints.	<b>BENCOM, S.A.</b>
<b>2010</b>	Civil study and detail engineering required for the fabrication and erection of the access equipments (steel platforms) for the inspection and maintenance works of the Bridge “25th April”, in Lisbon, Portugal.	<b>AMAL, S.A.</b>
<b>2010</b>	Rendering of engineering services for the new facilities required to increase the production at the Aurizona’s Gold mining field of Maranhão, in Brazil.	<b>JDS ENERGY AND MINING</b>
<b>2010</b>	Mechanical/piping and civil detail engineering for construction and licensing of the piping systems (101 piping lines) that will remain after rationalization/ remodelling of the existing ones at the stations 3, 6 and 7 for loading and unloading of ship tankers at Sines harbour, including the detail engineering for the associated steel structures and concrete pads.	<b>SETROVA, LDA./CLT</b>
<b>2010</b>	Elaboration of the detail engineering of one Bridge for mining trucks of 100 ton net weight, to be built in Ventana la Bodega - Colombia, in a solution of a deck in steel structure with 18m long x 4m width on top of concrete columns 5,468m clear height from river bed.	<b>JDS ENERGY AND MINING</b>
<b>2011</b>	Rendering of civil, mechanical and electrical engineering services to assist CELBI’s “Department of Engineering Techniques”, regarding the preliminary design, the design, the procurement, the implementation, the erection and the start-up of several projects related with the revamping and the expansion of their facilities located in Figueira da Foz and those of CELTEJO in Vila Velha de Rodão, in 2011.	<b>CELBI, S.A.</b>
<b>2011</b>	Supervision of the construction works of Setgás LNG distribution networks on the municipalities of Almada, Seixal, Alcochete, Barreiro, Moita, Montijo, Setúbal, Benavente, Palmela and Sesimbra, in the year 2011.	<b>SETGÁS, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2011</b>	Detail engineering of anchoring extra beams for two climbing cranes used in the construction of viaducts in Portuguese roadways.	<b>APA GRUAS, LDA.</b>
<b>2011</b>	<p>Basic and detail engineering for the new storage area of JP-8 for the refuelling of helicopters at the Airfield Quarters of the Portuguese army at Tancos, Vila Nova da Barquinha, Portugal, composed of:</p> <ul style="list-style-type: none"> <li>• two cylindrical and horizontal steel storage tanks with double wall and capacity for 100 m<sup>3</sup> of JP-8.</li> <li>• one cylindrical and horizontal steel storage tank with capacity for 3 m<sup>3</sup> of slops.</li> <li>• two covered loaded and unloaded stations with JP-8</li> <li>• one pumping station for JP-8 fully equipped with filters and metering systems.</li> <li>• process and utilities piping systems.</li> <li>• firefighting system including one vertical steel storage tank for fire water, piping station and piping network for water and foam.</li> <li>• one control room fully equipped</li> <li>• one electrical room</li> <li>• one laboratory for sample collection and analysis</li> <li>• fence, access gates, parking, roads and drain systems</li> <li>• all power, lightening and earth electrical systems</li> <li>• telephone and computer network</li> <li>• all instrumentation control and CCTV systems</li> <li>• cathodic protection system for the tanks</li> </ul>	<b>ESTADO MAIOR DO EXÉRCITO – D.I.E.</b>
<b>2011</b>	Study and detail engineering for the revamping/expansion of the water and foam firefighting systems, at the thermal power station of São Jorge - Azores in compliance with the Portuguese regulations and international codes and standards in force.	<b>E.D.A., S.A.</b>
<b>2011</b>	Detail engineering, in the fields of mechanical, civil, electrical and instrumentation engineering, including the process of dismantling and demolition of the existent systems and the cost estimation for the construction and technical assistance, required for the installation of a new system of separation and transportation of steam and water, from the wells PV4 and PV7 to the thermal power station of Pico Vermelho, in the Island of S.Miguel, Azores, Portugal.	<b>SO GEO, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2011</b>	Mechanical detail engineering, required for the supply and erection of the equipments and piping systems, to be erected by Amal, at the residual water treatment facilities existent at the energy recovery centre of Saint-Ouen, in France, in order to separate the recycling of industrial waters from the rain water treatment.	<b>AMAL, S.A.</b>
<b>2011</b>	Study, in the fields of mechanical, electrical and safety engineering, required for the revamping/extension of the fuel storage area of Nordela, located in Ponta Delgada, S. Miguel Island, Azores, Portugal.	<b>PETROAÇORES</b>
<b>2011</b>	Mechanical/piping detail engineering of the new process and utilities piping systems, for interconnection of the new equipments to be erected inside the building of the new extraction by solvent, and between the building and the existent Plant of Sovena, located in Palença de Baixo, Almada, Portugal, according to the basic engineering supplied by Desmet Balestra, composed of 570 piping lines.	<b>M.C.A.V., LDA.</b>
<b>2011</b>	Detail engineering of all civil works, including roads, foundations, paths, steel structure buildings and sewer systems, required for the construction of a new asphalt storage area and a factory of bituminous products, to be built in Soyo, Angola.	<b>AMAL, S.A.</b>
<b>2011</b>	Rendering of mechanical, civil and electrical design and engineering services, by a Lusofabril's team of experts at Matsa's mining fields, in Aguas Teñidas and Sotiel, Spain.	<b>MATSA, S.A.</b>
<b>2011</b>	Basic and detail engineering for the new 8" pipeline interconnecting the jetty in the harbour with the storage area of Santa Maria Airport, at Santa Maria Island, Azores, Portugal, including all the required civil works, to feed the airport with Jet A1.	<b>CRISMETAL, LDA.</b>
<b>2011</b>	Mechanical and civil detail engineering required for the expansion of the storage area of Luanda's Refinery, with the erection of two new steel storage tanks with capacity of 50.000 m <sup>3</sup> of crude each one, including the basin duly insulated, the foundations for the tanks and piping supports, draining systems and all process and utilities piping systems inside the basin.	<b>LYON, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2011</b>	Detail project of one steel cylindrical and vertical storage tank with fixed roof and Ø 22100 x 13500 and capacity for 5000 m <sup>3</sup> of sulphuric acid at Sapec's plant, in Setubal, Portugal.	<b>METALFORNOS, LDA.</b>
<b>2011</b>	Detail engineering for the construction and erection of Sonangol's Refinery in Luanda, Angola, of two steel cylindrical and vertical tanks, with Ref. R-011 and R-012 and Ø 67360 x 16460, with floating roof, for the storage of 50000m <sup>3</sup> of crude, each one.	<b>AMAL, S.A.</b>
