

REFERENCES

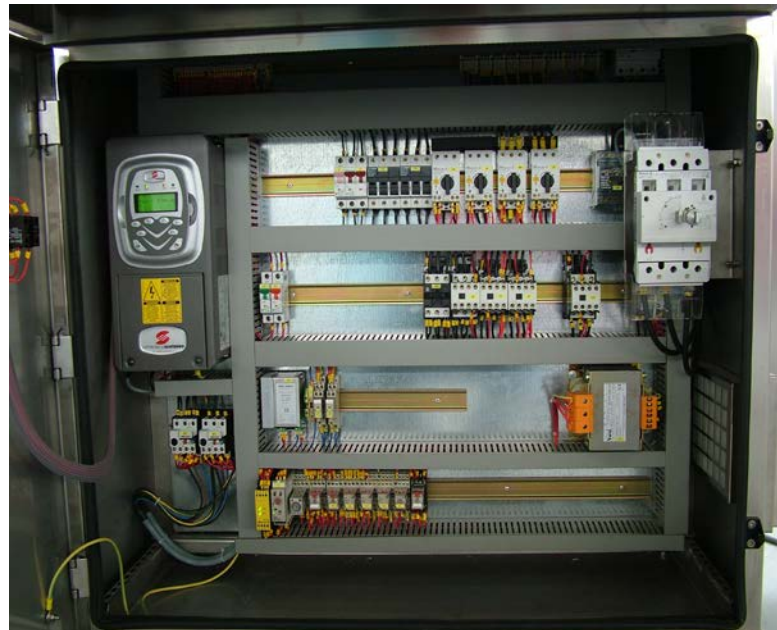
INDUSTRIAL AUTOMATIONS

Turboemulsifiers | Bologna - Italy



Industrial Sector: **Cosmetics Industry**
Applications: Emulsifier - OEM
Products: Sinus Penta 4-37 kW
Connection date: 2009
Costumer: Dumek srl

Key Notes:



REFERENCES

INDUSTRIAL AUTOMATIONS

PLASTIC INDUSTRY

Plastic Machinery | Lonate Pozzolo (VA) - Italy



Industrial Sector: Plastic Industry

Applications:

Products: Sinus Penta

Connection date: From 2006

Costumer: Plasmec Srl

Key Notes: Pasmec is an International manufacturer equipment for plastics and powder coating processing



Plastic Technology | Mazzano (BS) - Italy



Industrial Sector: Plastic Industry

Application: Hydraulic pumps

Products: Sinus Penta 0016-0200
4TBA2K2

Connection date: From 2006

Customer: Italtech

Key Notes: Italtech is synonym of high Italian technology in the production of injection moulding machines for thermoplastic materials.



Plastic Technology | Gambellara (VI) - Italy



Industrial Sector:	Plastic Industry
Application:	Injection moulding machines for thermoplastics
Products:	Sinus Penta IP54
Connection date:	From 2009
Customer:	Plastic Metal Spa

Key Notes: Plastic Metal SpA manufactures injection molding machines for the molding of thermoplastics with double toggle locking system and clamping forces from 35 to 3200 tons. Through its sales and service network, Plastic Metal is present in almost all Italian regions and in major foreign countries, from Europe to the United States, Latin America and the Middle East

- Injection molding plastics with Sinus Penta pump motor of IP54



Injection Molding Machines | Nuernberg - Germany



Industrial Sector: **Plastic Industry**

Application: Injection Molding Machines

Products: Sinus Penta 0007 to 0250

Connection date:

Customer: Haitian Europe GmbH

Key Notes: Haitian Europe as a subsidiary of Haitian International Holdings Ltd, Wuxi Haitian Machinery Co., Ltd with its brand “Tianjian Plastics Machinery” covers the simple applications for the plastic parts and focuses on the development and production of simple and solid hydraulic injection molding machines for the growing buying power and the mass markets in the densely populated areas in China and India.



Plastic Industry | Brescia - Italy



Industrial Sector: Plastic Industry

Application: Injection Molding

Products: Sinus Penta

Connection date: 2011

Customer: CPL CONCORDIA SC.

Key Notes: Manufacturers and overhaul of injection molding machines for plastics. Using Sinus Penta engine of the pump and motor life.



Extrusion and Blow Molding Machines | Crespellano (BO) - Italy



Industrial Sector: Plastic Industry

Application: Estrusion

Inverters: Sinus Penta IP54

Connection date:

Customer: Autonoma

Key Notes: Autonoma is a Company manufacturing of machinery for extrusion-blow molding and injection-stretch blow molding machines



REFERENCES

INDUSTRIAL AUTOMATIONS

WATER

Electric and Heat Energy | Turin - Italy



Industrial Sector:

Water

Application:

Water Pumps

Products:

16 Sinus Penta 4T- 800 kW

3 Sinus Penta 4T- 90 kW

1 Sinus Penta 4T- 35 kW

3 Sinus Penta 4T - 300 kW

1 Sinus Penta 4T - 100 kW

Connection date:

Customer:

Iren Energia

Key Notes: IREN works on Electricity (production, distribution, sales), Thermal energy for district heating (production, sales), Natural Gas (distribution, sales), Management of integrated water services, Environmental services (waste collection, disposal waste), Services for public administrations.



Water supply and sanitation | Mexico City - Mexico



Industrial Sector: **Water**

Application: Pumps

Inverters: Soft Starter ASAMV

Connection date: 2009

Customer: Water treatment Company
Mexico City

Key Notes:



Water Treatment | Ferrara - Italy



Industrial Sector:	Water
Application:	Pumps
Inverters:	Sinus Penta Box and Cabinet
Connection date:	2009
Customer:	C.A.D.F. SpA Ciclo Integrato Acquedotto Depurazione Fognatura

Key Notes: The purpose of C.A.D.F. consist of the associated management of the entire cycle of collection, treatment, purification and distribution of water for multiple uses, especially for human uses.
C.A.D.F. operates on an area of 1312.70 km ², with a resident population of 104,699 units¹, which in summer becomes 200,000, for a number of 68,229 users, providing drinking water for every year 10,560,000 m³.
Drinking water treatment plant - 2



Water Treatment | Bari - Italy



Industrial Sector:	Water
Application:	Pumps
Inverters:	Sinus Penta Cabinet
Connection date:	2008
Customer:	Acquedotto Pugliese SpA

Key Notes: In size and capacity, the Aqueduct Pugliese is one of the most impressive and exemplary works of hydraulic engineering systems in the world.

A widespread system of systems for the isolation of the water, pipelines and interconnections located in an area wide and high population density.



