

Refining and Gas Processing Community presents

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Safety Seminar ♦ Exhibition ♦ Training

**DAHLMAN**

Company: Dahlman Industrial Group

Title: Heavy Coker Gas Oil Filtration

Abstract:

**Problem:** The refiner is using a common backwash filter for HCGO which operates with short cycles and thus consumes too much backwash liquid - a cost factor for the refiner. Additionally, the filter needed to be cleaned ex situ driving up the cost even further.

**Motivation:** The refiner wanted to significantly cut the operational costs of this filter. Dahlman was very interested in the process and wanted to demonstrate the possibility of process improvement by using gas assisted backflush technology in combination with a special type of filter element.

**Approach:** After the refiner consulted Dahlman, a basic design was made for a gas assisted backflush filter. The project was approved by the refiner to be designed and fabricated provided a pilot test would be done on site to demonstrate the process performance of the industrial design.

**Results:** The test demonstrated that the finally selected filter media did work. Using a new designed filter, it was field proven that filter cycle times of 6 hours were achieved versus 30-60 minutes on the original backwash filter.

**Conclusions:** The tests demonstrated the feasibility of the industrial design and made it possible to make the most optimum filter media selection. Now, after the industrial unit is installed in the plant using two types of filter elements for further large scale testing, it can be concluded that the new design can solve many operational problems at refineries with delayed coker units and other feed filtration processes