<b>2011</b>	Mechanical and civil detail engineering required for the expansion of the storage area of Luanda's Refinery, with the erection of two new steel storage tanks with the capacity of 20000 m <sup>3</sup> of naphtha each one, including the basin duly insulated, the foundations for the tanks and piping supports, draining systems and all process and utilities piping systems inside the basin.	<b>AMAL, S.A.</b>
<b>2011</b>	Preliminary design required for the licensing of the new fuel storage facility that Bencom intends to build in one area with 6010 m <sup>2</sup> next to the existent Nordela's storage farm, in Ponta Delgada, S. Miguel Island, Azores, Portugal.	<b>BENCOM, S.A.</b>
<b>2011</b>	Preliminary design required for the licensing of the revamping of Bencom's fuel storage farm, in Santa Clara, Ponta Delgada, S. Miguel Island, Azores, in order to maintain the capacity of reception, storage and expedition by bulk trucks, of 3000 m <sup>3</sup> of asphalt and 780 m <sup>3</sup> of fuel, and dismantling and demolition of the rest of the equipments and installations existent.	<b>BENCOM, S.A.</b>
<b>2011</b>	Mechanical, civil, electrical and instrumentation detail engineering, from the basic engineering supplied by Carbogal, required for the modification of the heating system of Carbogal's tank 09TK06, for the storage of pyrolysis fuel, at CLT's harbour, in Sines, Portugal, through the installation of a new heating system (with heat exchanger and recirculation pump, next to the referred tank).	<b>CARBOGAL, S.A.</b>



## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2011</b>	<p>Detail engineering for construction of the new equipments to be prefabricated and erected at the new mill plant that Metso Paper will build for the company Suzano Papel e Celulose, S.A., in the state of Maranhão, Brazil, listed below:</p> <p>For the fiber line:</p> <ul style="list-style-type: none"> <li>- weak gas scrubber (GNCD)</li> <li>- rejected products tank – Ø 5500 m x 8000</li> <li>- filtrate tank – Ø 12500 m x 8000</li> <li>- filtrate tank - Ø 6600 m x 8000</li> <li>- filtrate intermediate tank - Ø 19070 m x 16800</li> <li>- 2 filtrate tanks - Ø 5400 x 8000</li> <li>- 2 filtrate tanks - Ø 3500 x 8000</li> <li>- hot water tank - Ø 11800 x 10000</li> </ul> <p>For the causticizing:</p> <ul style="list-style-type: none"> <li>- DNCG scrubber</li> <li>- lime slaker</li> <li>- lime milk slaker</li> <li>- dregs tank - Ø 5200 x 6200</li> <li>- condensated tank - Ø 4000 m x 6200.</li> </ul>	<b>METSO PAPER</b>
<b>2012</b>	Supervision of the construction works of Setgás LNG distribution networks on the municipalities of Almada, Seixal, Sesimbra, Setubal, Alcochete, Montijo, etc., in the year 2012.	<b>SETGÁS, S.A.</b>
<b>2012</b>	Rendering of civil, mechanical and electrical engineering services to assist Celbi's "Department of Engineering Techniques", regarding the preliminary design, the design, the procurement, the implementation, the erection and the start-up of several projects related with the revamping and the expansion of their facilities, located in Figueira da Foz and those of Celtejo, in Vila Velha de Rodão, in 2012.	<b>CELBI, S.A.</b>
<b>2012</b>	Rendering of mechanical, civil and electrical detail engineering services, required for the production capacity increasing works of Aguas Teñidas and Sotiel mines, by a Lusofabril's team of experts at Matsa's mining fields, in Aguas Teñidas and Sotiel, Spain, in 2012.	<b>MATSA, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2012</b>	Mechanical, civil, electrical and instrumentation basic and detail engineering, as well as the rendering of technical assistance, required for the construction of the new fuel oil storage facilities, at Bencom's own land, annexed to the storage area of Nordela, in Ponta Delgada, Azores.	<b>BENCOM, S.A.</b>
<b>2012</b>	Mechanical and civil basic and detail engineering, as well as the rendering of technical assistance, required for the construction of the complementary systems and facilities of five new turbines to install by Lyon/LS Energia at the Railway's Power Station, in Luanda, Angola.	<b>LYON, S.A.</b>
<b>2012</b>	Mechanical and civil detail engineering, as well as the rendering of technical assistance, required for the systems erection and construction of the complementary facilities of two new generator groups of 21.176 MVA to install by Lyon/GRN at Kileva Thermal Power Station, in Lobito, Angola.	<b>LYON, S.A.</b>
<b>2012</b>	Civil basic and detail engineering, as well as the rendering of technical assistance, required for the construction of the complementary systems and facilities of the Railway's Power Station, in Cazenga – Luanda, Angola, related to the transport lines of 60KV and arrival at the substations of Cuca and Filda.	<b>LYON, S.A.</b>
<b>2012</b>	Mechanical detail engineering required for the repair of the flare platform structure, at Total's Dália offshore platform, in Angola.	<b>LYON, S.A.</b>
<b>2012</b>	Complementary finishing, in the fields of mechanical and civil detail engineering, of the definitive hydraulic system construction works, to allow the derivation of the flows coming from the Geothermal Power Station of Pico Vermelho for injection, from the existing piping of the geothermal wells PV5 and PV6, into the new geothermal wells PV9, PV10 and PV11, according to the final routings defined by Setilgest/Sogeo.	<b>SETILGEST, S.A.</b>
<b>2012</b>	Mechanical, civil and electrical detail engineering for the partial demolition of the administrative building, modification of the main entrance gate and the relocation of several underground infrastructures, required due the construction of the new cistern-trucks filling rack at the Storage Farm of Nordela, in S. Miguel Island, Azores.	<b>PETROAÇORES</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2012</b>	Mechanical, civil and electrical study, detail engineering and licensing of the new pipeline of 8" for Jet A1, to build between the beginning of Ponta Delgada pier and the Fuel Storage Farm of Nordela.	<b>PETROAÇORES</b>
<b>2013</b>	Supervision of the construction works of Setgás LNG distribution networks on the municipalities of Almada, Seixal, Sesimbra, Setubal, Alcochete, Montijo, etc., in the year 2013.	<b>SETGÁS, S.A.</b>
<b>2013</b>	Rendering of civil, mechanical and electrical engineering services to assist Celbi's "Department of Engineering Techniques", regarding the preliminary design, the design, the procurement, the implementation, the erection and the start-up of several projects related with the revamping and the expansion of their facilities located in Figueira da Foz and those of Celtejo in Vila Velha de Rodão, in 2013.	<b>CELBI, S.A.</b>
