

# INDUSTRIAL SERVICES

**THE ACTIVITY OF THE INDUSTRIAL SERVICES AREA IS FOCUSED ON THE DEVELOPMENT, CONSTRUCTION, MAINTENANCE AND OPERATION OF ENERGY, INDUSTRIAL AND MOBILITY INFRASTRUCTURES.**





# INDUSTRIAL SERVICES

**The ACS Group's Industrial Services area is one of the main global competitors in the field of applied industrial engineering.**

The **ACS Group's Industrial Services area** is one of the main global competitors in the field of applied industrial engineering, with projects in more than 50 countries. Its activity is focused on the development, construction, maintenance and operation of energy, industrial and mobility infrastructures through a large group of companies.

Within its sector, the Industrial Services area is a leader within the Spanish market and one of the main competitors in Latin America, where it has extensive experience and steady involvement in executing turnkey projects and providing services, especially in Mexico and Peru where it occupies a leading position. Likewise, the Industrial Services area is increasingly involved in Europe and Middle East countries, where the Group has been awarded significant projects in recent years. Equally, the Group is consolidating its presence in areas such as North America, Africa and Asian Pacific countries.

For the next few years, the Industrial Services area will continue consolidating its position and leadership situation in the countries in which it already has strong implementation, combining it with sustainable expansion toward new geographical markets with strong potential for growth, making use of the synergies arising from joint action with other ACS Group companies.

The Industrial Services area will continue to focus on consolidating its position as a global benchmark in the sector, thanks to ongoing technological innovation and its technical excellence. This, seeking to efficiently and profitably combine Support Services to Industry which provide greater recurrence and stability with the activity of EPC Projects, which, being specialised and specific solutions for each client, contribute higher profitability levels.

With regards to the activities carried out by the Industrial Services area, the recent agreements of the COP 21 in Paris in



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December 2015, will provide an additional boost over the medium to long-term for renewable energies and energy efficiency services. On this aspect, the ACS Group's Industrial Services area is a leading company in carrying out projects under EPC thermal solar and wind energy regime, with increasing presence in large photovoltaic projects all over the world, as well as being the regional leading in mini-hydroelectric in Latin America and putting biomass plants into operation. From a technological evolution stance, the main objectives driving these projects focus on reducing costs involved in solar energy and offshore wind energy projects, as well as combining different renewable energy sources for improving the flexibility and integration of renewable energies into the electrical systems.

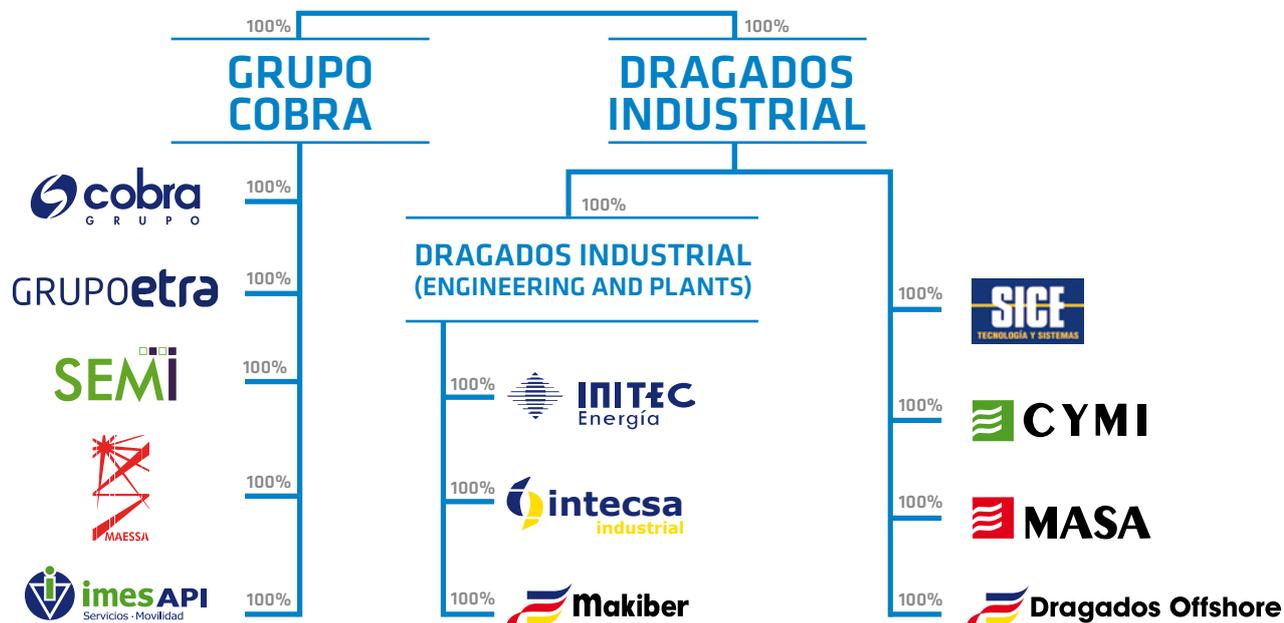
In relation to energy efficiency, its main activities are focused on sustainable mobility. Likewise, ACS Group holds a global leading position in technologies for managing urban

and motorway traffic, which, combined with its presence as a support company for the "utilities" of energy and communication services, enables it to take part in activities entailing a large potential for growth, such as the "Smart Cities" or developing electric vehicle charging infrastructure.

On the other hand, the experiences and capability of the Industrial Services area for developing projects will lead to continuing consolidating their position in concessional projects both in the energy field (renewable generation, transporting electricity, sustainable transportation) and in the environmental field (desalination, purification and treatment plants).

Likewise, the Industrial Services are will continue developing projects related to hydrocarbon development and use. These are fields in which the ACS Group's Industrial Services area has extensive experience and in which it has recognition from the sector.

## INDUSTRIAL SERVICES



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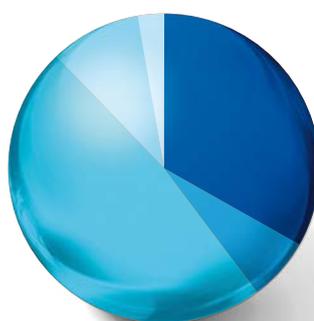
## MAIN FIGURES

In 2015, the **turnover** of the Industrial Services area was 6,501 million euros, a 3.7% decrease with respect to the previous year. It is worth highlighting that in 2015, all figures within this area are affected by the sale of renewable assets during the first quarter of 2015, without taking into account this effect the sales would have increased by 0.6% with respect to 2014.

Sales in international markets, stood at 4,335 million, 1.2% above 2014, and represent 67% of total turnover, thanks to the significant increase of activity in Asia Pacific, thanks to the major contracts awarded in previous years in the Middle East and other countries in this area (Australia, Japan, India), while sales in America, the Group's main geographic area, have remained practically stable.

