

Santerno Reference List

Mining Applications

March 2016



20 years experience all over the world



Product for Mining : SINUS PENTA

1/3



- Sensor less VTC, Closed-Loop FOC or V/F control
- For AC induction and PM Synchronous motors
- Regenerative Fully Sinusoidal AFE version
- IP54 version available up to 130 kW
- Wide Fieldbus Communication Protocols range
- Customized floor mounted Cabinets available



Product for Mining : SINUS PENTA



2/3



- CE, **UL**, C-Tick, EAC, **DNV Marine**, certified.
- **3 Years Warranty** as a standard.



Product for Mining : SINUS PENTA



3/3

- The product line is **Tough, Strong** and **Reliable**:
 - All steel construction.
 - Varnished boards (conformal coating).
 - Wide Temperature Tolerance: -10C to 55C
 - Overloads up to 200% for 2 minutes every 20 minutes.
 - Peak currents up to 240% for 3 secs.
- **4 Voltage Classes**:
 - **2T** 200 ac ÷ 240Vac,
 - **4T** 380 Vac ÷ 500Vac,
 - **5T** 500 Vac ÷ 600Vac,
 - **6T** 575 Vac ÷ 690Vac.
- **IP54 models** available up to 150 kW (4T) and up to 220 kW (6T)
- **Wide Power Range:** **3kW to 3000kW.**

China



Application: Pumps

Connection date: 2009

Products: SINUS PENTA

Key Notes:

Flow control and transport on demand



Jin Yuan Mining - China



Application: Centrigugal Pumps
Connection date: August 2009
Products: SINUS PENTA 0162 4T



Zijin Mining Group - China



Application: Water Pumps

Connection date: September 2009

Products: many 400V models up to SINUS PENTA 313 4T
many 690V models up to SINUS PENTA 457 6T



Anhui Jinrisheng Mining , Iron Ore- China



Application: 730 kW Water Pump
Connection date: September 2011
Products: SINUS PENTA 0457 6T



Newcastel (NSW) - Australia

1/4



Application: Belt Conveyour

Connection date: 2007

Products: n.1 SINUS PENTA 0457 4T + RGN
n.3 SINUS PENTA 0831 4T + RGN



Newcastel (NSW) - Australia

2/4



- 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



Newcastel (NSW) - Australia

3/4



Newcastel (NSW) - Australia

4/4



Jixi Mining - China



Application: Winch
Connection date: January 2012
Products: SINUS PENTA 0260 4T



Jixi Mining - China



Application: Slurry Pump
Connection date: April 2012
Products: SINUS PENTA 0260 4T



Shanghai Huaxin- China



Application: Conveyor Belt for coal transport

Connection date: May 2012

Products: many SINUS PENTA 0218 6T + RGN
the customer mounted the VFDs on ATEX cabinets



Harbin Jixi Zhang Chen Mine - China



Application: Winch
Connection date: May 2012
Products: SINUS PENTA 0314 6T



“Pucamarca Project” - Perú

1/2



4,300
m
a.s.l.

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

<http://www.minsur.com.pe/proyectopucamarca.htm>



“Pucamarca Project” - Perú

2/2



Longtang Coal Mine - China



Application: Winch
Connection date: May 2012
Products: SINUS PENTA 0164 6T + RGN



Zijin Mining Group - China



Application: Centrifugal Pumps

Connection date: July 2012

Products: many 400V models : SINUS PENTA 0025 - 0313 4T
many 690V models : SINUS PENTA 0312 - 0457 6T



Henan Red Flag Mine - China



Application: Winch
Connection date: August 2012
Products: SINUS PENTA 0202 4T



Sichuan Coal Mine Group - China



Application: Winch

Connection date: August 2012

Products: SINUS PENTA 0201 6T + RGN
the customer mounted the VFDs on ATEX cabinets



Pusong Automation Equip. Co. - China



Application: Conveyor Belt for coal transport

Connection date: October 2012

Products: SINUS PENTA 0201 6T
the customer mounted the VFDs on ATEX cabinets



Cerro Corona - Perú



Application: n.4 20 HP Pumps
Products: n.4 SINUS PENTA 0017 4T

4,000
m
a.s.l.