<b>2013</b>	Rendering of mechanical, civil and electrical detail engineering services, required for the production capacity increasing works of Aguas Teñidas mines, by a Lusofabril's team of experts at Matsa's mining fields, in Aguas Teñidas, Spain, in 2013.	<b>MATSA, SAU</b>
<b>2013</b>	Detail engineering required for the construction of two metallic, cylindrical and vertical tanks, tags T-306A and T-306B, with Ø 31.500 mm x 16.000 mm, for the storage of 12.000 m <sup>3</sup> of diesel, to be installed at Futila Terminal, located in Cabinda, Angola.	<b>GDK ANGOLA, S.A.</b>
<b>2013</b>	Detail engineering required for the work preparation and manufacturing of two process furnaces that AMAL has supplied for erection in Novokuibyshevsk, Russia.	<b>AMAL, S.A.</b>
<b>2013</b>	Detail engineering required for the construction of several metallic vessels, cylindrical and vertical, atmospheric and under pressure, that M.C.A.V. intends to supply to Fisipe - Fibras Sintéticas de Portugal, S.A. industrial plant, located in Lavradio, Portugal, in connection with the adaptation works for the production of carbon fibers.	<b>M.C.A.V., LDA.</b>
<b>2013</b>	Civil and mechanical detail engineering required for the revamping/extension of the existing firefighting system at the Thermal Power Station of Caldeirão, owned by EDA, located in S. Miguel Island, Azores.	<b>CRISMETAL, LDA.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2013</b>	Civil and mechanical detail engineering and preparation of technical specifications for the constructing of the condensate collecting and forwarding system of the Geothermal Power Station of Ribeira Grande, in S. Miguel, Azores.	<b>SOGEO, S.A.</b>
<b>2013</b>	Civil, mechanical, electrical and instrumentation study and detail engineering required for the revamping and expansion of Bentrans' storage area, located in Moio - S. José, S.Miguel Island, Azores.	<b>BENTRANS, LDA.</b>
<b>2013</b>	Civil detail engineering for the construction of a metallic structure 65m high and of the respective foundation to support and to allow the access to a Ø 1.700 mm x 80.000mm Chimney, made of FRP, to be installed at Sopac plant, located in Mitrena, Setúbal.	<b>SOPAC, S.A.</b>
<b>2013</b>	Flexibility calculation of a Ø 18" pipeline (along its whole onshore length and including an existing Φ 12" branch) for the reception/ expedition of liquid fuels of Luanda refinery, in Angola.	<b>GDK ANGOLA, S.A.</b>
<b>2013</b>	Mechanical detail engineering of five metallic, cylindrical and vertical, fuel oil tanks, to be built by Amal for installation at the new Fuel Storage Area of Bencom, S.A., located at Nordela, Ponta Delgada, Azores.	<b>AMAL, S.A.</b>
<b>2013</b>	Mechanical design of nine metallic, cylindrical and vertical tanks, for petrol and diesel, to be manufactured by Metalbaía for erection on the Ocean Terminal of Lobito (TOL), in Angola.	<b>METALBAÍA, LDA.</b>
<b>2013</b>	Elaboration of the civil, mechanical and electrical detail engineering, including electricity, instrumentation, control and automation, concerning modifications to be made by GDK Angola on the Ocean Terminal of Soyo.	<b>GDK ANGOLA, S.A.</b>
<b>2013</b>	Feasibility analysis of the deployment of Bencom's new fuel storage facility in a new location, in S. Jorge Island, Azores.	<b>BENCOM, S.A.</b>
<b>2013</b>	Calculation and Detail Engineering for construction of the water and foam systems for protection of the White Fuels Pumping Station and of the Filling Rack existing in Petroaçores Tank Farm, located in Nordela, Ponta Delgada, Azores.	<b>PETROAÇORES</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2014</b>	Rendering of services of technical assistance and supervision of the construction works in Bencom's facilities, located in Ponta Delgada, S. Miguel Island, Azores.	<b>BENCOM, S.A.</b>
<b>2014</b>	Rendering of mechanical, electrical and civil design services, in the Industrial Plant of Celbi, in Leirosa, Figueira da Foz.	<b>CELBI, S.A.</b>
<b>2014</b>	Rendering of mechanical, civil and electrical detail engineering services, required for the production capacity increasing works of Aguas Teñidas mines, by a Lusofabril's team of experts at Matsa's mining fields, in Aguas Teñidas, Spain, in 2014.	<b>MATSA, S.A.U.</b>
<b>2014</b>	Rendering of Design Engineering Services by Lusofabril's technicians at Fisipe's offices, for the modification of equipments and piping systems, in Fisipe's Industrial Plant, in Lavradio, Portugal.	<b>FISIPE, S.A.</b>
<b>2014</b>	Recalculation of a battery of 3 steel silos, items 461 FA/FB/FC, in the Plant of Nova AP, located in Lavradio, in order to verify its capacity for supporting lots of 360 Ton of liquid fertilizer (solution of 32N) in each one of them.	<b>NOVA AP, S.A.</b>
<b>2014</b>	Detail engineering of 2 new firefighting towers, as well as for the assembling of motorized valves and repair of piping existing in the Stations 4 and 5 of CLT Oil Terminal, in Sines Harbour.	<b>SETROVA, LDA.</b>
<b>2014</b>	Detail engineering for the erection of the new lines for inlet and outlet of steam, with the adequate systems of purge, in the new turbo-generator 5861J, near the Nitric Acid Factory, in the industrial Plant of ADP, in Lavradio.	<b>NOVA AP, S.A.</b>
<b>2014</b>	Supervision of the construction works of Setgás LNG distribution networks on the municipalities of Almada, Seixal, Sesimbra, Setubal, Alcochete, Montijo, etc., in 2014.	<b>SETGÁS, S.A.</b>
<b>2014</b>	Construction Project of Santa Clara V3 facility, including the follow up and supervision of construction of the pipeline between the harbour and Nordela, in the vicinity of other entities infrastructures, as well as of the works performed in the harbour, in Ponta Delgada.	<b>BENCOM, S.A.</b>
<b>2014</b>	Revamping Project of the existing Filling Rack in Petroaços Tank Farm, located in Nordela, S. Miguel, Azores.	<b>PETROAÇOS</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2014</b>	Technical support and assistance required for the elaboration of a Tender for the construction of the Hydrocarbons Reception, Storage and Expedition Terminal that GIMTL intends to build and operate in Matola, Mozambique.	<b>MARTIFER - AMAL E TEIXEIRA DUARTE</b>
<b>2014</b>	Completion, in the mechanical, civil, electrical and instrumentation fields, of the detail engineering produced and delivered unfinished by Oyster Progetti, SRL, for the revamping of the LPG Bottle Filling Station, located in Lobito – Angola.	<b>PLACON - ENGENHARIA E PRODUTOS, LDA.</b>
<b>2014</b>	Civil and mechanical detail engineering of a diesel motor driven pump, to ensure the redundancy of the firefighting water pumping system of Santa Bárbara Thermal Power Station, property of EDA, located in Faial Island.	<b>CRISMETAL, LDA.</b>
