ABB Automation GmbH, Center of Excellence

Open Pit Mining, Cottbus Germany

References
Semi mobile crusher, Moly mines, Molybdenum mine
Australia - Spinifex Ridge

- Spinifex Ridge, Pilbara Region, Western Australia
- OEM: ThyssenKrupp Fördertechnik, Germany
  End user: Moly Mines Ltd, Australia
- Commissioning in 2011
- Mechanical performance data:
  - 1 crusher with discharge conveyor
  - engineered capacity up to 5.100 t/h
  - temperature up to +50°C
- Scope of ABB:
  - Design according to Australian standard
  - Medium voltage
  - Low voltage
  - Control system
  - Frequency converters
  - Transformers
  - E-houses / cabins
  - Field devices
  - Cables and wiring
- Key Features:
  - ABB AC 800M controller system
  - ABB ACS 800 technology
Semi mobile crusher, Sino Iron ore mine
Australia - Cape Preston

- Spinifex Ridge, Pilbara Region, Western Australia
- OEM: ThyssenKrupp Fördertechnik, Germany
  End user: Sino Iron Ltd, Australia
- Commissioning in 2011
- Mechanical performance data:
  - 4 crusher with discharge conveyors
  - engineered capacity up to 5.100 t/h
  - temperature up to +50°C
- Scope of ABB:
  - Design according to Australian standard
  - Medium voltage
  - Low voltage
  - Control system
  - Frequency converters
  - Transformers
  - E-houses / cabins
  - Field devices
  - Cables and wiring
- Key Features:
  - ABB AC 800M controller system
  - ABB ACS 800 technology
Refurbishment of 2 x SchRs 1200 Excavator
Bulgaria - Trojanowo 3 & North mine

- Open pit-mine Trojanowo, Bulgaria
- Balgarska Energetika, Sofia, Bulgaria
- End user: Mini Mariza Istok, Radnevo; Bulgaria
- Commissioning in 2009
- Mechanical performance data:
  - 2 SchRs 1200 excavator
  - Digging rate up to 3,600 m³/h

- Scope of ABB:
  - Medium voltage
  - Low voltage
  - Control system
  - Frequency converters
  - Motors
  - E-Houses, Cabins
  - Field devices
  - Communication system (WLAN)
  - Cables and wiring
  - Engineering and commissioning, Site supervision

- Key features:
  - ABB AC 800F controller system
  - ABB ACS 800 technology
  - WLAN communication, automatic antenna tracking
Refurbishment of 3 x SchRs 1200 Excavator
Bulgaria - Trojanowo 1 & North mine

- Open pit-mine Trojanowo, Bulgaria
- Balgarska Energetika, Sofia, Bulgaria
- End user: Mini Mariza Istok, Radnevo; Bulgaria
- Commissioning up to 2011
- Mechanical performance data:
  - 3 SchRs 1200 excavator
  - Digging rate up to 3,900 m³/h
- Scope of ABB:
  - Medium voltage
  - Low voltage
  - Control system
  - Frequency converters
  - Motors
  - E-Houses, Cabins
  - Field devices
  - Communication system (WLAN)
  - Cables and wiring
  - Engineering and commissioning, Site supervision
- Key features:
  - ABB AC 800F controller system
  - ABB ACS 800 technology
  - WLAN communication, automatic antenna tracking
Leach Pad System, Copper mine
Chile - Gaby

- Location: Atacama Desert, Region II Chile
- OEM: TAKRAF GmbH, Leipzig, Germany
  End user: CODELCO, Chile (Corporación National del Cobre)
- Mechanical performance data:
  Stacking System:
  - Stacking Bridge, 409 m long, 12 VFC-Travel Drives
  - Overland Conveyor, 2 x 630 kW/ 6,6 kV
  - Stacker/Tripper, 16 VFC-Travel Drives
  - Tripper car, 18 Travel Drives
  Reclaiming System:
  - Reclaimer Bridges 423 m long, 12 VFC Travel Drives
  - 3 Conveyors, total 5 km long, 5 x 630 kW/ 6,6 kV
  - Reclaimer, 3 VFC Travel Drives
  - Hopper car, 6 VFC Travel Drives
  - Tripper car, 4 VFC Travel Drives
  - Spreader, 3 VFC Travel Drives, 2 VFC Slewing Gear, 2 Conveyors
- Scope of ABB:
  - Design according to NEMA/ANSI Standards
  - 12 Electrical E-Houses (Container)
  - Medium voltage (partly Metal Glad)
  - Low voltage (MCC and LV Switch Gears, 0,69; 0,4 kV)
  - Control system AC800M + Panels, Frequency converters (ACS800),
  - Air Condition and Heating, Fire Extinguishing System(FM200)
  - 2 Operators Cabins
  - Transformers, Capacitors, Field devices, Communication system WLAN), Cables and wiring
  - Engineering, Assistance Erection, Commissioning, Performance Tests
- Key features:
  - ABB AC 800M controller system
  - ABB ACS 800 technology
  - WLAN data communication / Monitoring
Semi mobile crusher, Iron ore mine
China - Taigang I & II