Chengzhuang Coal Mine - China



Application: Winch

Connection date: September 2012

Products: SINUS PENTA 0088 6T + RGN
the customer mounted the VFDs on ATEX cabinets



Janfeng Industry - China



Application: Stone Saw

Connection date: November 2012

Products: SINUS PENTA 0162 4T



Wangtaipu Coal Mine - China



Customer: Shanxi Coal Mine Group

Application: Winch

Connection date: November 2012

Products: SINUS PENTA 0181 6T + RGN
the customer mounted the VFDs on ATEX cabinets



Shanxi Lingshi Jiantaiyuan Coal Mine - China



Application: Winch
Connection date: November 2012
Products: SINUS PENTA 0259 6T + RGN



Gold Mine Retamas, Perú



Application: n.8 10 HP Pumps

Products: n.4 SINUS PENTA 0086 4T (100 HP)
n.4 ASAB-0145B/5/12/0 (100 HP)

**3,900
m
a.s.l.**



Shendi Linfen - CHINA



Application: Mining Cable

Connection date: March 2013

Products: SINUS PENTA 0113 4T
the customer mounted the VFDs on ATEX cabinets



Shanghai Qinhe Pingdingshan - CHINA



Application: Mining Cable

Connection date: January 2014

Products: SINUS PENTA 0067 6T
the customer mounted the VFDs on ATEX cabinets



Chungar, Perú

1/2



Application: n. 2 250 HP Horizontal Pumps
Products: n.2 SINUS PENTA 0180 4T (440 Vac)

**4,300
m
a.s.l.**



Chungar, Perú



2/2

4,300
m
a.s.l.



Jian'gou Coal Mine - China



Customer: Shenhua Zinjiang Co. Ltd
Application: Conveyour Belt
Connection date: December 2012
Products: SINUS PENTA 0259 6T + RGN



Dongpo Coal Mine in Suzhou- China



Application: Winch

Connection date: December 2012

Products: SINUS PENTA 0131 6T + RGN
the customer mounted the VFDs on ATEX cabinets



Shuouzhou Waist Plug Coal Mine - China



Application: Winch
Connection date: December 2012
Products: SINUS PENTA 0401 6T + RGN



