



REFERENCE LIST



SIDSA



PORTO DO AÇÚ

LNG terminal

Acciona implemented the Açú Gas Hub project intended to import Liquefied Natural Gas (LNG) and supply natural gas to a Combined Cycle Power Plant located in the municipality of São João da Barra, State of Rio de Janeiro.

A Floating Storage and Regasification Unit (FSRU) with a peak regasification capacity of 21 MM(n)m³/day was permanently moored on the south (inner) side of the North Jetty, where LNG Carriers come alongside the FSRU for ship-to-ship transfer of LNG. The FSRU stores LNG, it is then vaporized and sent

out as gas to the thermal power plant at a pressure range between 50 and 102 barg.

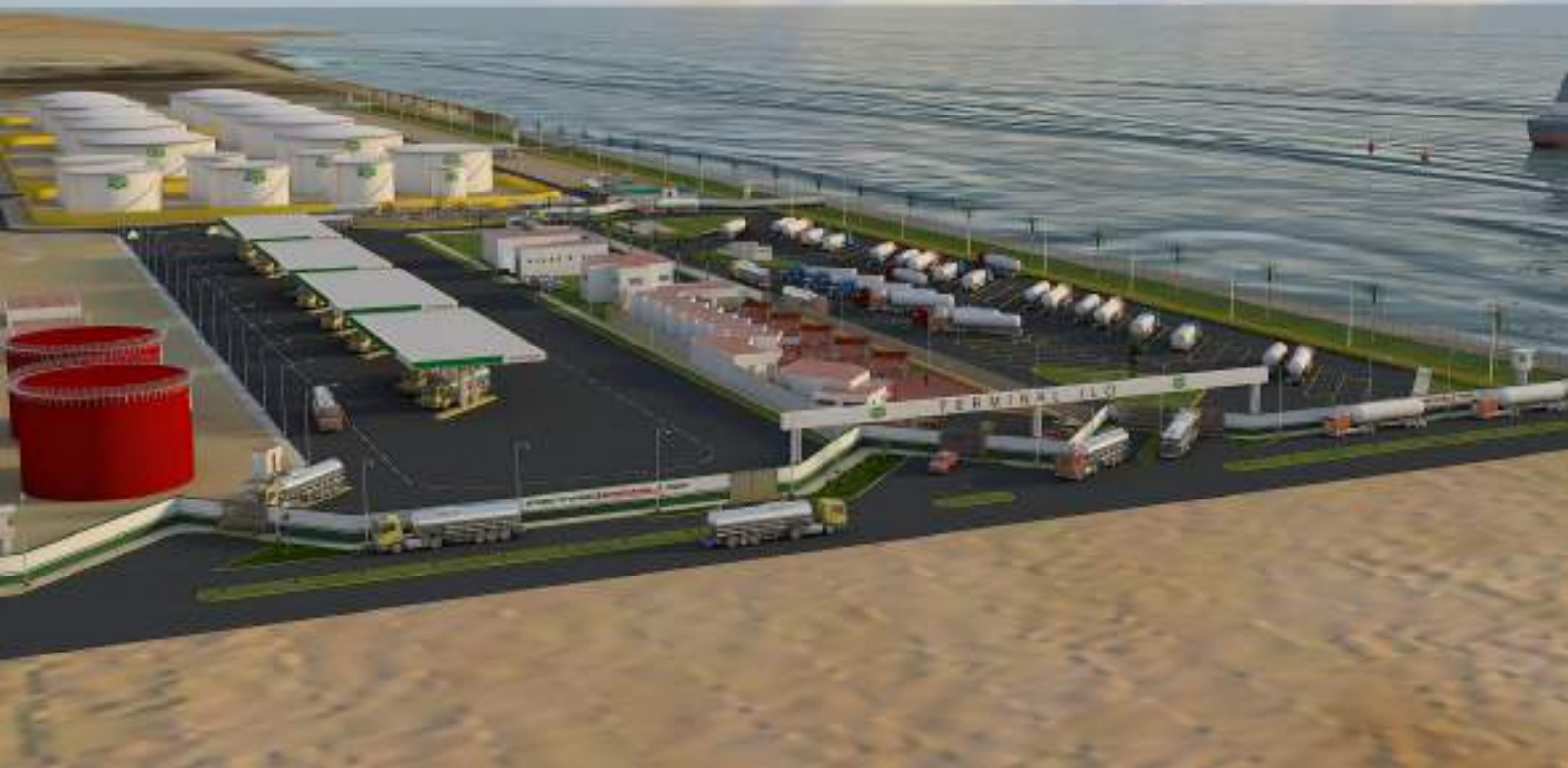
SIDSA successfully supplied high yield strength pipe and fittings, together with the galvanized and painted carbon steel intended for the fire protection systems. On this occasion, we proposed an alternative coating method for the gas transport pipe to the thermal power plant fulfilling the project requirements. In such way, we managed to drastically reduce the delivery time solving an issue with the overall project schedule requirement.