Public utility for water supply | Moscow - Russia



Industrial Sector: **Water**

Application: Manual/Automatic control of the water flow in different pipe sites

Products:

- 1 Sinus Penta 0366 4T
- 4 Sinus Penta 0312 4T
- 3 Sinus Penta 0150 4T
- 1 Sinus Penta 0017 4T
- 8 Sinus M 0014 4T
- 10 Sinus M 0002 2S/T
- 6 ASA0238-5-24-4
- 3 ASAC-1-022-4-1

Connection date: 2011

Customer: MosVodoKanal

Key Notes: with the installation of Santerno inverters and soft starters the existing pumping plant is now automated in order to optimize the water consumption.

Manual/automatic control of the water flow

Unit installed into a cabinet IP54 , because of further requirement from the end user



Agroindustry | Andahuasi - Peru



Industrial Sector: **Water**

Application: Pump

Products: Sinus Penta

Customer:

Key Notes:



Irrigation Pump | Piura- Peru



Industrial Sector: **Water**

Application: Irrigation Pump

Products: Sinus K

Connection date:

Customer: Esitel S.A.C.

Key Notes:



Water | Ponte di Piave (TV) - Italy



Industrial Sector:

Water

Application:

Pumps – OEM

Products:

Soft-Start serie ASAB

(tropicalized for H₂O)

Sinus Penta

(tropicalized for H₂O)

Connection date:

Customer:

Euromacchine

Key Notes:

Euromacchine produce high performance, reliable and efficient machines for all applications in the fields of energy and irrigation

Multifunctional LAMPO - generator that powers the Sinus Penta on the Caprari pump

euromacchine



Water | Longyan Zijin Mining Industry - China



Industrial Sector: **Water**

Application: Pump

Inverters: Sinus Penta RGN

Type: Drive + RGN

Connection date:

Customer: Longyan Zijin Mining Industry

Key Notes: Flow control and transport on demand



Water Treatment | Granarolo Faentino (BO) - Italy



Industrial Sector: **Water**

Application: Pumps

Products: Sinus Penta IP54 for pumps

Connection date:

Customer: Hera

Key Notes:

Hera provides energy services (gas, electricity), water (water supply, sewerage and treatment plants) and environmental (waste collection and disposal) for a basin of over 2.9 million people.



Energy Services | Imola (BO) - Italy



Industrial Sector: **Water**

Application: Pumps

Products: Sinus Penta IP54 for hot water pumps

Connection date:

Customer: Hera

Key Notes:

Hera provides energy services (gas, electricity), water (water supply, sewerage and treatment plants) and environmental (waste collection and disposal) for a basin of over 2.9 million people.



REFERENCES

INDUSTRIAL AUTOMATIONS

STEEL INDUSTRY

Handling and lifting | Sassoferrato (AN) Italy



Industrial Sector: **Steel Industry (Handling and lifting)**

Application: Cranes

Products: Sinus

Connection date: 2010

Customer: Emis

Key Notes: EMIS is a sound company with a 10-year long experience in design and manufacturing of lifting and handling equipments, indoor transportation, automation and metal structural works. Because of its dimensions and wide range of products, this high- level manufacturing company provides customers with the technical and business competence required to meet their most specific demands.



Steel Industry | Ontario - Canada



Industrial Sector: **Steel Industry**

Application: Cranes

Products:

Connection date:

Customer: Gerdau Ameristeel

Key Notes: The Santerno inverters allow the full control of the crane ensuring safe operation of it.

The result is smooth, 'Bump-Less' starts and stops and variable speed make positioning of steel ingots easier for the operator.



Steel Industry | Lima - Peru



Industrial Sector: **Steel Industry**

Application: Fan

Inverters: Sinus Penta 45kW, 440VAC

Connection date:

Customer: Siderperu, Empresa Siderurgica del Peru S.A.A. (Grupo Gerdau)

Key Notes: SIDERPERU is the steel manufacturer's most biggest and prestigious in Peru.



Steel Industry | Soacha - Colombia



Industrial Sector: **Steel Industry**

Application: Cranes

Inverters: Sinus M 7.5HP y 2HP, High Torque

Type: Drive + RGN

Connection date:

Customer: SAC Estructura Metalicas S.A.

Key Notes: Engineering sector industry leader in the construction of metal structures for roofing.

- Up to 4 drives to control the motion in master-slave, 1 regenerative drive: when the load goes down the inverter feeds the grid with the energy which will be dissipated on clamps or break resistors

SAC ESTRUCTURAS
METALICAS S.A.



Steel Industry | Ancona - Italy



Industrial Sector: **Steel Industry**

Application: Electric trolley brings

Products: Sinus Penta

Connection date: 2011

Customer: Emis

Key Notes:

- Electric trolley brings conducted with Sinus Penta



Conveyor | Shaanxi Tongchuan Cuijiagou Coal Mine - China



Industrial Sector: **Steel Industry**

Application: Conveyor Belt

Inverters: Sinus Penta RGN

Type: Drive + RGN

Connection date:

Customer: Shaanxi Tongchuan Cuijiagou Coal Mine

Key Notes: Transport the coal on two 1000m long belts at 5m/s from the mine to surface.



Metal Structures Industry | Callao - Peru



Industrial Sector: **Steel Industry**

Application: Crane

Products: Sinus M

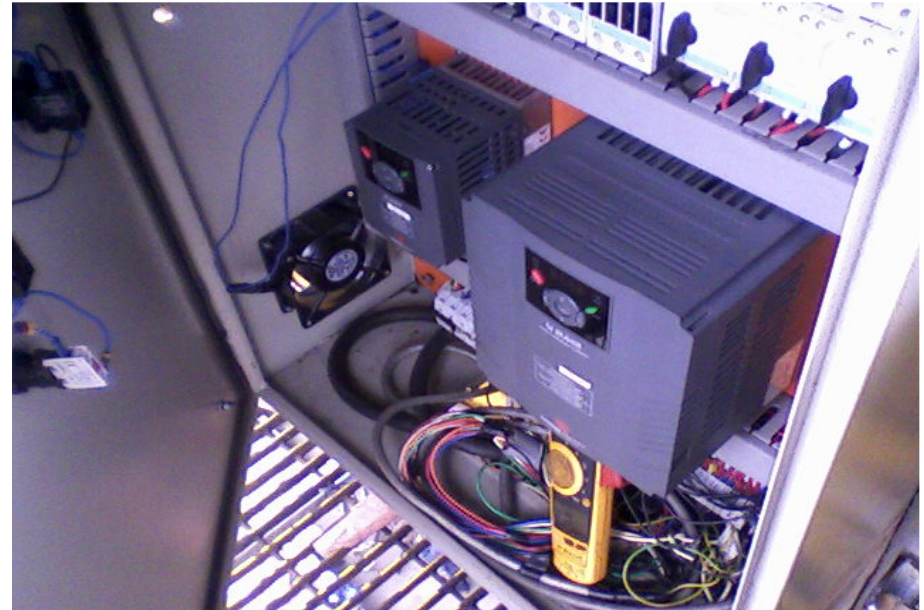
Connection date:

Customer: Esmetal S.A.C.

