



MEA INC

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MFA INC



COMPLETE CONTROL



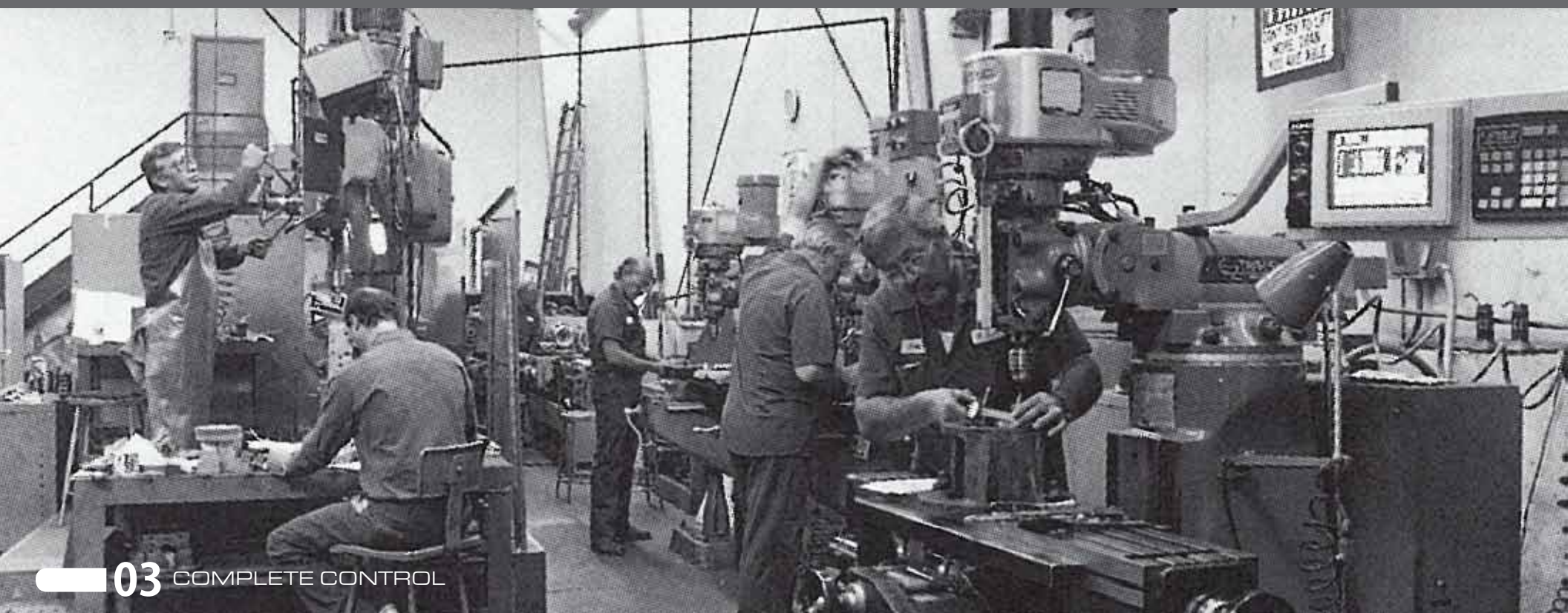
For almost half a century, MEA
has been providing proven and
reliable solutions for critical
processes throughout the world.

Welcome to MEA

Founded in 1963, MEA has been the industry leader in the design and manufacture of Actuators needed to safeguard critical flow processes such as FCCU (Fluid Catalytic Cracking Unit) Slide Valves, Coker Switch Valves, Boiler and Furnace Damper Drives, Butterfly Valves, Plug Valves, Blower and Compressor Surge Controls, Wet Gas Compressor Controls and oil flow control valves. Our latest systems effectively eliminate unplanned shut downs by providing digitally controlled redundant actuators with 100% reliability and continuous control over your processes. MEA systems integrate easily into your existing network and provide multiple levels of security and diagnostics.

Early Days

MEA was founded in 1963 by Mr. Thaddeus Lasiewicz. Over dinner one night, a friend in the Steel Industry explained a problem he was having maintaining efficiency in his blast furnace. What began as a sketch on a napkin has resulted in almost 50 years of effective problem solving for customers in the utility, refining and steel industries.



The First 48 Years

1963 -1970

MEA Founded by T.W. Lasiewicz as a consulting company to the steel industry. MEA designed its first actuator in 1966 for gas boiler pressure controls and embedded 8 men as service contractors to Interlake Steel.