Turnover in Spain for 2015 stands at 2,166 million euros, which represents a 12.1% reduction with respect to 2014, due to the sale of the above mentioned renewable assets.

## REVENUE BREAKDOWN BY GEOGRAPHICAL AREA



- SPAIN: 33%
- REST OF EUROPE: 7%
- AMERICA: 47%
- ASIA PACIFIC: 10%
- AFRICA: 3%

## INDUSTRIAL SERVICES

MILLION EUROS	2014	2015*	% Var.
SALES	6,750	6,501	-3.7%
EBITDA	902	680	-24.6%
MARGIN	13.4%	10.5%	
EBIT	810	608	-25.0%
MARGIN	12.0%	9.4%	
NET PROFIT	420	320	-23.7%
MARGIN	6.2%	4.9%	
ORDER BOOK	8,021	8,421	5.0%
MONTHS	14	16	
NUMBER OF EMPLOYEES	41,272	40,006	

\* The sale of the renewable energy assets took place in the first quarter of 2015.

The activities in the ACS Group's Industrial Services area combine two fundamental lines of business: Support Services to Industry and EPC Projects.

**Support Services to Industry** are aimed at industrial maintenance contracts and services, as well as support services to the clients' operational activities, and in turn cover three areas of activity:

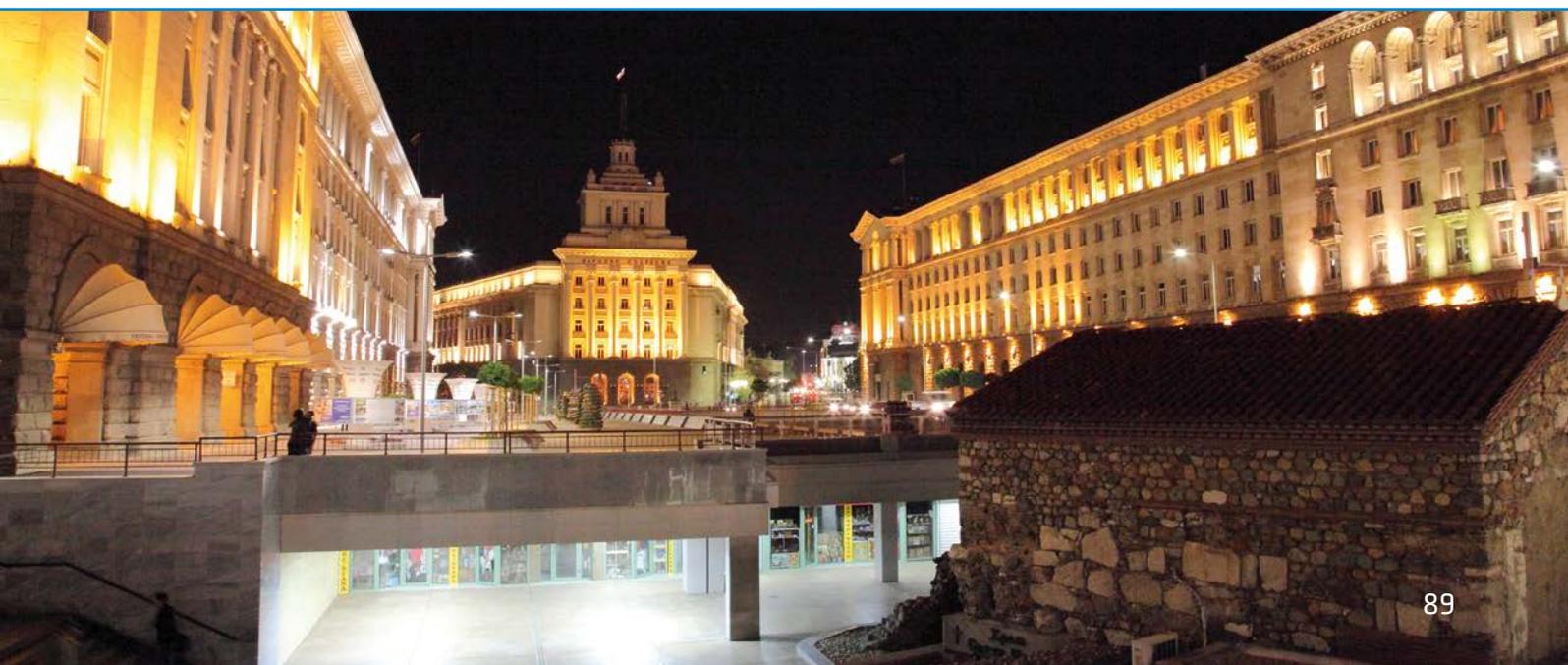
- **Networks:** electricity, gas and water network maintenance services and activities, in which the ACS Group has over 80 years' experience.
- **Specialised Products:** covering construction, installation and maintenance activities for high-voltage electricity lines, telecommunications systems, railway installations, electricity facilities, mechanical assemblies and heating and cooling systems.
- **Control Systems:** activities for installing and operating control systems for industrial and municipal services, noteworthy among which are traffic and transport control systems and systems for comprehensive management of public infrastructures, segments in which ACS has become the leading engineering supplier.

The ACS Group's activity in **EPC Projects** focus on the execution of "turnkey" or EPC<sup>7</sup> projects for the design, construction and commissioning of projects connected to the energy sector (electricity generation, also being noteworthy for the execution of projects related to renewable energies, assets related to the oil and gas sector, among others) and engineering applied to industry.

The ACS Group also has outstanding experience in developing and taking a stake in concession assets, basically related to energy, such as wind farms, thermal solar plants (either with central tower or with parabolic trough concentrators and storage of molten salt technology), transmission lines, purifying plants and desalinating plants.

So, at 31 December 2015, the ACS Group held stakes in 2 wind farms in Spain, with a gross installed capacity of 13.5 MW and 3 wind farms abroad, with gross installed capacity of 160.9 MW, as well as the participation in two wind farms in construction, one in Peru and the other one in Portugal with a gross installed capacity of 117.2 MW.

<sup>7</sup> EPC stands for Engineering, Procurement and Construction.



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In thermal solar energy, in Spain the ACS Group had a 10% stake in two other plants of 49.9 MW each. Outside Spain it has a stake in the Tonopah thermal solar plant in the United States, with an installed power of 110 MW, which is one of the largest tower thermal solar plants with molten salt storage in the world, as well as thermal solar plant in South Africa with an installed capacity of 100 MW, both currently under construction.

In addition, the ACS Group also has a stake in several concession projects for the management and maintenance of high-voltage lines mainly in Brazil, with secured financing from the Banco Nacional de Desenvolvimento Economico e Social do Brasil (BNDES). At 31 December 2015, the ACS Group held stakes in 8 transmission lines, with a total length of 5,183 kilometres, and the Sete Lagoas electricity substation.