Luoyang Cama Machinery Co. Ltd.- China



Application: Test Bench

Connection date: February 2013

Products: SINUS PENTA 0217 4T
SINUS PENTA 0367 4T



Mining | Cerro Lindo - Perú



Application: n.2 600 HP Recovery Pumps thickener overflow water

Products: n.2 SINUS PENTA 00524 4T S60

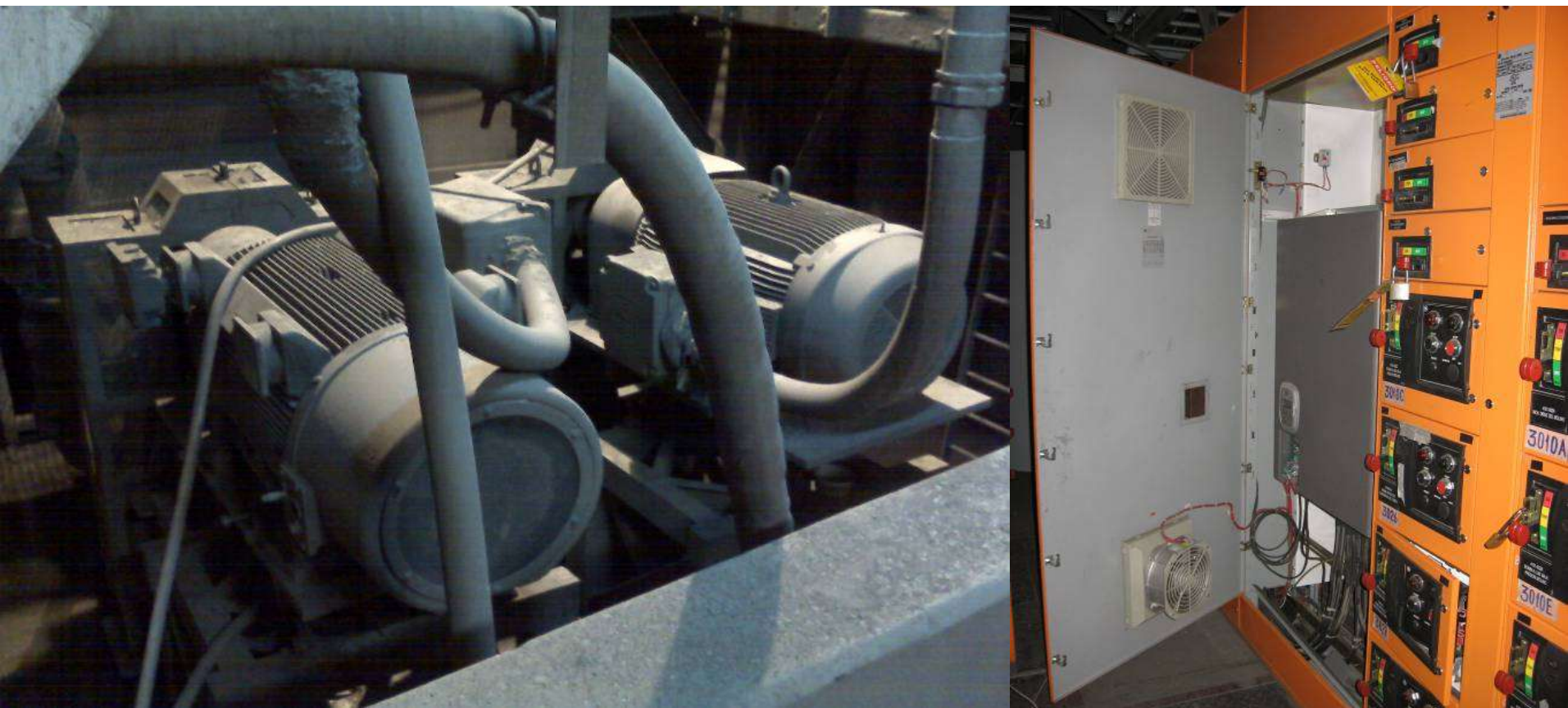


Cerro Lindo - Perú



Application: n.2 300 HP Pumps

Products: n.2 SINUS PENTA 0217 4T



Cerro Lindo - Perú



Application: Regenerative Conveyor Belt
Products: SINUS PENTA 0067 4T + RGN



Shuouzhou Waist Plug Coal Mine - China



Application: Winch
Connection date: March 2013
Products: SINUS PENTA 0259 6T



Ningxia Tiandi Northwest Coal Machinery- China



Application: Conveyor Belt for coal
Connection date: March 2013
Products: SINUS PENTA 0260 4T



Mina El Abra , Calama - Chile

1/4



Application: Crushers + Conveyors
Connection date: 2010
Products: SINUS PENTA 375 kW

**3,500
m
a.s.l.**



Mina El Abra , Calama - Chile



2/4

3,500
m
a.s.l.



Mina El Abra , Calama - Chile



3/4

3,500
m
a.s.l.



Mina El Abra , Calama - Chile



4/4

3,500
m
a.s.l.



Janfeng Industry - China

Application: Stone Saw

Connection date: September 2013

Products: SINUS PENTA 0162 4T



Gaoping Zinzhuang Coal Mina - China



Application: Conveyor Belt for coal

Connection date: April 2013

Products: SINUS PENTA 0088 6T +RGN



Mina El Abra , Calama - Chile

1/3



Application: Conveyors
Connection date: 2011
Products: SINUS PENTA 80 kW

**3,500
m
a.s.l.**



Mina El Abra , Calama - Chile

2/3



Mina El Abra , Calama - Chile

3/3



Ares - PERU



Application: n.2 150 HP Pumps
Products: n.2 SINUS PENTA 00129 4T

**5,000
m
a.s.l.**



Pampa de Cobre, PERU



Application: n.4 30 HP Pumps

Products: n.4 SINUS PENTA 0025 4T

4,200
m
a.s.l.



