



Mustang Offers Total Project

Construction Operations Enhances EPCM Capabilities

Mustang has long been recognized for its project management, engineering design and support services, including procurement and inspection. What is not universally known is Mustang's expertise in construction operations (CM) as a component of its Engineering, Procurement, Construction Management (EPCM) offering and capabilities to deliver an entire project, from pre-concept studies through start-up and commissioning.

In 2006, Mustang acquired Greenville, South Carolina-based Global Performance, a firm experienced in EPCM projects. With multiple offices and alliances, Global Performance focuses primarily on serving the process and industrial market segments, with an emphasis on chemicals, automotive and manufacturing. With the acquisition, Mustang gained an established construction management organization, currently managing more than \$1.6 billion in capital projects for their clients, with more than 200 professionals and a hands-on, highly experienced senior management team. One business unit has managed the construction of numerous large projects in the U.S., Latin

America, Asia and Europe. Its expertise added significantly to the experienced CM team members already in place in Mustang's five other business units – upstream, downstream, midstream, pipeline and automation and control.

Making Heroes

Mustang's culture is designed to

make heroes of all project participants – clients, vendors, fabricators, contractors, business partners and Mustangers alike. Its projects are executed using a team approach, involving all parties from the earliest stages and providing a high level of communication to build trust and cooperation. Ingenuity and innovation are encouraged with a focus on execution excellence.

The Mustang construction operations team works closely with engineering design, ideally being involved at the project's FEED stage, and provides constructability planning during the detailed engineering phase. The construction operations input, especially at its early stages, greatly enhances the quality of deliverables and overall project success.



Managing an Entire Project or Just a Portion

Managing a project's execution phase, which includes construction, can take different forms depending on the industry segment, the client's requirements and the relationship built between Mustang and a specific client. Mustang has the flexibility to offer what makes the most sense to the client and the project. In many instances, we have managed all phases of a project, including its construction. In other cases, we have been designated as the owner's engineers, providing various levels of project oversight, depending on the scope and the





Delivery Around the World

client's needs. We have often referred to that position as being 'Engineers Down the Hall' as we have maintained a close, on-site relationship with the client to provide the necessary counsel and management services for the project's construction or other phases. In still other instances, we have managed specific field services or portions of a project, such as inspection. That scope provides the client with a cost effective approach for just the portion of the project that requires outsourcing.

Meeting New Challenges

Mustang has never been content with maintaining the 'status quo', rather we respond to changing client needs and market conditions as part of our mission to be our clients' *First Choice Around the World*. We are continually increasing our capabilities, expanding our services and enlarging our global presence to better assist client requirements and keep at the forefront of industry trends. As projects become larger and more complex, clients increasingly have needs for a completely integrated services package. With an enhanced construction operations function, we have positioned ourselves



to deliver that capability. Our integrated EPCM services offering encompasses multiple areas including project controls, site planning, quality assurance, construction engineering, materials and equipment control, and administrative oversight.

Jim Rammell, as director of construction operations, manages Mustang's construction operations team. A 25-year industry veteran, Jim worked in construction management for Global Performance and has held similar positions in a large multi-national engineering firm. He has worked on many domestic and international projects, supervising construction management teams of various sizes. His task is to capitalize on Mustang's resident talent, enlarge the field capabilities of existing disciplines and align them in support of construction projects.



The outgrowth of this effort is that all disciplines will place an increased emphasis on constructability and make Mustang increasingly suited for delivering total projects anywhere in the world.

Mustang's worldwide entities are further supported by its parent company, Wood Group. As part of a multi-national energy company with operations in 50 countries and annual revenues exceeding \$5.0 billion, Mustang is provided with expertise, direction and resources for projects undertaken in all parts of the globe.

Safety is a Priority

Safety is an integral aspect of Mustang's approach to total project delivery. In managing any phase of a project, Mustang

puts safety at the top of the priority list. Its record for providing a safe work environment for Mustangers and partners is exceptional and has garnered numerous accolades from



clients. One such example was the recent presentation of Chevron's Gold Star Award for Safety Excellence. The award was given to Mustang for its outstanding record of no lost-time incidents or recordable injuries while performing EPCM services on a year-long project at Chevron's El Segundo, California refinery.

Developing New Tools

Mustang is very involved in the activities of the Construction Industry Institute (CII), a consortium of 100+ member companies based at The University of Texas in Austin. Not only do Mustangers serve in committee leadership positions, but we use CII's Best Practices to assist in effective project execution. This alignment with CII provides Mustang with quality tools for construction management and assures that Mustang projects are benchmarked against industry norms. The incorporation of constructability into front end and detailed engineering, according to CII research, can offer a ten-fold return on project success.

Internally, Mustang has created proprietary tools that facilitate assimilation of all disciplines into the construction phase of its projects. The cutting-edge *PACESETTER*TM project execution system and other specialized tools allow Mustang to manage critical information from FEED and detailed design and integrate into project construction. Mustang's site teams and experienced project managers have access to robust software modules that provide the necessary information and documentation to help guide the project efficiently through construction, with control of timely deliverables and strict adherence to the schedule.

Inspectors Provide Added Value

Mustang provides a team of highly experienced inspectors to help assure that any project meets all quality and integrity expectations. With a wealth of hands-on knowledge in all disciplines and a thorough understanding of all necessary codes, industry standards and jurisdictional requirements, the team performs quality assurance inspections on the construction site, in the fabrication facility or at the equipment manufacturer's plant. Backed by experienced project leads and coordinators,

the team's inspection work takes them to virtually every part of the world as equipment sourcing and component fabrication become increasingly global.

The inspection team interfaces with all project participants, providing a synergy to make all project aspects seamless and successful. They work closely with engineering beginning at the project's front end to assist in developing inspection and execution plans. They help develop specifications and apply the appropriate codes and standards to assure safety compliance and intended performance. In their interface with procurement, inspectors evaluate suppliers with in-depth audits and facility surveys. They assist in providing quality assurance measures to requisitions and assess vendor data for safety and quality appropriateness.

Mustang's inspectors keep the project on schedule with its oversight of components in fabrication and work at the construction site, where they apply their extensive knowledge on non-destructive testing (NDT), welding procedures and manufacturing methods. They provide expert guidance to the client and closely interface with certifying authorities to comply with their requirements. Mustang's field inspectors utilize electronic reporting to provide project participants with up-to-date status of engineering, material receipt, construction and inspections.

With specialized capabilities in laser scanning, Mustang also provides an additional dimension for inspection and construction management. The technology can be used to assist designers in constructability planning and in-progress planning in the office, in the field and at the fabrication yard.

First Choice

Because of our extensive experience and strong relationships with both vendors and construction contractors, Mustang is a perfect choice to manage the construction of any project. As Mustang expands its construction management capabilities, we further position ourselves to take projects from concept through startup, helping accelerate project schedules, improve coordination, provide high levels of QA/QC and bolster the bottom line. This assures that our vision of making heroes becomes a reality for all project participants.

