

Latest news!

Preventing salt fouling in FCC main fractionators



Situation

Salt fouling is a very serious problem in oil production and refining. It is very often observed in main fractionator columns of FCC units. The salt deposits are predominately ammonium bisulfide and ammonium chloride. If not removed, these salts will accumulate and cause a number of significant problems.

The new low sulphur gasoline specifications increase the salt fouling potential. Refiners have to undercut the FCC gasoline or to take-off the heavy naphtha product from the main fractionator.

Problem

Ammonium salt deposition is observed, when the temperature drops below the salt dew point. Localised cold spots can still exist in the main fractionator column even though the adjusted column temperature is above the dew point.

Fouling typically occurs in the mid-to-upper section of the main fractionator column and top pumparound system. Delta pressure increase and Heavy Cracked Naphtha (HCN) end point specification problems are clear indicators for salt precipitation.



Fouled bubble-cap

New Technology

Kurita developed the ACF technology to prevent ammonium salt fouling and corrosion. The ACF products are special formulations, based on a very strong liquid organic base.

The ACF products demonstrate an excellent performance as they are directly reacting with HCl, NH_4Cl and other amine salts. ACF displaces the

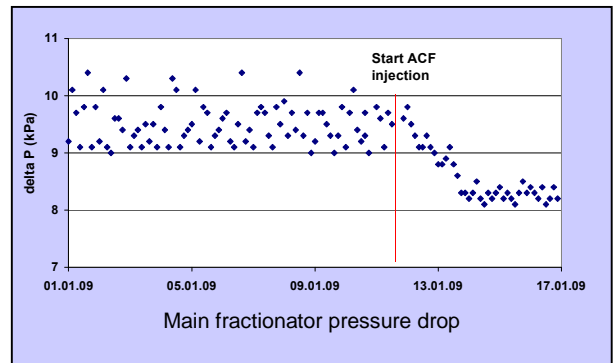
ammonia to form liquid ACF compounds with a neutral pH. These compounds remain liquid under operational conditions and can be removed easily.

Field experience

In many applications the ACF products showed an outstanding performance. They can be applied to clean fouled distillation towers and equipment or they can be used to maintain clean conditions.

A customer was suffering from plugged trays and increased corrosion in the FCC main fractionator column. Separation in the top section of the column became worse and the HCN end point specification was harder to achieve.

Therefore **KURITA ACF-9601** was injected into the top pumparound system to dissolve the ammonium salts. Within days the delta pressure decreased and the desired HCN end point was achieved.



Your benefits

- Maximum product throughput
- Significant reduction of corrosion potential
- Specifications can be achieved
- No cleaning shut-downs required
- Compliance with safety regulations

Contact

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