



25
Years 1990 / 2015
POWER SOLUTIONS
INMESOL

25TH ANNIVERSARY OF INMESOL POWER SOLUTIONS

A QUARTER OF A CENTURY DESIGNING AND MANUFACTURING
GENERATOR SETS FOR THE FIVE CONTINENTS



Staff of Solano Group at Inmesol facilities

From a Small Workshop to Expansion across 80 Countries

In 1982 a Spanish entrepreneur, José Luis Solano, began designing and manufacturing bedplates, soundproof bodywork and electrical components for generator sets in a small metalwork studio in Corvera, a small village situated 20 km from the city of Murcia in the southeast of Spain. At the time, his main business was centred on the manufacture and monoblock assembly of the motor and alternator for gensets. Now, 33 years later, his business project has evolved into Grupo Solano, whose

flagship company is Inmesol. **Inmesol is currently present in more than 80 countries across the five continents**, offering a wide range of equipment with the most innovative technology for the most demanding markets, and **has a 25% annual growth rate.**

2003: A Turning Point Towards Continuous Growth

1987 saw the inauguration of the factory to produce **generator sets**; however, the main line of business was still the **bodywork**, which was highly appreciated in the market for its excellent

quality. The company continued to specialise in the manufacture of this product until 2003, when it was decided to make a firm commitment to R+D in order to make a strong entrance into the international generator set market. Since then, **Inmesol has grown exponentially to become one of the best manufacturers of generator sets in the world.** Over the past quarter of a century, its facilities have also expanded to keep up with the demands of the increase in the volume of business; their installations now occupy a surface area of 100,000 m².

Genset Ranges Designed for the Most Demanding Industrial Sectors

Inmesol designs, manufactures and sells highly technologically advanced generator sets, both in open and soundproofed versions and with power capacities ranging from 2 to 2500 kVA. The diverse equipment on offer comes in five ranges to provide solutions to any power supply needs their clients may have, regardless of their geographical location or the extreme conditions in which the equipment has to function. (The International Board of Entrepreneurs and Business People



Mr. Jose Luis Solano, founder and president of Solano Group

incorporate the most modern, low-emission motors; the alternators are mounted with the utmost efficiency; the chassis and bodywork are made using pickled sheets; they work with pre-cut metal sheets to reduce both the number of journeys to and from the factory and the waste to be recycled; and the punching and bending of the steel sheets in profile is mechanised, while the welding is optimised by the use of robots. On the assembly line, most of the work is done manually; a controlled powder painting system is used which reduces the environmental impact while dilutions and liquids are drying; and there are constant improvements to the generator set and pallet design in order to optimise the space



Rental Range generator on a high speed trailer

recently honoured Inmesol with the 2015 Entreprs Energy Award for providing power to SMEs which work in remote locations.) The generator set ranges are: **stand-by, portable, industrial, rental and heavy**, all of which comply with current regulations on low levels of acoustic and atmospheric gas emissions.

Super-Soundproof, Transportable and Eco-Friendly Equipment Which Can Be Controlled Remotely

This year Inmesol has presented several new generator set models which incorporate the latest advances developed by their Engineering Department. Just last month the company put their new **Rental Range 22-550 kVA soundproofed gensets** on the market, using Kohler, Volvo, Penta and FPT-Iveco motors that comply with the current strict STAGE IIIA gas emission regulations. The Rental Range gensets have an upper air vent, a waterproof control panel, reinforced drag points and a design which facilitates maintenance and cleaning tasks. They are also designed to work at maximum power in severe weather conditions. Another novel feature is the super-soundproof container: unlike the series models, the new gensets have two external silencing modules, one for admission and the other for expulsion. These design features have managed to reduce the gensets' acoustic emissions even further, from the **75 dB(A) at 7m of sound pressure of the standard models in normal conditions to 70 dB(A) at 7m.**

The new models are the result of months of research in order to maintain their position as leaders in advanced equipment that is also environmentally friendly, a commitment which has defined Inmesol company policy since it was founded and which is translated to all the stages of manufacture, transport and operational life. The generator sets

in lorries and containers during their transportation.

Also notable among the latest products presented by the company are the **models which can be monitored and controlled remotely from anywhere in the world via mobile devices** (from tablets and mobile phones as well as from computers). This technology greatly simplifies the maintenance tasks performed by the personnel responsible for the equipment and allows them to visualise the control panel in real time and interact with it remotely at any time and with the same efficiency as though they were in the same place, producing significant savings on time and travel costs.

Intelligent, Environmentally Friendly and Transportable Lighting Towers

Another Inmesol line of business is the manufacture and commercialisation of **lighting towers designed so they can be transported quickly on roads and**



Assembling line at INMESOL facilities

motorways in emergency situations which require greater illumination in a specific area or an additional electrical power source. Among the many models available, the **Mobile Kit** is worth special mention: it comprises a tower and a generator set that have been prepared in such a way as to be hitched and towed in compliance with all the relevant regulations. (The new Bangkok

International Airport purchased this model this year.) The towers are environmentally friendly as they use LED lamps (more resistant than conventional ones) that substantially reduce the diesel consumption, meaning that the equipment, besides providing energy for the spotlights, can be used to supply other auxiliary charges.