CLIENT:  **acciona**

TYPE: **LNG Terminal**

SCOPE: **3LPE coated pipe and fittings; FPS grooved fittings**

YEAR: **2019**



TERMINAL ILO

Fuel Storage Tanks

PetroPerú together with Felguera-IHI conducted the design and erection of a new set of fuel storage tanks at Loma la Buitrera, Ilo. The plant will consist of docking areas, the tanks and distribution areas for the different stored products. It counts with two submarine ducts that will transport the different hydrocarbons transported by carrier ships that will dock to a multi buoy mooring system.

SIDSA supplied the interconnection pipe, fittings and flanges between the tanks, part of the fire protection system, together with the drainage system scope. It mainly consisted of carbon and galvanized steel, together with HPDE items.

CLIENT:  **Petroperú**

TYPE: **Fuel Storage Tanks**

SCOPE: **ASTM pipe and fittings. HDPE pipe and fittings**

YEAR: **2020**



MARLIM AZUL

Combined Cycle

Cobra underwent the engineering procurement and construction of the Marlim Azul Combined Cycle Power Plant. The plant is located on a site comprised of approximately 7,35 hectares of land located at Rodway RJ-168, Km 7,4, Aroeira, municipality of Macaé in the state of Rio de Janeiro, Brazil. The plant includes one gas turbine, one steam turbine,

one electric generator and one heat recovery steam generator, obtaining a total amount of 565 MW of electrical power.

SIDSA supplied HDPE pipe and fittings together with some adhoc backing rings for the fire protection and subsidiary systems.

CLIENT:  cobra

TYPE: **Combined Cycle**

SCOPE: **HDPE pipe and fittings; backing rings according to adhoc drawings**

YEAR: **2021**



CURTIS

Biomass Plant

Curtis is the largest forestry biomass plant in the Iberian Peninsula and Southern Europe (2022). This 49,9 MW nominal power plant is located in Teixeira, La Coruña. Curtis has a surface area of 103.000 square metres and the capacity to treat 500.000 tonnes of biomass per year.

It is a highly efficient and dry cooling plant in terms of generation and with a reduced level of CO₂ emissions into the atmosphere.

SIDSA successfully completed the delivery of pipes and fittings made of carbon, stainless and alloy steel of different grades, complying with all specifications, at the Curtis Biomass Plant (Spain) in the year 2019. Supported by our warehousing capacity we managed to adapt all the deliveries to the project planning. Finally yet importantly, our carbon and alloy steel stock helped us to complete packages out of manufacturing programs.

CLIENT:  **acciona**

TYPE: **Biomass Plant**

SCOPE: **ASTM pipe fittings and valves**

YEAR: **2019**



CERRO DOMINADOR

Thermal Solar Power Plant

The consortium formed by ACCIONA and ABENGOA conducted the procurement and construction of Cerro Dominador Thermosolar plant in Chile. At the awarding time, it was the first plant in South America to combine a 100 MW photovoltaic plant together with a thermosolar tower plant. Both facilities combined yield a total capacity of 210 MW.

Cerro Dominador complex is located in the town of Maria Elena, at the Atacama desert, is one of the areas with the highest solar radiation rates worldwide.

SIDSA supplied ASTM pipes, fittings and flanges for the thermosolar power plant. The supply consisted of different materials grades such as 347H, 316L, carbon steel, and low alloy grades as well. In addition we also helped to define and supplied various ad hoc condensate pots needed urgently at the plant.

