

GULFTRONIC® | SEPARATOR

Increasing profits through superior technology

BENEFITS

- Increased refinery revenue from use of low-ash feedstock (< 10 ppm) and reduction of settling tank waste
- Reduced environmental impact by separating lost catalyst and returning feed back to the reactor
- Raw FCC feed used for backflush
- Low operational pressure drop
- Improved operator safety resulting from automated, low maintenance design
- No loss of FCC or RFCC production
- Impervious to fouling by Asphaltenes and Coke particles
- Optimized performance supports non-scheduled changes in nominal flow rates and solids content
- Proven, robust, 4th generation product
- Experienced and dedicated support staff
- Expandable modular design meets future production increases

FEATURES

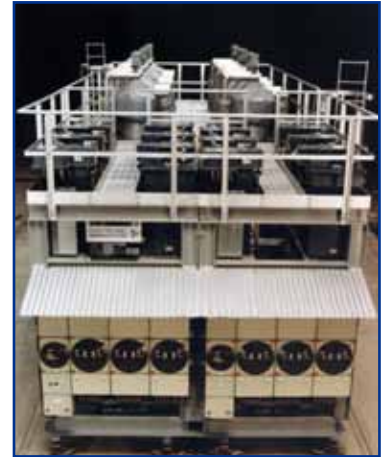
- Built to ASME standards
- Operator friendly design
- Constant low pressure drop when module is loaded with catalyst fines
- Sub-micron and large catalyst particles are separated out of slurry
- Separator PLC interfaces with your DCS system for operator access from the control room
- Configurable field I/O meets local control and safety requirements
- Designed to fit your specific plot space
- PED/ATEX certification as required
- Performance guarantee
- 4 year warranty

MODULAR FABRICATION - Each Gulftronic Electrostatic Separator is modular by design. Designing a unit for a refinery's needs is accomplished by determining the number of modules required in a system to accomplish the intended clarified oil specifications. This design creates the most efficient and profitable solution possible.

AUTOMATED CONTROLS - The Gulftronic Electrostatic Separator is designed as a standalone unit. However, the operation can be integrated with an onsite DCS.

MORE THAN A PRODUCT - Gulftronic Separator Systems, headquartered in San Diego, provides a number of services specifically designed to assist refineries in the separation of catalyst fines:

- Separation tests on your Slurry Oil sample
- Project design
- Installation and commission assistance
- Operator training
- Performance validation
- Long-Term support



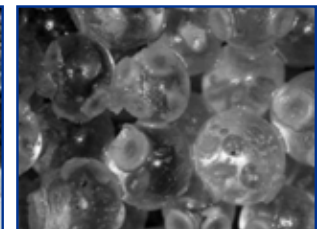
TECHNICAL SUPPORT - Gulftronic Electrostatic Separators are backed by a complete 4 year warranty. Each unit is commissioned and guaranteed to meet design requirements. Technical instruction is included and after initial commissioning the unit is backed by General Atomics world renowned customer service.

LESS DOWNTIME - Our separation process allows for continuous operation without delays in throughput or having to take the unit off line.

INDUSTRY APPLICATIONS

Gulftronic Separator low-ash feedstock is used for the following applications:

- Carbon Fiber Feedstock
- Needle Coke Feedstock
- Pitch Feedstock
- Refinery/Marine Fuel
- Carbon Black Feedstock



INSTALLATION

Gulftronic Separators are installed worldwide by major refinery operators to achieve maximum yields from each barrel of crude processed. Gulftronic® Electrostatic Separators can be found in operation at refineries of BP®, Exxon- Mobil®, Shell® and Valero®.

SYSTEM OPERATION

The Gulftronic Separator consists of a number of highly accessible modules mounted as part of a skid. Each module contains a high voltage electrode surrounded by glass beads. An electrostatic charge polarizes the glass beads, which capture the catalyst fines (regardless of size) that cannot be filtered out conventionally. Raw FCC feed is used to backflush each module in sequence, while the separation cycle continues with the other modules. The low operating pressure drop remains constant with no loss of FCC production.

The modules are automatically back-flushed as the glass beads become saturated with catalyst fines. During the back-flush mode, the power to the modules is shut-off and flow is reversed, producing a "scrubbing" action of the glass beads, and completely removing all catalyst fines from the module. The back-flushed product is returned to the riser to be used as part of the FCC feed.

A purge cycle is used to displace the back-flush oil (FCC feed) remaining in the modules from the back-flush cycle. Clarified FCC Slurry Oil is fed-back from the Separator output. This action maintains the quality of the clarified oil product output.

The automatic removal of catalyst fines from each module during the backflush cycle, allows the unit to operate with a constant pressure drop.

For more information on any of our products or services:

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