Key Notes:

Esmetal is the biggest manufacturer of metal structures in Peru.

They work in the mining sector, energy, refinery, infrastructure, trade and industry in general. They are specialized in manufacturing process and storage buildings for mining, on & off shore structures to liquefaction plant and oil refinery, power plants buildings, structures for springs, beam bridges, tanks and boilers.



Steel Industry | Arequipa - Peru



Industrial Sector: **Steel Industry**

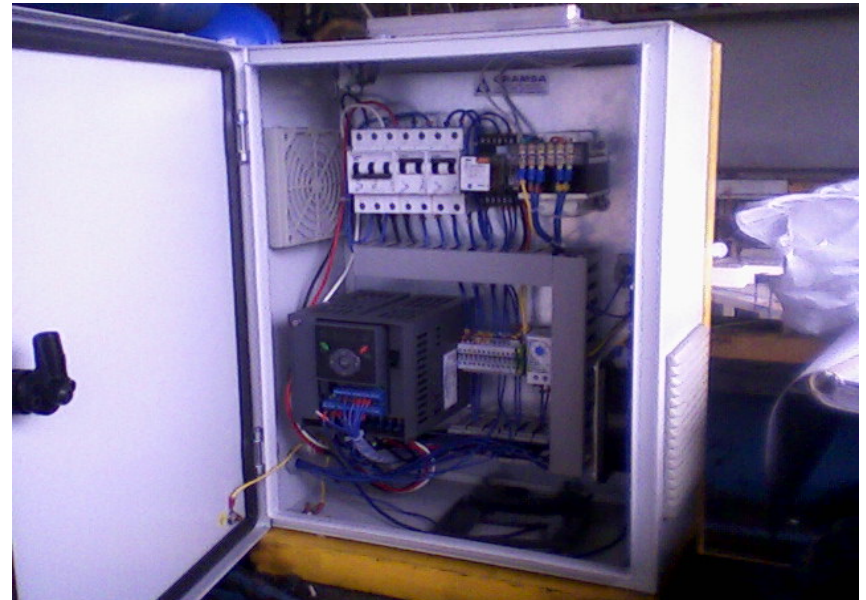
Application:

Products: Sinus M

Connection date:

Customer: Corporación Aceros Arequipa S.A.

Key Notes:



Casting | Callao - Peru



Industrial Sector: **Steel Casting**

Application: Regenerative Crane

Inverters: Sinus Penta

Type: Drive + RGN

Connection date:

Customer: Fundicion Callao S.A.

Key Notes:

Fundicion Callao is a foundry with more than 60 years of experience serving the mining, cement, agricultural and minerals processing industry. Our company provides castings as spare parts for all types of machinery, having specialized in the mining and cement industry.

- The SINUS M drives feature the Regenerative function and Fall prevention of connected load. This allows operating under totally safe conditions.



Magnetic Lifting | Brescia - Italy



Industrial Sector: **Steel Industry**

Application: Magnetization and demagnetization electromagnets

Products: Sinus Penta from 5,5 kw to 75kw
AC-DC converters DCREG4

Connection date: 2007

Customer: SGM Gantry SpA

Key Notes:

SGM has continuously been developing its magnetic equipment technology by closely working with and being highly sensitive to the needs of steel mills all over the world.

This close relationship with the steel industry has permitted SGM to become a leader in lifting magnets and magnetic separation equipment.

- Steel bridge cranes with lifting electromagnets equipped with AC-DC mod. DCREG



Lifting and Transport Systems | Verona - Italy



Industrial Sector: Steel Industry

Applications: Cranes

Products: Sinus Penta from 15 kw to 315 kw

Connection date: 2008

Costumer: CPM Milano

Key Notes: CPM Milano Company was formed out of an industrial group that had operated in Milan since 1940 in the iron and steel and mechanics sectors. Experience, know-how and customer base were integrated into CPM in the early 90s creating a new, dynamic and modern outfit.

CPM is an engineering company specialised in the lifting and transport systems sector.



correggere



REFERENCES

INDUSTRIAL AUTOMATION

PULP & PAPER

SEEI | Drenik - Serbia



Industrial Sector: **Pulp & Paper**

Application:

Products: Sinus Penta

Connection date: 2005

Customer: SEEI

Key Notes: SEEI established itself in the international Pulp & Paper market as a top player in the Industrial Automation, with all the skill to manage all the stages of a plant supply (also very complex): design, start-up and commissioning, DCS setup, maintenance, complying with all existing rules and regulations



Paper Industry | Lima - Peru



Industrial Sector:	Pulp & Paper
Application:	Pumps
Products:	22 Sinus Penta, 900 HP (total), 440VAC
Connection date:	2006
Customer:	Tissue del Peru

Key Notes: With modern factories in Chile, Argentina, Peru and Uruguay, CMPC Tissue manufactures and markets products in the categories of toilet paper, paper towels, napkins and tissues.

- Cell lines, Recycled Water Circuit



Printing Industry | Lima - Peru



Industrial Sector: Pulp & Paper

Application: Rotativo metro GOS

Products: 7 DCREG 60HP (DC), Heavy Duty

Connection date:

Customer: Editora Perú (EL PERUANO)

Key Notes: Santerno AC/DC digital converters allow a speed control of the motor for a higher precision in picture, layout, text and high resolution printings.



REFERENCES

INDUSTRIAL AUTOMATION

FOOD & BEVERAGES

Drink Industry | Lima - Peru



Industrial Sector:	Food & Beverages
Application:	Malt supplier
Products:	Sinus Penta 50HP, 2T, Heavy Duty
Connection date:	
Customer:	Backus y Johnston S.A.A.

Key Notes: Backus and Johnston is the largest brewery in Peru, part of Grupo Empresarial Bavaria,[1] which itself is part of the international SABMiller group. Its main brewery is located in the Ate District of Lima. Backus, as owner of almost all brands of beer available in Peru, enjoys a de facto monopoly over Peruvian beer consumption, although recently InBev from Brazil is trying to challenge the monopoly with their Brahma. Besides beer, Backus also produces soft drinks and bottled water.

Backus



Fishing Industry | Lima - Peru



Industrial Sector:	Food & Beverages
Application:	3 Phase Decanter
Products:	Sinus Penta 40HP, 50A, 440VAC, Heavy duty
Connection date:	
Customer:	Pesquera Exalmar S.A.