1970 -1980

MEA develops a "Super Thrust" Electro-Hydraulic Modulating Actuator followed by similar models for Nuclear and Pipeline applications. MEA designs Center and Edge Guides for the Steel Industry based on laser technology. In conjunction with UOP, MEA develops the first high speed, high accuracy Electro-Hydraulic self-contained actuator - the precursor to the Eagle System.

1980 -1990

MEA develops Electro-Hydraulic, modulating actuators for Ortho Flow Plug Valves and designs a "Super Thrust" modulating Low Pressure Actuator. MEA enters into a joint partnership with Kubota Valves.

1990 -2000

MEA designs and builds the first Dual "Super Thrust" Actuator, the first "Super Thrust" Digital Steam Turbine Control and the first "Super Thrust" Nuclear Damper Actuator. MEA revolutionizes Wilson Snyder Coker Switch Valve Actuation with the first Phoenix model and introduces the first Redundant Analog Controller.

2000 -2010

MEA is Awarded ISO 9001:2000 Certification. MEA designs the first Redundant Digital Controller. Improvements and upgrades carry digital controls into the third Generation - the present Eagle System.

TODAY

With the retirement of founder T.W. Lasiewicz, MEA moves forward under the new leadership of President Jack Mueller who says, "Our current new customers can expect that MEA will continue to be the innovative company it has always been. With Service and Support as our cornerstone, the next half century will be more exciting than the first."

Locations



Client Testimonials

"Whatever our plant needs may be - technical advice, training, spare parts, planned maintenance or emergency repairs - MEA has always come through for us. Their technicians consistently perform above and beyond expectations, minimizing down time and maximizing reliability. When any type of issues arise concerning our slide valve actuators, MEA is the first call I make."

Brian Hendrickson, Instrumentation Supervisor ConocoPhillips Trainer Refinery

"We have had many years experience with MEA and their installed equipment. They have always responded in a professional manner within their engineering and design team, followed by their jewel in the crown of field installation and support service engineers. It has been a pleasure to do business with MEA and a comfort to know they are ready and willing to respond to any issue we have thrown at them. Even though we have had the Big Pond between us, we have still managed excellent communication and support. Keep up the good work."

B.W.R. Jones, Senior I/E Project Engineer, Chevron Ltd., Pembroke Refinery

Industry Types

MEA provides control systems and actuation solutions across several industrial sectors, including: in refining with FCCU Slide Valves, Coker Switch Valves, Wet Gas Compressors, MOV Gate Valves and Furnace Controls; in utilities with Boiler Fan Damper Actuators, Turbine Steam Emission Valves, Feed Water Control Valves and Turbine Bypass Valves; and in Steel Production with Edge Guide and Center Guide Systems.

Oil Refinery



Power



Steel



Pipe Line



Brands



Phoenix

Named after the mythical bird with a life span of 500 to 1000 years, the MEA Phoenix revolutionized the coker deheading process for the durable Wilson-Snyder Coker Switch Valve.

Hawk

Hawks are widely reputed to be the most intelligent birds based on the efficiency of their hunting habits. The MEA Hawk's efficiency comes from its keen, state-of-the-art, reliable linear control of dampers and valves.

Eagle

Eagles differ from other birds of prey in their larger size, powerful builds and precise eyesight. Like its namesake, the MEA Eagle offers unmatched power and precision when actuating valves in critical processes.



Phoenix

Automated Safety



The MEA Phoenix provides complete automation for Wilson Snyder Switch Valves. Because the coke drum feed switch valve process is now automated, operators can now complete delayed coking operations accurately and with the “push of a button.” This results in a dramatic improvement in safety and operator moral.

Although initial investments may be higher with Wilson Snyder valves, their longevity, durability and simplicity result in drastic savings over the life of the valve. As they do not need steam in the operational process, there is also the added eco-benefit.



Hawk

Accurate Precision



The MEA Hawk is an electro-hydraulic Actuator for dampers, globe valves, butterfly valves, plug valves and pipeline applications. Offering effective, state-of-the-art, reliable linear control of dampers and valves, it also provides high-thrust accuracy, a 100% duty cycle, manual control and fail-safe actuation for valves and other equipment.

It can be a replacement actuator for ITT General Hydromotor delivering 4,000 lbs. of thrust, an adjustable stroke of 4" maximum, an adjustable spring close or spring open, and modulating or on/off. It features a simple design and requires virtually no maintenance. Hydraulic controls are machined in one manifold. Each Hawk model meets UL, CSA/CUL and NEMA 4X standards and Class I, Division 1 Hazardous Locations (Explosion Proof). The Hawk can also be designed to meet ATEX standards as specified.