<b>2014</b>	Rendering of supervision services, related with tests and checks of the piping systems under construction, in the new facilities of Bencom, in Nordela, Ponta Delgada.	<b>BENCOM, S.A.</b>
<b>2014</b>	Elaboration of studies associated to a new line, to forward the slop wax flow produced in the Distillation Unit of Vacuum I, to the Distillation Unit of Vacuum II, to be installed by EFATM in Sines Refinery.	<b>EFATM - SERVIÇOS DE MANUTENÇÃO GLOBAL, ACE</b>
<b>2014</b>	Mechanical detail engineering required for the replacement of the booster pumps for LPG, to be erected in the fuel storage farm of Cabinda, by three new multiproduct pumps, including: - The required changes on the suction and compression lines of the pumps, in order to use the piping already purchased and prefabricated. - New bypass to the existing multiproduct pumps.	<b>AMAL ANGOLA, S.A.</b>
<b>2014</b>	Civil and mechanical detail engineering, regarding the feeding to the PP directly with heavy naphtha from the HC, to be performed by Projecto Detalhe, in the Refinery of Galp Energia, in Sines.	<b>PROJECTO DETALHE, LDA.</b>
<b>2014</b>	Rendering of mechanical design and supervision services, for the construction works of equipments and industrial piping systems, by Lusofabril's technicians at the Plant of Celcacia, in Cacia.	<b>CELCACIA, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2015</b>	Rendering of design services by Lusofabril's technicians at Fisipe, for the modification of equipments and piping systems in the Plant of Lavradio.	<b>FISIPE, S.A.</b>
<b>2015</b>	Rendering of design services regarding industrial facilities, by Lusofabril's technicians at Somincor, in Neves Corvo.	<b>SOMINCOR, S.A.</b>
<b>2015</b>	Rendering of design services, on the fields of mechanical, electrical and civil engineering, at the Plant of Celbi, in Leirosa, Figueira da Foz.	<b>CELBI, S.A.</b>
<b>2015</b>	Supervision of the construction works of SETGÁS LNG distribution networks on the municipalities of Almada, Seixal, Alcochete, Barreiro, Moita, Montijo, Benavente, Sesimbra, Palmela and Setubal, on the year 2015.	<b>SETGÁS, S.A.</b>
<b>2015</b>	Rendering of supervision services, required for checking tests to the piping systems under construction, at the new facilities of Bencom, in Nordela.	<b>BENCOM, S.A.</b>
<b>2015</b>	Basic and detail engineering studies, on the fields of civil (steel structures), mechanical and electrical engineering, including electricity, instrumentation, control and automation, of the LPG Filling station of Bordj Menaiel, located in Algeria. Studies of the Hazid/ Hazop/ SIL Analysis / Performance and feasibility of the F&G detection system.	<b>AMAL, S.A.</b>
<b>2015</b>	Calculation note and certification of a load-lifting balance for 16Ton.	<b>SMM, S.A.</b>
<b>2015</b>	Revision of PIDs and elaboration of the operation manual for the Storage facility of Faial. Technical support to the storage facilities: PDL, PIC and GRAC.	<b>BENCOM, S.A.</b>
<b>2015</b>	Detail engineering design for the full construction and licensing of a new superheater SB-E07, for the Refinery of Petrogal, in Sines.	<b>M.C.A.V., LDA.</b>
<b>2015</b>	Mechanical detail engineering design regarding the reconditioning of the fluids systems of the Pier nr. 2 on the facilities of Lisnave, located in Mitrena, Setúbal.  External measurement of the piping thicknesses by ultrasounds.	<b>PROMAN, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2015</b>	Civil and mechanical detail engineering design regarding the interconnection of the fuel gas networks of Plant II and Plant III (in production and distribution), that EFATM intends to perform, in the Refinery of Sines, property of Galp Energia.	<b>EFATM, ACE</b>
<b>2015</b>	Completion, on the mechanical, civil, electrical and instrumentation fields, of the detail engineering design produced and delivered unfinished by Oyster Progetti, SRL, for the revamping of the facilities for reception, storage and filling of bottles with LPG, named ICPN, in Luanda, Angola.	<b>LYON, S.A.</b>
<b>2015</b>	Study and detail engineering design, on the civil, mechanical and electrical fields, concerning the installation of a new cooling tower, in the Plant of Lavradio, that Nova AP intends to delegate. Project management, comprising project planning, cost estimation, enquiries (for acquisition of materials, equipments and construction contracts), technical and economical analysis of tenders and participation in the negotiation meetings, to choose the suppliers. Supervision of the Works.	<b>NOVA AP, S.A.</b>
<b>2015</b>	Preliminary study, on the fields of Architecture, Process, and of Civil, Mechanical and Electrical Engineering, including electricity, instrumentation, control and automation, regarding the expansion project of the Jet-A1 storage capacity (+1500 m <sup>3</sup> , in 3 vertical tanks, with 500 m <sup>3</sup> capacity each), in the Aviation Fuel Station of the Airport 8 <sup>th</sup> May 1945, located in Sétif, in Algeria.	<b>AMAL, S.A.</b>
<b>2015</b>	Preliminary study, on the fields of Architecture, Process, and of Civil, Mechanical and Electrical Engineering, including electricity, instrumentation, control and automation, regarding the expansion project of the Jet-A1 storage capacity (+1500 m <sup>3</sup> , in 3 vertical tanks, with 500 m <sup>3</sup> capacity each), in the Aviation Fuel Station of the Airport Ramdane, located in Bejaia, in Algeria.	<b>AMAL, S.A.</b>



## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2015</b>	<p>Elaboration of technical documentation to support the budgeting, on the fields of civil, mechanical and electrical engineering, required for the presentation of a Tender by Setilgest, regarding the Works of Installation of the Injection Line and Auxiliary Equipments, as well as the Water Tank for the Firefighting System, that EDA intends to implement in the Thermal Power Station of Pico Alto, located in the municipality of Praia da Vitória, Azores.</p> <p>Detail engineering design, on the civil, mechanical and electrical fields, required for the installation of the Injection Line and Auxiliary Equipments, as well as the Water Tank for the Firefighting System, that EDA intends to implement in the Thermal Power Station of Pico Alto, located in the municipality of Praia da Vitória, Azores.</p>	<b>SETILGEST, S.A.</b>
<b>2015</b>	<p>Design of the Routing Changing of POL NATO's Oil Pipeline of Ponta Delgada, in the fields of civil, mechanical, electrical and telecommunications engineering, comprising the underground relocation, in an extent of <math>\pm 200</math> metres, of the aerial sections of:</p> <ul style="list-style-type: none"> <li>• Pipeline of <math>\varnothing 10''</math> for Ballast Water;</li> <li>• Pipeline of <math>\varnothing 12''</math> for Gasoil;</li> <li>• Pipeline of <math>\varnothing 20''</math> for Gasoil;</li> <li>• Medium voltage cable;</li> <li>• Telecommunications' cable;</li> <li>• Cathodic protection system.</li> </ul>	<b>DIRECÇÃO-GERAL DE RECURSOS DA DEFESA NACIONAL</b>
