REFINERY PROCESS UNIT CONTROL SOLUTIONS

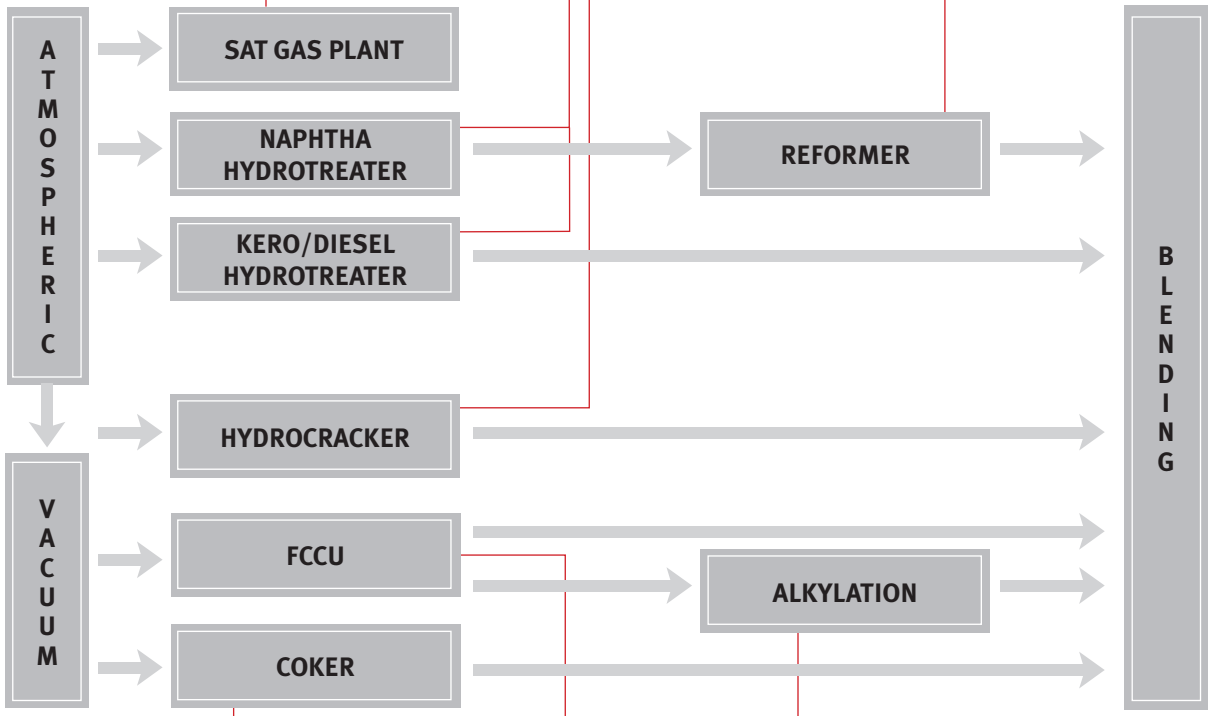
SAT GAS PLANT
- Dual-product composition control
- Separation maximization
- Benefits: $0.10 – $0.15 per barrel of feed

HYDROTREATERS
- WABT control
- Final product sulfur composition control
- Benefits: $0.05 – $0.10 per barrel of feed

HYDROCRACKER
- Bed temperature and profile control
- Hydrocracking severity control
- Main fractionator product quality controls
- Benefits: $0.08 – $0.28 per barrel of feed

REFORMER
- WAIT & temperature profile control
- Reformate inferred octane & RVP controls
- Benefits: $0.10 – $0.15 per barrel of feed

CRUDE UNIT
- Feed maximization
- Inferred product quality control
- Advanced furnace controls (firing, pass balancing)
- Crude switch controls
- Benefits: $0.10 – $0.35 per bbl of crude



BLENDING
- Blend header controls with analyzer feedback
- Blend recipes & set-ups
- Blend optimization (MBO, BLEND, etc.)
- LIMS integration
- Benefits: $10MM / yr in reduced quality giveaway and reblending, opportunity blends, reduced demurrage

TANK FARM / TERMINAL OPS
- Wireless tank gauging
- Oil movement systems / control
- Marine operations management
- Planning & scheduling (pipeline, railcar, dock, vessel, truck)
- Terminal / truck rack automation systems
- Benefits: loss control, inventory optimization, demurrage reduction

UTILITIES

COKER
- Charge maximization – coke make model & drum outage minimizer
- Drum switch controls
- Main fractionator product quality controls
- Benefits: $0.15 – $0.30 per barrel of charge

FCCU
- Charge maximization
- Reactor & regenerator controls
- Main fractionator inferred product quality controls
- Gas Con controls for C3 recovery and distillation optimization
- Benefits: $0.13 – $0.30 per barrel of feed

ALKYLATION
- I-C4 / olefins ratio control
- Acid / HC ratio control
- Reactor temperature control
- Charge maximization
- Benefits: $0.10 – $0.25 per barrel of feed

UTILITIES
- Master boiler controls & boiler optimization
- Cogen optimization
- Steam system balancing
- Benefits: 3–5% energy usage reduction