Six months ago the company launched another model with **LED lighting which, instead of using a generator set as a power supply source, is designed so that it can be connected to either the power grid or autonomous equipment.** Integrated in the towers are a 220 V clock to programme the lighting to come on at a certain time, a twilight relay (light sensor) which activates the spotlights when the sun sets and turns

them off at daybreak, and a motion detector which triggers the lights when any movement is detected within a 280° angle around the tower. Likewise, the model is designed so that it can be connected to other towers and operates in a series. To facilitate handling and transport, the towers have wheels and a handle, and the lamps are easily disassembled. The "autonomous" towers, like other products developed by the company, respond to a common demand among many of Inmesol's clients, as they are designed to facilitate and multiply their use.

The Excellence which Took Inmesol to the Winter Olympics in Sochi

Inmesol generator sets are manufactured with top quality materials: the steel used for the bodywork and chassis and the laminated carbon steel in the structure are both DD11 according to EN10111.2008, for example. The joints are welded using robotic MIG-MAG technology and the Qualicoat paint used on the equipment prevents corrosion in saline and humid environments.

Another key component of Inmesol generator sets are the control switchboards, which undergo constant improvements as new technological advances become available to facilitate equipment monitoring or event and alarm programming. Moreover, to "arm" them against any eventuality, they include functions to protect the motor and automatic monitoring for anomalies which may occur in the current, voltage, frequency, speed, oil pressure and levels, the motor, fuel and coolant levels, etc. Likewise, alarms can be configured for the oil level and temperature, the coolant level or to stop the generator set when it functions outside certain parameters.

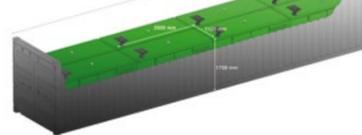
The equipment is also designed to be towed and lifted securely and stably; Inmesol has specially designed **mobile kits** to transport the gensets by road or around building sites, for instance.

“ HUMAN CAPITAL AT INMESOL: OUR BIGGEST ASSET ”



Heavy Range Generator in a Super-Soundproof container

In addition to their **advanced production lines** (with robotics and in some cases triplicated) are their demanding **quality control processes** and their **excellent post-sales service.** All of these characteristics have inspired confidence in Inmesol technology in companies around the world. Their equipment is used to supply power in public works, hotels, ports, military facilities, hospitals, large concerts, mines, airports, etc., whether as a main power source where there is no electricity grid available or to provide full emergency power when there is a failure in the grid.



Infographic showing how we optimise the load capacity of Inmesol generator set containers.

A clear example of how far the company has developed over the past 25 years is the trust placed in Inmesol to supply generator sets for the construction companies contracted to build the new infrastructures for the **2014 Winter Olympics in Sochi.** Inmesol equipment supplied power during the construction phase of the Olympic Park and stand-by generator sets were installed in the oval Olympic skating centre and the data centre. "Inmesol's trajectory has been marked by the commitment to excellence, a commitment which is shared by all the personnel who form part of the company and which is manifested in their attitude and ability to add value to projects and to facilitate their progress," says José Luis Solano when commenting on Inmesol's work at Sochi and other recent projects which have consolidated the **company's leading position in growth sectors such as telecommunications since 2013.**

The Keys to Growth: Innovation, Human Capital and Exports

To the president and founder of the company, Inmesol is the result of his view of life and work, the paradigms of which make up its business culture. Instead of settling into a comfort zone, new challenges are set continuously. This ability to enter new territory and a vocation for service permeates the entire organisation. Continuous staff training and research translate into a great capacity for innovation and excellent technical advice for clients. "Inmesol's human capital is our best asset: we work so we can make our clients' projects grow," says Jesús Fernández Cano, the company's financial director. This philosophy acts as internal engine and is precisely what has opened the doors to international markets and enabled the company to grow in times of crisis. **In the past five years, Inmesol has increased production by 100%, the network of distributors/clients has grown by 50% and it currently exports 96% of its production output.** "Over the past three years we have expanded our technical

“ A HISTORY OF COMMITMENT IN PURSUIT OF EXCELLENCE ”

engineering workforce by 100% to further strengthen our post-sales service," adds Cano. With a **solid presence in countries in the Middle East, Africa, Europe and South America, their target for the next five years is to expand their distribution network to more than 120 countries** and to maintain and improve their competitiveness.

A Socially Committed Company

For the past five years Inmesol has sponsored the Tandem-Murcia cycling team, medallists in the Paralympic



Generators Sets exported

Games. The elite athlete Miguel Ángel Clemente has a degenerative disease of the retina and his desire to overcome it represents a value which the company identifies with. The company provides financial support for his daily training and for the meetings and competitions he attends, activities which require a guide, a trainer and a medical team. Tandem-Murcia won the bronze medal at the 2012 London Olympics, the silver medal at the World Track Championships in Los Angeles and gold medals in the Road Cycling category (2010) and the Time Trial category (2012) of the Spanish Adapted Cycling Championships.

