

Santerno in Latin America, Projects and Development

JANUARY 30, 2014

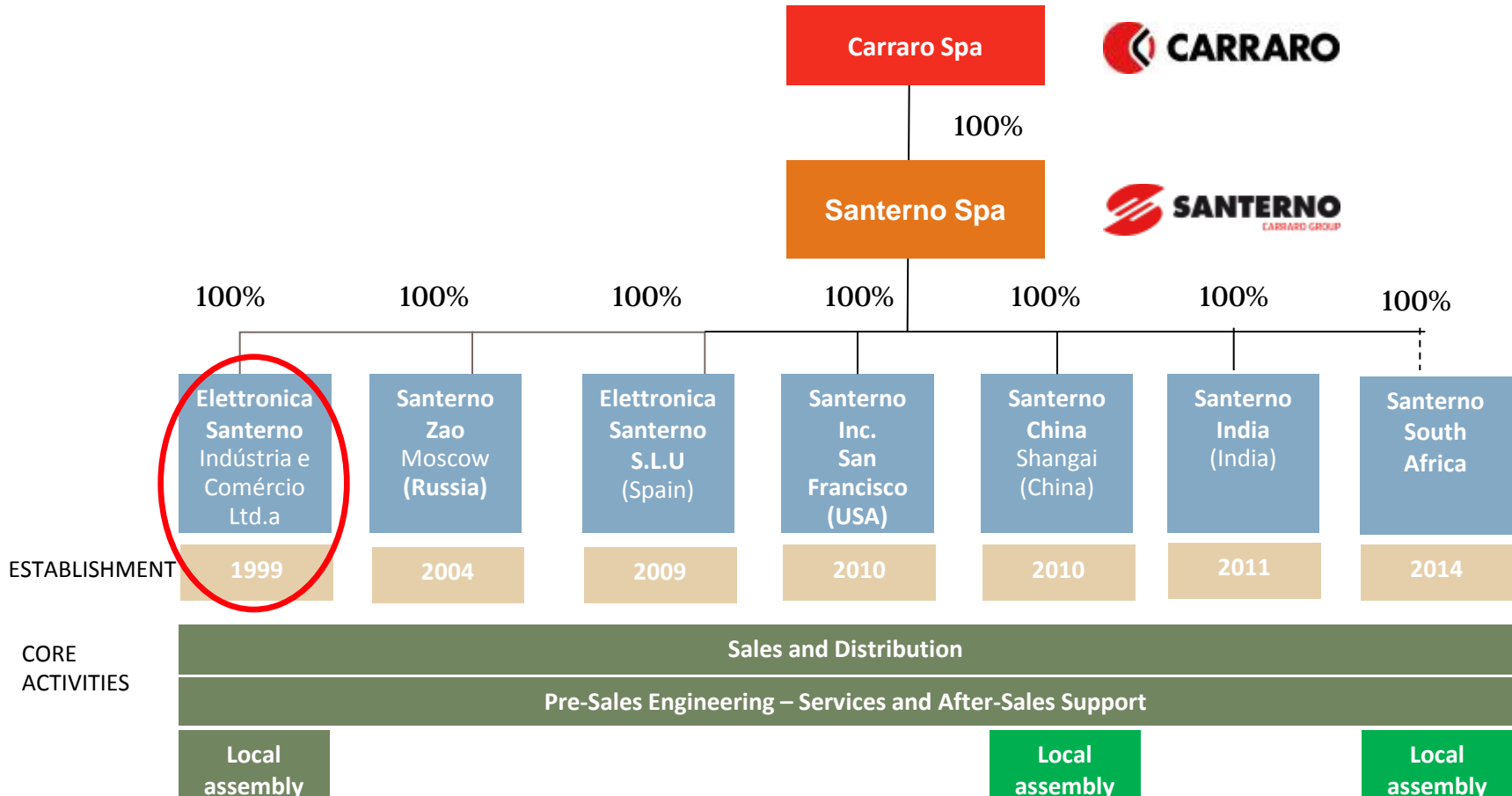




Santerno's Company Structure

Santerno is wholly owned by the Carraro Group with headquarters in Italy and seven subsidiaries all over the world

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Santerno in Latin America



- **Santerno** branch in São Paulo – **Brazil**
- **Santerno** branch in Santa Rita do Sepucaí – **Brazil**
- **Santerno** PV Service Center in Calexico, CA - **USA**, at the Mexican border
- **Santerno's** authorized Service Centre :



COMRISA , Monterrey – **Mexico**
COMRISA , Ciudad de Mexico – **Mexico**



MANELSA, Lima – **Perù**



DIMET, Santiago, Concepcion, Talca, Antofagasta – **Chile**



MOTORTECH, Buenos Aires – **Argentina**



Santerno PV installations in Latin America



Based in Brazil since 1999, Santerno has installed several PV and Industrial Automation inverters in most Latin American Countries.



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Eletrônica Santerno Industria e Comércio Ltd. São Paulo | Brazil



- Santerno Brazil, established 1999, was the first Santerno branch in the world.
- The Santerno Brazil branch includes a Sales and Technical Office in São Paulo with Factory and Warehouse in Minas Gerais State (Santa Rita do Sapucaí City).
- Our 20 technicians provide service on site and at the phone all around LATAM.