The ACS Group has also been developing equipment and technologies for water purification and desalination since 1983, as a global leader in this field, especially in water desalination by reverse osmosis, thanks to its extensive experience in carrying out projects in countries such

as Algeria, Australia, Mexico, Qatar, etc. The ACS Group had stakes in two desalination plants at 31 December 2015 –one in Spain and one in Algeria– with a capacity of 272,000 m<sup>3</sup>/day of water production for human consumption.

Likewise, on these lines indicating that during the first quarter of 2015 ACS Group witnessed the creation and flotation of its subsidiary Saeta Yield S.A., integrating the mature energy assets of the ACS Group.

The ACS Group sold 51% of Saeta Yield on the market to qualified institutional investors, and 24.4% to Global Infrastructure Partners. With this, ACS Group maintains at 31 December 2015 a 24.21% stake in Saeta Yield. At 31 December 2015, Saeta has an installed power of 538.5 MW in wind farms and 149.8 MW in thermal solar plants.

Simultaneously, ACS Group reached an agreement with Global Infrastructure Partners for the sales of 49% of Bow Power, a company dedicated to developing energy assets, over which Saeta Yield holds a right of first offer. Thus, at 31 December 2015, ACS Group held a 51% stake in Bow Power, which on this



## INDUSTRIAL SERVICES CONCESSIONAL ASSETS AT 31 DECEMBER 2015

WIND FARMS	Number of wind farms	Installed capacity (MW)	Average stake
WIND FARMS IN OPERATION	5	174.4 MW	76%
WIND FARMS IN CONSTRUCTION	2	117.2 MW	96%
THERMAL SOLAR PLANTS	Number of plants	Installed capacity (MW)	
STAKE IN THERMAL SOLAR PLANTS IN OPERATION	2	99.8 MW	10%
THERMAL SOLAR PLANTS IN CONSTRUCTION	2	210 MW	29%
ELECTRICITY TRANSMISSION ASSETS	Number	Kilometers	
TRANSMISSION LINES	8	5,183	47%
ELECTRICAL SUBSTATION	1		100%
PHOTOVOLTAIC PLANTS	Number of plants	Installed capacity (MW)	
PHOTOVOLTAIC PLANTS IN OPERATION	3	12.4	80%
OTHER CONCESSIONAL ASSETS	Number	Capacity	
DESALINISATION PLANTS	2	272,000 m <sup>3</sup> /day	59%
WATER TREATMENT PLANTS	31	1,774,715 m <sup>3</sup> /day	99%
COMBUSTION CYCLE	1	223 MW	50%

date had an installed power of 151.2 MW in wind farms, at different stages of development, and 149.7 MW in thermal solar plants, as well as a transmission line which is 402 kilometres long.

With these two operations, the Group has restructured its stake in these assets, remaining the industrial shareholder of reference in Saeta Yield to promote its

profitable growth, and strengthening the rotation strategy of the mature assets developed by the Group.



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In 2015, the activity of Support Services to Industry, grew by 8.3% with respect to 2014, reaching 3,759 million euros, while the EPC Projects activity decreased by 7.9% due to the completion of several major projects combined with a delay in starting new awards. The sales of Renewable Energy Generation reflect a 72.1% decrease due to the sale of renewable assets during the first quarter of 2015.

The Industrial Services area has a balanced diversification and business mix, enabling it to face up to the changes in situation and retaining stable levels of profitability. In this way the EPC Projects activity (representing 43% of the total) combines

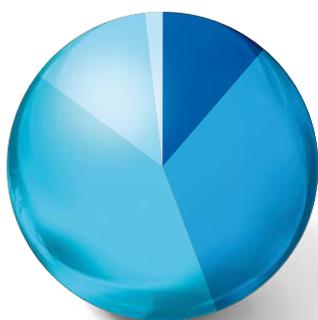
with the Specialised Products activity, (33% of the total) which features technologically complex businesses with higher margins, with the Networks and Control Systems, that contribute greater stability and visibility to the volume of business with their recurrence.

The technological capacity and its consolidated international track record, lead to the Industrial Services area being of high geographic diversification, especially in EPC Projects and Specialised Installations areas, with turnover outside Spain of 94% and 60% respectively, which contributes greater stability in the case of fluctuations in the domestic market.

## REVENUE BREAKDOWN BY ACTIVITY

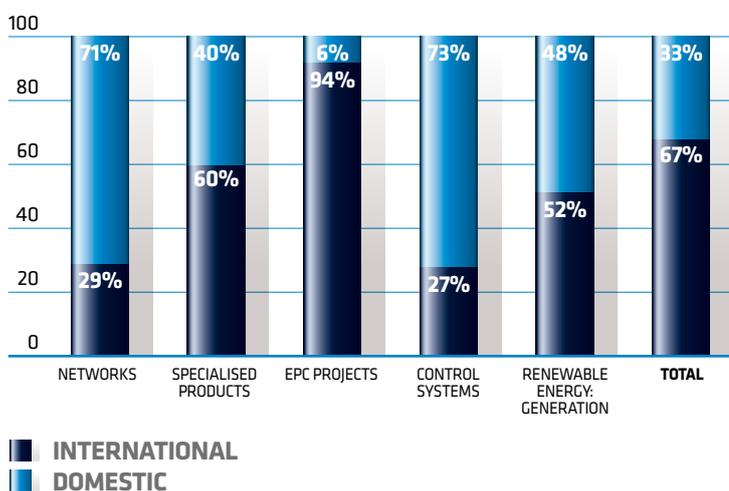
MILLION EUROS	2014	2015	% Var.
<b>SUPPORT SERVICES</b>	<b>3,471</b>	<b>3,759</b>	<b>8.3%</b>
<b>NETWORKS</b>	<b>661</b>	<b>738</b>	<b>11.7%</b>
<b>SPECIALISED PRODUCTS</b>	<b>1,965</b>	<b>2,163</b>	<b>10.0%</b>
<b>CONTROL SYSTEMS</b>	<b>845</b>	<b>859</b>	<b>1.7%</b>
<b>EPC PROJECTS</b>	<b>2,923</b>	<b>2,691</b>	<b>-7.9%</b>
<b>RENEWABLE ENERGY: GENERATION</b>	<b>406</b>	<b>113</b>	<b>-72.1%</b>
<b>CONSOLIDATION ADJUSTMENTS</b>	<b>(50)</b>	<b>(63)</b>	<b>n.a.</b>
<b>TOTAL</b>	<b>6,750</b>	<b>6,501</b>	<b>-3.7%</b>

## REVENUE BREAKDOWN BY ACTIVITY

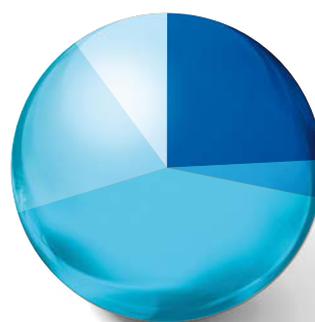


- NETWORKS: 11%
- SPECIALISED PRODUCTS: 33%
- EPC PROJECTS: 41%
- CONTROL SYSTEMS: 13%
- RENEWABLE ENERGY: GENERATION: 2%

## REVENUE BREAKDOWN BY MARKET



## ORDER BOOK BREAKDOWN BY GEOGRAPHICAL AREA



The Industrial Services area recorded an EBITDA of 680 million euros for 2015, representing a 10.5% margin on sales, while the net profit for 2015 was recorded at 320 million euros.

