

# Dover Hennessey Gas Plant Retro-Flex™ Retrofit

## ABSTRACT

The new Retro-Flex™ design and equipment concept developed by Ortloff™ and SME Products has been applied at the Mustang Gas Products Dover Hennessey Gas Plant (DHGP) to increase plant production and efficiency while providing plant flexibility in both ethane recovery and ethane rejection modes of operation. Through innovative use of integrated heat and mass transfer equipment in conjunction with conventional processing equipment, the DHGP plant was successfully retrofitted to provide an increase in product recoveries while reducing overall plant power requirements.

The DHGP plant is an 80 MMSCFD facility installed in 1978 using a single-stage standard expander plant design. When the plant was installed it used state of the art technology and has operated reliably for the past 40 years. The retrofit consisted of upgrading the technology to a modified Gas Subcooled Process (GSP) with integrated Retro-Flex™ equipment. The retrofitted plant is now designed to achieve 92.5% ethane recovery in ethane recovery mode and maintain 99% propane recovery in both ethane recovery and ethane rejection modes of operation. Through collaboration between the Mustang Gas Products operations team, Honeywell UOP Ortloff, SME Products and the installation contractor, the retrofitted plant is operating reliably while meeting or exceeding performance criteria at present inlet gas rates. Inlet gas rates will be increased over time to the maximum design rate, however based on current equipment performance we anticipate no degradation in performance as rates are increased.

This paper will focus on the following aspects of the project:

- Plant history and retrofit criteria
- Scope of the retrofit design
- Summary of actual plant operations and performance

## PRESENTERS

### **Gerry Wooten**

*Engineering Manager - Mustang Gas Products*

Mr. Wooten is an experienced Engineering Manager with a demonstrated history of working in the oil & energy industry. Skilled in Onshore Operations, Hydrocarbon Measurement, Gas Gathering and Processing, and Engineering. Strong Energy professional with a Bachelor of Science (BS) focused in Mechanical Engineering from University of Oklahoma. Holds certification as a Project Management Professional (PMP).

**Kyle T. Cuellar**

*Principal Engineer - Honeywell UOP Ortloff™*

**Larry Lewis**

*P.E. - SME Products, L.P.*