

Lurgi Rectisol™

The world's leading synthesis gas purification process

Rectisol™ is the leading process for providing high purity gasification-based syngas for catalytic applications such as SNG, methanol, ammonia and Fischer-Tropsch.

FEEDSTOCKS

Raw syngas deriving from gasification of all carbon containing feedstocks such as all types of refinery residues, pet-coke or biomass.

APPLICATIONS

Selective removal of carbon dioxide (CO₂), sulfur (H₂S, COS) and nearly all trace components (like NH₃, HCN, CS₂, mercaptans, BTX, carbonyls) by physical absorption.

PRODUCTS

- Clean/high purity syngas (H₂+CO)
- CO₂ product
- H₂S rich gas for SRU

REFERENCES

- More than 110 references (more than 35 since 2005)
- Air Liquide Engineering & Construction has experience with its own Rectisol in operation since 2013
- Air Liquide Engineering & Construction operates a demonstration unit to investigate future improvements



HIGHLIGHTS

- "5 in 1" solution - removal of all impurities in one step
- Outstanding number of references and continuously improvement in the last 75 years
- Fully referenced in all applicable scales and different applications
- Process uses inexpensive, available and chemically stable solvent (methanol)
- Technology provides low operating costs and high availability
- Process configuration can be tailored to optimize CAPEX and OPEX figures

Lurgi Rectisol™ – The "5 in 1" Solution

- 1 Trace contaminant removal
- 2 Deep desulfurization (total S < 80 ppb)
- 3 Bulk CO₂ removal (up to 100%)
- 4 CO₂ purification (total S < 5 ppmv)
Dry CO₂ capture ready (> 98.5 vol%)
- 5 Acid gas enrichment (S > 25 vol%)

SERVICE OVERVIEW

We can provide high purity gasification-based syngas for catalytic downstream applications.

Our services comprise:

- consultancy
- research and development
- market studies
- pre-feasibility and feasibility studies
- product marketing
- engineering
- architectural design
- construction
- installation
- repair
- contracting services