On the other hand, in 2015 the Industrial Services' **order book** increased by 5%, reaching 8,421 million euros, driven by the increase in the national order book and the major contracts awarded in the international sphere, especially those related to the field of energy and the development of turnkey industrial plants in Latin America and countries like Saudi Arabia, India or Japan, which have led to a 5.1% in the order book

related to international markets. Activities EPC Projects and Specialised Installations represented 80% of the total order book, with 96% and 78% respectively of their order book projects located abroad.

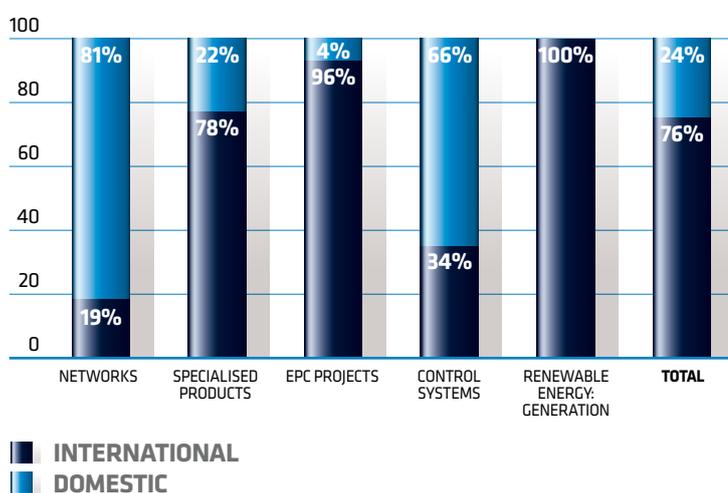
## ORDER BOOK BREAKDOWN BY ACTIVITY

MILLION EUROS	2014	2015	% Var.
<b>SUPPORT SERVICES</b>	<b>4,833</b>	<b>4,867</b>	<b>0.7%</b>
<b>NETWORKS</b>	<b>474</b>	<b>448</b>	<b>-5.5%</b>
<b>SPECIALISED PRODUCTS</b>	<b>3,071</b>	<b>3,171</b>	<b>3.3%</b>
<b>CONTROL SYSTEMS</b>	<b>1,288</b>	<b>1,248</b>	<b>-3.1%</b>
<b>EPC PROJECTS</b>	<b>3,096</b>	<b>3,545</b>	<b>14.5%</b>
<b>RENEWABLE ENERGY: GENERATION</b>	<b>92</b>	<b>9</b>	<b>-90.3%</b>
<b>TOTAL</b>	<b>8,021</b>	<b>8,421</b>	<b>5.0%</b>

## ORDER BOOK BREAKDOWN BY TYPE OF ACTIVITY



## ORDER BOOK BREAKDOWN BY TYPE OF ACTIVITY



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## INDUSTRIAL SERVICES' ACTIVITY 2015\*