Eletrônica Santerno Industria e Comércio Ltd.
Santa Rita do Sapucaí City | Minas Gerais State, Brazil



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Case History: Mexico

Sugar Centrifuge 500 kW regenerative Inverter



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Case History: Mexico

Sugar Centrifuge 500 kW regenerative Inverter

The application is a centrifuge for sugar which can provide a capacity to manage 2,500Kg of raw pulp from which, at the end of the process can provide about 1,250Kg of sugar. The brand of the centrifuge is Western States TITAN Model, known as the bigger manufacturer of such machines in Mexico.

The benefit got by the customer, end user, is a faster cycle, energy saving, THDI < 1% and no one stop of production thanks to the AFE Santerno VSD.

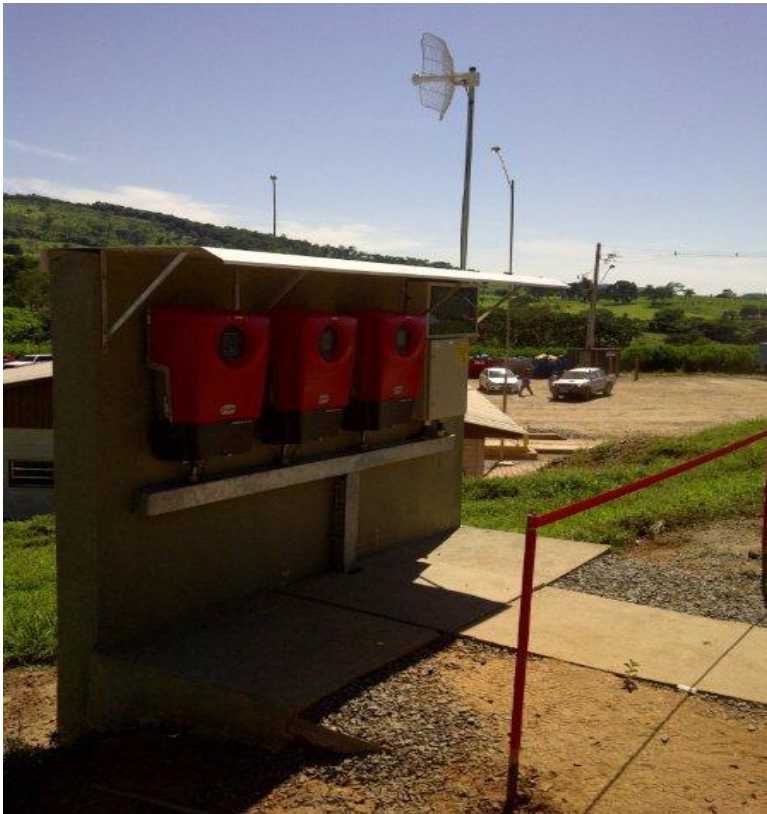


Case History: Mexico

PV Plant in Cancun area



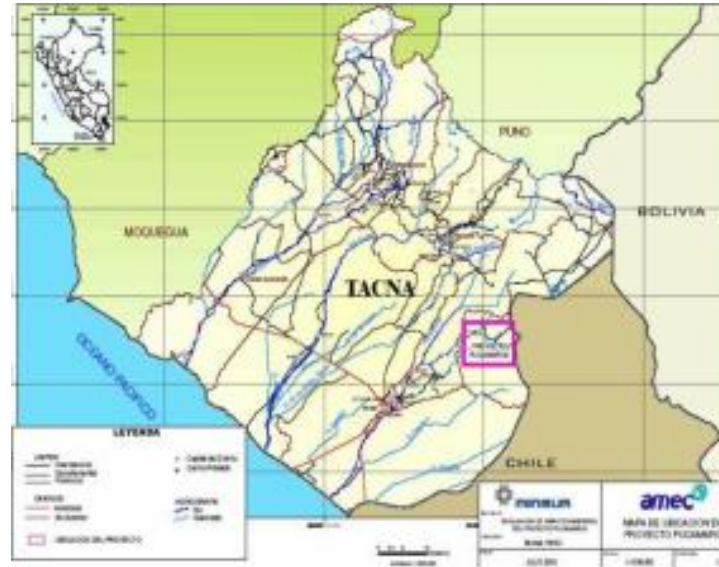
3 Sunway M XS installed



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Case History: Chile

The Gold Mine Pucamarca



The Gold Mine Pucamarca belongs to the Minsur Group and is located in Peru next to the border with Chile.

It started operations in the third quarter of 2010.

Santerno Product: Sinus Penta 200HP

Thanks to the pass-through mounting available on the Sinus Penta, the cabinet degree of protection is Nema 3 R , it is fully sealed to protect the electronics.

Heat sinks are in the back with Nema 12 protection degree.

