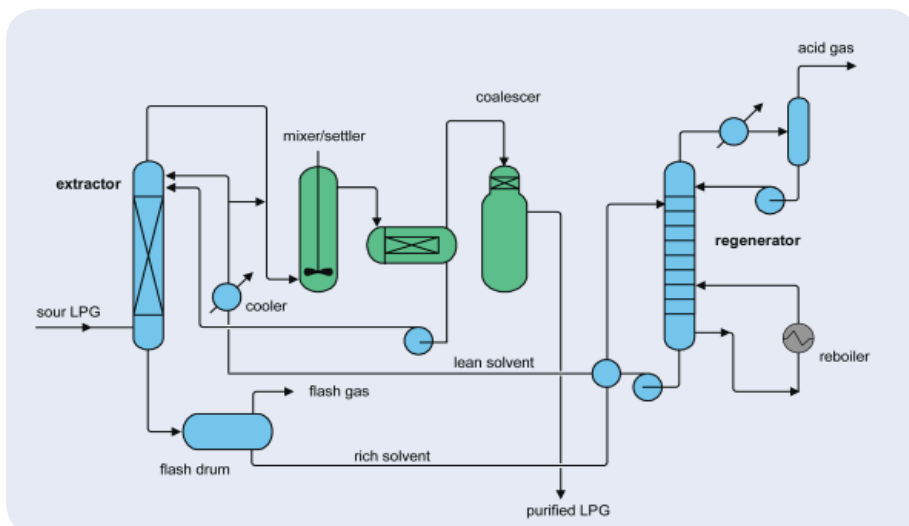


### APPLICATIONS

Besides its use as a regenerative process for the reduction of H<sub>2</sub>S to very low levels in gases, the ADIP process is also used to selectively reduce H<sub>2</sub>S and COS to very low levels in liquid hydrocarbons, such as propane-propylene (PP), butane-butene (BB), LPG and NGLs.

The process is based on regenerative absorption with an amine solvent in contact with the acidic feed. Removal of CO<sub>2</sub> is also possible. H<sub>2</sub>S removal from LPG or NGLs down to 20 ppmwt or lower, and COS removal down to 5 ppmwt as sulfur are achievable.



### DESCRIPTION

In liquid hydrocarbon treating (LPG, for example) the feed stream is contacted counter-currently with lean ADIP in a packed liquid/liquid extractor column.

If COS is present in the LPG, removal of COS is achieved by a mixer/settler system. The lean ADIP solvent passes first through the mixer/settler system before entering the extractor. Co-current and counter-current mixer/settlers are used for COS removal.

The treated LPG then passes through a coalescer to separate entrained ADIP solution. The rich ADIP solvent is flashed to remove entrained and/or dissolved hydrocarbons before passing to the regenerator. Stripping of the rich solvent is identical to that done in gas treating.

### OPERATING CONDITIONS

The typical operating pressure is 20-40 bar and temperature 30 – 50°C.

Streams to be treated	Contaminants removed
Natural Gas Liquids (NGLs)	H <sub>2</sub> S, COS
Liquefied Petroleum Gas (LPG)	H <sub>2</sub> S, COS

### LICENSOR

Jacobs Comprimo® Sulfur Solutions, a member of Jacobs Engineering Group Inc., authorized licensor on behalf of Shell Global Solutions B.V.

### REFERENCES

More than 490 ADIP units, ranging in capacity from 1,900 Nm<sup>3</sup>/d to 12,2 million Nm<sup>3</sup>/d and 19 t/sd to 7,700 t/sd of liquid hydrocarbons, are in operation throughout the world, demonstrating the reliability of the process.



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