MILLION EUROS

### REVENUE

#### SAPIN

2014	2,466
2015	2,166

#### REST OF EUROPE

2014	482
2015	428

#### AMERICA

2014	3,126
2015	3,112

#### ASIA PACIFIC

2014	443
2015	633

#### AFRICA

2014	234
2015	162

### ORDER BOOK

#### SPAIN

2014	1,937
2015	2,026

#### REST OF EUROPE

2014	370
2015	350

#### AMERICA

2014	3,626
2015	3,551

#### ASIA PACIFIC

2014	1,247
2015	1,659

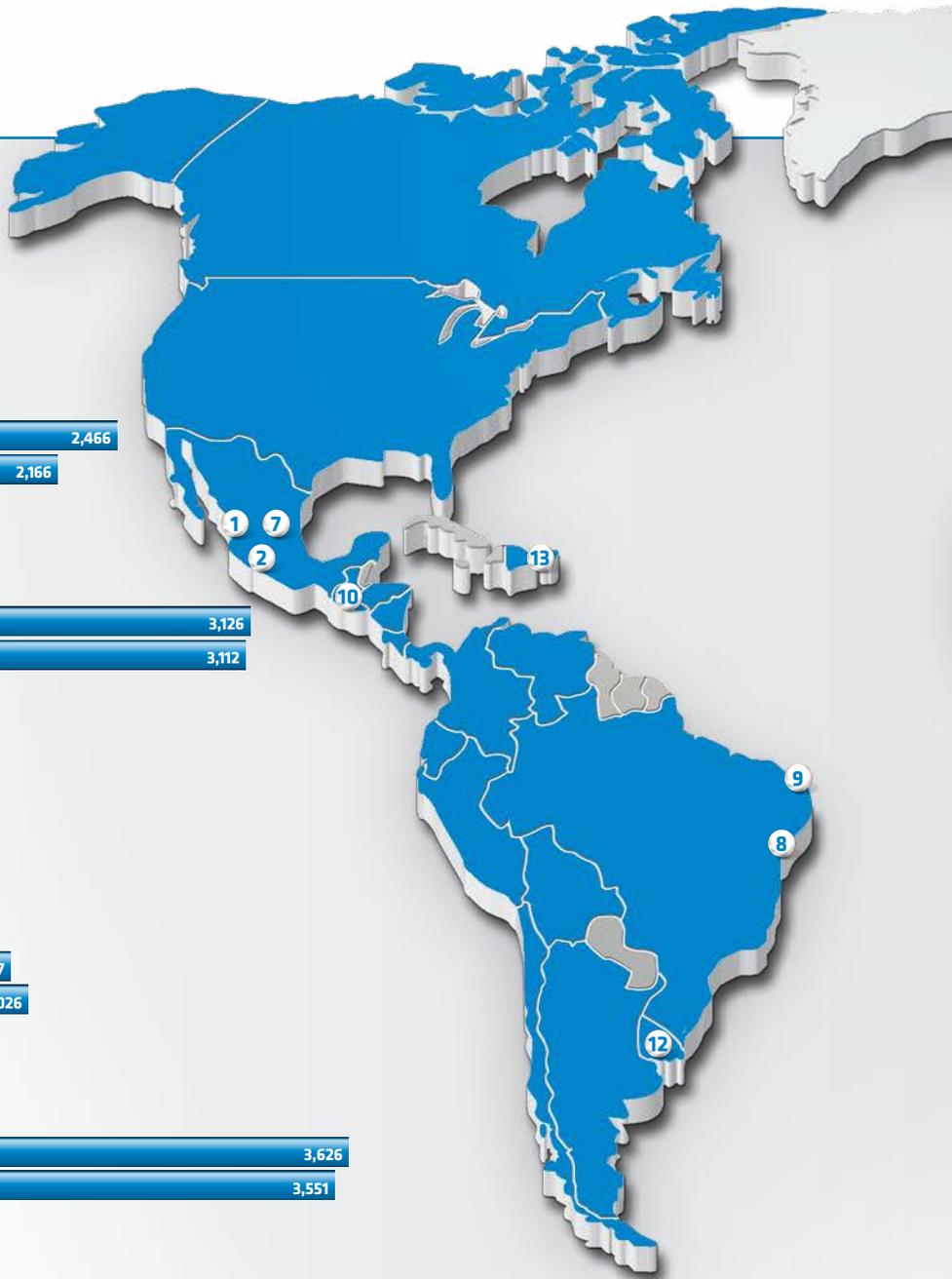
#### AFRICA

2014	842
2015	836

### 2015 REVENUE BREAKDOWN BY COUNTRY

SPAIN	2,166
MEXICO	1,563
SAUDI ARABIA	478
PERU	359
BRAZIL	209
PORTUGAL	195
CHILE	132
UNITED STATES	132
DOMINICAN REPUBLIC	119
OTHERS	1,148

\* Main countries where Industrial Services has reported ongoing projects or new awards.





## 2015 INDUSTRIAL SERVICES MAIN AWARDS

<b>1</b>	<b>MEXICO</b> CONSTRUCTION IN THE MIGUEL ALLENDE DE TULA REFINERY OF PLANTS FOR THE PRODUCTION OF ULTRA-LOW SULFUR DIESEL	<b>AMOUNT</b> <b>586</b> MILLION EUROS	<b>7</b>	<b>MEXICO</b> ENGINEERING, SUPPLY, CONSTRUCTION AND INSTALLATION OF THE OIL DRILLING PLATFORM PP-TECKEL-A.	<b>AMOUNT</b> <b>135</b> MILLION EUROS	<b>13</b>	<b>DOMINICAN REPUBLIC</b> EPC PROJECT FOR THE CONSTRUCTION OF KIVU WIND FARM WITH AN INSTALLED CAPACITY OF 49.5 MW.	<b>AMOUNT</b> <b>85</b> MILLION EUROS
<b>2</b>	<b>MEXICO</b> CONSTRUCTION OF VALLE DE MEXICO II COMBINED CYCLE PLANT WITH AN INSTALLED CAPACITY OF 615 MW.	<b>AMOUNT</b> <b>387</b> MILLION EUROS	<b>8</b>	<b>BRAZIL</b> EPC PROJECT FOR THE CONSTRUCTION OF ODOVA ELECTRICITY TRANSMISSION LINE WITH 281 KILOMETRES LENGTH IN BAHIA STATE.	<b>AMOUNT</b> <b>123</b> MILLION EUROS	<b>14</b>	<b>SAUDI ARABIA</b> SUPPLY AND INSTALLATION OF ELECTROMECHANICAL EQUIPMENT FOR 3 ELECTRICAL SUBSTATIONS IN DIAHRAN.	<b>AMOUNT</b> <b>83</b> MILLION EUROS
<b>3</b>	<b>ISRAEL</b> CONTRACT FOR THE ELECTRIFICATION OF 420 KILOMETERS OF ISRAEL RAILWAY NETWORK.	<b>AMOUNT</b> <b>386</b> MILLION EUROS	<b>9</b>	<b>BRAZIL</b> EPC PROJECT FOR THE CONSTRUCTION OF ESPERANZA ELECTRICITY TRANSMISSION LINE WITH 492 KILOMETRES LENGTH IN RIO DO GRANDE STATE.	<b>AMOUNT</b> <b>120</b> MILLION EUROS	<b>15</b>	<b>SINGAPOUR</b> EPC PROJECT FOR THE CONSTRUCTION OF TUAS 3 DESALINISATION PLANT WITH A CAPACITY OF 136,000 M <sup>3</sup> /DAY.	<b>AMOUNT</b> <b>81</b> MILLION EUROS
<b>4</b>	<b>SAUDI ARABIA</b> EPC PROJECT FOR THE ENGINEERING AND CONSTRUCTION OF DUBA COMBINED CYCLE PLANT WITH A TOTAL POWER OF 500 MW.	<b>AMOUNT</b> <b>314</b> MILLION EUROS	<b>10</b>	<b>GUATEMALA</b> DESIGN, ENGINEERING, SUPPLY, CONSTRUCTION AND COMMISSIONING OF RENACE IV HYDROELECTRIC PLANT.	<b>AMOUNT</b> <b>92</b> MILLION EUROS	<b>16</b>	<b>ALGERIA</b> MECHANICAL, ELECTRICAL AND PLUMBING INSTALLATIONS FOR THE NEW TERMINAL OF THE ALGIERS AIRPORT.	<b>AMOUNT</b> <b>75</b> MILLION EUROS
<b>5</b>	<b>SPAIN</b> MAINTENANCE CONTRACT FOR TELEFONICA IN SPAIN.	<b>AMOUNT</b> <b>198</b> MILLION EUROS	<b>11</b>	<b>JAPAN</b> EPC PROJECT FOR THE CONSTRUCTION OF MASHIKI PHOTOVOLTAIC FARM WITH AN INSTALLED CAPACITY OF 47.7 MW.	<b>AMOUNT</b> <b>89</b> MILLION EUROS	<b>17</b>	<b>SPAIN</b> CONTRACT FOR THE MAINTENANCE SERVICES OF SEVERAL STRECHTS OF THE SPANISH HIGH-SPEED RAILWAY LINE.	<b>AMOUNT</b> <b>71</b> MILLION EUROS
<b>6</b>	<b>UNITED ARAB EMIRATES</b> EPC PROJECT FOR THE CONSTRUCTION OF RAS AL-KHAIMAH DESALINISATION PLANT WITH A CAPACITY OF 100,000 M <sup>3</sup> /DAY.	<b>AMOUNT</b> <b>148</b> MILLION EUROS	<b>12</b>	<b>URUGUAY</b> EPC PROJECT FOR THE CONSTRUCTION OF KIVU WIND FARM WITH AN INSTALLED CAPACITY OF 48.6 MW.	<b>AMOUNT</b> <b>87</b> MILLION EUROS	<b>18</b>	<b>NORWAY</b> EPC PROJECT FOR THE CONSTRUCTION OF THE JOHAN SVERDRUP LIVING QUARTER JACKET.	<b>AMOUNT</b> <b>68</b> MILLION EUROS

# INDUSTRIAL SERVICES

## EUROPE

During 2015, ACS Group's Industrial Services area invoiced 2,594 million euros in Europe, representing 40% of the total turnover. The order book for this geographic area totalled 2,376 million euros.

