

## Construction Engineering

AG&P's in-house construction engineers bring decades of experience from yard- and site-based environments, transforming detailed designs into fabrication and assembly drawings that consider all aspects of constructability, heavy-lift and installation. The team of global engineers work together to offer clients the following services:

- Houston: global headquarters for AG&P's innovation and value engineering services providing proprietary solutions for in-house as well as third-party LNG projects
- Philippines: detailed and construction engineering for global LNG projects
- South Korea: conceptual and detailed engineering for floating LNG infrastructure

The construction engineering team has deep expertise in engineering design calculations, preparation of detailed fabrication and erection drawings, preparation of lifting, weighing and load-out procedures and construction methodologies that aid the modular construction and assembly of oil, gas and petrochemical facilities, offshore structures, power generation facilities, minerals and metal mining facilities and civil infrastructure.

AG&P's team brings hands-on expertise in accordance with the project requirements and engineering detailing standards for civil, structural, architectural, piping, tank, vessel, electrical and instrumentation projects. The team ensures standards, stresses, welding points and sea-fastenings are optimized for modularization, transport and end-use at the project site.

AG&P offers clients a single point of contact for projects and maintains control of planning, execution, delivery and logistics. A dedicated client interface manager oversees the transition from the early phase engineering work performed by AG&P's Houston team to the EPC phase, making it easier for clients to execute their projects.

AG&P's construction engineers are a critical part of the global in-house engineering team offering the following services:

### CONSTRUCTION ENGINEERING SERVICES

Test pack [TP] preparation

- Marked-up piping and instrumentation diagram [P&ID]
- Piping isometrics
- Marked-up line classification lists
- TP information symbols
- Punch lists
- Approved checklists and forms

#### Lifting procedure

- Lifting arrangement drawing
- Rigging equipment
- Integrity check
- Center of gravity (COG) location

#### Weighing and load-out procedure

- Load cell location
- Rigging arrangement
- Self-propelled modular transporter (SPMT) arrangement
- COG location
- Transport stability calculation

#### Drawing preparation

- 3D modeling
- Detailing of erection and fabrication drawings

#### Construction methodology

- Fabrication and erection sequence in 3D presentation and 3D animation

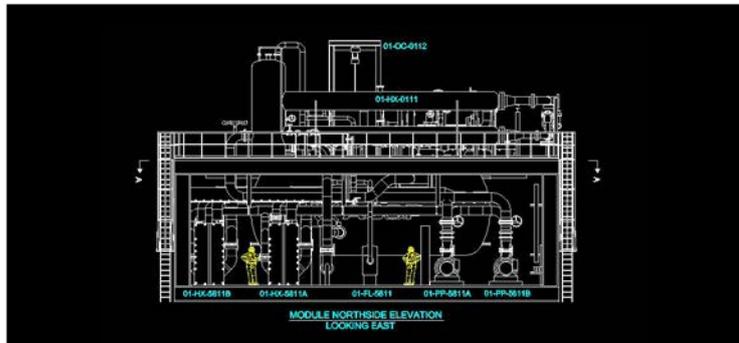
## Company Overview

Founded in 1900, AG&P is a global industrial infrastructure company, delivering pragmatic gas logistics solutions and construction services to blue-chip clients for some of the world's most demanding infrastructure projects.

**Gas Logistics:** AG&P makes natural gas available to end-consumers in emerging markets through its integrated gas logistics platforms, anchored on its City Gas Distribution (CGD) networks that make natural gas conveniently accessible on demand. From aggregating multiple customer streams to supply acquisition from global LNG suppliers and infrastructure development (pipelines, trucks, vessels and dispensing stations), AG&P delivers natural gas directly to houses, gas stations, industrial and commercial establishments, providing easy access to cost-effective energy.

**Construction:** AG&P delivers award-winning construction solutions to industrial projects around the world. A global leader in onshore and offshore infrastructure, AG&P has an outstanding track record in executing complex projects for blue-chip clients including LNG liquefaction, E-houses and complex process modules for LNG plants, refineries, petrochemical facilities, mining operations and utilities plants. AG&P's FieldCOM Division (Field Construction, Commissioning, Operations and Maintenance) deploys highly trained, experienced professionals and craftsmen to project sites, bringing international standards to even the harshest and most remote locations.

AG&P brings global best practices in safety and quality to every project, regardless of location. The company holds a world-leading construction safety record for continuous safe man-hours and its outstanding performance for blue-chip clients demonstrates its execution capabilities. Throughout its history, AG&P has focused on delivering solutions that increase efficiencies, lower costs and accelerate schedule, enabling projects to become operational sooner.



For more information on AG&P's construction engineering services, please contact Jaime Abarquez, VP Construction Engineering, at [jaime.abarquez@agp.ph](mailto:jaime.abarquez@agp.ph).

For more information, visit [www.agp.ph](http://www.agp.ph)

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