



***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



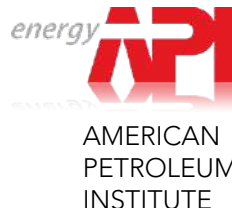
PEMCO est. 1960 - Acquired in 2016



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



OIL & GAS INDUSTRY PRODUCT SOLUTIONS

- Custom designed in accordance with IBC guidelines
- Steel and Stainless Steel construction, Mild, or Galvannealed
- Installation of instrumentation and control equipment inside the building
- Custom HVAC and ventilation solutions
- Heat tracing of pipes and temperature sensitive components
- Modular sections available for large areas
- Ancillary components available - Steps, Ramps, Platforms, Railings, Mezzanines, etc.



Building Solutions (cont'd)



AMR PEMCO's 35 and 88 ton Gantry Cranes provide easy loading of buildings and skid mounted equipment



On-site installation assistance from AMR PEMCO personnel is available.

Electrical Houses (E-House)



- “E-Houses” are widely used in the oil & gas, mining, and power generation sectors.
- Designed to the customers specifications they can be application specific or general use.
- Examples include:
 - Substation control buildings
 - Motor Control Centers (MCC's) or Electrical Switchgear
 - PLC Control Buildings
 - Battery backup buildings



Operations Buildings



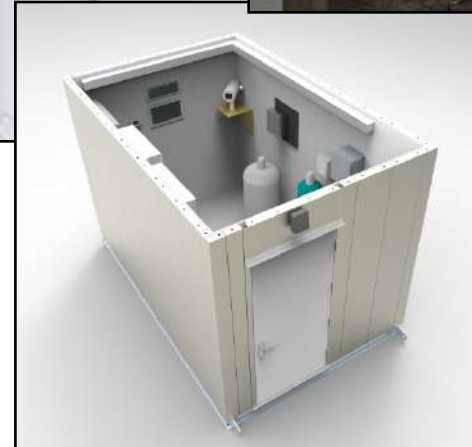
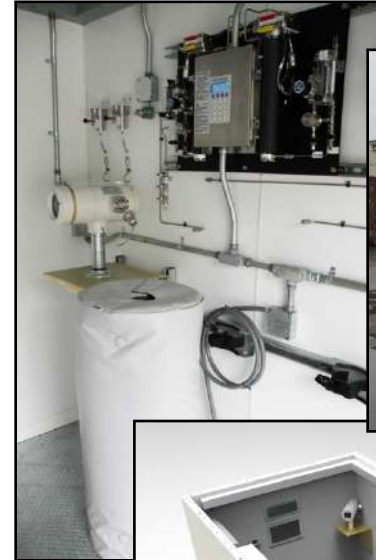
- ▣ Command Centers
- ▣ Instrumentation Air Building
- ▣ Metering Building
- ▣ Administrative Offices
- ▣ Change Houses / Locker Rooms
- ▣ Weather Shelters
- ▣ Bus Stops



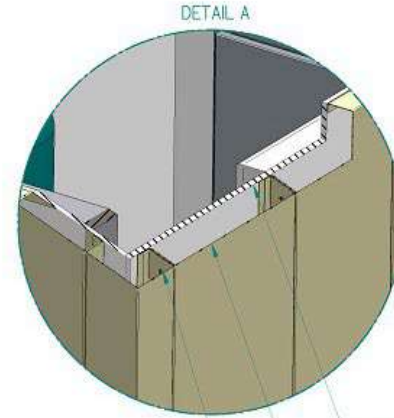
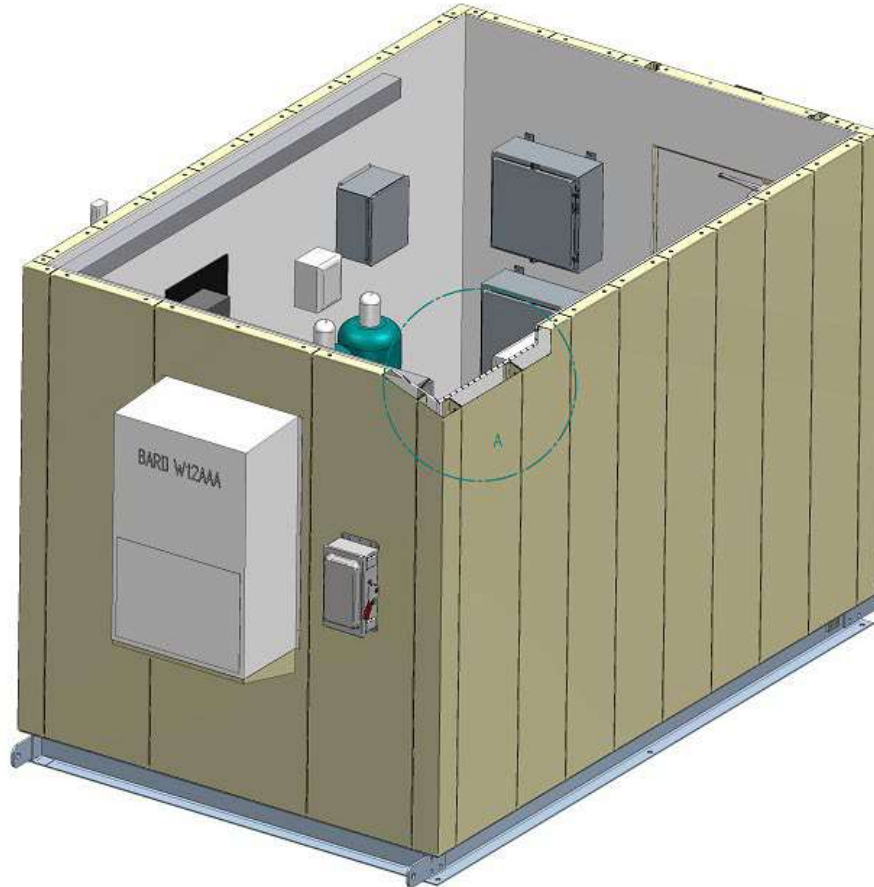
Measurement Buildings