CLIENT:  **ACCIONA**  **ABENGOA**

TYPE: **Thermal Solar Power Plant**

SCOPE: **ASTM pipe fittings, valves and miscellaneous**

YEAR: **2018-2021**



SCHOLVEN

Gas Cogeneration

The Joint Venture formed by Sener and MMEC Mannesmann GmbH conducted the existing Combined Heat and Power plant revamping in Scholven / Gelsenkirchen (Germany). The plant is part of Uniper's strategy to reduce coal consumption, this upgrade is intended to replace part of the units in operation in the Scholven Thermal Power Plant in the short term, and to eliminate coal as fuel in the latter power plant in the medium term.

SIDSA supplied a wide scope of materials under EN standard. It consisted of pipes, fittings (Type B), flanges, bolts and gaskets. The material grade of such items comprised 1.4401, 1.4404 and P265GH. We also supplied ASTM standard materials intended for the auxiliary power plant commissioning.

CLIENT:  **SENER** MMEC **MANNESMANN**

TYPE: **Gas Cogeneration**

SCOPE: **EN pipe and fittings**

YEAR: **2020**



PROJECT TO GREEN HYDROGEN MALLORCA

Photovoltaic Green Hydrogen Production Facility

This project is the core of the European Green Hysland project, coordinated by Enagás and promoted by CEMEX, Acciona and the IDAE. This project aims to deploy the necessary infrastructures to develop a renewable hydrogen ecosystem in Mallorca.

It consists of two photovoltaic power plants located in Lloseta and Petra producing a total power of

15,09 MWp. Both solar facilities generate the renewable electricity to power the Lloseta hydrogen production plant, located in the former CEMEX plant, which produces more than 300 tonnes of 100% green hydrogen per year.

CLIENT:    

TYPE: **Photovoltaic Green Hydrogen**

SCOPE: **ASTM pipe and fittings. HDPE pipe and fittings**

YEAR: **2021**



LNG PLANT GODORF

LNG Plant

SHELL commissioned and built the industrial BIO-LNG COMPLEX at GODORF to suit the increasing demand of LNG production in the industrialized German region of Rhineland. The step up includes cryogenic treatment and processing of liquefied Natural Gas with the highest technical requisites and safety and environmental stringent regulations.

The new processing lines supply around 100.000 t/year of BIO-LNG, mainly processed by bio methane received in-line and then reused and distributed in tankers for green refuelling of big loading vehicles on the German network of green refuelling stations.

SIDSA satisfied the highly demanding technical specification regarding the piping, fittings, flanges and line blanks, as it runs only on the latest EN/DIN normative.

Supposing a technical challenge due to the specific nature of the requisition, SIDSA supplied masterfully all the different piping elements, fulfilling the project needs in time, proposing technical deviations to better fit the normative and helping to design, develop and carry out the O-lets and other pipe derived pieces that had to be specifically adapted to suit the whole plant necessities.

CLIENT:  IDESA

TYPE: **LNG Plant**

SCOPE: **EN pipe, fittings, stud bolts and gaskets**

YEAR: **2021-2022**



TALARA

Refinery

COBRA PERU erected the Talara industrial complex at the same name province of the coastal Peruvian area, to set up a complete modernization of the existing installations including the units of distillation, cracking and vacuum lines.

The complete new upgrade of the plant allows adapting the refining and process units, to fit up the new Peruvian regulations. Thus reducing the climatic impact and producing cleaner and more efficient fuels and lubricants and other derivatives, increasing the total process capacity from 65.000 BPD to 95.000 BPD.

SIDSA successfully supplied on time the complete sections of piping for the Dehydrator and Cracking lines including fittings and all types of pipeline connections, as well as the sections of waste effluents to treatment in cast iron. Matching the demanding technical specification and taking part in proposing improvements in the design of the wall passing-through sections, in such a way that the construction and assembly of those effluent lines were eased and achieved on time.

CLIENT:  cobra

TYPE: **Refinery**

SCOPE: **ASTM pipe and fittings. HDPE pipe and fittings**

YEAR: **2019-2021**



JORF LASFAR

Sulphuric Acid Plant

This ACS project scope consists in two new sulphuric acid plants at OCP Jorf Lasfar complex (Morocco). ACS is responsible of the basic and detailed engineering, equipment and material supply, construction and implementation of two 5.000 tons-per-day sulphuric acid plants.