In Spain, the sales are recorded at 2,166 million euros, 12.1% below the figure recorded in 2014 for the sale of renewable assets in Spain during the first quarter. Without this effect, the turnover would have remained stable. Thus, the Industrial Services area continues to be a leading company in Spain in the field of applied engineering, thanks to the strong diversification of its services and its long-standing experience in the sector. This has allowed for, in 2015, the Industrial Services order book within the national market to have increased by 4.6% with respect to 2014, with contracting during the year exceeding 2,200 million euros.

Within Spain, the Group continued to execute significant projects during 2015, such as:

- Construction and maintenance of the installations overhead contact line and associated systems of the high-speed railway stretch between Albacete and Alicante and its subsequent maintenance for two years.
- Contract for the maintenance service of the street lighting of Murcia.
- Comprehensive maintenance of four coal-fired power stations in Galicia.
- Contract for installation and maintenance of telephone, broadband services, voice, fibre and television networks for Movistar in various Spanish provinces.
- Construction and maintenance of Natural Gas networks including the gas distribution network, emergency

call-out service and industrial connections in different areas within Spain.

- Contract for developing climate control installations, mechanics and control of the new data processing centre for the BBVA in Tres Cantos (Madrid).

In the rest of Europe, ACS Group's Industrial Services area recorded sales for 2015 amounting to 428 million euros, which represent 7% of its turnover. In this sense, the Group is present in major European countries such as Portugal, the United Kingdom, France, Italy, Ireland, Poland, Norway and some Eastern countries, developing projects mainly related to power generation, control systems and other specialised installations.

Among the main projects carried out by the area in these countries in 2015 would include the following:

- Increasing the installed capacity of the Penamacor wind farm in Portugal.
- Project for the construction of a drinking water treatment plant and supply networks in the regions of Agnita and Dumbrăveni (Romania).
- Construction of a photovoltaic plant with 49.9 MW of installed capacity in West Raynham (United Kingdom).
- Implementation of a 17 kilometres underground electric interconnection line between Moirans and Vinay (France).
- Mechanical assembly work for the nitric acid plant owned by Yara Norge (Norway).
- Maintenance of the street lights in Sofia, Bulgaria.
- Control and security system installations in the tunnel under the Vistula river (Poland).

## EPC PROJECT FOR THE MARINER PROJECT OIL RIG

### CLIENT

Statoil UK.

### PROJECT TYPE

EPC Projects.

### PROJECT EXECUTION DATES

2012-2015.

### AMOUNT

214 million euros.

### LOCATION

Project Implementation: Puerto Real, Cádiz –  
Definitive location: Mariner oilfield, British sector of  
the North Sea

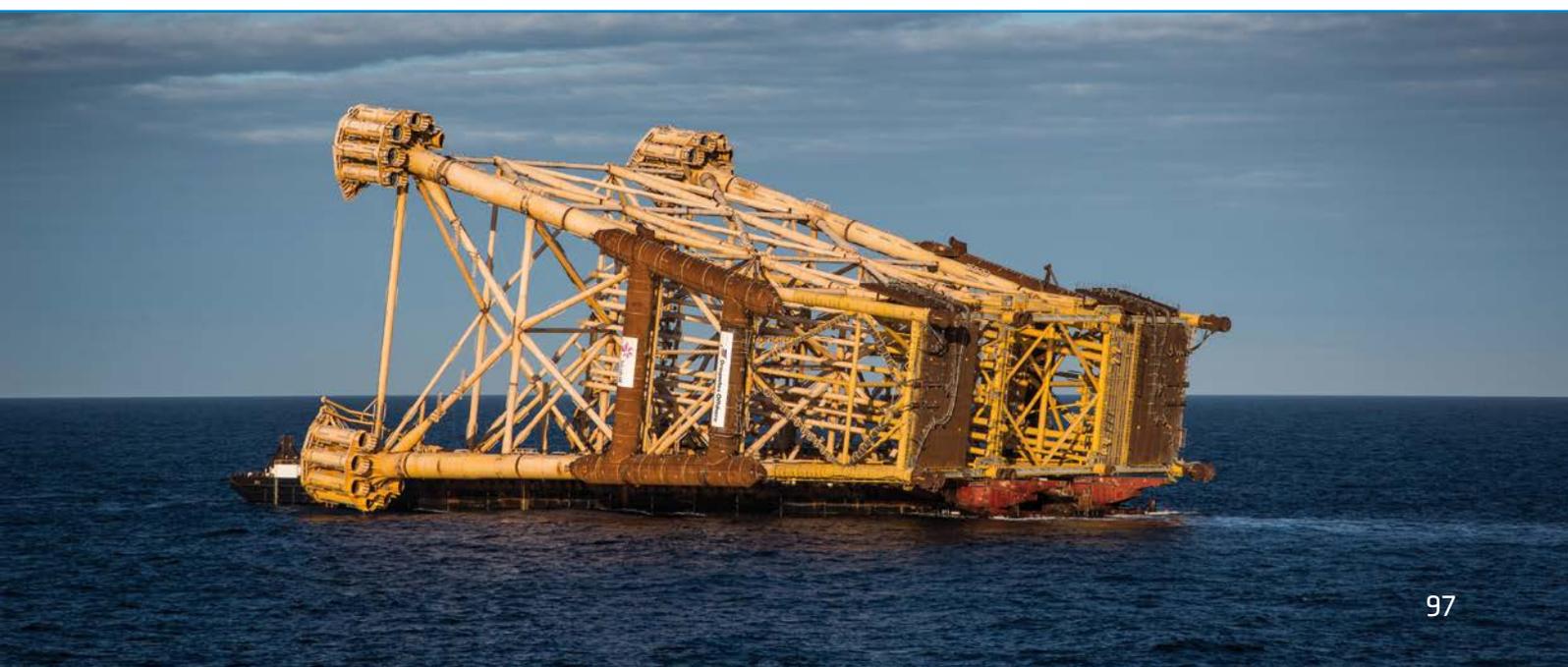
### COMPANIES INVOLVED IN THE PROJECT

Dragados Offshore.

### FULL PROJECT DESCRIPTION

In 2015, Dragados Offshore completed for Statoil the oil rig (jacket) for the Mariner project. Within this project, Dragados Offshore has been responsible for executing the Works involved in the engineering, procurement and construction (EPC) of the rig, until its loading and mooring to the transport ship. The jacket weighs approximately 22,400 tonnes, and it is the largest of its kind ever built by Statoil and by Dragados Offshore.