Case History: Chile

“Pucamarca Project”

- Application:** Water pumping from the mine
- Products:** Stand alone NEMA 3R SINUS PENTA for 250HP, 480VAC motor.
- Key Notes:** Power supplied by a Caterpillar Diesel Genset
Installed at 4300 meters above sea level



Case History: Chile



Mina EL-ABRA

Industrial Sector:	Mining	Connection date:	2010
Application:	Conveyor Belt	Customer:	Sociedad Contractual Minera El Abra
Products:	Sinus Penta		



Case History: Chile

Mina EL-ABRA



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Case History: Chile

PV Plant for Oil Company



Products: 2 Sunway M XS installed



Case History: Peru

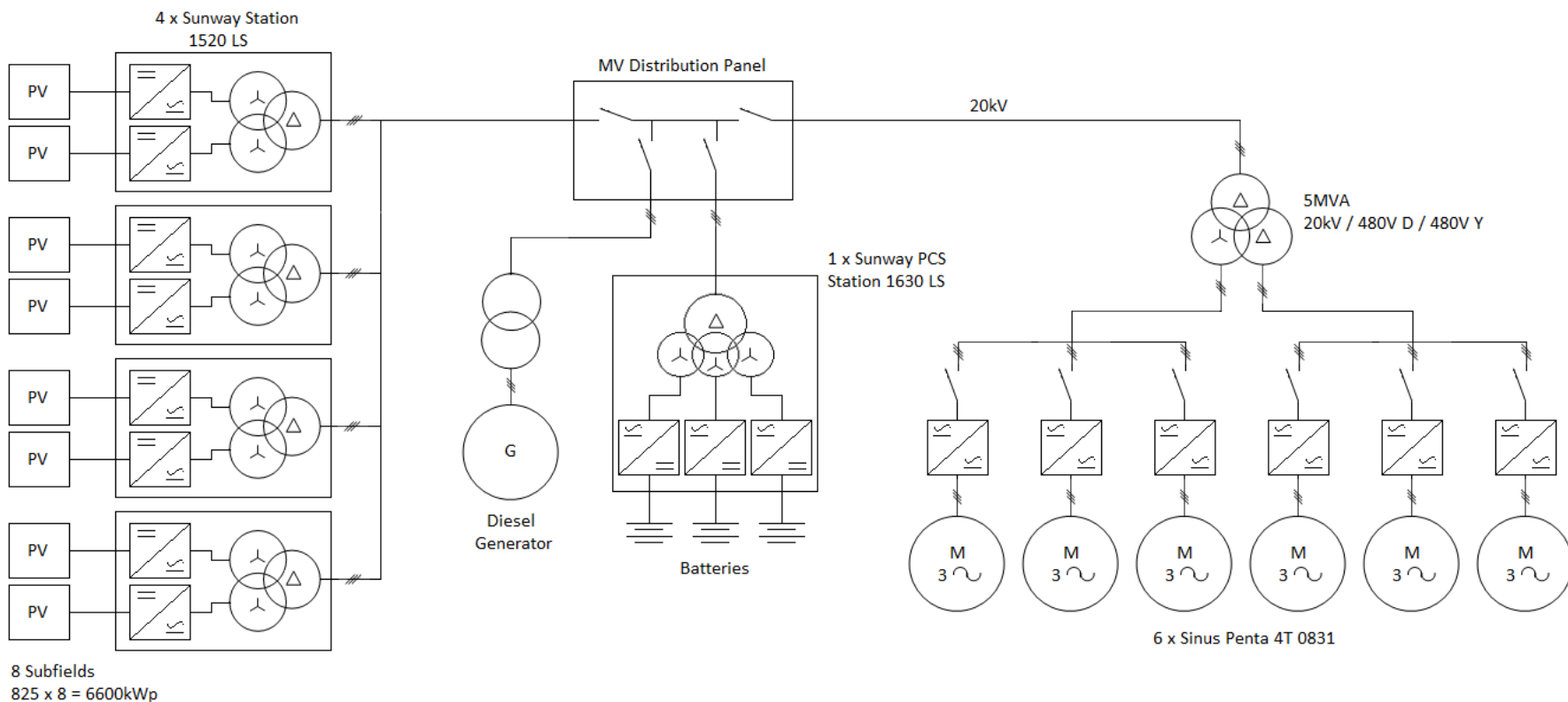
Production Facility | Lima



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Case History: Peru

PV powered pumping station | Piura Region



PV Products: 4 Sunway Stations 1520 LS – (Tot: 8 Sunway TG750)

Motor Drives: 6 Sinus Penta drives 4T 0831

Storage Products: 1 Sunway PCS Station 1630 LS – (3 Sunway Station TG750)

Case History: Ecuador



630 kW PV plant in operation | Manta Manabi

This the biggest PV plant in operation Ecuador
Santerno Service is provided by MANELSA – Peru.



Case History: Argentina

Grua Portacontenedores | Puerto de Buenos Aires



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Case History: Brazil



Rooftop PV Plant – Italian Embassy | Brasilia DF



- 9 Sunway M Plus 7800 installed (3 per phase)
- Three-phase plant, 220Vac 60Hz, 50 kW

Case History: Brazil

Environmental conference | Rio de Janeiro



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- 10 inverter MPlus 7800, 220Vca-60Hz
- Thin film modules

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