* images are not to scale



Eagle

Reliable Redundancy



The MEA Eagle Hydraulic Power Unit and Actuator were developed by MEA for FCCU (Fluid Catalytic Cracking Unit) slide valve applications in oil refineries. First introduced in the field in 1979 as an analog system, they now come with fully digital controls providing precise position to a resolution of 1/1000th of an inch.

When fully networked with your DCS, operation can take place remotely while self-diagnostics and predictive maintenance can communicate a potential problem before it even occurs. With optional redundant controls, a secondary control system will seamlessly take over in the event of a failure assuring that your process continues uninterrupted while maintenance takes place. This 100% always-on reliability can eliminate unplanned shut downs all together.



Eagle



Redundant Servo Control System

Engineered for precise directional flow control which gives you constant command of the valve position.



Testable and Redundant Emergency Shut Down System

Allows you to verify your emergency shutdown function (meeting OSHA 29 CFR, Part 10 regulations). Testing emergency shutdown function will not interfere with the operation of your valve or the critical process it controls.



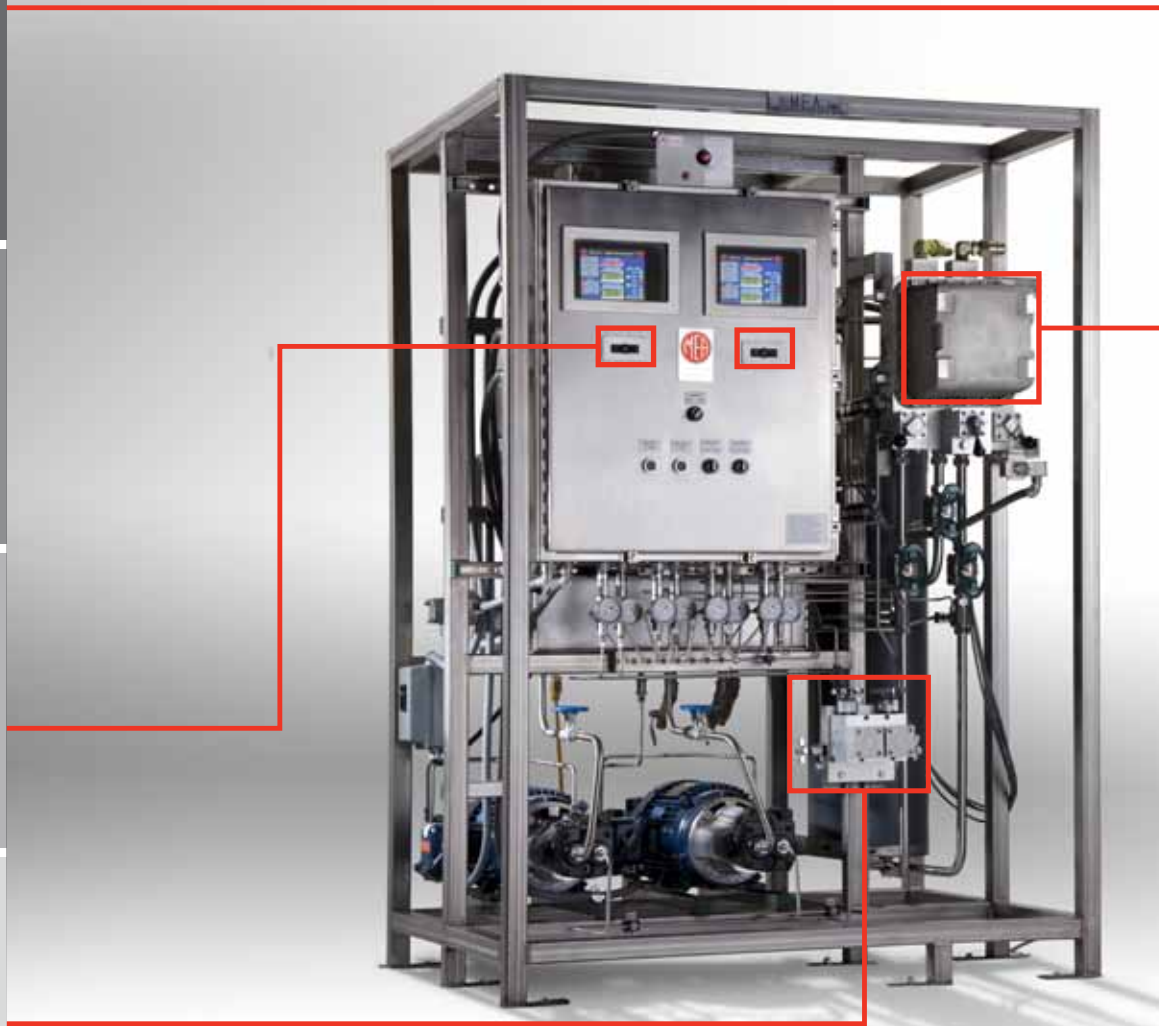
Externally Mounted Mouse

Allows access to screen controls without opening the control enclosure thereby maintaining the integrity of your area classification.



Double Filter Manifold Design

Allows for the changing of filters without interruption of service. Three (3) micron filtration eliminates contamination from hydraulic circuitry.