Corporate Communication on Digital Platforms

The company is aware of the immense potential of the Internet in a globalised society as well as of the need to establish and nurture communication with their actual and prospective

clients through digital resources. To this end, for the past three years their **communications strategy** has included the active generation of information in six languages on their website and their corporate blog, constant activity on social networks and regular informative bulletins to their clients to share news on the latest products created by the company and the most notable developments in the energy sector, research and technology (www.inmesol.com).

Magazines of recognized prestige in the Middle East have echoed the celebration of the INMESOL, such as "Technical Review" on pp. 36, 37 and 38:

<http://www.technicalreviewmiddleeast.com/bome/current-issue>.



GENERATOR SETS GUARANTEE CONTINUOUS POWER SUPPLY DURING SOLAR ECLIPSES



Annular eclipse in New Mexico (2012). Author of the photograph: Kevin Baird via Wikimedia Commons.

On 20th March there was a **solar eclipse**, visible to a greater or lesser extent in all European countries (and in the north of Africa as well as in the north and west of Asia and the Middle East). Before this event, those responsible for the European power network spent months preparing to implement the necessary measures so that the populace and companies would not suffer the **effects of this astronomical phenomenon**, as the **power supply** across the continent is interconnected. The media in all these countries warned of potentially serious consequences for a large part of the continent, indicating that **the eclipse would put the European electricity system to the test**. Why was there such alarm?

In today's world, renewable energies—mainly solar and wind power—have a not insignificant weight in global energy production. **Photovoltaic generation**, for example, **accounts for 3% of Europe's total energy consumption**. Meanwhile, although wind power accounts for less energy production, it too depends on

solar radiation to function properly. **When there is a solar eclipse, the sudden absence of sunlight over the affected countries in turn causes an abrupt reduction in their photovoltaic energy production**. To have some idea of what this means, suffice to say that the energy which could cease to be produced by the photovoltaic sources in



Europe for 1 minute is the equivalent of the production generated by a nuclear power plant for the same period of time.

Bearing in mind that **to avoid a collapse in the network, production and energy consumption must be in constant balance**, when there is a solar eclipse, the electricity network must be able to guarantee that the photovoltaic energy deficit is correctly and instantly compensated for by other production sources. This equilibrium must be maintained while the sun is hidden and the power supplies readjusted once the phenomenon ends. **Otherwise, there could be partial or total power cuts**, which would affect millions of people and companies, especially as the networks are interconnected.

An anomaly in the regulation of this balance would also have **unfortunate consequences for all the organisations in which a fully functioning power supply is of vital importance**. For example, hospitals, fire stations, data centres, the telephone systems used to

make emergency calls, airports, etc. As we have mentioned, the dual challenge presented by a solar eclipse is to have alternative energy supply sources available and to regulate the supply perfectly from the beginning of the astronomical phenomenon until it ends.

While generator sets do not have the capacity to counteract a possible collapse in electricity supplies at a global or continental level, they are extremely important in compensating for power cuts locally, preventing significant financial losses and saving human lives. By installing them in all the companies and organisations which cannot afford a possible power failure, they guarantee a continuous supply of electricity. **Inmesol's emergency generator sets start working automatically in a matter of seconds** in these cases.

At Inmesol we have a wide range of emergency generator sets, designed to give solutions to all types of businesses, whatever their power supply needs and wherever they are located.



Inmesol generator sets on display in the new Sarl Obi showroom

SARL OBI, INMESOL'S DISTRIBUTOR IN ALGERIA, INAUGURATES NEW FACILITIES

Sarl Obi, the distribution company for Inmesol products in Algeria, have recently inaugurated their new offices and showroom in Algiers, the capital city. The change of location is due to the growth the company has experienced over the past few years; for which we take the opportunity to congratulate them. The new Sarl Obi headquarters are located near the Houari Boumedienne International Airport, facilitating the company's transport and communications, and has a **spacious showroom** on the ground floor, which includes a **large area dedicated to Inmesol generator sets**.

Contact Details for Sarl Obi:

Address: Lots N° 189 & 190, Ferme Pon, Kouba Alger – Algérie
Tel: +213 (0) 21 28 97 97
Fax: +213 (0) 21 28 98 98
Mail : commercial@sarlobi.com
Website: <http://www.sarlobi.com/>

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INMESOL

INMESOL, S.L.
CENTRAL HEAD OFFICE
Carretera de Fuente Álamo, 2. 30153 Corvera · MURCIA. SPAIN
Phone: +34 968 38 03 00 | Fax: +34 968 38 04 00
E-mail: inmesol@inmesol.com

Inmesol is present in over 80 countries worldwide

www.inmesol.com



Inmesol, S.L. company with ISO 9001 quality management system certificate and ISO 14001 Environmental Management System Certificate for the: "Design, manufacture, marketing and technical assistance of power generators, lighting towers, welding generators, tractor with PTO generator and hybrid generation systems."



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