Key Notes: Pesquera Exalmar S.A. operates in the fishing industry in Peru. It engages in the extraction, processing, and marketing of aquatic resources for direct and indirect human consumption. The company's products include fish meal and fish oil. It sells its products in Europe and Africa.

- At Pesquera Exalmar the decanter is used for fish vinegar production.
- The functioning of its electric motor is regulated by Santerno inverter.



Food Industry | Lima - Peru



Industrial Sector: **Food & Beverages**

Application: Pumps

Products: Sinus Penta IP20 – IP54 for pumps and mixer

Connection date:

Customer: Unigrà

Key Notes:

Unigrà works in the processing and sale of edible oils and fats, margarine and unfinished products for food, especially sweets.



Centrifugal Separators | Nuernberg - Germany



Industrial Sector: **Food & Beverages**

Application: Centrifugal separators

Products: Sinus Penta 0007 to 0250

Connection date:

Customer: CBB DECANter SRL

Key Notes: CBB DECANter SRL is a company manufacturing and marketing of centrifugal separators and related accessories for residential and industrial. Purification of waste water and sludge dewatering and sewage. Refining grape wine, fish meal, fruit juices, citrus fruits, tomatoes and sugar. Treatment of slaughter by-products and lard food. Extraction and refining of oils. Separation of liquid mixtures.



Agroindustry | Callao - Peru



Industrial Sector: **Food & Beverages**

Application: Hydro cooler

Products: Sinus M 5 HP, 440 VAC

Connection date:

Customer: Agrícola Huarmey S.A.

Key Notes:



Sugar Production | Minerbio (BO) - Italy



Industrial Sector: Food & Beverages

Application: Sugar refinery centrifuge

Products: Sinus Penta from 0005 to 0399 4TBA2K2

Connection date:

Customer: COPROB Cooperativa Produttori Bieticoli

Key Notes:

CoPROB It's the only Italian cooperative sugar producer, with legal configuration similar to that in EU countries with the highest vocation where over 60% of the sugar industry is controlled by cooperatives.

- Centrifuges refinery operated with SINUS PENTA fed DC Bar DCREG2



REFERENCES

INDUSTRIAL AUTOMATION

TEXTIL INDUSTRY

Textile Industry | Quaregna (BI) - Italy



Industrial Sector: **Textil Industry**

Application: Rotative Drying Machine

Products: Sinus Penta

Connection date:

Customer: Flainox

Key Notes: FLAINOX is a company that operates since 1968 in construction and equipment of dyeing and finishing. Specialists in the construction of rotary dye suitable for any type of garment.



Textile Industry | Lima - Peru



Industrial Sector: **Textile Industry**

Application: Yarn spinning machine

Products: 1 Sinus Penta 116A, 440VAC
13 Motori 7.5A, 380VAC,
2560RPM, 87Hz, isolamento F

Connection date:

Customer: Textil El Amazonas S.A.

Key Notes: Textil El Amazonas is dedicated to the manufacture and sales of cotton yarn



Textile Industry | Castel Goffredo (MN) - Italy



Industrial Sector: **Textil Industry**

Application: Automatic aspiration panels

Products: Sinus Penta from 15 Kw up to 132 Kw

Connection date:

Customer: ReB Impianti

Key Notes: The speed of each extractor fan is controlled by the Santerno Inverter and a pressure sensor in order to save energy (about 30%) and stabilize the pressure



REFERENCES

INDUSTRIAL AUTOMATION

MINING

Mining | Cerro Lindo - Peru



Industrial Sector:

Mining

Application:

Overflowing Water recovery pumps

Products:

Sinus Penta 600 HP

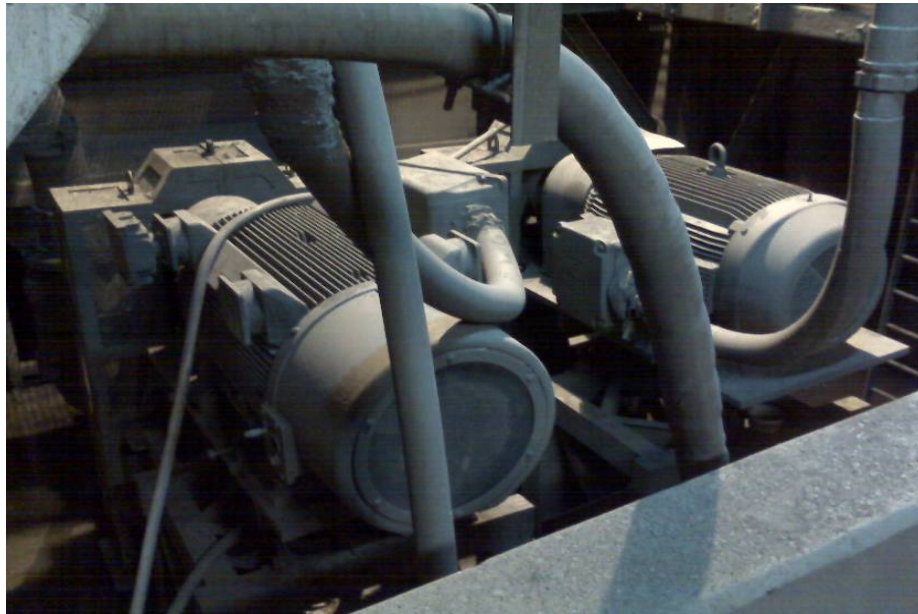
Connection date:

Customer:

Compañía Minera Milpo S.A.A.

Key Notes:

MILPO is a Peruvian mining group dedicated to the development and operation of medium-sized mines, production of copper, zinc, lead, silver and gold. It currently has five operational units: the Mine El Porvenir (Pasco), the Mine Atacocha (Pasco) acquired in November 2008, the Mine and refinery Ivan (Antofagasta - Chile), the Mine Chapi (Moquegua) and Mine Cerro Lindo (Ica) since July 2007.



Mining | Cerro Lindo - Peru



Industrial Sector: Mining

Application: Regenerative Conveyor Belt

Products: 3 Sinus Penta, 60 HP 440 VAC

Connection date:

Customer: Compañía Minera Milpo S.A.A.

Key Notes: the conveyor belt is one of the regenerative applications supported by Santerno inverters. They are capable of recovering energy power back to the mains without heat waste due to the unused energy.



Mining | Lima - Peru



Industrial Sector: Mining

Application: Slurry pump 8x10

Products: Sinus Penta 30 HP

Connection date:

Customer: Gold Fields Ltd.

Key Notes: Gold Fields is one of the world's largest unhedged producers of gold with attributable annualised production of 3.5 million gold equivalent ounces from eight operating mines in Australia, Ghana, Peru and South Africa. Gold Fields also has an extensive and diverse global growth pipeline with four major projects in resource development and feasibility, with construction decisions expected in the next 18 to 24 months.

