Ensured Results in Mineral Processing

Gearless Mill Drives
**Antamina**
*Compania Minera Antamina S.A.*
*Peru*

**Project**: One SAG Mill and 3 Ball Mill Drive Systems

**Capacity**:  
- SAG Mill 1000 t/h  
- Ball Mills 1000 t/h  

**Consultant**: Bechtel, USA

**Mill Builder**: FFE Minerals, USA

**Mill Size**:  
- SAG Mill 38 feet/11.58 m  
- Ball Mills 24 feet/7.32 m  

**Ore processed**: Copper/Zinc

**Drive Rating**:  
- SAG Mill 20.1 MW, 9.23 rpm  
- Ball Mills 11.2 MW, 11.38 rpm  

**Award of Contract**: March 1999

**Start of Operation**: June 2001

**ABB’s scope of supply:**  
Four complete Gearless Mill Drive Systems including:  
- Wrap-around Motors  
- Cycloconverters & Excitations  
- Transformers, E-House Containers incl.: Cycloconverters, MCC’s, PLC’s, VMS Excitation Converters, Fire Fighting, UPS  
- Two complete Synchronous Condenser Systems  
- Two complete Filter and Compensation Systems for Plant Compensation  
- Two 220/23 kV Main Transformers 75/100/125 MVA

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**Escondida IV, Chile**

**Project**: One SAG Mill and 3 Ball Mill Drive Systems

**Capacity**:  
- SAG Mill 4583 t/h  
- Ball Mills 4583 t/h  

**Consultant**: Bechtel, Chile

**Mill Builder**: FFE Minerals, USA

**Mill Size**:  
- SAG Mill 38 feet/11.58 m  
- Ball Mills 25 feet/7.62 m  

**Ore processed**: Copper Ore

**Drive Rating**:  
- SAG Mill 19.4 MW / 9.31 rpm  
- Ball Mills 13.43 MW / 11.5 rpm  

**Award of Contract**: November 2000

**Start of Operation**: December 2002

**ABB’s scope of supply:**  
Four complete Gearless Mill Drive Systems including:  
- Wrap-around Motors  
- Cycloconverters & Excitations  
- Transformers, E-House Containers incl.: Cycloconverters, MCC’s, UPS, Fire Fighting, PLC’s VMS, Excitation Converters
Batu Hijau
PT. Newmont Nusa Tenggara Indonesia

Project: Two SAG Mill Drive Systems

Capacity: 850 t/h
Consultant: Fluor Daniel, USA
Mill Builder: Svedala, USA
Mill Size: 36 feet/10.97 m
Ore processed: Copper/Gold
Drive Rating: 13.5 MW, 9.77 rpm
Award of Contract: February 1997
Start of Operation: December 1999

ABB's scope of supply:
Two complete Gearless Mill Drive Systems including:
- Wrap-around Motors
- Cycloconverters & Excitations
- Transformers
- E-House Containers incl.:
  - Cycloconverters
  - MCC’s, PLC’s, VMS
  - Excitation Converters
  - Fire Fighting
  - UPS

Century Zinc
Pasminco Century Australia

Project: One SAG Mill Drive System

Capacity: 680 t/h
Consultant: CMBJV
Mill Builder: Fuller, USA
Mill Size: 36 feet/10.97 m
Ore processed: Zinc
Drive Rating: 12.0 MW, 9.20 rpm
Award of Contract: February 1997
Start of Operation: October 1999

ABB's scope of supply:
One complete Gearless Mill Drive System including:
- Wrap-around Motor
- Cycloconverter & Excitation
- Transformers, E-House Container incl.:
  - Cycloconverters, MCC’s, PLC, VMS
  - Excitation Converter, Fire Fighting, UPS
One complete Ball Mill Drive System incl.:
- Wound Induction Motor 6.72 MW, 996 rpm, 6 pole, 50 Hz. Liquid Starter
Goldstrike
Barrick Goldstrike
USA

Project: Two Ball Mill Drive Systems

Capacity: 512 t/h
Consultant: Hatch Associate, Canada
Mill Builder: Polysius, USA
Mill Size: 19 feet/5.8 m
Ore processed: Gold
Drive Rating: 7.5 MW, 13.45 rpm
Award of Contract: October 1998
Start of Operation: April 2000

ABB’s scope of supply:
Two complete Gearless Mill Drive Systems including:
- Wrap-around Motors
- Cycloconverters & Excitations
- Transformers, E-House Containers incl.
- Cycloconverters, MCC’s, PLC’s, VMS
- Excitation Converters, UPS
- Two complete Filter and Compensation Systems

ABB – Your Partner in Mining & Mineral Processing

- Serving the industry since 1973
- Over 40 complete plants installed in 20 countries
- Drives and process control systems installed at more than 160 locations in 25 countries
- Internationally supported competencies and resources
- Single source responsibility for engineering and hardware needs
- Financially secure, longterm global commitment
- Over 80 additional process optimization and information management installations
- Wide range of process instrumentation
- Industry specific applications

ABB offers comprehensive packages of ABB competencies, products and services for the electrification, automation and optimization of the complete production chain in the industry.