NALCO Water
An Ecolab Company



RESOLV™ Water-Dispersible Emulsion Breaker

Direct-to-interface chemistry for improved desalter performance and a more effective treatment methodology

THE CHALLENGE

Lower quality and more complex crude slates can limit desalting efficiency and reduce operational flexibility.

Increased risk profile:

- High solids-laden crude
- Difficult-to-break emulsion/rag layer
- Poor effluent brine quality

THE SOLUTION

RESOLV™ Water-Dispersible Emulsion Breaker (EB) is delivered through the desalter wash water, providing a second point of attack at the oil-water interface. Combined with a crude-side emulsion breaker, it delivers dual-phase emulsion control for improved desalter performance and greater crude flexibility.

VALUE DELIVERED

- Faster emulsion breaking for stable desalter operation
- Improved water coalescence for enhanced water removal
- Enhanced dehydration and desalting to help protect downstream assets
- Greater flexibility for challenging crude processing to maximize crude opportunities
- Improved refinery performance and profitability through reliable desalter performance



THE OUTCOME

Strengthen desalter performance by reducing operational constraints, increasing crude-processing flexibility, and contributing to improved refining economics.

RESOLV™ WATER-DISPERSIBLE EMULSION BREAKER

TWO DISTINCT APPLICATIONS

Overlay Technology

Used in combination with crude-side primary emulsion breaker for the most challenging crude slates.

Standalone Use of Water-Dispersible EB

Used as a primary emulsion breaker for easier-to-treat slates.

Unlock Better Desalter Performance With Nalco Water's Next Generation of Water-Dispersible Emulsion Breaker

CUSTOMER SUCCESS STORY

BACKGROUND

To strengthen its competitive position in crude processing, a U.S. Midwestern refinery processing sour Canadian crude diluted with light tight oil to 22° API partnered with Nalco Water to adopt advanced desalter chemistry. The collaboration focused on improving desalter reliability, optimizing chemical operating costs and supporting the profitable addition of opportunity crudes to the refinery's existing slate.

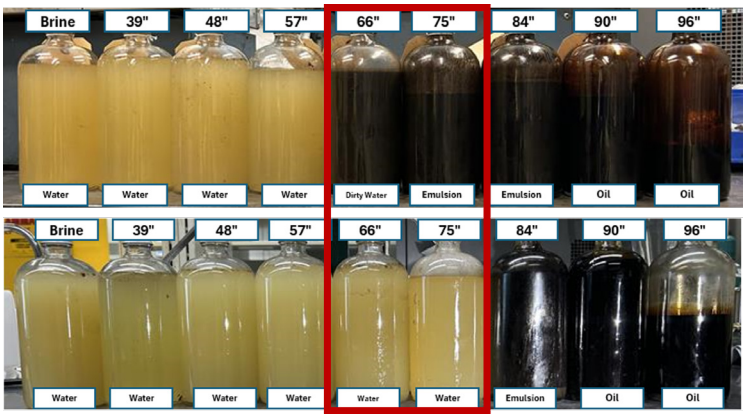
SOLUTION

Nalco Water developed, a next-generation water-dispersible emulsion breaker, to strengthen the refinery's existing RESOLV Overlay Program under increasingly challenging crude and operating conditions. Combined with a hydrocarbon-soluble primary emulsion breaker, the dual-phase solution supports improved water separation, desalting efficiency and desalter reliability, while enabling greater crude-slate flexibility.

RESULTS

- Improved desalter tryline profile
- 24% reduction in overall EB demand
- 77% reduction in annual economic losses associated with desalter upsets
- Enabled the site to process more opportunity crude

PERFORMANCE VISUALIZATION



- Decreased tryline filterable solids
- Increased number of clear water trylines
- Better phase separation

Note: Results are specific to this individual customer. Results will vary for other customers based on factors and circumstances in their operations.

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