The Mariner oilfield is located approximately 130 kilometres off the British coast and 40 kilometres from the United Kingdom/Norway international border, with a water depth ranging from 97 metres to 112 metres. It is expected that the rig rested on the jacket will produce heavy crude through 50 wells. The unit will in turn be connected to a floating storage and unloading unity. The rig will separate the gas and water from the crude oil that is produced. The stabilised crude oil will be piped to the storage ship and from there it will be sent to the mainland using tankers.



# INDUSTRIAL SERVICES

## AMERICA

In ACS Group's Industrial Services area, America remained the main geographic area in 2015 due to revenue, with recorded sales of 3,112 million euros, representing 47% of the revenue, as well as its order book which closed 2015 at 3,551 million euros, which represents 42% of the total order book.

In Latin America, the ACS group is a forerunner in the applied engineering sector, holding a leading position in several of the most significant countries, such as Mexico and Peru. Sales in this area exceed 2,900, which represents more than a 5% increase with respect to 2014, primarily due to the awarding of major contracts related to energy generation and transmission, and related to oil products and other specialised installations. The order book for this division in 2015 exceeds 3,300 million euros.

In Mexico, one of the Group's main activity areas, sales for 2015 stood at 1,563 million euros, while the order book increased by 6.9% with respect to 2014 up to 1,897 million euros, which reaffirms the Group's position in this area. In this way, the contracts obtained in this country during 2015 include projects related to energy generation and distribution such as the construction of the Valle de México II combine cycle with an installed power of 625 MW or the project for the construction of the Chimalpa Two substation, as well as projects related to oil products, such as phase II for the development of the plants for producing ultra-low sulphur diesel in the Miguel Hidalgo Refinery in Tula de Allende or the EPC project for implementing the PP-Teckel-A drilling oil rig.

In the remaining Latin American countries, the Group has a sound presence in countries such as Peru, Brazil, Chile, Argentina, Colombia, Ecuador or Panama,

where it is developing projects for electricity generation, hydroelectricity and other renewable energies along with electricity transmission projects, and projects related to oil products, mobility systems and water networks or treatment. On these lines, special relevance should be given to the alliance reached by the Industrial Services area with the Canadian investment fund Brookfield for implementing projects in the transmission sector in Brazil, where the ACS Group companies in Brazil (mainly Cobra and Cymi) have already established a solid reputation, experience and technical solvency.

During 2015, the projects executed in Latin America by companies belonging to the Industrial Services area include:

- Rehabilitation and modernisation of packages 1 and 2 of the combined cycle in the Tula thermal electric plant, comprising two units of 275 MW of installed power each, which is located in the town of Tula de Allende in the state of Hidalgo (Mexico).
- Contract for the execution of the engineering, supplies, civil works and assembly of the Transmission line in 500 kV between the Luziania and Pirapora 2 substations (400 km) in Brazil.
- Turnkey project for execution of the Recka thermal generation plant of 182 MW in Peru.
- Design, supply and construction of the Renace III hydroelectric project in Alta Verapaz (Guatemala).
- EPC project for the construction of a 30 MW biomass power plant in San Pedro de Macoris, Dominican Republic.
- Construction of the Larimar wind farm with installed capacity of more than 50 MW in Dominican Republic.

## The Industrial Services activity in America represents a 47% of the total revenue, reaching 3,112 million euros.

- Construction and installation of the Nacome II photovoltaic park with an installed capacity of 50 MW in Honduras.
- EPC project for the implementation of three photovoltaic plants of approximately 11 MW each in Panama.
- Implementation of the drilling water treatment plant at Puerto Gaitán (Colombia).
- Supply, installation and commissioning of the Tetra systems for providing coverage to the Collective Transport System (CTS) in Mexico FD.
- Supply, installation and commissioning of an Intelligent Traffic System (ITS), electrical and electromechanical system (ventilation, fire-protection system and lighting) of the Gambetta tunnel in Lima (Peru).

During 2015, the Industrial Services area has continued with its activity in the US and Canadian markets, in which, although still with a budding presence, has already implemented major projects in the energy field, such as the Tonopah solar thermal plant, in the United States. The Group has also implemented in this area projects related to transport infrastructures, such as the electrical installations along 11 kilometres of the Windsor Essex highway in Canada or the installation of the intelligent transport system for the new bridge over St. Lawrence river in Montreal (Canada). Also within the field of specialised installations, this division has been awarded in 2015 the contract for the electrical installations, sound and video systems, climate control and ventilation for Grace Church in Humble (United States). The aim is to continue consolidating its position in the North American market, one of world's major infrastructure markets.



# INDUSTRIAL SERVICES

## EPC WIND FARM PROJECT IN TRES HERMANAS (PERU)

### CLIENT

Parque Eólico Tres Hermanas SAC.

### PROJECT EXECUTION DATES

2014-2016.

### LOCATION

Marcona (Peru).

### PROJECT TYPE

EPC Projects.

### AMOUNT

168 million euros.

### COMPANIES INVOLVED IN THE PROJECT

Cobra Instalaciones y Servicios, S.A.

### FULL PROJECT DESCRIPTION

Turnkey implementation of the engineering, procurement, construction and commissioning of a 97.15 MW wind farm located close to the town of Marcona, Department of Ica, Peru.

The project includes the supply and installation of 25 Siemens SWT 108 wind turbines of 3.15 MW and 8 Siemens SWT 108 wind turbines of 2.3 MW, all of which with their corresponding transformation centres.

Likewise, the scope of the project includes the construction of access roads; interior paths; assembly platforms and foundations for the wind turbines and cable trenches.

Also implementing the underground power evacuation lines at 34.5 kV and communication via fibre optics to the transformer substation, as well as the works for extending the Park's step-up transformer substation at 220 kV.



## PROJECT FOR THE DEVELOPMENT OF THE COMPRESION ALTA LITORAL A PLATFORM (MEXICO)

### CLIENT

Pemex.

### PROJECT TYPE

EPC Projects.

### PROJECT EXECUTION DATES

2012-2015.

### AMOUNT

350 million euros.

### LOCATION

Tampico, Mexico – Definitive location: Litoral Oilfield, Gulf of Mexico, Mexico.

### COMPANIES INVOLVED IN THE PROJECT

Dragados Offshore de México SA de CV.

### FULL PROJECT DESCRIPTION

The Compresion Alta Litoral A platform is part of the Litoral oilfield development project, which is being carried out by Dragdos Offshore for Petróleos Mexicanos (Pemex). The Litoral A oilfield is located in the southern part of the Gulf of Mexico, in the south-eastern area of Campeche Sound, which is Mexico's most important oil producing province. The maximum water depth in the Litoral oilfield is of 115 feet (35 metres). The Compresión Alta Litoral A platform has been designed to comply with new operating conditions for the Litoral processing centres, eliminating excess gas burning, and to provide the necessary modular capacity for increasing production. The platform's compression system will have the capacity for increasing the pressure to 85 bar using high-pressure compression modules.