Sulphuric acid is used as a commodity for the elaboration of granulated phosphate fertilizers and the process excess heat generated by these plants is employed to produce electrical power. These plants were

two of the largest sulphuric acid plants worldwide at the time.

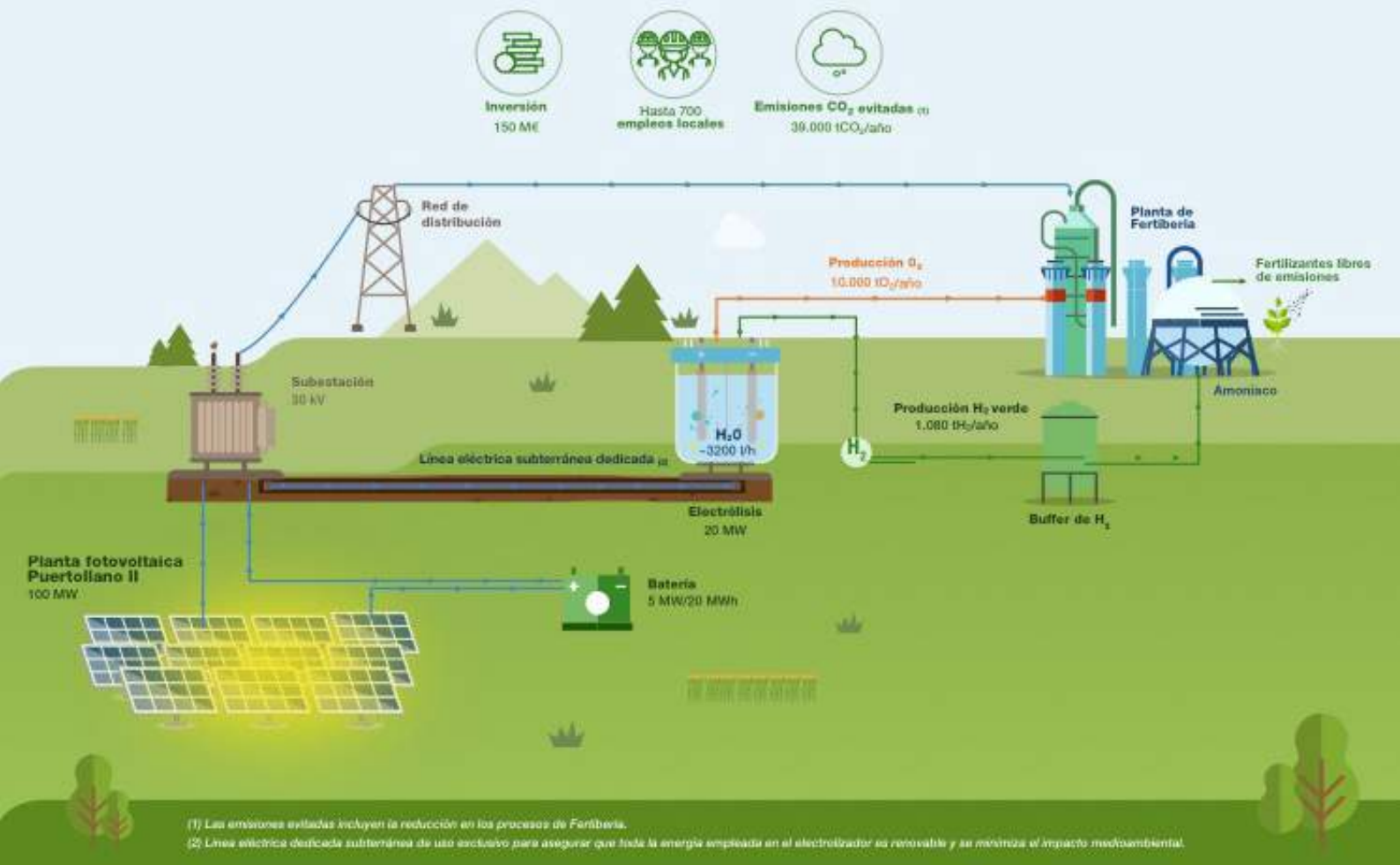
SIDSA has supplied more than 500 units of carbon steel and stainless steel manual Plug valves and also Steam-Jacketed valves for sulphuric acid process, including PFA Lined valves. In addition to this, SIDSA also has supplied the BW and forged fittings of one of the plant expansions, and some adhoc pieces consisting of condensate pots and curved stainless steel sheets.