The Cerro Corona Mine is a large open-pit mine situated in the highest part of the western Cordillera of the Andes Mountains in northern Peru, two kilometers north-west of the village of Hualgayoc in the Department of Cajamarca. This is about 600 kilometers north-east of Lima and about 80 kilometers by road north of the city of Cajamarca.



Mining | Lima - Peru



Industrial Sector: **Mining**

Application: **Pumps**

Products: Sinus Penta, 20 HP

Connection date:

Customer: Minera Pampa De Cobre S.A.

Key Notes:

Located in the upper reaches of the gorge Campayoc between 2300 and 2750 m asl. It belongs to the district of La Capilla, Sánchez Cerro Province and the region of Moquegua. This unit is owned Pampa de Cobre Mining SA, a subsidiary 100% owned by Milpo.



Industrial Sector: Mining

Application:

Products: Sinus M

Connection date:

Customer: Empresa Minera Iscaycruz S.A.

Key Notes:

Empresa Minera Los Quenuales SA is a Peru-based mining company engaged in the extraction and production of zinc, lead and bulk concentrates. The Company operates two mining units: Unidad Minera Yauliyacu, located in Chicla, province of Huarochiri, and Unidad Minera Iscaycruz, located in Pachangara, province of Oyon (Peru).



Mining | Lima - Peru



Industrial Sector: Mining

Application: Stone crusher

Products: Sinus Penta 300 HP

Connection date:

Customer: Compañía Minera Ares S.A.C.

Key Notes: Peruvian operation mine owned by Hochschild and situated 4,900 meters above sea level in the Andes Mountains, approximately 275 kilometres from the city of Arequipa, in southern Peru. Ares operates an underground mine and a processing plant.



Mining | Lima - Peru



Industrial Sector: Mining

Application: Pumps

Inverters: Sinus Penta 150 HP

Connection date:

Customer: Compañía Minera Ares S.A.C.

Key Notes: Peruvian operation mine owned by Hochschild and situated 4,900 meters above sea level in the Andes Mountains, approximately 275 kilometres from the city of Arequipa, in southern Peru. Ares operates an underground mine and a processing plant.



Mining | Lima - Peru



Industrial Sector: Mining

Application: Pumps

Products: Sinus Penta 50 HP, 460 VAC

Type:

Connection date:

Customer: Compañía Minera IRL Ltd.

Key Notes: Minera IRL Limited together with its subsidiaries (the "Group") is a Latin American precious metals mining, development and exploration company

www.minera-irl.com/english/Mine/Corihuarmi/tabid/135/Default.aspx



Mining | Lima - Peru



Industrial Sector: **Mining**

Application: Tumbling pumps

Inverters: Sinus Penta 75 HP

Type:

Connection date:

Customer: Minera Colquisiri S.A.

Key Notes: Private Peruvian miner Colquisiri is dedicated to exploration and development of mining properties in Peru. Established in April 1981 and totally owned by Peruvian interests, Colquisiri extracts non-ferrous metals such as copper, silver, lead and zinc.



Mining | Lima - Peru



Industrial Sector: Mining

Application: Pumps

Products: Sinus Penta 100 HP

Type:

Connection date:

Customer: Minera Aurifera Retamas S.A.
(M.A.R.S.A.)

Key Notes: The Peruvian company is engaged in exploration, development and mining of precious and base metals

MARSA



Mining | Lima - Peru



Industrial Sector:	Mining
Application:	Horizontal pumps
Products:	Sinus Penta 250 HP, 440 VAC
Type:	
Connection date:	
Customer:	Volcan Compañía Minera S.A.A. (Chungar)

Key Notes: The company's main product was zinc, in addition to, silver, lead, copper and gold.

In September 2000, Volcan Compañía Minera S.A.A. purchased the entire shares of stock of Empresa Administradora Chungar S.A.C. and Empresa Explotadora de Vinchos Ltda. S.A.C.

As a result, Volcan Compañía Minera S.A.A. is a company constituted by Peruvian capital that develops its mining operations in the following Production Units: Carahuacra, Ticlio, San Cristobal, Andaychagua, Mahr Tunel, Cerro de Pasco and Animón (Chungar).



Mining | Calama - Chile



Industrial Sector: Mining

Application: Conveyor Belt

Products: Sinus Penta (S65???????)

Connection date:

Customer: Sociedad Contractual Minera El Abra

Key Notes:



Mining | Newcastle - Australia



Industrial Sector: Mining

Application: Regenerative Conveyor Belt

Products: 3 Sinus Penta 0831
1 Sinus Penta 0457

Type: RGN

Connection date:

Customer: chi è ???????????????

Key Notes: The 5km belt conveyor is used to transport the coal from the mine to the thermoelectric power station.

The communication between inverters and PLC is via Ethernet.

➤ **Technical Specification:**

- Length 1st conveyor: 300m
- Length 2nd conveyor: 5 Km
- N.3 AC motors 900kW 50Hz @ 690Vac
- N.1 AC motor 500kW 50Hz @ 690Vac
- Conveyor belt speed: 5m/s



Jixi Coal Mine | Heilongjiang - China



Industrial Sector:	Mining
Application:	Winch
Inverters:	Sinus Penta 280 kW 690 Vac
Type:	Drive + RGN
Connection date:	2010
Customer:	Heilongjiang Jixi Coal Mine

Key Notes: To lift a full loaded mine car from 600m deep mine shaft to surface or to main shaft and to descend empty mine car inside shaft.

The application has been successfully operating for an extended period in which the customers' goals have been well met in not only production efficiency but also in energy cost reduction, by now having their own «Mini power generating Plant»



REFERENCES

INDUSTRIAL AUTOMATION

OIL & GAS

Oil Field | Alberta - Canada



Industrial Sector:	Oil & Gas
Application:	Regenerative Pump Jack
Products:	Sinus Penta 0007-0162 4TBA2K2
Type:	Drive + RGN
Connection date:	2009
Customer:	GT's Oilfield Hauling
Partner:	Canada Control Works

Key Notes: GT's Oilfield Hauling will be recognized as one of the most progressive enterprises in the oilfield transportation industry.

- The pump cycle regenerates back into AC mains up to 35% of the energy. Thanks to Santerno inverter efficiency the electricity consumption and the operating costs are now lowered.