Fail-safe is accomplished through the use of redundant controls and Quality Assured Manufacturing. MEA designs include two separate control nodes, each capable of complete, independent control. Each node monitors the other as well as its individual control loop components. In the event of a failure, MEA software senses the problem and automatically initiates a seamless switchover to the alternate node avoiding interruptions.



MEA has achieved ISO 9001:2008 certification. In order to control quality, component standardization and field inventory demands, MEA manufactures all critical components in our Chicago plant. These exacting manufacturing standards allow MEA to accurately control all hydraulic, mechanical and electronic systems. No detail is overlooked. The MEA Eagle meets or exceeds all process performance standards and codes including Hazardous Area and Location Classifications. Conversion to digital control (including the replacement of analog parts) can be done on-line or during your next turnaround. Adapting your slide valves, butterfly valves, plug valves or existing valve actuators is easy and economical.

Manufacturing

Identifying a need and then developing a creative solution is an MEA hallmark. Our capability includes a full force engineering and manufacturing team to work with you throughout the design phase, installation, startup and maintenance.

MEA's commitment to quality and service includes support throughout the entire product lifecycle. Our ISO 9001:2008 certification is evidence of our commitment to our customers in developing and maintaining a quality product. Leveraging expertise in product manufacturing by being a lean manufacturing facility. MEA continuously enhances product design, improves product quality and reliability while reducing product cost and shortening time to manufacture. This is particularly important when our customers require critical spare parts necessary for their process efficiency.

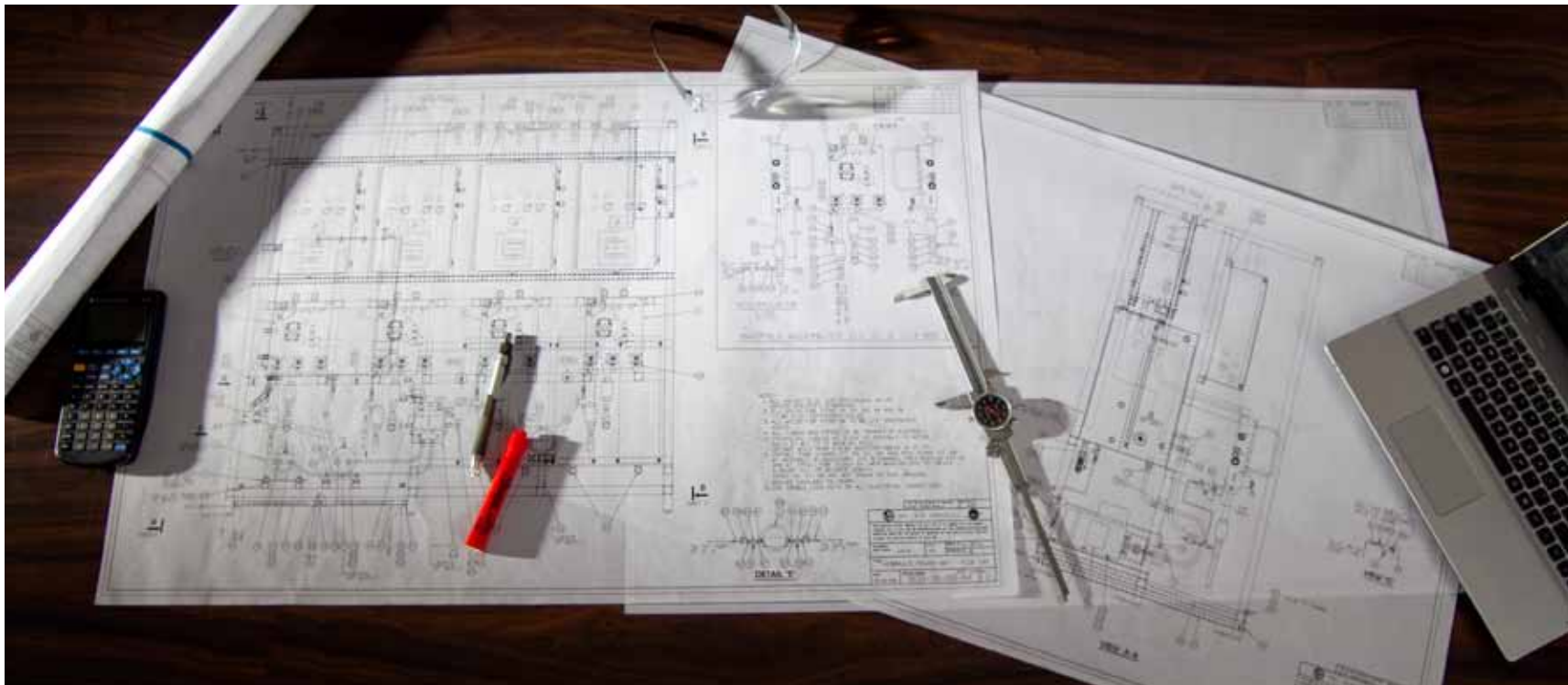
Our manufacturing practice includes:

- Multi-million dollar state-of-the-art software, testing and manufacturing equipment.
- Working arrangements with other manufacturers and distributors throughout the world to assure you of smooth and uninterrupted service.
- Computer controlled inventory to get you the parts you need expeditiously.
- Quality control and inspection system that assures we meet your specifications exactly from the initial design phase through final installation.



Production

Our Engineering Team has worked on numerous projects worldwide. The experience and expertise of our engineers allows us to meet the diverse requirements of our customers, however complex, typical, or process based they might be. We can meet your application specifications by providing full turnkey product design. We offer complete engineering design capabilities involving multiple engineering disciplines and an ISO certified product development process. We can satisfy your complete product development needs starting with a product concept and finishing with a ready-to-manufacture product design. During project development, we can provide requirement analysis, architecture development, mechanical design, electrical design, software design, verification and validation testing, and other product development capabilities.



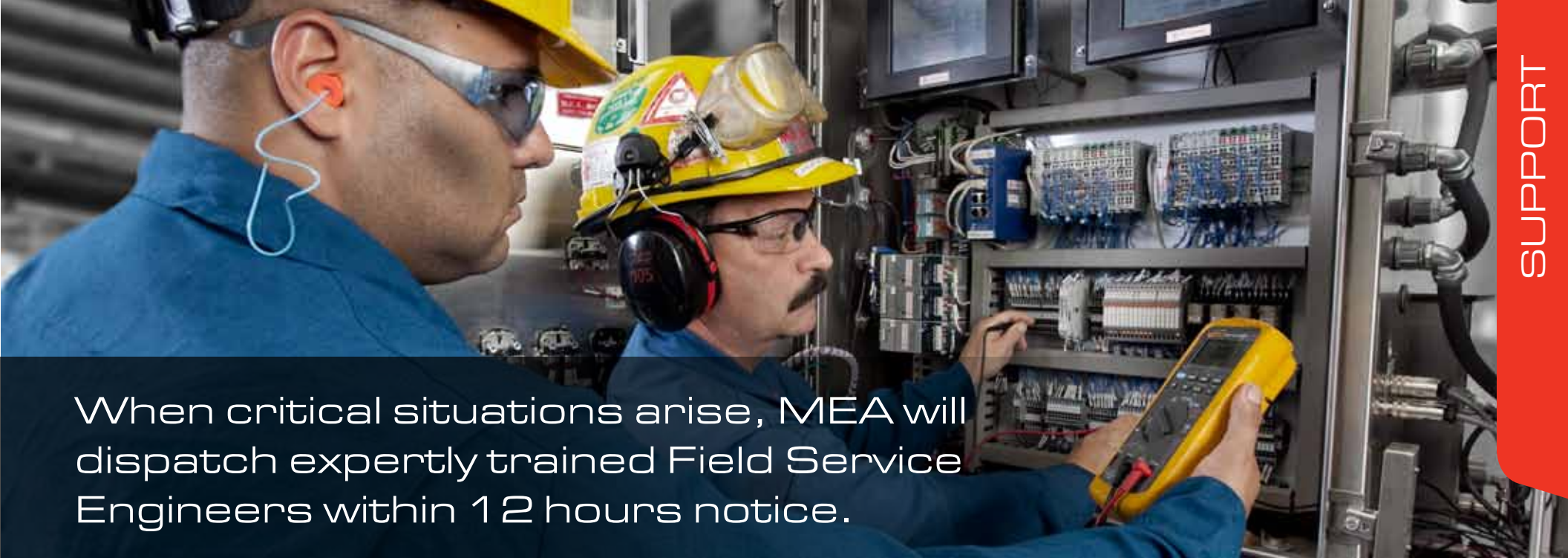


Field Service

Priority Support

We understand that MEA equipment is used in critical and continuous processes in which problems can cause serious human or financial consequences. That is why at MEA we have prioritized our ability to respond to our customers whenever they need assistance. With our after hours call center, customers can be routed 24 hours a day directly to an MEA engineer who can assist in troubleshooting or if need be, schedule emergency service. More proactively, we offer comprehensive training programs which can be done at MEA headquarters, on installed equipment or on demonstration units which can be brought to our customers training facilities. MEA also offers a Proactive Preventative Maintenance Plan to help assure your processes are always running at optimal conditions. MEA works to help you avoid problems that lead to profit loss, safety issues and unnecessary shut downs. As always, genuine MEA parts and service come guaranteed.





When critical situations arise, MEA will dispatch expertly trained Field Service Engineers within 12 hours notice.



Genuine Spare Parts

Always Guaranteed

Over the years we have found that the reliability and lifespan of our equipment is enhanced with regular preventative maintenance. This includes thorough service and rebuilds during scheduled turnarounds. In fact, in the nearly 50 years we have been in business, we've developed a thorough turnaround regimen to keep your equipment running for years.

Standard turnaround service includes:

- Service history of the equipment examined
- Testing of current system and preparation of Pre-Service Report
- Dismantle the system in a systematic order while checking variable systems