CLIENT:  **intecsa**
industrial

TYPE: **Sulphuric Acid Plant**

SCOPE: **ASTM pipe fittings, valves and miscellaneous**

YEAR: **2021**



PUERTOLLANO

Green H2 plant

The Puertollano Green Project plant, located in Ciudad Real, consists of a 100 MW photovoltaic solar plant, a lithium-ion battery system with a storage capacity of 20 MWh and one of the largest electrolytic hydrogen production systems in the world (20 MW). All from 100 % renewable sources.

This is already one of the most efficient plants in the European Union with a production capacity of more than 200.000 t/year. Fertilberia updates and modifies its plant to be able to use the green hydrogen produced

to manufacture green fertilisers and subsequently to reduce natural gas consumption by over 10 %.

SIDSA successfully completed the delivery of H2 Critical Control and Shut-Off valves complying with all the specifications. Supported by our partners, SIDSA contributed in approaching the initial project specifications to H2 technical trends coming from former real experiences in EU with hydrogen processes.

CLIENT: 

TYPE: **First Green Hydrogen Production Facility in Spain**

SCOPE: **Hydrogen ball and control valves**

YEAR: **2021**



STEAM REHEATERS-PERTAMINA

Refinery

AIR LIQUIDE was appointed to engineer procure and install the full section for main STEAM REHEATERS, trusting NOVARGI ENGINEERING to develop and supply this core part of the plant located at BALIKPAPAN according to PERTAMINA'S rules and technical conditions.

Such scope included the highly demanding performance of the materials and the very strict metallurgical condition of the main manifold and piping auxiliary lines. The new Steam Reheater boosts the overall

performance of the plant due to its high temperature of operation exceeding regularly peaks above 750°C.

SIDSA took active part in the proposal and definition of the most critical metallurgical parameters, Heat Treatments and Control of unwanted effects, successfully satisfying the needs of this particularly demanding supply. After careful tracking and control of the austenitic and martensitic materials throughout the whole production process, SIDSA successfully delivered the full package of piping and fittings.

CLIENT:  NOVARGI

TYPE: **Refinery**

SCOPE: **Pipe and fittings in AISI 347H**

YEAR: **2020**



CUBILLOS

Biomass

WOOD participated under an ACCIONA EPC main contract in the construction of the power plant boiler. This 49,9 MW biomass plant is powered by forest-based biomass, and it generates renewable energy equivalent to the consumption of 50.000 homes. Cubillos Biomass Plant is located in Cubillos del Sil (León) and stems out over the rest Iberian Peninsula and in southern Europe biomass plants.

The plant occupies an area of approximately 100.000 square metres and generates energy from forest biomass. The consumption is estimated in 280.000 tonnes per year and it helps in the forest management

of the forests of Castilla y León. The project incorporates the latest technological innovations applied to biomass plants.

SIDSA successfully completed the supply of both the main contract and the boiler pipes and fittings made of carbon, stainless and alloy steel of different grades, complying with all specifications in 2019. Supported by our warehousing capacity we managed to adapt all the deliveries to the project planning. Finally yet importantly, our carbon and alloy steel stock helped us to complete packages out of manufacturing programs.

CLIENT:  

TYPE: **Biomass**

SCOPE: **ASTM pipe, fittings and valves**

YEAR: **2019**



BOG

Compresor de Gas de Boil Off C-6000

This Project was awarded on 2019 to TSK and includes the design, supply, construction and installation of new Boil-Off Gas compressor C-6000 and the construction of associated facilities for the Gas compressor C-2002 replacement.

It consists of a Boil-Off Gas system located at the Barcelona Terminal of Enagas. This BOG system is modified with the aim of avoiding CO2 emissions due to

the combustion of the excess BOG generated in the storage tanks in order to comply with environmental commitments.

SIDSA successfully supplied the whole piping, manual ball valves and (ESD) Emergency Shut Down ball valves with fire protection box for natural gas.

CLIENT: 

TYPE: **Boil-Off Gas system**

SCOPE: **Piping, manual and Emergency Shut Down (ESD) ball valves**

YEAR: **2019**



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