- Enclosed building or skid-mounted
- Programmable Logic Controllers (PLC's) and/or other control systems
- Field Services
 - Commissioning
 - Heat Trace Installation
- Classified or unclassified ratings
- Gas Chromatograph (GC)/Dekatherm buildings
- Integrated Remote Telemetry Units (RTU's)
- Classified or unclassified ratings



Measurement Buildings (cont'd)



1/2" OSB, LAMINATED WITH
FRP SHEETING

R-11 3" THICK UNFACED INSULATION

16GA GALVANNEAL INTERLOCKING WALL PANELS
BOLTED 12" O.C. WITH GRADE 5, 3/8"Ø HARDWARE

Deposit on Base Enclosures (DOBE's)



- ▣ Designed to be placed over existing equipment onto concrete pad or other foundation
- ▣ Same features as an Industrial Building; electrical, HVAC, etc.
- ▣ Minimal Site Assembly Required
- ▣ Mild, Stainless, and Galvannealed Steel Construction Available



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
- PLC, Drives and Control



Gas Stream Monitoring & Control

Natural Gas Methane Monitors



- Real-time, 0 to 100% full range
- Detects Methane specifically in the Hydrocarbon mixture
- Temperature compensated
- Separate CO2 sensor and compensated readings
- Calibration data stored in the individual sensor modules
- Automatic detection of installed sensors
- Communications Options:
 - RS485
 - 4-20mA Current Loop
 - Modbus
- Universal mounting plate
- Intrinsically Safe Design



Remote Telemetry Units (RTU's)



- Cellular or Satellite Communications
- Analog, Digital or Pulse Inputs
- Digital Outputs and Customizable Control Logic
- Configurable and schedulable Voice, SMS, and Email Notifications for alerts and alarms
- Historical data and customized reports
- Cloud based SCADA with mobile interface
- AC or Solar Powered with battery backup



Flow Controllers and Computers



- Thermo Scientific Flow controllers and computers are designed on the proven technology of the AutoPILOT PRO platform, which has been accurately transferring product from production site to truck, pipeline or storage tank for over 25 years.
- Thermo Scientific provides low cost of ownership (COO) and increased cost savings over time due to accurate measurement of product
- Designed to endure extreme environmental conditions with minimal downtime
- Engineered to withstand lightning strikes and temperature differentials
- Reliable communication of valuable flow data from remote, unmanned locations



ThermoFisher
S C I E N T I F I C

Custom Control Panels



- Engineered for each customer, application, and environment
- Manufactured in our UL508A certified factory
- PLC's, HMI's, controllers, and automation solutions
- Ethernet, remote telemetry, or wired communications
- Transient Voltage Surge Suppressors (TVSS) and UPS battery backup
- Technical documents and drawings with hands on training
- Custom VFD and motor starter panels



Previous Projects



Customer: TMEIC

End User: Spectra Energy

Site: Delmont, PA

Challenge: Drive selected for project had top bus connection for a bottom application

Solution: PEMCO designed a 6000A bus assembly to allow customer to connect through the bottom of the building



Customer: Balfour Beatty Rail

End User: LA Metro

Site: Los Angeles Area

Challenge: Large Yard Traction Power Building built to Siesmic Certifications for California in 4 section. Overall weight was over 300,000 pounds. Total dimension 28 wide x 100 feet long. Shipped in four 14 x 50 sections.

Solution: Complete solution with integrated drive and electrical gear and onsite assistance for installation and electrical commissioning.



Customer: Balfour Beatty Rail

End User: LA Metro

Site: Los Angeles Area

*Product: Traction Power Substations for
Blue and Gold Line Extension*

*Other: Coordinated installation with
Mass Electric and LA Metro*

Custom Solutions



Customer: General Electric (GE)

End User: APS Palo Verde

Site: Arizona

Product: 15 x 60 Excitation Building w/ 100ton HVAC

Challenge: Design Exciter Compartment with severe requirements for Nuclear application

Solution: PEMCO worked 4 years with GE & APS on retrofit the largest exciter (as of 2015) in the world

- 100t HVAC w/ custom base/plenum system
- 9" thick walls to withstand desert heat
- Building also contained blast panels
- Salt spray certificate for salty environment of the cooling towers
- Over 5 miles of I/O wiring in the building with complete conduit and cable schedules





Customer: Eaton

End User: Microsoft

Sites: Virginia, Washington, & Wyoming

Product: Custom designed Deposit on Base Enclosure for MV Switchgear

Challenge: Lack of Lead time to provide buildings to customer site

Solution: PEMCO devised a floor-less building (DOBE) with the same features as a typical PEMCO building. The DOBE was delivered the same day as the switchgear for setup on the concrete pad. This eliminated shipping equipment to PEMCO for install in a traditional equipment building. This solution allowed the project to succeed on time and under budget.

Custom Solutions



Exterior

Customer: GE Energy

End User: Hawaii Electric (HECO)

Site: Pearl Harbor, Hawaii

*Product: Stainless Steel Specialty
Magnetics Enclosure for
Power Plant controls upgrade*

*Challenge: Provide custom upgrade for
corroded equipment in salt air
environment*

*Solution: PEMCO designed and built
stainless steel ventilated
enclosures with GORE salt air
filters. The enclosure was
designed to fit existing bus
duct entry and exit points*



Interior

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