The scope of the works carried out by Dragados Offshore include the engineering, procurement, construction, loading and commissioning of the platform (EPCIC). The structure weighs more than 15,000 tonnes, including the main 9,000 tonne platform, the 2,000 tonne jacket, bridges, and tripods. Due to the shallowness of the sheet of water, this project is the first installation project to be executed using the "float-over" method in Mexican waters and in the Gulf of Mexico.



# INDUSTRIAL SERVICES

## ALTO HYDROELECTRIC PLANT (PANAMA)

### CLIENT

Panamá Power Holdings, INC.

### PROJECT TYPE

EPC Projects.

### PROJECT EXECUTION DATES

2010-2015.

### AMOUNT

110 million euros.

### LOCATION

Chiriquí Province, Panama.

### COMPANIES INVOLVED IN THE PROJECT

Cobra Infraestructuras Hidráulicas.

### FULL PROJECT DESCRIPTION

The project consists in the turnkey construction of El Alto thermal electric plant. This is a hydroelectric exploitation which comprises a 50 metre-high dam with a 3.3 kilometre headrace tunnel, followed by a 480 metre-long pressurised pipe, surge tank, powerhouse and a discharge canal.

The El Alto project's curved gravity dam is made from conventional concrete, is 160 metres long, its normal operating level of 634 metres and the minimum level is 625 metres. The headrace tunnel has a 5 metres diameter for a design flow rate of 60 m<sup>3</sup>/s. A chimney tunnel of the same diameter as the tunnel and a forced pipe of 3.8 metre diameter, which splits before reaching the powerhouse, which houses three Francis vertical axis units each with an installed power of 22.3 MW.

The Project has a transmission line of 230 KV from the powerhouse until intercepting the SEIPAC transmission line, with an approximate length of 6 kilometres.

In addition, for accessing the dam, 2.5 kilometres of the Producción Plaza Caisán – El Alto road have been reconditioned and a further 1.2 kilometres have been laid until reaching the dam. For accessing the powerhouse, 2.5 kilometres of the Hato Volcán – San Andrés road have been recondition until reaching the bridge along the Plaza de Caisán – Cañas Gordas road and a further 2.5 kilometres of road has been laid until reaching the powerhouse.



## ASIA PACIFIC AND AFRICA

The Asia Pacific and Middle East region has experienced in 2015 the largest growth in the Industrial Services area, thanks to major contracts awarded during previous years, in countries such as Saudi Arabia, United Arab Emirates, Japan and India, where the Group is implementing industrial plants, electrification projects, mobility projects or renewable energy assets. Thus in 2015, sales in this area have increased by 43.1% compared to the previous year, up to 633 million euros and they already represent 10% of the Group's total revenue. Likewise, in this area the order book is at 1,659 million euros, which entails a 33.1% increase when compared to the 2014 figure, thanks to major awards won in 2015 such as the contract for the electrification of 420 kilometres of railway network in Israel or the contract for the supply and assembly of 3 electrical substations in Dahrán (Saudi Arabia). For its part, the turnover in Africa for 2015 has reached 162 million euros, while the order book remains at 836 million euros.

In these countries, during 2015, major projects have continued to be developed, including:

- Turnkey project for the construction of mineral handling units and infrastructures related to the bauxite mine belonging to Ma'aden Bauxite and Alumina Company in Saudi Arabia.
- Design, supply, installation and commissioning of the control systems of the WestConnex M4-East tunnel (Australia).
- Design, execution, commissioning and operation of the Ali Mendjeli Sewage Treatment Plant (Algiers).
- Urban traffic regulation system in Casablanca (Morocco).
- Projects for the installation of electrical systems in the Indian railway network.
- Turnkey execution of the photovoltaic plant of Fukuroda, with installed capacity of 32 MW (Japan).
- Contract for the engineering, supply, and construction of a fertiliser plant, more specifically, diammonium phosphate (DAP), producing 1.5 million tonnes per year, in the industrial city of Ras al Khair (Saudi Arabia).
- Turnkey contract for the implementation of the "Ibn Sina" plastics plant in Saudi Arabia, with production capacity of 50,000 tonnes of polyoxymethylene. The scope of the work includes the engineering of details, purchase management, and construction of a polyoxymethylene (POM) plant, as well as the auxiliary and offsite services.
- Project for the engineering, supply and installation of 10 reactors for different plants belonging to subsidiaries of the Sabic Group in Saudi Arabia.
- Turnkey project for a 200-bed hospital and 24 relatives accommodation houses for healthcare staff (Angola).



# INDUSTRIAL SERVICES

## DESIGN, CONSTRUCTION AND MAINTENANCE OF THE ISRAELI RAILWAY INFRASTRUCTURE IN ISRAEL

### CLIENT

Israel Railways Limited.

### PROJECT TYPE

Specialised Installations.

### PROJECT EXECUTION DATES

2016-2032.

### AMOUNT

386 million euros.

### LOCATION

Israel.

### COMPANIES INVOLVED IN THE PROJECT

SEMI.

### FULL PROJECT DESCRIPTION

The project consists of the design, construction and maintenance of the Israeli railway infrastructure. The scope of the electrification spans over 420 kilometres of double-track, quadruple-track, etc., reaching a total of 1,100 kilometres of single-track. The techniques to be implemented are overhead contact line, traction substations (14 units), Scada and communications. The contract also includes obtaining all permits from local and national authorities and coordination with the state-owned electricity board, Israel Electric Co.

After delivering the construction, the initial 10-year maintenance period will begin, with a possibility of being extended for a further 15 years. Other contract options are the line extensions, which total about 250 kilometres of track and 9 substations.

The first line to be completed is the A1, between Herzliya and Jerusalem, a new-build which will allow for travelling between the country's two main cities in less than 20 minutes.



## PLANT FOR EXPORTING GAS AND NGL (NATURAL GAS LIQUIDS) OF KJO (SAUDI ARABIA)

### CLIENT

KJO (Al-Khafji Joint Operations).

### PROJECT TYPE

EPC Projects.

### PROJECT EXECUTION DATES

2011-2015.

### AMOUNT

45 million euros.

### LOCATION

Khafji, Arabia Saudi.

### COMPANIES INVOLVED IN THE PROJECT

Intecsa.

### FULL PROJECT DESCRIPTION

The scope of the project consists of providing the engineering, procurement and construction of the gas and NGL (Natural Gas Liquids) exporting plant of KJO. The complex will require the construction of the installations for handling the natural gas and the recovered liquids (also known as condensed). This product is of great commercial interest and is extracted from the natural gas due to being heavier than methane.

The scope of the project includes NGL containment tanks and the product transfer. The unit would require an NGL cooling system for storage.

The project has also included the construction of the installations for exporting sour gas for its desulphurisation and the safety flare for burning acid gases.

For servicing the plant, the project also included carrying out the nitrogen generation package, the air compression system for instrumentation, the systems and operations buildings, and all the piping, loading arms and interconnections within the complex.