<b>2015</b>	<p>Detail engineering design, on the mechanical, civil, electrical and instrumentation fields, and overseeing of the detail engineering, for the construction and licensing of the new Tank TK5430 and the modifications to be done on the Tank TK5424, as well as the rendering of Technical Assistance, required for the replacement of the Tanks TK5413 and TK5414, and contract works of mechanical, piping, civil, electricity and instrumentation, in the Tank Farm of Boa Nova, Refinery of Matosinhos.</p>	<b>AMAL, S.A.</b>
<b>2016</b>	<p>Rendering of design services by Lusofabril's technicians displaced at FISIFE's Plant, for the modification of equipments and piping systems, as well as for the execution of the As-Built version of the Plant drawings.</p>	<b>FISIPE, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2016</b>	Rendering of design services regarding the industrial facilities, by Lusofabril's technicians at SOMINCOR, in Neves Corvo.	<b>SOMINCOR, S.A.</b>
<b>2016</b>	Rendering of design services, in the mechanical, electrical and civil engineering fields, at the Plant of CELBI, in Leirosa, Figueira da Foz.	<b>CELBI, S.A.</b>
<b>2016</b>	Supply of a Mechanical Calculation Sheet (acc. AD MERKBLAETTER) of a cylindrical and vertical separator filter, Item H404/1, with Ø 419 x 821, that ATM intends to manufacture and deliver to SOLVAY PORTUGAL.	<b>ATM, S.A.</b>
<b>2016</b>	Elaboration, in the mechanical engineering field, of Engineering Design documentation related with the interconnection of the discharge lines of the pumps OP-P224 and TE-P27/28, in Sines Refinery, owned by GALP ENERGIA.	<b>EFATM, ACE</b>
<b>2016</b>	Modification of the Jet Pumping station design, with the installation of a filter and of a counter.	<b>PETROAÇORES</b>
<b>2016</b>	Rendering of Drafting Services, by LUSOFABRIL designers, related with the performing of industrial piping engineering, at PORTUCEL SOPORCEL Plant, located in Mitrena, Setúbal.	<b>PORTUCEL, S.A.</b>
<b>2016</b>	Mechanical Calculation for the structural verification of the tank OP-T511 existing in the facilities of GALP ENERGIA Sines Refinery, considering the reconstruction of the roof with a thicker plate than the presently installed. Verification of the possibility of replacing the last shell plate (600mm wide), by a plate with 6 or 7 mm thickness.	<b>PROZINCO, S.A.</b>
<b>2016</b>	Mechanical Preliminary Study, related to the retrofit of the Firefighting System, considering the future erection of two tanks of Fuel oil, respectively, of 70 m <sup>3</sup> and 180 m <sup>3</sup> and a new electrical pump to ensure the redundancy of the pumping system, of the Thermal Power Station of the Airport, located in the island of Santa Maria, Azores.	<b>EDA - Electricidade dos Açores, S.A.</b>
<b>2016</b>	Detail engineering design for the full construction and licensing of a new superheater SS-E12, to be erected, replacing the existent one, in Sines Refinery of GALP ENERGIA.	<b>SETROVA, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2016</b>	Recalculation and detail engineering for the construction of a steel tank, cylindrical and vertical, with Ø 22.100 mm x 13.500 mm, for the storage of 5.000 m <sup>3</sup> of Sulphuric Acid.	<b>METALFORNOS, LDA.</b>
<b>2016</b>	Design and calculation of reinforcement plates, to be installed on each one of four new nozzles to be assembled by hot taping, on the shell of Slops Tank 10-TK-1011 in ECOSLOPS PORTUGAL plant, located at CLT, in Sines, as well as the performing of flexibility calculations of two new lines, to be installed for the discharge of the Light Slops to a new truck loading station, including the definition of the type and location of the respective supports, including a Field Survey related with Tank and Piping Layout.	<b>ECOSLOPS PORTUGAL, S.A.</b>
<b>2016</b>	Elaboration of the detail engineering design, in the civil, mechanical and electrical fields, including electricity and instrumentation, regarding the interconnection of the Lines of Tank 09TK06 with the Liquid Bulk Terminal, including modification on the pumping station, interconnection of different lines, with the installation of motorized valves, and their extension to Station 6/7.	<b>TECNOSPIE, S.A.</b>
<b>2016</b>	Elaboration of the mechanical and electrical detail engineering design, regarding the modification of the Drainage System of Compressors HT-C1.A and HT-C1.B, in Sines Refinery, owned by GALP ENERGIA.	<b>MEISA PORTUGAL</b>
<b>2016</b>	Elaboration of the civil and mechanical detail engineering design, regarding the installation, in the plant of ADP Fertilizantes, S.A., in Salgados da Póvoa, of the following lines:  - Injection of Nitric Acid at 40% in the Tank P-077. - Recovery of the Process purges of Unit Un 270.	<b>ADP FERTILIZANTES, S.A.</b>
<b>2016</b>	Detailed review, followed by the Evaluation of the Firefighting Protection Systems existing in the Thermal Power Station of Belo Jardim, located in the Municipality of Praia da Vitória, Terceira, Azores, and performing of the Detail Engineering for its Expansion and Revamping, in order that the plant complies with the legislation in force and with the international applicable rules.	<b>NORMA AÇORES, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2016</b>	Detail engineering design, in the civil, process, mechanical and electrical fields, including electricity, instrumentation and control, regarding the Coprocessing, Reception, Interconnections, Storage and Expedition of FAME of Animal origin, as well as of Vegetable Oil, to install by SETROVA in Sines Refinery, owned by GALP ENERGIA.	<b>SETROVA, S.A.</b>
<b>2016</b>	Elaboration of the mechanical Detail engineering design, regarding the installation of a new steam line, with a pressure reducing station, to feed the Stripper of Acid Waters AB-V10, that SPIE intends to install, in Sines Refinery, owned by GALP ENERGIA.	<b>TECNOSPIE, S.A.</b>
<b>2016</b>	Elaboration of the mechanical Detail engineering design, regarding the installation of a new condensates line, from the exchanger P-233 to the Accumulator A-060, in ADP Fertilizantes Plant, located in Salgados da Póvoa.	<b>ADP FERTILIZANTES, S.A.</b>
<b>2016</b>	Elaboration of the Detail engineering design, in the civil, mechanical and electrical fields, regarding changes that EGEO intends to perform in the Storage of Unit 7000, located in Leça Refinery, owned by GALP ENERGIA, including the installation of a new tank, drainage system of its retention basin, interconnection of the tank with existing equipment, including product, steam and condensate piping, outdoor lighting, tank and inline instrumentation.	<b>EGEO, S.A.</b>