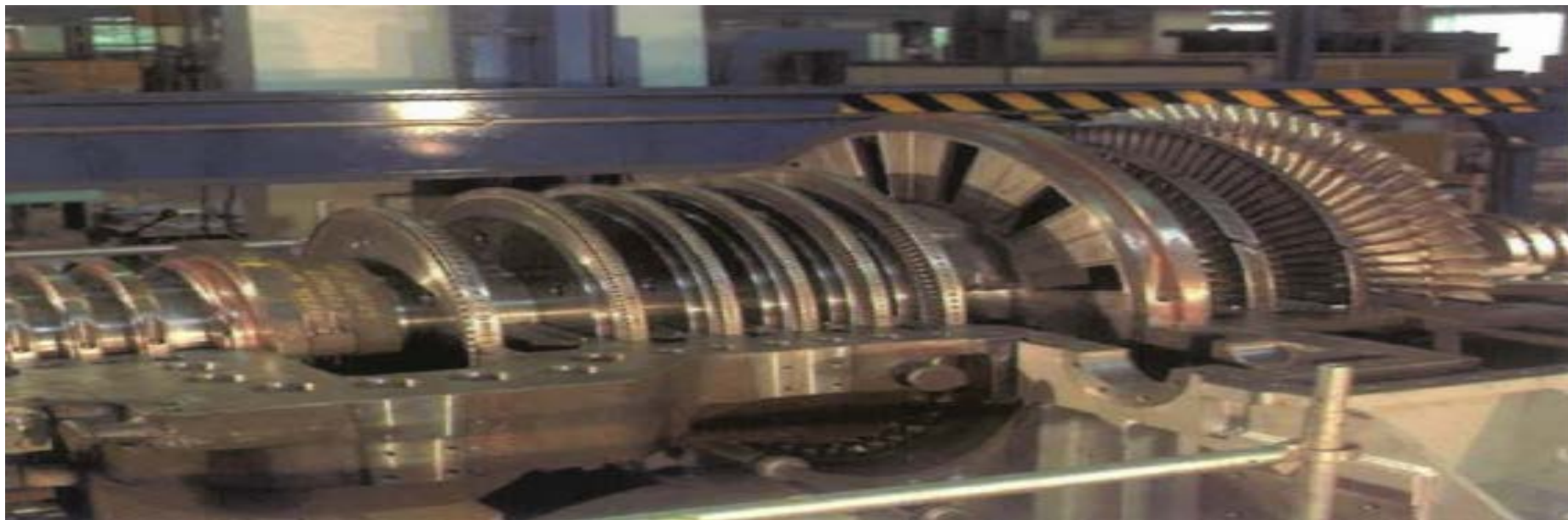


Oil & Gas Industry | Florence - Italy



Industrial Sector: Oil & Gas
Application: Test Bench for Gas Turbines
Products: Soft Starter ASAMV 400-07-E2
Connection date: 2008
Customer: Nuovo Pignone GE

Key Notes: ORegen - Waste Heat Recovery: At locations where remote operation, water scarcity and widely variable loads are important issues, capturing gas turbines' waste heat using the ORegen™ system is an efficient and effective choice to generate additional power without additional fuel consumption and associated CO2 emissions. The ORegen™ system is capable of generating electricity at lower gas turbine loads than a standard combined cycle system where water and steam are used to recover waste heat



Oil Terminal | St. Petersburg - Russia



Industrial Sector:	Oil & Gas
Application:	Pumps
Products:	Sinus Penta 0831 Cabinet RGN.
Type:	Drive with AFE (active front end to reduce current harmonics)
Connection date:	2010
Customer:	CJSC "Electropromcomplect"

Key Notes: Saint Petersburg, sea port. Installation by 1 set of 4 pumps pumping oil products from railway tank to container or to the tanker or vice versa. This set is being managed by 5 Inverters: 4 working and 1 as reserve. Santerno inverter was installed instead of a broken Siemens Cabinet. For the moment is working as reserve driver for any pump.



REFERENCES

INDUSTRIAL AUTOMATION

CEMENT

Cement Industry | Spoleto - Italy



Industrial Sector:	Cement
Application:	Fan
Inverters:	Soft Starter ASAMV 200-07-E2
Connection date:	2008
Customer:	CEMENTIR Italia s.r.l.

Key Notes: Cementir Italy is one of the leading producers of cement and concrete in Italy. The company is controlled by Cementir Holding SpA, which operates internationally in the field of building materials

- Santerno soft starter, HVAC applicated, provides a complete range of motor and system protection features.



Cement Industry | Travesio (PN) - Italy



Industrial Sector:

Cement

Application:

Rotating cylinder

Products:

Sinus Penta

IP20 0005-0831 4TBA2K2

Cabinet 0030-0831 4TBA2K2

Connection date:

Customer:

Buzzi Unicem SpA

Key Notes: Buzzi Unicem is an International multi-regional, heavy-side group, focused on cement, ready-mix and aggregates. Long-term view of the business and dedicated management towards a sustainable development.



Cement Industry | Barletta (BA) - Italy



Industrial Sector: **Cement**

Application:

Products: Sinus Penta Cabinet
0049-0831 4TBA2K2

Connection date:

Customer: Buzzi Unicem SpA

Key Notes: Buzzi Unicem is an International multi-regional, heavy-side group, focused on cement, ready-mix and aggregates. Long-term view of the business and dedicated management towards a sustainable development.



Cement Industry | Robilante (CN) - Italy



Industrial Sector:	Cement
Application:	Conveyor Belt
Products:	Sinus Penta 0113 4TBA2K2
Type:	Drive + RGN
Connection date:	
Customer:	Buzzi Unicem SpA

Key Notes:

The plant is connected to quarries by a 6-km conveyor belt, inside a tunnel: in the picture the belt at Monfranco quarry. Robilante will be the first Italian plant to have the NF certification for two products.

Therefore, after a long and complex effort (it took us almost 4 years), Robilante cement plant becomes one of the few European plants that can take pride in achieving official recognitions by prestigious Italian and International Institutes.



Cement Industry | Barile (PZ) - Italy



Industrial Sector:	Cement
Application:	Mill
Products:	Soft Starter ASAMV 200-07-E2
Type:	
Connection date:	2006
Customer:	Cementi Costantinopoli s.r.l.

