



World Leader in Catalyst Services

Regenerated Catalyst Applications Checklist

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REGENERATED CATALYST APPLICATIONS CHECKLIST:

- ✓ **TURNAROUNDS DICTATED BY ISSUES NOT RELATED TO CATALYTIC ACTIVITY, SUCH AS PRESSURE DROP LIMITATIONS.**
- ✓ **REFINERY TURNAROUND SCHEDULING.**
- ✓ **VESSEL INSPECTION TIMING.**
- ✓ **EQUIPMENT PROBLEMS, SUCH AS COMPRESSOR FAILURE CAUSING PREMATURE END-OF-CYCLE.**
- ✓ **HDT UNITS WHERE SILICON CONTAMINATION FROM COKER LIQUIDS OR OTHER SILICON SOURCES LEADS TO PREMATURE SHUTDOWN DUE TO CATALYST CONTAMINATION AND FOULING.**
- ✓ **HDT UNITS WHERE OTHER METAL CONTAMINANTS (EG.: NI, V, FE, PB, NA) CAUSE PREMATURE SHUTDOWN DUE TO CATALYST CONTAMINATION OR FOULING.**
- ✓ **LESS SEVERE SERVICE (EG.: NAPHTHA HYDROTREATING) WHERE A REGENERATED HIGH-ACTIVITY CATALYST (EG.: HYDROCRACKER PRETREATER) CAN BE CASCADED TO LESS SEVERE SERVICE.**
- ✓ **REFILLING AN ACTIVE BED OF MATERIAL IN PERFORMING A REACTOR SKIM.**
- ✓ **SHORT CYCLE UNITS. THE MOST PROMINENT EXAMPLES ARE UNITS OPERATING TO MAKE LOW SULFUR DIESEL WHICH MAY DEACTIVATE QUICKLY DUE TO INSUFFICIENT HYDROGEN PRESSURE. IN THIS APPLICATION, THE REFINER MAY CHOOSE TO ACQUIRE TWO BATCHES OF CATALYST AND SWITCH OFF BETWEEN THEM WITH REGENERATION OF THE CATALYST BETWEEN CYCLES.**
- ✓ **EXPENSIVE CATALYSTS. HYDROCRACKING AND OTHER LICENSED SPECIALTY HYDROTREATING CATALYSTS MAY COST WELL UPWARDS OF \$8- 10 PER POUND. IN THESE INSTANCES, REFINERS ALWAYS PAY SPECIAL ATTENTION TO THE REGENERABILITY OF THE CATALYST.**
- ✓ **COST SAVINGS: IN THE PROPER APPLICATION, PERFORMANCE DIFFERENCES BETWEEN FRESH AND REGENERATED CATALYST MAY BE UNDETECTABLE. HOWEVER, SUBSTANTIAL SAVINGS IN CATALYST COST MAY EASILY REACH OR EXCEED \$200,000 FOR A TYPICAL 100,000 POUND REACTOR LOAD.**

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