- Taiyuan, China
- OEM: ThyssenKrupp Fördertechnik, Germany
  End user: Taiyuan Iron & Steel Co. Ltd. - TISCO
- Commissioning in 2011
- Mechanical performance data:
  - 2 crusher with discharge conveyor
  - engineered capacity up to 7,200 t/h
  - temperature up to -40°C
- Scope of ABB:
  - Design, engineering and delivery
  - Medium voltage
  - Low voltage
  - Control system
  - Frequency converters
  - Transformers
  - E-houses / cabins
  - Field devices
  - Cables and wiring
- Key Features:
  - ABB AC 800M controller system
  - ABB ACS 800 technology
Semi mobile crusher, Iron ore mine  
China - Tanggang I&II

- Tangshan, China
- OEM: ThyssenKrupp Fördertechnik, Germany
  End user: Sijiajing Iron Ore Mine of Hebei Iron & Steel Group Mining Co. Ltd
- Commissioning in 2011
- Mechanical performance data:
  - 4 crusher with discharge conveyor
  - engineered capacity up to 7.300 t/h
  - temperature range -40°C up to +40°C
- Scope of ABB:
  - Design, engineering and delivery
  - Medium voltage
  - Low voltage
  - Control system
  - Frequency converters
  - Transformers
  - E-houses / cabins
  - Field devices
  - Cables and wiring
- Key Features:
  - ABB AC 800M controller system
  - ABB ACS 800 technology
Open Pit mine Bükkabranty, Hungary

- Open Pit mine Bükkabranty, Hungary
- OEM: SANDVIK materials handling, Austria
  End user: MATRA Kraftwerk G. AG, Hungary
- Commissioning in 2009
- Mechanical performance data:
  - 1 bucket wheel excavator
  - 1 Beltwagon
  - engineered capacity up to 6000t/h
  - total transshipment capacity 12mt/y

- Scope of ABB:
  - Medium voltage
  - Low voltage
  - Control system
  - Frequency converters
  - Transformers
  - cabins, air conditioning
  - lightings and socket outlets

- Sensors, Cables and wiring
- Key Features:
  - ABB AC 800M controller system
  - ABB ACS 800 technology
Refurbishment of the SRs 1300 Excavator
Kosovo - Sibovc West Open-Pit Mine

- Open pit-mine Sibovc West, Kosovo
- Consortium TAKRAF GmbH, Leipzig, Germany & ABB
  End user: KEK, Republic of Kosovo
- Mechanical performance data:
  - 1 SRs 1300 excavator
  - 1 loading unit
  - 1 hopper car
- Scope of ABB:
  - Medium voltage
  - Low voltage
  - Control system
  - Frequency converters, Motors
  - Transformers
  - Cabins
  - Field devices
  - Communication system (WLAN)
  - Cables and wiring
  - Engineering, Dismantling, Erection
  - Commissioning and tests
- Key features:
  - ABB AC 800F controller system
  - ABB ACS 800 technology
  - WLAN communication
New Mining Field Equipment – BWE + Spreader
Macedonia - Brod Gneotino

- Brod Gneotino Mine Field, Macedonia
- OEM: Takraf GmbH Leipzig, Germany
  End user: ELEM JSC Macedonian Power Plants
- Commissioning in 2009 - 2010
- Mechanical performance data:
  - 1 Bucket Wheel Excavator (Compact style)
  - 1 Spreader
  - Capacity up to 5.500m³/h
- Scope of ABB:
  - Medium voltage
  - Low voltage
  - Control system
  - Frequency converters
  - Local service
  - Transformers
  - E-houses / cabins
  - Sensors
  - Cables and wiring
- Key Features:
  - ABB ACS 800 technology
Coal Terminal, Port
Russia - Wanino

- Wanino Port, Siberia, Russia
- OEM: Takraf GmbH Leipzig, Germany
- End user: Daltransugol SUEK, Russia
- Commissioning in 2009
- **Mechanical performance data:**
  - 1 crusher
  - 3 stockpile machines
  - 2 shiploaders
  - 15 conveyors
  - engineered capacity up to 3,500t/h
  - total transshipment capacity 12mt/y
  - temperatures up to -40°C
- **Scope of ABB:**
  - Plant overview / energy distribution
  - Medium voltage
  - Low voltage
  - Control system
  - Frequency converters
  - Local service
  - Transformers, E-houses, cabins, Sensors
  - Cables and wiring
- **Key Features:**
  - Central control room with ABB AC 800F controller system
  - ABB ACS 800 technology
Overburden System  
Turkey - Çöllolar Mine Field

