



***AMR* PEMCO**

PROVEN PARTNER IN TECHNOLOGY

WWW.AMRPEMCO.COM

Corporate Overview



- AMR PEMCO and sister companies operate to provide electronic monitoring, controls, communications, tracking, and collision avoidance systems as well as industrial buildings, circuit breakers, dry-type transformers, and automation integration.
- Markets served include global mining, aggregates, tunneling, power generation, utilities, transit, nuclear, water/wastewater, and general industry.
- Primary sales in the U.S., Canada, Mexico, India, South Africa, and South America with sales in many other countries around the world.

AMR est. 1975



ERM est. 1979



CMS est. 1995



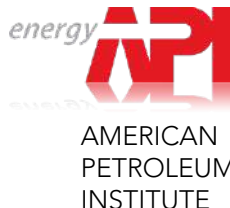
PEMCO est. 1960 - Acquired in 2016



Delivering Projects Worldwide



Codes and Certifications



Experience With Popular Brands



GE Infrastructure
Water & Process Technologies



Clients and Customers



NORTHROP GRUMMAN

Balfour Beatty



TMEiC



**Rockwell
Automation**



Core Capabilities



- Industrial & control buildings (ICB) and equipment enclosures including HVAC systems and design, installation and integration of all types of electrical equipment
- Complete skid mounted systems including switchgear, AC & DC Drives, transformers and control systems
- Complete skid mounted power centers and substations for harsh duty applications
- Custom designed dry type transformers up to 4 MVA and 25kV class.
- Specialty magnetics for custom applications including reactors, inductors, and rectifier duty transformers
- UL and CSA certified control panels with custom enclosure design and fabrication
- 3D modeling capabilities for all enclosures and bus assemblies.
- Electrical, mechanical, and transformer engineering



Transit and Tunneling



- AMR PEMCO applies decades of underground mining experience to the transit and tunnel construction sector. Our skid-mounted power centers, electronic circuit breakers, gas detection sensors, IEEE 802.11 Wi-Fi communications, asset and personnel tracking, and collision avoidance solutions not only increase safety, but improve efficiency and productivity as well.
- AMR PEMCO is dedicated to providing customers with products that achieve results, improve employee safety, reduce operating costs and shorten downtime. Our domestic and international distributor network, combined with our highly trained sales, engineering, and service departments, are ready to assist customers around the clock.





TRANSIT & TUNNELING INDUSTRY PRODUCT SOLUTIONS

Collision Avoidance



- Designed to alert equipment operators of nearby personnel and other equipment, our Collision Avoidance Protection System (CAPS) reduces the risk of crushing and pinning accidents as well as vehicle-to-vehicle collisions
- This is done by detecting when a person or vehicle enters the “Customized Protection Zone” around the machine. When a tagged asset enters the protection zone, the system activates up to three open collector outputs for audible, visual, or other alert response systems to warn the equipment operator and nearby personnel of the dangerous situation.



C.A.P.S Vehicle Tag

Dry-Type Transformers



Dry-type Transformers

- 100 to 10,000 KVA (10 MVA)
- Primaries voltages up to 34.5 kV
- Meet all IEEE standards
- UL or CSA-approved varnish and VPI system
- Drive Rated, Rectifier Duty, Excitation and Static Start applications
- Custom enclosure and packaging options
- Retrofits, rebuilds, and custom-designed upgrades available!



E-Houses and Control Buildings



Industrial Control Buildings

- ▣ Custom Control Panels, Copper Bus Assemblies, Termination Compartments, and other accessories available
- ▣ E-Houses, Deposit on Base Enclosures (DOBE), skid-mounted, and other styles
- ▣ Mild, stainless, and galvanized steel construction available
- ▣ Complete installation and electrical integration of all equipment
- ▣ Installation to NEC guidelines for acceptable work practices and clearances
- ▣ Engineering services for electrical integration



Electrical Distribution Equipment



Custom Panels

- Turn key solutions
- Custom enclosure design and manufacturing
- CSA/UL/CE certifications available
- Power and control panels
- Custom 3D copper bus bar design and fabrication
- Breaker cabinets

Custom Electrical Equipment

- Industrial & Control Buildings (ICBs) and equipment enclosures including HVAC systems and design, installation and integration of all types of electrical equipment

Specialty Magnetics

- Custom applications including reactors, inductors, and rectifier duty transformers



Electronic Circuit Breakers



AMR PEMCO's CB series offers greater safety than conventional breakers.

- Replaces molded case breakers
- No external arcing
- Extremely long life of operation
- Indicator lights for all faults: Phase overcurrent, Ground fault, Phase undervoltage, Unit fault, Ground monitor trip, Fuse/contact failure, Phase loss
- Self Test circuitry
- All protection functions in one package
- Easily tested by breaker test unit (BT-1000)
- Capable of remote control by any data acquisition system or PLC's.



