

UOP Adsorbents



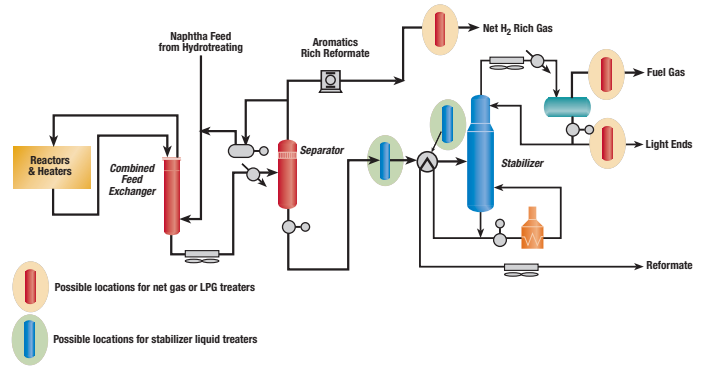
EXTEND CATALYST LIFE, PROTECT EQUIPMENT
AND ENSURE THAT PRODUCT SPECIFICATIONS ARE MET

Adsorbent Solutions in Refining

Adsorbents for Catalytic Reforming

- CLR-204:** Premier, highest capacity product with very low green oil production for net gas and LPG treating
- 9139A:** Workhorse product for net gas and LPG treating
- CLR-454:** Good capacity in net gas treating, also makes NO green oil
- PCL-100:** For use in stabilizer feed treating, also removes organic chlorides along with trace HCl

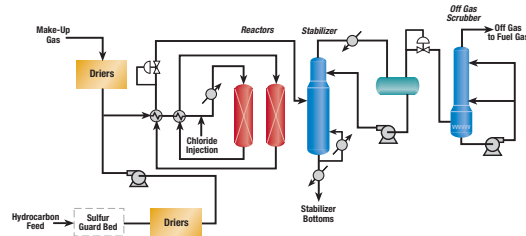
Chloride Treating in Reforming



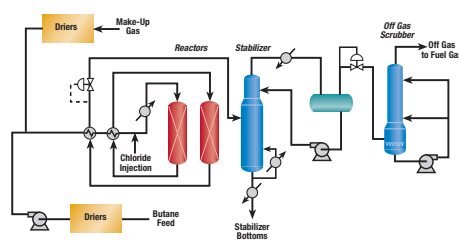
Adsorbents for Isomerization

- HPG-250 & HPG-429:** Use in feed treaters to remove a broad range of impurities. Add to make-up H_2 dryers for both H_2O and removal of CO_2 , H_2S or methanol
- PDG-418:** For moisture removal in make-up H_2 dryers
- ADS-120:** New, cost-effective, non-regenerative sulfur removal adsorbent for treating Penex and Reforming feed streams

Simplified Penex Flow Diagram



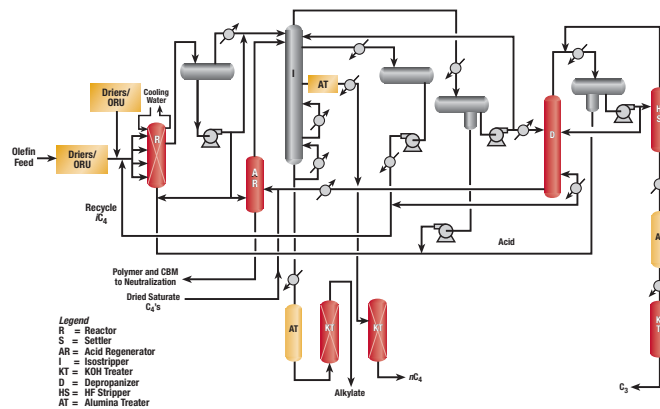
Simplified Butamer Flow Diagram



Adsorbents for HF Alkylation

- GB-346S:** Hg removal from hydrocarbons in feed to alkylation units
- ADG-401:** Use alone to remove water or with HPG-250 or HPG-429 to remove H_2O and oxygenates in feed dryers
- ORG-E:** Used to purify etherification raffinate streams, used as alkylation feedstocks
- P-188:** Premier, highest capacity defluorination adsorbent resulting in longer effective bed life
- A-202HF:** Widely used and considered the industry standard in defluorination adsorbents

UOP HF Alkylation Process



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