- Çöllolar Mine Field, Turkey
- OEM: ThyssenKrupp Fördertechnik GmbH, Germany
  End user: PARK Teknik, Turkey
- Realisation and Commissioning until 2011
- Mechanical performance data:
  - 2 pcs. Truck Dump Stations (year 2009)
  - 2 pcs. Truck Dump Stations (year 2010)
  - 3 pcs. Spreader (year 2010 – 2011)
  - 3 pcs. Tripper Cars (year 2010 - 2011)
  - engineered capacity per TDS up to 5.600m³/h
- Scope of ABB:
  - Medium voltage
  - Low voltage
  - Control & visualisation system
  - Frequency converters
  - Transformers
  - E-houses and cabins
  - Field devices
  - Cables and wiring
  - Cable reeling drums
- Key Features:
  - ABB ACS 800 technology
Bucket Wheel Excavator SRs2000
Serbia - Drmno

- Open cast mine Drmno, Serbia
- OEM: Takraf GmbH Leipzig, Germany
  End user: Public Enterprise Electric Power Industry of Serbia (EPS)
- Commissioning in 2009
- Mechanical performance data:
  - 1 Bucket Wheel Excavator
  - engineered capacity up to 6.600m³/h
- Scope of ABB:
  - Plant overview / energy distribution
  - Medium voltage
  - Low voltage
  - Control system
  - Frequency converters and motors
  - Local service
  - Cable reeling drum
  - Transformers
  - E-houses / cabins
  - Video system and intercom, Field devices
  - Cables and wiring
- Key Features:
  - ABB AC 800F controller system
  - ABB ACS 800 technology
Overburden Belt Conveyor System & CCR
Serbia - Open-Pit Mine Tamnava West

- Open pit-mine Tamnava West, Serbia
- Contractor: FAM GmbH, Magdeburg, Germany
  End user: EPS, Republic of Serbia
- Mechanical performance data:
  - 5 pcs 2000mm belt drive stations with return station
  - 1 tripper car
  - 2 hopper cars
- Scope of ABB:
  - Medium voltage switchgears
  - Low voltage switchgears
  - Control system
  - Frequency converters, Motors 1000kW
  - Transformers
  - Containers, Field devices
  - Communication system (WLAN, VIDEO, Radio, Intercom)
  - Cables and wiring
  - Engineering, Supervision, Erection
  - Commissioning and tests
- Key features:
  - ABB AC 800F controller system
  - ABB ACS 800 technology
  - Central control room (CCR) with 800xA for > 7.500 I/O’s
  - 4 Operator workplaces, 2 Service workplaces
  - Optimized belt speed regulation (OBS)
  - WLAN data communication
Spreader A₂RsB 8500.60.1
Serbia - Open-Pit Mine Tamnava West

- Open pit-mine Tamnava West, Serbia
- Contractor: TAKRAF GmbH, Leipzig, Germany
  End user: EPS, Republic of Serbia
- Mechanical performance data:
  - 1 Spreader with capacity up to 8.500m³/h
- Scope of ABB:
  - Medium voltage switchgears
  - Low voltage switchgears
  - Control system
  - Frequency converters
  - Motors
  - Transformers
  - Containers, operator cabins
  - Reeling cable drum
  - Field devices
  - Communication system (WLAN, VIDEO, Radio, Intercom)
  - Cables and wiring
  - Engineering, Supervision, Erection
  - Commissioning and tests
- Key features:
  - ABB AC 800F controller system
  - ABB ACS 800 technology
  - WLAN data communication
  - Radio interlocking to belt conveyor stations
Overall Power Supply System
Serbia - Open-Pit Mine Tamnava West

- Open pit-mine Tamnava West, Serbia
- Contractor = End user: EPS, Republic of Serbia
- Electrical performance data:
  - 1 Transformer substation 35/20kV with power demand of 12,240kW as compact container solution
  - 1 Transformer 110/35kV with 31.5 MVA
  - 1 Transformer 35/20kV with 8 MVA
  - 8000m optical cable network along overhead lines
- Scope of ABB:
  - Medium voltage switchgears
  - Low voltage switchgears
  - Cable reeling storage drums
  - Control system
  - Transformers
  - Container
  - Field devices
  - Communication system (Phone, Radio, Intercom)
  - Cables and wiring
  - Engineering, Supervision, Erection
  - Commissioning and tests
- Key features:
  - ABB AC 800M controller system
  - data transfer to Central control room (CCR) with 800xA
  - Open Rail Network
  - Remote control of 5 transformer substations from the central control room (CCR)
Movable Shifting Devices
Serbia - Open-Pit Mine Tamnava West

- Open pit-mine Tamnava West, Serbia
- Contractor: TAKRAF GmbH, Leipzig, Germany
  End user: EPS, Republic of Serbia
- Mechanical performance data:
  - 2 Movable shifting devices
- Scope of ABB:
  - Medium voltage switchgears
  - Low voltage switchgears
  - Control system
  - Frequency converters
  - Motors 1000 kW
  - Transformers
  - Containers, operator cabins
  - Field devices
  - Communication system (WLAN, VIDEO, Radio, Intercom)
  - Cables and wiring
  - Engineering, Supervision, Erection
  - Commissioning and tests
- Key features:
  - ABB AC 800F controller system
  - ABB ACS 800 technology
  - WLAN data communication