

# FLUOR CRYO-GAS<sup>5M</sup>

## MAXIMIZE RECOVERY WITH THE VANGUARD OF PROCESS TECHNOLOGY

Joule has teamed with Fluor to bring new-to-market cryogenic technology to the forefront of unconventional natural gas. Our units feature a Fluor-patented design that utilizes a Deep Dewpointing Process (DDP) in order to meet hydrocarbon dew point and heating value specs for pipeline gas.

When it comes to rich gas applications with gas liquids content from 6-12 GPM, DDP allows maximum flexibility for  $C_2$  and  $C_3$  recovery and rejection. That's because Fluor's DDP utilizes a two-column configuration, where the first column operates as an absorber, and the second column acts as a stripper. This two-column approach is known as the Twin Reflux Absorption Process, or TRAP, which allows the two columns to work as either a de-methanizer or as a de-ethanizer, depending on the operating mode.

The TRAP approach also creates an ethane loop, improving mass transfer cooling and significantly reducing the system's energy requirements–dropping the amount of compression required by up to 3,900 HP when compared to traditional Recycle Split Vapor (RSV) technology. In addition, these two shorter columns lead to considerable savings in fabrication, transport and installation when compared to a standard de-methanizer.

Fluor's Cryo-Gas<sup>SM</sup> can also be installed with or without an Enhanced Residue Gas Recycle (ERGR) loop. ERGR makes it possible to recover 99% propane and over 95% ethane, allowing for the production of a pure ethane product ready for delivery to market.

#### SMARTSTEEL™

Our approach to equipment design starts with a robust skid and strengthened box frame which allows stackable skids. Plus, our outside-in design approach provides optimal operator and maintenance access. These combined features mean reduced overall footprint, maximum on-skid accessibility and easier facility tie-ins for quick installation and start-up.

#### **PSV DECK**

Joule identified that the PSV scope is more efficient when included in the equipment scope vs. the construction scope because it reduces installation costs and improves quality control. This deck allows a consolidation of valves to a common area for maintenance without the need for scaffolding or man lifts.

### **ADDITIONAL SERVICES**

- Project Development
- Facility Engineering
- Automation
- Field Services
- Operations & Maintenance
- Process Optimization

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