<b>2016</b>	Elaboration of the Detail engineering design, for the construction of a steel cylindrical and vertical tank, with reference 77-ME-101, with Ø 25.000 mm x 14.000 mm, for the storage of 4.000 m <sup>3</sup> of water, for the Storage and Pumping facilities of Biópio, in Lobito, Angola.	<b>L.Y. LYON, S.A.</b>
<b>2016</b>	Elaboration of the Detail engineering design, in the civil, mechanical and electrical (including instrumentation, control and automation) fields, related with modifications to implement on the effluents system of ADP Fertilizantes plant, located in Salgados da Póvoa.	<b>ADP FERTILIZANTES, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2016</b>	Elaboration of the Mechanical recalculation for the structural verification of the tank OP-T506 existing in Sines Refinery, owned by GALP ENERGIA, considering the roof reconstruction with a thicker plate than the one actually installed.	<b>SETROVA, S.A.</b>
<b>2016</b>	Technical support to allow SETROVA's elaboration of a Tender regarding PHASE II – Coprocessing, Unloading and Storage of Vegetable Oil, for GALP ENERGIA, comprising preliminary hydraulic calculations, pumps and railway unloading arms selection.	<b>SETROVA, S.A.</b>
<b>2016</b>	Elaboration of the Preliminary Design and of the Environmental Impact Study for the eventual erection of a new Pipeline to forward Jet-A1, from the Air Base of Montijo to Portela Airport, in Lisbon.	<b>ENMC, E.P.E.</b>
<b>2016</b>	Elaboration of the Detail engineering design, for the construction of the equipment that MASA intends to manufacture and to erect in the industrial facilities of Galp's Refinery in Sines, namely: <ul style="list-style-type: none"> <li>- a steel, cylindrical and vertical column, with Ø int. 4.000 /1.930 mm x 13.550 mm, with ref. AL-V27;</li> <li>- a steel, cylindrical and vertical tank with Ø 2.600 mm x 4.450 mm, with ref. AL-T02, for the storage of 19 m<sup>3</sup> of calcium chloride.</li> </ul>	<b>MASA, S.A.</b>
<b>2016</b>	Elaboration of the Detail engineering design, required for the reconstruction in stainless steel, of a steel chimney with Ø 2.200 mm x 35.000 mm, presently made of carbon steel and in advanced state of corrosion, in the industrial facilities of FUNFRAP, including vertical stairs and intermediate platforms, to access the emissions analysis probe, the smoke inlet and bottom drainage piping.	<b>SIMETRIAXIAL, LDA.</b>
<b>2016</b>	Checking of the loading capacity of the CC-V1 Equipment platforms to support suspended scaffolding, in Sines Refinery, owned by GALP ENERGIA.	<b>EFATM, ACE</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2016</b>	Rendering of services for the Preliminary Study, Detail Engineering Design and execution of Technical Specifications for the installation of overpressure and vacuum break valves in five (05) fuel oil tanks in the Thermal Power Station of Belo Jardim, municipality of Praia da Vitória, Ilha Terceira, Azores.	<b>EDA - Electricidade dos Açores, S.A.</b>
<b>2016</b>	Elaboration of the required documentation, in the mechanical engineering field, for the approval of the Construction Design and CE Marking of: - gasoline line 20”P0310-AW, between the Pumping station of unit UN6100 and the inlet valves of TKs 6104A/B; - gasoline lines 14”P0203-AW and 14”P0308-AW, between the 14” valve, located at the inlet of the pumping station of unit UN6100 and the inlet valves of TKs 6103A/B, TKs 6104A/B and TKs 6105A/B; to be implemented in Leça Refinery, owned by GALP ENERGIA.	<b>PROZINCO, S.A.</b>
<b>2016</b>	Elaboration of the Detail engineering design of a new heating coil, made of flat pipe, to replace the finned pipe coil presently installed in tank 09TK06 of CLT.	<b>MASA, S.A.</b>
<b>2016</b>	Elaboration of the Detail engineering design, in the civil, mechanical and electrical fields, regarding the installation of a new safety valve (TSV) on the 20” line and of a motorised actuator on the valve 09V95, located in the Fuel Oil Pumping Station, that CLT wants to have implemented on the Liquid Bulk Terminal, located in Sines.	<b>CISEC, S.A.</b>
<b>2016</b>	Elaboration of the Detail engineering design of new heating coils, made of flat pipe, to replace the finned pipe coils presently installed in tank OP-T510 of Sines Refinery.	<b>PROZINCO, S.A.</b>
<b>2016</b>	Elaboration of the Basic and Detail engineering design, in the civil, mechanical and electrical fields, related with several jobs to be performed in Factory I and Factory II, involving the installation of several new lines and the erection of the respective instrumentation.	<b>MEISA PORTUGAL, S.A.</b>
<b>2017</b>	Rendering of design services by Lusofabril’s technicians at FISIPE’s Plant, for the modification of equipment and piping systems, as well as for the execution of the As-Built versions of some the Plant existing drawings.	<b>FISIPE, S.A.</b>
<b>2017</b>	Rendering of design services regarding industrial facilities, by Lusofabril’s technicians at SOMINCOR, in Neves Corvo mine, along the year of 2017.	<b>SOMINCOR, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2017</b>	Civil and mechanical detail engineering design, for the construction of a new Firefighting Tower, to replace the existing one, on Station 2 – North, of Terminal de Granéis Líquidos de Sines, rented to CLT – Companhia Logística de Terminais Marítimos, S.A.	<b>PROZINCO, S.A.</b>
<b>2017</b>	Piping Design for the MDO line extension, connecting the tanks 10 TK 7008/ 10-TK-7009 with GALP Ø 48" existing Crude Lines nº1 and nº 2, to be built in Sines (Portugal) by ECOSLOPS Portugal, S.A., including namely, flexibility calculations and the definition of the type and location of the respective supports.	<b>ECOSLOPS PORTUGAL, S.A.</b>
<b>2017</b>	Review of the Basic Engineering and Execution of the Detail Engineering Design, regarding process, civil, mechanical, electrical, control & instrumentation and safety disciplines, related with the construction of the new Windhoek Tank Farm, for NAMCOR.	<b>A1V2, LDA.</b>
<b>2017</b>	Elaboration of the Mechanical Calculation Notes required for the Detail Engineering of three steel, cylindrical and vertical tanks, that VALINOX intends to build, to be erected in the Plant of THE NAVIGATOR COMPANY, located in Figueira da Foz. Review the Detail Engineering drawings produced by a third party, to check their conformity with the calculations performed.	<b>VALINOX, S.A.</b>
