

### **Reliability and Efficiency:**

Trust AMCS to provide you with state-of-the-art industrial gas and liquid plant solutions that will increase your operational efficiency and lower product cost. AMCS engineering staff supports customers with their designs in areas of process control and optimization, automation, and electrical and instrumentation. We also help clients maximize returns from investments in existing plant assets. The following are among some of the operational technology solutions we offer.

### **Pipeline Load Following:**

AMCS offer's you the capability to continuously monitor end users product requirements, plant processes, and automatically adjust feedstock and utility inputs as needed. This improves the efficient use of materials and minimizes costs.

### **Regulatory Control and Validation**

Many industrial gas plants are now subject to a variety of regulations that can vary from country to country. Reliable, credible data can be essential to keeping your industrial facilities open and operating. AMCS can provide you with reliable technology for monitoring and assessing various aspects of your processes. We can help you maintain continuous monitoring and supporting data for validation of output quality/purity as well as emissions.

### **Automatic Truck Filling:**

The AMCS solution is a proven application that is designed for merchant liquid plants. This system can include the integration of scales and pumps that facilitate the loading of liquid tankers to predetermined weights. Our system retains pertinent details about the tanker for validation and record keeping purposes including trailer numbers, target gross weights and has a selectable system for choosing a company name. The application can be tailored for customer specific needs. To facilitate the application customization AMCS will:

- Provide all necessary control software and configuration to implement sequential control logic for automated trailer filling
- Assist customer through entire development and specification phase of project
- Install and tested control and graphical interface software on-site
- Meet all necessary requirements for applications in a regulatory environment

### **Remote Monitoring and Operation:**

AMCS provides operational and technical support to our customers in real time from our Remote Operations Support Center (ROC).

As our customer's facilities go on stream, we are there every step of the way, through high speed and secure internet connections. We have the capability to provide full operational assistance or simply to advise on operational issues or production optimization as required and authorized by our clients.

This is just one example of how AMCS leverages technology for our customers to yield cost savings and increases in efficiency.

Most of our clients are either non-industrial gases customers (Chemical Industry, Oil and Gas, Steel, Petrochemicals, Electronics and others) or industrial gases operators with limited engineering resources. Our world class engineering team is available to provide real time support to their operating staff to ensure that our clients capture the cost savings gained from producing their own industrial gases without concerns for operational support and reliability.

AMCS plants are designed with global remote support taken into consideration so that the range of assistance provided by our Remote Operation Support Center extends beyond operational and engineering advise to the ability to perform necessary updates and modifications requested and authorized by the client remotely in a highly secure environment.

### **Advanced Process Control**

Model predictive solution developed by AMCS specifically for industrial gas plants based on AMCS team's knowledge of these facilities. Application success is assured by relevance of the Model Predictive Controller (MPC) to gases plants and the implementation teams specific industrial gases experience. Key factors that appeal to gas plant owner and operators are.

- Trending is built into the solution
- System flexibility based on observed ASU operator preferences
- Alarms are built into the system
- The system acts as a "best operator" ensuring rapid transition while maintaining process/equipment stability
- "at a glance" viewing feature (deviations identified with Yellow, Blue and White background) mimics older control panel ease of process monitoring