CB-100

The CB-100 offers state-of-the-art technology that meets the most stringent safety standards while providing the reliability you demand in one rugged compact package. The CB-100 is a companion to the successful CB-1000 and is comparable in size with a 225 Amp molded case circuit breaker. However, the comparison ends with size, because the CB-100 offers you levels of safety and reliability unheard of in molded case breakers.

Electronic Circuit Breakers



CB-1000

For the ultimate in power, safety and reliability, the CB-1000 combines motor control and fault sensing circuitry in one rugged package. Ground fault, under-voltage phase loss, ground monitor, and over-current sensing are featured on plug-in printed circuit boards housed in an easily maintained electronic package. The CB-1000 can be easily interfaced using control systems with its digital in/out port.



CB-PRO

- Reduction in maintenance downtime
- Eliminates molded case circuit breaker replacement
- Rated for 1 million trips useful life
- Increased trip accuracy leads to decreased troubleshoot time
- Eliminates nuisance tripping
- Prevents equipment damage
- Reduction in spare parts inventory

MC-6410 Multi Gas Monitor



- Monitor multiple unique gases simultaneously
- Sensors available include: CO, CO₂, CH₄, O₂, NO, NO₂, H₂, H₂S, SO₂ and others
- Diesel Nullifying available using NO and CO sensors
- Calibration data, including last calibration date*, stored in each individual sensor module
- No tools required for sensor module replacement
- Automatic detection of installed sensors
- Automatic date & time synchronization (Wi-Fi Only)
- NETWORK INTERFACE OPTIONS:
 - IEEE 802.11 Wi-Fi
 - Radio module for AMR Mine Net™ System
 - RS485 for AMR MC-4000 or other control systems
 - 4-20mA Current Loop
- MSHA Intrinsically Safe Approval # 18-A130001



Mine Net Mesh Wi-Fi Systems



Mine Net Mesh is the second generation of AMR PEMCO's communications and tracking solutions adding real time voice and 802.11 data connectivity. The primary purpose of these systems is to expedite miner location and rescue efforts, but they also greatly increase productivity during daily operations.



VoIP Handset

The Voice over IP phone operates at 2.4 GHz and is IEEE 802.11 compliant. Capable of voice calls, Push-to-Talk (PTT), and preset or custom text messages, it allows the user to communicate with a single person, a specific group, or the entire network all at the same time.



MN-6400 Wireless Access Point

The wireless access point, or Node, provides the backbone of the Mine Net™ Mesh system by communicating all voice, tracking, and data throughout the mining facility via Wi-Fi and Ethernet connections. It communicates with the Central Monitoring Station for real-time communications and system management.

Mine Net Mesh Wi-Fi Systems



Personnel Tag

The MN-6425 Wi-Fi Ranging Tag is the latest in precision wireless tracking for underground environments such as mines and tunnels. The unit is lightweight, rechargeable, and includes an integrated clip allowing personnel to place it prominently on their mid to upper body.



MineWeb

MineWeb is a browser-based application for personnel and equipment tracking in underground mining operations. It complements the MineNet™ Mesh, Wi-Fi based communication and tracking system, and provides a graphical user interface for real-time location monitoring of personnel and equipment.

Mine Net Communication & Tracking



The Mine Net Communications and Tracking system is AMR PEMCO's original non-tethered, two-way communications network.



Mine Net Reader

The Intrinsically Safe Smart Readers are connected by twisted pair copper wire, or fiber optic cable, to create a comprehensive communications network. The Mine Net software program gathers information from the network to track personnel and assets by user defined zones, as well as provide real-time text communications with handheld messengers.



Mine Net Tag

The Mine Net Communications and Tracking system utilizes actively transmitting tags which continuously transmit a unique Identification number to the Smart Readers. The Smart Readers are connected by twisted pair copper wire, or fiber optic cable, to create a comprehensive communications network throughout the underground mining or tunneling operation.

Remote Telemetry



- AMR PEMCO is an authorized distributor for High Tide Technologies, a US-based technology company. High Tide offers a complete, but simple, SCADA solution utilizing Remote Telemetry Units (RTU's) via satellite or cellular.
- TelemetryVIEW enables easy access to information about remote equipment run times, electrical consumption, flow rates, tank levels, and more.
- Applications include:
 - Grinder Pump Status
 - Simple Alarm Systems
 - Remote Storage or Water Tanks
 - Field Instrumentation Monitoring
 - Managing Treatment Plants
 - Ventilation Fan Monitoring
 - Natural Gas Wells and Compressor Stations





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