<b>2017</b>	Elaboration, in the field of mechanical engineering, of the documentation required for the design approval and CE marking of the Gasoline Line 20" P0309-AW, from the Pumping Station of UN6100 to the inlet valves of the TKs 6103A/B, to be implemented in the Refinery of Leça, property of GALP ENERGIA.	<b>CISEC, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2017</b>	<p>Elaboration of the Detail engineering design, in the civil, mechanical and electrical fields, regarding the Expansion and Revamping of the Firefighting Protection Systems existent in the Thermal Power Station of Belo Jardim, located in the Municipality of Praia da Vitória, Terceira, Azores, to ensure its conformity with the legislation in force and with the international rules applicable, including:</p> <p>Geological and Geotechnical Study;            Topographical Survey;            Detail Engineering of the New Storage and Pumping Station of Firefighting Water;            Detail Engineering of the Firefighting Water and Foam Networks;            Detail Engineering of the Fire Detection and Alarm System;            Fire Protection Design of the new Pumping Station;            Expansion and revision of the overall Firefighting System Plant.</p>	<b>EDA - Electricidade dos Açores, S.A.</b>
<b>2017</b>	<p>Elaboration of the Basic and Detail engineering design, in the civil, mechanical, instrumentation and control fields, regarding the Project related with the Forwarding of Saturated Steam IS to the HT Unit, that CISEC intends to perform on an EPC basis, in Sines Refinery, owned by GALP ENERGIA, comprising the dimensioning of the Steam Piping and Introduction of an expansion lyre.</p>	<b>CISEC, S.A.</b>
<b>2017</b>	<p>Elaboration, in the mechanical, civil and safety fields, of several Detail engineering design projects, related with the Revamping of the Fuel Storage Farm of Santa Barbara Thermal Power Station, that CRISMETAL intends to perform in the Faial Island, comprising:</p> <ul style="list-style-type: none"> <li>- Decantation tanks (new): TQ-7 and TQ-8, with a single capacity of 40 m3;</li> <li>- Tanks instrumentation;</li> <li>- Revamping of the fuel pumping station;</li> <li>- Fuel piping, to interconnect the new tanks with the Daily Fuel tanks;</li> <li>- Steam piping for the tanks heating coils and for steam tracing of the fuel piping;</li> <li>- Evaluation of the existing firefighting network, in function of the needs of the new installed tanks;</li> <li>- Extension of the firefighting and cooling systems to the new tanks and to the firefighting pumping room.</li> </ul>	<b>CRISMETAL, LDA.</b>



## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2017</b>	Elaboration of the Basic and of the Detail engineering design, in the civil and mechanical fields, regarding the interconnections of the Unit 3000 pumps drains with the Closed Drain System 72, that MEISA intends to perform in Matosinhos Refinery, owned by GALP ENERGIA, including also the design of a new collector, interconnecting the sub-networks 1 and 2 inspection manhole with sub-networks 3 and 4 manhole.	<b>MEISA PORTUGAL</b>
<b>2017</b>	Elaboration of the mechanical detail engineering design, required for the construction of a new piping system, to allow the forwarding of liquid ammonia (NH <sub>3</sub> ) directly from the storage tanks 2116 FA/FB/FC to the Nitric Acid Plant, existent in the facilities of ADP, located in Lavradio. Hydraulic dimensioning of the new lines, in order to check the respective diameter. Reformulation of the Pumping System of NH <sub>3</sub> according to the calculations performed.	<b>ADP FERTILIZANTES, S.A.</b>
<b>2017</b>	Rendering of Local Civil Engineering Design Services, related with the design of several foundations and concrete and metallic structures in connection with the <i>EPC Vacuum Flasher Unit Project for Sines Refinery</i> , that has been awarded to APS, S.p.A., by PETROGAL – Petróleos de Portugal, S.A..	<b>APS ENGINEERING ROMA S.P.A.</b>
<b>2017</b>	Elaboration of a Preliminary Study related with the piping layout, associated with the Expansion of the Calcium Nitrate Production Unit in ADP Plant, located in Salgados da Póvoa, in Alverca, consisting in the construction of a second production line. Elaboration of a Preliminary Study regarding the equipment and steel structures layout for the new Calcium Nitrate Plant. Reformulation of the structure of the new building for the Expansion of the Calcium Nitrate Plant to ensure its compatibility with the piping layout.	<b>ADP FERTILIZANTES, S.A.</b>
<b>2017</b>	Detail engineering design including the new retention basin of tanks 2106-F and 2107-F for expedition of ammonia nitrate solution, the new foundation for tank 2106-F, the new retention basin of the pumping station and two new foundations for the installation of the pumps, in ADP Fertilizantes Plant, located in Lavradio.	<b>ADP FERTILIZANTES, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2017</b>	Elaboration of the Mechanical Detail engineering design, as well as of the required documentation, for approval of the project and for CE marking, of columns T-0251 and T-0252, that PEMEL intends to build and install in the Refinery of Matosinhos, owned by GALP ENERGIA.	<b>PEMEL, LDA.</b>
<b>2017</b>	Elaboration of the Mechanical Detail engineering design, regarding the intervention in the Fuel oil Line 20"PO113-AW, from the pumping station UN610, near the MOV room, up to the 20" valve, located south of the intersection of the J Street with the 11 <sup>th</sup> Street, that PROZINCO intends to perform, in Leça Refinery, owned by GALP ENERGIA.	<b>PROZINCO, S.A.</b>
<b>2017</b>	Detail engineering design for the Construction of the column T0502, for erection in the Refinery of Matosinhos, owned by GALP ENERGIA.	<b>A. SILVA MATOS, Metalomecânica, S.A.</b>
<b>2017</b>	Mechanical Detail engineering design for the Construction (stairs and access platforms excluded) of the Columns T-2102 A/B and T-2302 A/B, that A. SILVA MATOS intends to build, for erection in the Refinery of Matosinhos, owned by GALP ENERGIA.	<b>A. SILVA MATOS, Metalomecânica, S.A.</b>
<b>2017</b>	Rendering of Supervision Services related with the Mechanical/ Piping erection, included in the Optimisation Project to be developed by NAVIGATOR PULP FIGUEIRA, S.A., in its Plant of Figueira da Foz.	<b>THE NAVIGATOR COMPANY, S.A.</b>
<b>2017</b>	Calculation and Detail Engineering for the Construction of helium tanks foundations in Germany	<b>A. SILVA MATOS, Metalomecânica,S.A.</b>
<b>2017</b>	Elaboration of the Study and Final Design for the construction of a new pipe bridge to cross over a street, between the ammonia storage area and the main pipe rack, for the installation of new lines, in ADP Fertilizantes Plant, located in Lavradio.	<b>ADP FERTILIZANTES, S.A.</b>
<b>2018</b>	Elaboration of the mechanical engineering Repair Project of the condensor GC-E17 and Construction of the Drum SB-V06, including the required documentation for the projects approval and for CE marking of the equipment, that MASA PORTUGAL, S.A. intends to install in Sines Refinery, in the 2018 shutdown.	<b>MASA PORTUGAL, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2018</b>	Elaboration of the detail engineering design for construction of two atmospheric, cylindrical and vertical steel tanks, with conical roof, for storage of the firefighting system water, with nominal capacity of 500 m <sup>3</sup> each, that CRISMETAL intends to install in the Thermal Power Station of Belo Jardim, located in Terceira Island, Azores.	<b>CRISMETAL, LDA.</b>
