Processing Facilities

Husky Energy Ansell Minehead 03-06 Compressor Station

Husky built one common 30 MMSCFD compressor station re-utilizing as much existing equipment as possible from the two adjacent smaller existing plant sites. The new compressor station sends liquids rich sales gas to a nearby processing facility through an existing 6" sales line. Besides increasing overall production, the site also decreased the plant inlet pressure from the existing gathering system to 100 psig which allows for the removal of condensate from the inlet gas stream for stabilization, storage and transport.

The compressor station was designed to process 846 E3m3/day (30 MMSCFD) of sweet gas and included stabilization of the associated liquids collected. Special attention had to be paid to the process design of the plant due to high initial propane content of the inlet gas, and potential adverse effects to the operation of the equipment (eg. auto refrigeration effect on blow down and flare events). Special operating procedures were written to mitigate the possibility of these adverse effects from occurring.

Rotary screw compressors were chosen as the first stage of the compression service because the future declining well pressures would eventually require a reciprocating compressor to be re-staged. One existing Minehead sales compressor was re-cylindered and salvaged for use on this project, and is one of the reasons to go with two compression trains. One single 30 MMSCFD train would have forced equipment packagers into engines that were not readily available in time to meet the project schedule. A second new sales gas compressor was purchased with a different compressor frame and cylinder set-up than the existing Minehead compressor, a more efficient design and was similar enough to the existing unit for some parts commonality. Also, all four compressors had the same engine model, further minimizing spare parts costs.

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Our scope of work included:

-Conceptual design (pre-FEED)
-FEED
-Process investigation scenarios
-Detailed engineering
-Procurement and expediting
-Constructability Reviews
-Field construction support
-HAZOP reviews
-DBM preparation
-Capital cost estimate (Appropriation Grade)
-60% and 90% 3D Model reviews
-Shutdown Key reviews

Engineering deliverables and construction drawings/documents in the different engineering/design disciplines, including Process, Mechanical, Piping, Instrumentation, Civil and Structural, design and 3D model, sourcing of equipment and bulk items, procurement and expediting (in cooperation with Husky Procurement Department) were completed by our team.