Irl Mine, PERU



Application: n.2 50 HP Pumps
Products: n.2 SINUS PENTA 0034 4T

**4,800
m
a.s.l.**



Colquisiri Mine, PERU



Application: n.2 75 HP Pumps

Products: n.2 SINUS PENTA 0049 4T



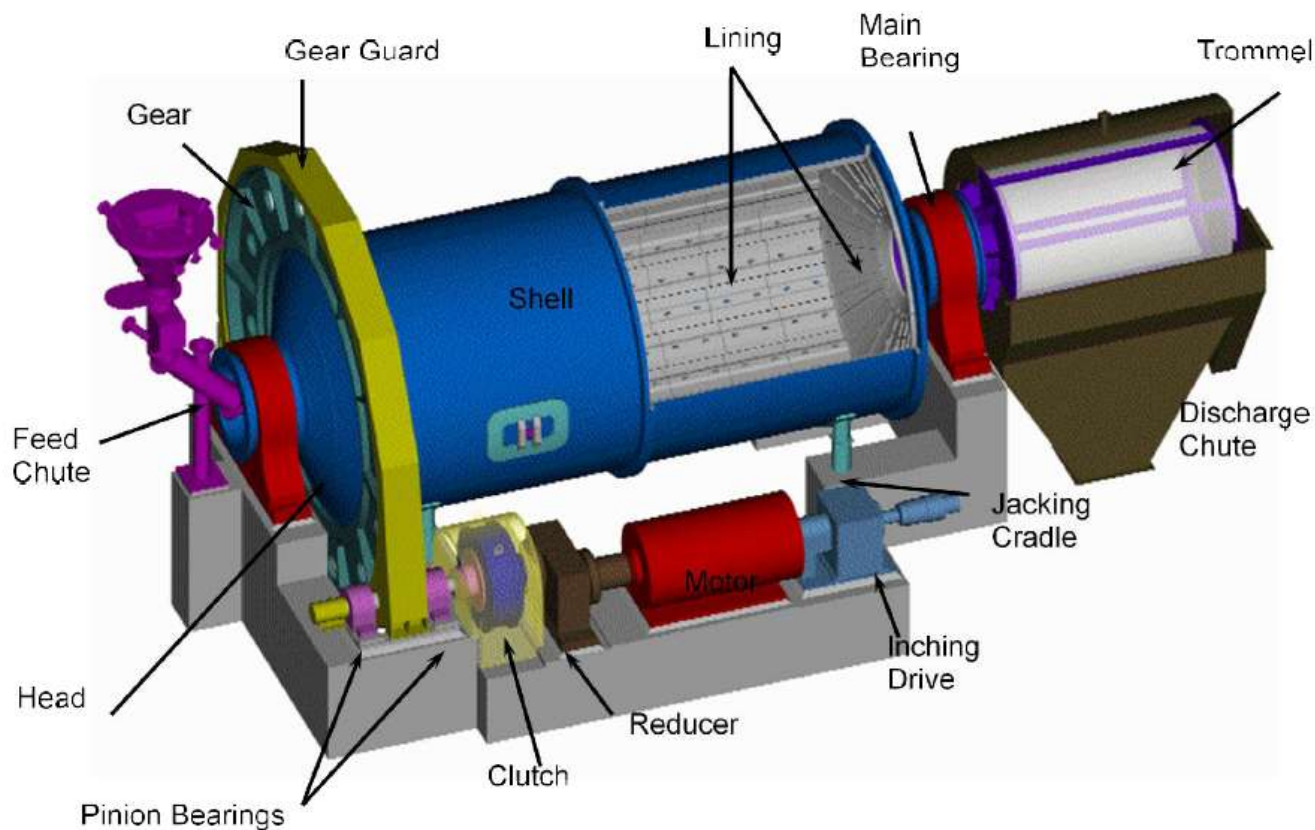
PERU

1/2



Application: Ball Mill, 400HP, 460Vac

Connection date: 2015



PERU

2/2



Application: Ball Mill, 400HP, 460Vac

Connection date: 2015

Products: SINUS PENTA 0402 4T



Coal Min - VIETNAM



Application: Winch
Connection date: August 2012
Products: SINUS PENTA 0164 6T + RGN



45 YEARS EXPERIENCE in VFD

20 YEARS EXCELLENCE in MINING

