



Ortloff's Supplemental Rectification with Compression (SRC) process is an enhancement of Ortloff's original Gas Subcooled Process (GSP) technology. The SRC process can be operated to provide any level of ethane recovery from natural gas streams up to ultra-high levels, while maintaining ultra-high propane and heavier recovery at all times. It is an extremely flexible process for ethane recovery and is more efficient than GSP, requiring less horsepower for lower capital and operating costs.

The SRC design incorporates a vapor draw from the demethanizer column that is compressed and used to provide reflux to the top of the column after cooling. An additional rectification section is included above the typical top feed point of the GSP process. The liquefied side draw is fed to the top of this new section. This additional reflux feed point allows the process to maintain ultra-high propane and heavier product recoveries at all times regardless of the desired ethane recovery. Additionally, the SRC process has very high tolerance for CO₂ in the feed gas.

APPLICATIONS

The SRC technology is extremely flexible, and can provide ultra-high ethane recovery levels, or intermediate ethane recovery levels down to full ethane rejection. This flexibility allows an operator to maximize plant profits based on ethane economics. The operator can "seamlessly" adjust the ethane recovery anywhere between high recovery and full rejection as required. This feature may also be beneficial for operational flexibility. For example,



NGL / LPG RECOVERY

SUPPLEMENTAL RECTIFICATION WITH COMPRESSION



reduced ethane recovery may be desirable if the NGL recovery plant is feeding ethane to multiple downstream chemical processing plants that might be taken off-stream one at a time periodically for maintenance.

Typical applications for the SRC process include:

- Ultra-high ethane recovery from natural gas streams with essentially no loss of propane and heavier components.
- Ultra-high propane recovery from natural gas streams while operating the plant at lower ethane recovery levels.
- Applications where elevated levels of CO₂ may be present in the feed gas.

SRC technology can be installed in a new facility or may be retrofit into an existing facility where varying ethane recovery combined with ultra-high LPG recovery resulting in plant operational flexibility is desired.

FEEDSTOCK AND PRODUCTS

The SRC process can accommodate most natural gas compositions. Richer gas compositions may require the

FEEDSTOCK AND PRODUCTS (CONT.)

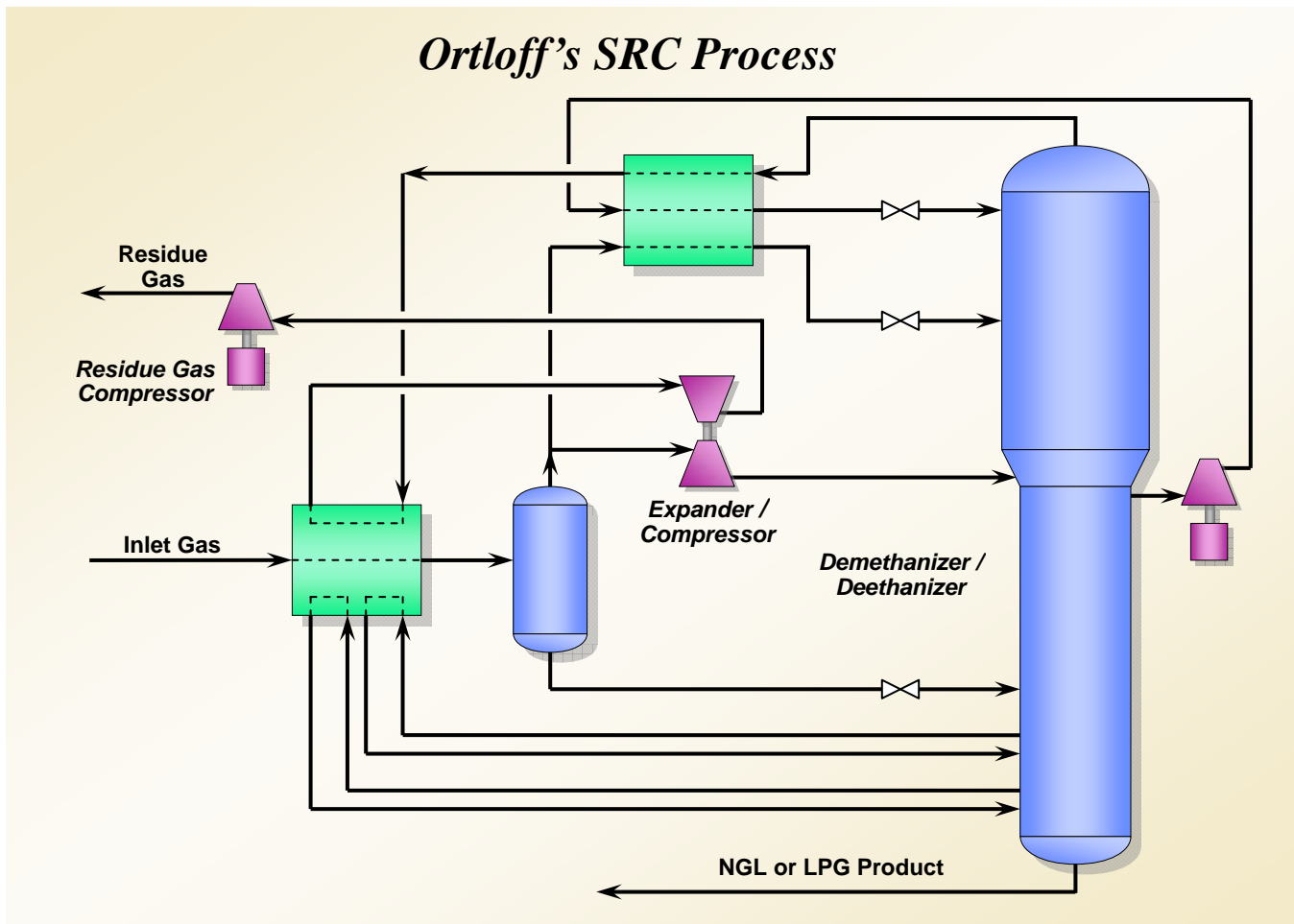
addition of a refrigeration system. Inlet pressures above 600 PSI are generally preferred.

In ethane recovery mode, the SRC process produces a mixed NGL product stream, typically meeting a maximum methane in ethane liquid product specification. In propane recovery mode, a mixed LPG product stream is produced, typically meeting a maximum ethane in propane liquid product specification.

The residue gas product stream will contain methane or methane and ethane, depending on the mode of operation.

EXPERIENCE

Ortloff's SRC technology was developed in the mid 2000's based on proven Ortloff technology. One SRC plant in Texas has been successfully operating since early 2013, providing 98% ethane recovery when desired. Several more SRC plants are in the design or construction phase.



FOR MORE INFORMATION

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OEL FORM PDS-SRC-01 9JAN2014



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