- Inspect individual parts to determine viability until next turnaround
- Replacement of consumable or damaged parts
- Analyze products failing before the MTBF (Mean Time Before Failure)
- Perform post build tests and calibrate the unit to specifications
- Submit detailed service report and recommendations until next turn around

“ We really appreciate you coming on such short notice to help us get through a problem that potentially could have cost us thousands of dollars. We wish we had more service companies that took their customers well being as much as MEA does. ”

**Luke Powers, Instrument Shop
Supervisor, Citgo Corpus Christi, TX**

Guarantee

All MEA designed equipment and spare parts are warrantied against defect for a period of one year after installation. MEA performed installation and field service comes with our Promise of Performance Assurance that, under normal conditions, your equipment will work as designed and expected.

Certifications

MEA designs, manufactures, and engineers products per your required certifications and directives. We are capable of designing our products to conform to NEC, UL, FM, CSA, CUL, CENELEC, ATEX, IEC and other directives. Product development and production are carried out per the coveted ISO 9001:2008 certification for quality control management. Additionally, we design and manufacture our products per ISA, ASTM and ASME standards and make sure that components from other manufacturers that are used in our products also meet these standards or equivalent.

Testing

Prior to product assembly, each component is individually tested. Testing includes but is not limited to; heat testing, strain testing, hydrostatic testing, and high pressure testing. Once a product is completely assembled, it is put through a series of rigorous performance tests that simulate real process conditions. Prior to shipment, customers are encouraged to be present for witness testing or Factory Acceptance Tests. During Factory Acceptance Tests, it is a great opportunity for the end user to send their personnel for operational and maintenance training. Factory Acceptance Tests also serve as a method of confirming that the product will perform per end-user specifications. Finally, once the product is delivered it will go through a series of Site Acceptance Tests as required by the end-user. The aforementioned series of testing ensures optimal, safe, and efficient performance of your product.

Experience and Qualifications

- MEA is an ISO 9001:2008 Quality Accredited Company
- MEA has half a century of innovative and performance proven product development
- MEA field engineers have extensive and rigorous internal training and hold certified TWIC cards
- MEA has worked on more than 150 major turnarounds worldwide
- MEA is compliant with ISNetworld, PICS and Safety Council Texas City
- MEA practices standardized Lean Manufacturing and has an accountable Continuous Improvement Program in full force



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