<b>2018</b>	Elaboration of the Detail Engineering design regarding modifications of the industrial piping systems that SUEZ Water Technologies & Solutions Portugal intends to implement in the WWTP of Matosinhos Refinery, owned by GALP ENERGIA, in order to increment the Plant efficiency.	<b>SUEZ Water Technologies &amp; Solutions Portugal</b>
<b>2018</b>	Analysis, reproduction, validation and complementing of the detail engineering documentation produced by STEVAL, for the construction of several steel tanks, atmospheric, cylindrical and vertical, that SIMI intends to erect in the Liquid Fuel Storage Terminal of Beira, Mozambique, owned by IGTBL, namely: <ul style="list-style-type: none"> <li>- T1001, with Ø 27.000 x 20.000 for 10.163 m<sup>3</sup> of diesel, with geodesic roof, in Al;</li> <li>- T1002, with Ø 32.500 x 20.000, for 13.481 m<sup>3</sup> of mogas, with geodesic roof and internal floating screen, in Al;</li> <li>- T1003, with Ø 27.000 x 20.000, for 9.190 m<sup>3</sup> of mogas, with geodesic roof and internal floating screen, in Al;</li> <li>- T1004, with Ø 32.500 x 20.000, for 14.352 m<sup>3</sup> of diesel, with geodesic roof, in Al;</li> <li>- T1005, with Ø 32.500 x 20.000, for 14.891 m<sup>3</sup> of diesel, with geodesic roof, in Al;</li> <li>- T9101, with Ø 20.000 x 14.100, for 3.890 m<sup>3</sup>, for fire water, with fixed conical roof.</li> </ul>	<b>SIMI, S.A.</b>
<b>2018</b>	Elaboration of the mechanical detail engineering design, regarding modifications that SUEZ Water Technologies & Solutions Portugal intends to implement in the WWTP of CAMPOFRIO, in Rio Maior, in order to eliminate defaults and increase the plant efficiency.	<b>SUEZ Water Technologies &amp; Solutions Portugal</b>
<b>2018</b>	Detail engineering design, in the fields of process, civil, mechanical and electrical, of a steel Tank, cylindrical and vertical, for storage of 2.850 m <sup>3</sup> of Asphalt Bitumen, including related piping, foundations, electrical and instrumentation systems, that PETROGAL intends to install at the Terminal of Viana do Castelo.	<b>PETROGAL, S.A.</b>
<b>2018</b>	Audit to the Fire Protecting System of the Fuel Farm of Graciosa Thermal Power Station, located in Graciosa Island, for EDA - Electricidade dos Açores, S.A..	<b>EDA - Electricidade dos Açores, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2018</b>	Elaboration of the detail engineering design, including the respective calculation note, of the new steel tank TK-04, atmospheric, cylindrical and vertical, with Ø 6970 x 7912, of Galp Comercialização, S.A., including the respective heating coils, destined to the storage of asphalt bitumen, that METALOESPO intends to build in the Terminal of Viana do Castelo.	<b>METALOESPO, LDA.</b>
<b>2018</b>	Study and detail engineering design, on the fields of mechanical, civil, piping, foundations and structure, for the construction of the new ADP plant for Expedition of Ammonia Nitrate Solution, in Lavradio.	<b>ADP FERTILIZANTES, S.A.</b>
<b>2018</b>	Study and detail engineering design, on the fields of mechanical, civil, piping, foundations and structure, for the construction of the new ADP plant for Calcium Nitrate, in Alverca.	<b>ADP FERTILIZANTES, S.A.</b>
<b>2018</b>	Surveys, calculations and drawings for a hanging scaffold to install at the Dam of Crestuma.	<b>SMM, S.A.</b>
<b>2018</b>	Elaboration of the fabrication drawings of the Extractor for the Column T0201, in Petrogal Sines Refinery.	<b>SMM, S.A.</b>
<b>2018</b>	Mechanical detail engineering of the new storage, reception and expedition of sulphuric acid 98% at the Sea Terminal of Aveiro, to be built by BTL, including: <ul style="list-style-type: none"> <li>- Checking of the speeds inside the piping foreseen by BTL and indication of the diameters required for each section;</li> <li>- Issuing of calculation notes of the piping flexibility;</li> <li>- Description of works with definition of the operation and evaluation of flows/timing per operation;</li> <li>- Hydraulic calculations;</li> <li>- Pump specification/ pre selection;</li> <li>- Proposal for pumps control system.</li> </ul>	<b>BTL - INDÚSTRIAS METALÚRGICAS, S.A.</b>
<b>2019</b>	Civil Engineering Design (foundations and steel structure) and piping systems for the new Unit of NA97 Concentration in Setúbal.	<b>SOPAC</b>
<b>2019</b>	Engineering Design for the construction of the new Pipe Rack to cross over the main street, in ADP Fertilizantes Plant, located in Alverca.	<b>ADP FERTILIZANTES, S.A.</b>
<b>2019</b>	Detail Engineering Design, on the fields of mechanical, civil, piping, foundations and structure, for the construction of the new ADP plant for Calcium Nitrate, in Alverca.	<b>ADP FERTILIZANTES, S.A.</b>

## REFERENCE LIST – MAIN PROJECTS 1987 – 2019

YEAR	PROJECT DESCRIPTION	CUSTOMER
<b>2019</b>	Detail Engineering according to API 650, for the construction of 2 steel cylindrical and vertical tanks, with $\Phi$ 6 m x 6m, for storage of fuel oil in Luanda.	<b>PETROTEC, S.A.</b>
<b>2019</b>	Mechanical and civil detail engineering required for the replacement, according to code API 653, of the bottom of each of the two hydrocarbons tanks TK-22 and TK-27, existing in the Trafaria Terminal of OZ ENERGIA GAS, including: <ul style="list-style-type: none"> <li>- Dimensioning and drawings of anchor bolts;</li> <li>- Dimensioning and specification of emergency ventilation</li> <li>- Foundations of the tanks</li> </ul>	<b>OZ ENERGIA GÁS, SA</b>
<b>2019</b>	Mechanical Design of Skids for Measuring Fuel, for GIMTL Matola – Mozambique: <ul style="list-style-type: none"> <li>- Skid Truck Diesel/Mogas;</li> <li>- Skid Wagon Diesel/Mogas;</li> <li>- Skid Truck/Wagon LPG.</li> </ul>	<b>OILWATER, S.A.</b>
<b>2019</b>	Mechanical Detail Engineering, and documentation for obtaining the respective approval, by an Independent Authority, required for the construction of ten cylindrical and vertical tanks of Carbon Steel with 3500 mm x 7700 mm, destined to the storage of oil, that SGI, S.A. intends to build and to erect in the facilities of the new Waste Treatment Plant of Grupo CARMONA, located in Mitrena, Setúbal.	<b>SGI – SOLUÇÕES GERAIS INDÚSTRIA, S.A.</b>
<b>2019</b>	Preparation of the documentation required for instruction of the Environmental Licensing Process, regarding the expansion of the Facilities of Oil Storage and Regeneration, that SISAV, S.A. intends to implement at its Plant in Chamusca.	<b>SISAV, S.A.</b>