Key Notes: Cement Constantinople S.r.l. operates in the following activities:

- pozzolan extraction at the quarry property located in Barile (PZ);
- extraction of limestone from the quarry property located in Minervino Murge (BA);
- extraction of clay from the quarry property situated in Ruvo del Monte (PZ);
- production of clinker with a microwave tower with a 5-stage precalciner;
- production of cement binders;
- production and sale of ready-mix concrete;
- Transport



Industrial Lifting | Pergola (PU) - Italy



Industrial Sector: Cement Industry (Lifting)

Application: Cranes

Inverters: Sinus Penta

Sinus M

Connection date: 2008

Customer: Samo Srl

Key Notes: The SAMO Ltd. is engaged in the lifting industry since 1989, mainly manufactures bridge cranes, gantry cranes, jib cranes, stacker cranes and generally complete systems for lifting, and parts and accessories. The company has followed a path from the beginning of quality that has led, over the years, a better and better construction techniques and a high degree of customer satisfaction

- Using Sinus Penta and Sinus M for lifting and handling horizontal



REFERENCES

INDUSTRIAL AUTOMATION ENGINEERING INDUSTRY

Electronic and Thermo-mechanical Industry | Imola (BO) - Italy



Industrial Sector:	Thermo-mechanical Industry
Application:	Cogeneration Systems
Products:	Sinus M from 1,5 Kw up to 22 Kw Sinus Penta from 22 Kw up to 75 Kw
Connection date:	2009
Customer:	Energifera srl

Key Notes: Energifera designs, manufactures and markets TEMA (Total Energy Manager) electronic machine patented multi-inverter coupled to a thermo-electric generation portion of variable speed.



Engineering | Straits of Messina - Italy



Industrial Sector:	Engineering Industry
Application:	Tidal Turbine Kobold
Inverters:	Sinus Penta RGN
Type:	Drive + RGN
Connection date:	2007
Customer:	Ponte di Archimede International SpA

Key Notes: Ponte di Archimede works in the field of research and development into alternative and renewable energy sources, specialising in the environmental aspects of this work.

Ponte di Archimede International S.p.A.
Ingegneria innovativa per un ambiente sostenibile



Electrical Systems | Larderello (PI) - Italy



Industrial Sector: **Energy Industry**

Application: Geothermal Power Station

Products: Sinus Penta from 5,5 to 500kw
Soft-Start series ASA

Connection date:

Customer: Icet Industrie SpA

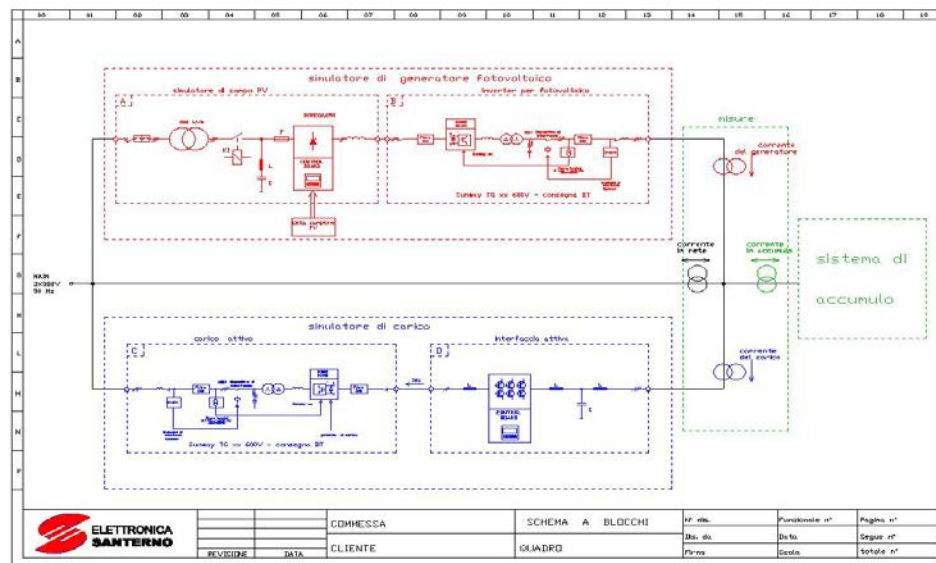
Key Notes: Italy was the first country in the world to exploit geothermal energy, with the first generation plant built in 1913 in Larderello.



Industrial Sector: Engineering Industry
Application: Solar Simulator Generator
Inverters: DCREG2
 Sunway TG
Type: Drive + RGN
Connection date: 2011
Customer: Elettromar SpA

Key Notes: Elettromar is a leading engineering and construction, reliable and dynamic, with a distinctive approach to integration system, technologically competent, experienced, thorough knowledge of the problems of system and process and mastery of the main techniques in automation systems industrial.

The complete solutions designed to optimize production processes through the customer's engineering and development of industrial automation systems.



Command and Control Panels | Scandiano (RE) - Italy



Industrial Sector: Engineering

Application: Lift

Products: Sinus K lift from 1,5kw to 45kw

Connection date: From 2009

Customer: Norma Kontrol srl

Key Notes:

Norma Kontrol produce:

- Control Panels, Components and Accessories for
- Elevators
- Aluminium Heat Sink , ecc.



REFERENCES

INDUSTRIAL AUTOMATION

WOOD INDUSTRY

Wood Carving | Gradara (PU) - Italy



Industrial Sector: **Wood Industry**

Application: Automatic wood polish

Inverters: Sinus M e Sinus Penta

Connection date: From 2006

Customer: Viet Italia

Key Notes: Viet became one of the world leaders in the production of **woodworking machines**



REFERENCES

INDUSTRIAL AUTOMATION

WASTE MANAGEMENT

Waste Management | Padova - Italy



Industrial Sector: **Waste Management**

Application: Recycling Systems

Products: Sinus Penta

Connection date: From 2009

Customer: Forrec Srl

Key Notes: FORREC designs and constructs industrial plants to meet the many different requests from the world of solid waste disposal and recycling. The construction of a wide range of shredders and grinders flanked by the new division for the construction of conveyor belts allows for a high level of flexibility and capability to design customised solutions which then become turnkey solutions



Gasifier | Roma - Italy



Industrial Sector:	Waste Management
Application:	Crane
Products:	Sinus Penta from 5,5 kw to 250kw
Connection date:	
Customer:	CPM Milano

Key Notes: CPM Milano Company was formed out of an industrial group that had operated in Milan since 1940 in the iron and steel and mechanics sectors. Experience, know-how and customer base were integrated into CPM in the early 90s creating a new, dynamic and modern outfit.

CPM is an engineering company specialised in the lifting and transport systems sector.

- The lifting “spider” is regulated by the Sinus Penta Inverter to allow sliding, lifting and translation



Recycling | Padova - Italy



Industrial Sector: **Waste Management**

Application: Single-shaft shredder

Inverters: Sinus Penta

Soft-start ASAB

Connection date: 2007

Customer: Bano

Key Notes: Innovative solutions for recycling Company that operates in the recycling industry with thirty years experience. Leading manufacturer of primary crushers and refiners SOHC suitable to treat a wide variety of materials with the aim of being able to recycle or decrease the volume and make it smooth.

