

The Philosophy on Fit-For-Purpose Meter Station Design



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Alliance Wood Group Engineering (Alliance) recently completed design for 13 meter/regulator stations related to the measurement of gas associated with a 42" interstate pipeline project. In considering design criteria for these stations a number of factors were addressed. After an extensive project review of our key team members (led by Bobby Connatser, design manager, and Jason Newton, technical consultant), we agreed on the following design philosophy questions and implementation:

How can we accomplish our task in the most expeditious and cost-effective manner?

Is a cookie-cutter approach practical?

Do we use modular or conventional stick-build construction philosophy?

How do we accommodate a multi-stage pipeline commissioning scenario?

Cookie-cutter is an often-used, but not always appropriate concept. Each site within this multi-station project had its own unique characteristics.

Therefore, Alliance provided a fit-for-purpose approach to the design of all related stations that incorporated both modular and stick-build scenarios. During the commissioning of the first leg of the pipeline project, flow rates at each measurement station were much greater than they would be after total commissioning. At this site, we recommended a modular build approach. This was the best fit-for-purpose design as it allowed

fabrication under controlled conditions in the winter season, and it also provided a means to relocate and reuse equipment down the line as additional segments were completed and commissioned. We designed modularized "trains" that included valve and regulator skids, meter skids and inlet separator skids designed to measure 300 mmscf/d. Under this scenario, four trains could be utilized to measure 1.2 bscf/d at an initial site, and modularized trains could be moved from that site to other locations along the pipeline as additional phases were commissioned. This provided our client with maximum flexibility in utilization and installation.

On those stations located on the final stage of the pipeline, we chose a more conventional stick-build option. This allowed for savings

of fabrication and installation, and provided the best fit-for-purpose solution to solving schedule and cost concerns.

We had to adapt to new strategies. Layouts were coordinated to meet the pipeline operator's requirements (and physical locations) and the interconnect companies' delivery pressures. Our equipment sizing and layouts were also adjusted per interconnect company requirements. Based on these requirements, we were able to accommodate the overall project commissioning scenarios.

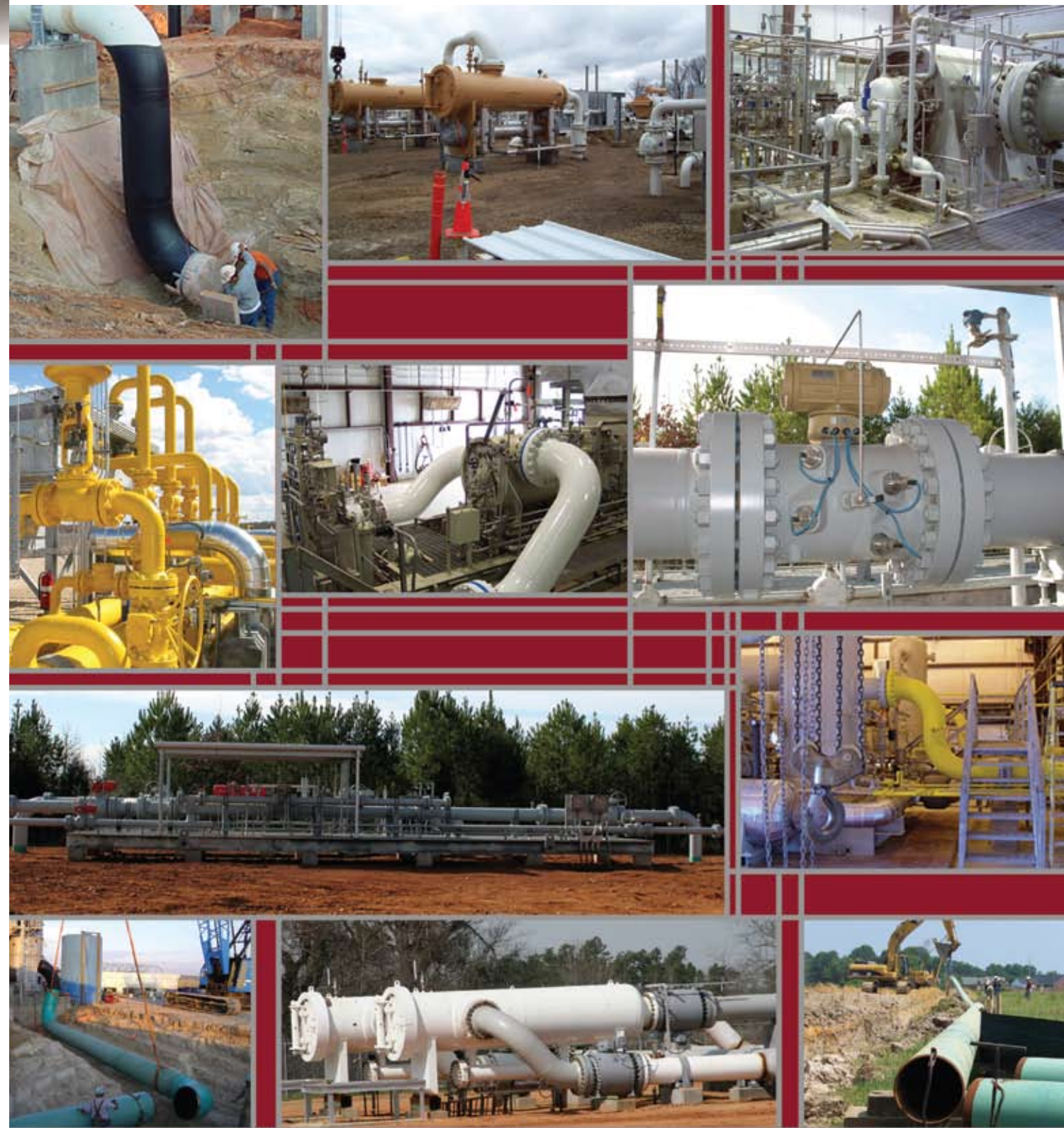
Alliance is committed to exceeding our customers' goals and expectations and helping to improve their competitive position in the marketplace. Next time you are faced with a unique project situation — don't think cookie-cutter... think fit-for-purpose.



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Improving Your Position in the Marketplace



Fit - For - Purpose Solutions



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