GAS DEHYDRATION & TREATING

GPE-CAT-04-23082018: GAS DEHYDRATION & TREATING
With the advance of refining and petrochemical processes worldwide, our objective is to develop and adapt the technologies to purify the process liquids to meet the stringent demand of the process.

GPE serves the steel, petroleum, chemical, gas processing, power generating, oil & gas and manufacturing industries. GPE has long been a leader in providing adsorption equipment to dehydrate and purify industrial gases, solvents, and liquefied petroleum gases such as propane and butane.

Our product covers systems for the removal of various impurities.

**IMPURITIES WE CAN HANDLE**

<table>
<thead>
<tr>
<th></th>
<th>H₂O, H₂, O₂</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon</td>
<td>CO, CO₂</td>
</tr>
<tr>
<td>Sulphur</td>
<td>H₂S, COS, CS₂</td>
</tr>
<tr>
<td>Nitrogenous</td>
<td>NH₃, NO, NO₂</td>
</tr>
<tr>
<td>Mercaptans</td>
<td>RSH</td>
</tr>
<tr>
<td>Alcohols</td>
<td>CH₃OH, C₂H₅OH</td>
</tr>
<tr>
<td>Di—olefins</td>
<td>C₄H₆, C₃H₄</td>
</tr>
<tr>
<td>Oxygenates</td>
<td>Ketones, Ethers, Carbonyls</td>
</tr>
<tr>
<td>Heavy Metals</td>
<td>Hg, PH₃, AsH₃</td>
</tr>
<tr>
<td>Acetylenes</td>
<td>C₂H₂, C₃H₄</td>
</tr>
</tbody>
</table>

**REGENERATION ALTERNATIVES**

- Closed Loop with dry gas nitrogen
- Open Loop
- Multi system regeneration.
- Heat of compression.
- Pressure Swing

**OUR ACTIVITIES INCLUDE**

- **Project Management**
  - Customer contact
  - Document control
  - Procedures/workflow
  - Planning
  - Project specification
  - Project administration
  - Site supervision

- **Engineering**
  - Basic engineering
  - Thermal, mechanical & Hydraulic
  - Piping & structure
  - Machinery
  - Instrument & control

**GASES WE HANDLE**

<table>
<thead>
<tr>
<th></th>
<th>Chlorine</th>
<th>Methane</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen</td>
<td>Ammonia</td>
<td>Methylene Chloride</td>
</tr>
<tr>
<td>Oxygen</td>
<td>Carbon Monoxide</td>
<td>Mixed HC Gases</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>Carbon Dioxide</td>
<td>Natural Gas</td>
</tr>
<tr>
<td>Argon</td>
<td>Mixed Gases</td>
<td>Propane</td>
</tr>
<tr>
<td>Acetylene</td>
<td>Butadiene</td>
<td>Propylene</td>
</tr>
<tr>
<td>Butane</td>
<td>Ethane</td>
<td>Sulfur Dioxide</td>
</tr>
<tr>
<td>Ethers</td>
<td>Ethylene</td>
<td>Helium</td>
</tr>
</tbody>
</table>
OUR NORMAL SCOPE
- Process Simulation
- Adsorber Vessels (2-8 nos.)
- Initial Charge of Ceramic Balls
- Initial Charge of Adsorbent
- Dual Pre-filters (CS/SS)
- Dual After-filters (CS/SS)
- Automatic Switching Valves
- Various regeneration alternatives
- Regeneration Gas Booster
- Gas Booster Surge Control.
- Regeneration Gas Cooler
- Regeneration Gas Heater
- Regeneration Gas Separator
- Control System
- 2oo3 logic , FF & HART protocol
- Heater – Gas /Electric/Steam
- Field Installation Supervision
- Startup Supervision
- Operator Training
- FAT and Performance Testing

CONTROL
Control of the dryer package is through an unit PLC system typically with dual redundant configuration. 10” TFT HMI is provided on the PLC panel. Hazardous area II A/B or II C / safe area installation options are available.

OUR OTHER PRODUCTS
- Liquid Dehydration
- Coke Oven Gas Purification
- Gas Conditioning Plants
- Methane Enrichment(Bio Gas )
- Hydrogen Enrichment( H2 PSA)
- Separation
- Gas and Liquid Filtration