- Waste technology machines. Using the Sinus Penta and soft-start ASAB



REFERENCES

INDUSTRIAL AUTOMATION

AIR CONDITIONING

Heating and Air Conditioning Systems | Feltre (BL) - Italy



Industrial Sector:	HVAC
Application:	Industrial ventilation
Products:	Sinus M from 0,75 kw to 22kw
Connection date:	From 2005
Customer:	Clivet SpA

Key Notes: Clivet is a leading European company that designs, produces and distributes systems for air conditioning, heating, fresh air and purification with a wide range of solutions for residential, commercial and industrial use.



POLICLINICO and BAGGIOVARA Hospital | Modena - Italy



Industrial Sector: **Air conditioning**

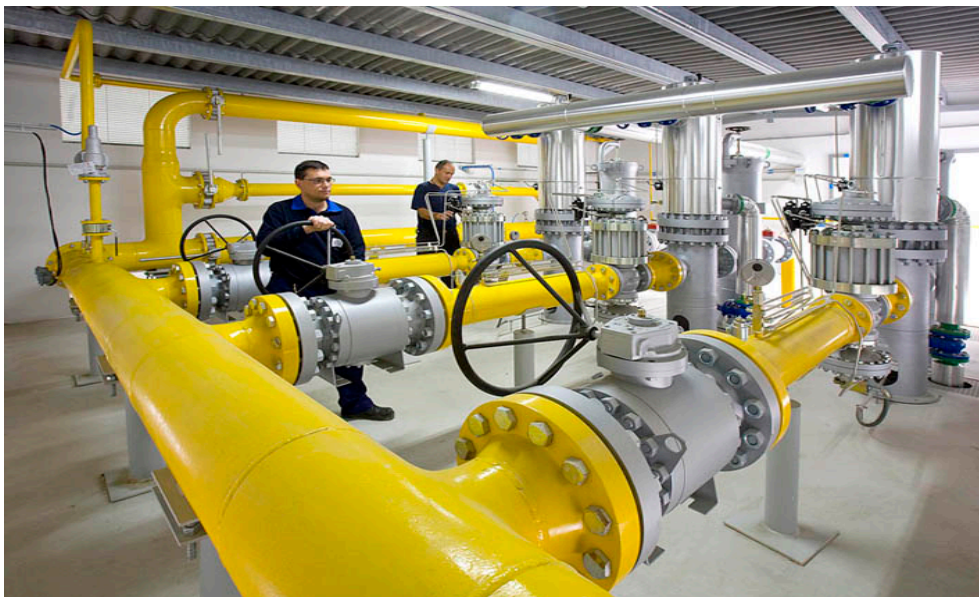
Application: HVAC

Products: Sinus Penta IP54

Connection date: 2011

Customer: CPL CONCORDIA SC.

Key Notes:



Air-conditioning and ventilation | Brunico - Austria



Industrial Sector: **Air-conditioning and ventilation**

Application: HVAC

Products: Sinus M

Connection date: 2011

Customer: Emis

Key Notes: Euroclima is a company with extensive international operations, whose manufacturing facilities are in -Bruneck, Italy and Sillian, Austria. More than 170 employees are at present employed. Euroclima has a well distributed network of sales and service all over Europe, Asia, Middle East and northern Africa. Euroclima is a marketoriented manufacturing company providing top -quality technology in the air-handling sector.



REFERENCES

INDUSTRIAL AUTOMATION

AUTOMOTIVE INDUSTRY

F1 Test Bench | Faenza (RA) - Italy



Industrial Sector: **Automotive Industry**

Application: Gear Test Benches

Products: Sinus Penta

Connection date: 2011

Customer: Scuderia Toro Rosso

Key Notes: F1 car manufacturer - Using the Sinus Penta test benches, high dynamic performance (Test of change of F1)



Carraro Group Test Bench | Campodarsego (PD) - Italy



Industrial Sector:	Axels & Transmissions
Application:	Test Benches
Products:	Sinus Penta Cabinet RGN
Type:	Drive + RGN
Connection date:	2011
Customer:	Carraro SpA

Key Notes: Carraro is an international group that leads the world in highly efficient, eco-compatible power transmission systems.



Testing | Shanxi Jinmei Jinli Electrics - China



Industrial Sector: **Testing Industry**

Application: Test benches

Inverters: Sinus Penta RGN

Type: Drive + RGN

Connection date:

Customer: Shanxi Jinmei Jinli Electrics

Key Notes: The motors are controlled by Sinus Penta's FOC, entire system is regenerative, the overloaded energy is returned to regenerative drive and redirected to drive's inverter, realizing the energy circulation. Each motor is equipped with a 1130 converter and a 1130 energy regenerative converter, they are DC connected.



REFERENCES

INDUSTRIAL AUTOMATION

MARINE INDUSTRY

Industrial Sector:	Marine Industry
Application:	Test Bench & Crane
Products:	Sinus Penta Cabinet RGN Sinus M
Type:	Drive + RGN
Connection date:	2011
Customer:	Viotto Elettromeccanica

Key Notes:

Shipbuilding panel builder. Using the Sinus Penta Cabinet RGN for marine test bench

Port of Ancona | Ancona - Italy



Industrial Sector: **Marine Industry**

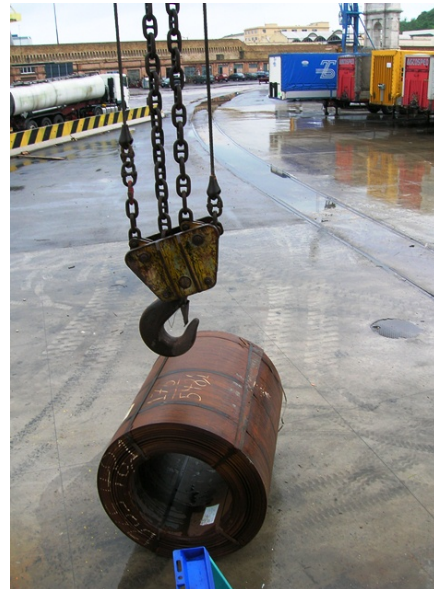
Application: Cranes

Products: Sinus Penta

Connection date: 2011

Customer:

Key Notes:



Marine Industry | Fujian Ningde Xiabaishi - China



Industrial Sector: Marine Industry

Application: Cranes

Inverters: Sinus Penta RGN

Type: Drive + RGN

Connection date:

Customer: Fujian Ningde Xiabaishi

Key Notes: The machine trough block and tackle, lift, move and drop, the entire process can regenerate energy.



REFERENCES

INDUSTRIAL AUTOMATION

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..... | Ucraina

Industrial Sector: ???

Application: **Cranes**

Products: Sinus Penta from 11 kw to 315kw

Connection date:

Costumer: **CPM Milano**



Tin Packaging Industry | Lima - Peru



Industrial Sector: **Packaging**

Application:

Connection date:

Customer: Metalpren S.A.

Inverters: Sinus M

Key Notes:



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