Case History
#10-077

Oil Sweetening Field Test In Fuel Oil No.6

Background

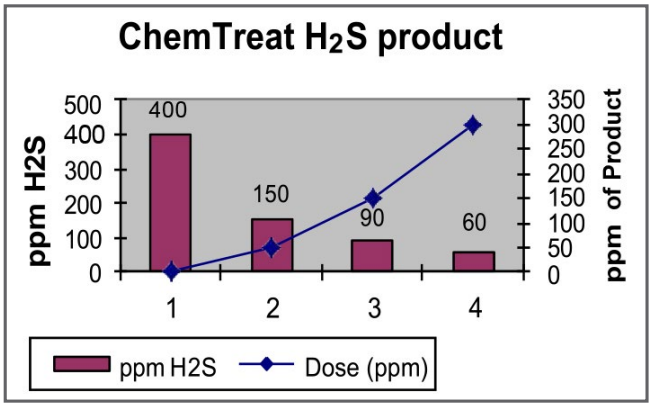
A refinery located in South America invited ChemTreat to participate in laboratory and field tests to select the ideal product for the No. 6, quality 300 SSF Fuel Oil. & 2.0% H_2S.

Laboratory Test Results

Point of Application:

Figure 1 shows that more than 300 ppm of the ChemTreat H_2S product is needed to reduce the content of H_2S in fuel oil to 50 ppm.

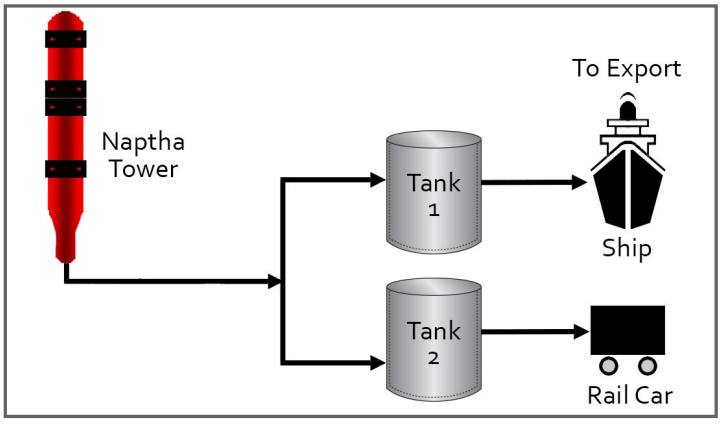
Figure 1: Optimum Product Results



System Description:

Figure 2 shows the injection point of the H_2S scavenger to one of the final FO preparation tanks of 150,000 bbl. It also shows the final destination of the tankers and the plant that produces the residual (CD -1) and the viscosity diluent used (cutting oil).

Figure 2: Fuel Oil Ref PLC System

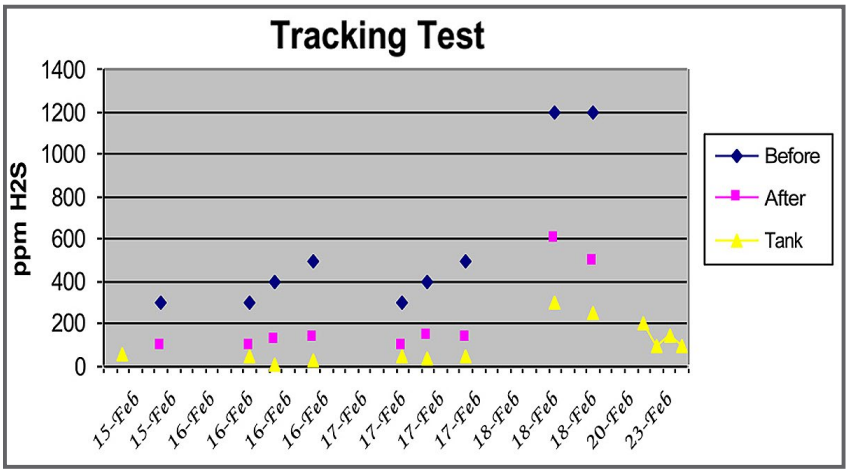


Results are examples only. They are not guaranteed. Actual results may vary.

Field Test

In figure 3, three series of values are shown. The blue represents the ppm prior to ChemTreat's H_2S formulation; the pink represents the values of ppm of H_2S in the pipe after adding the ChemTreat formula; and the yellow represents the ppm of the H_2S in the final tank (150X 2).

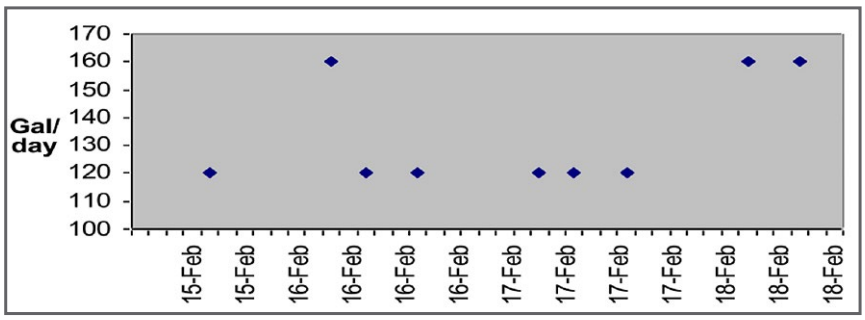
Figure 3: Field Results



Consumption of ChemTreat Product

Figure 4 shows that at the beginning of the test, the consumption of ChemTreat product was 120 gallons per day, and towards the end it increased to 160 gallons per day. This is because in the residual of the plant CD-1, the H_2S ppm increased from 400 to 1,200 ppm, which also increased this parameter in the final tank above the maximum of 50 ppm. However, we maintained the consumption of 160 gallons per day at the end, so the tank was in specification.

Figure 4: Consumption ChemTreat H_2S



Conclusions and Recommendations

Field results show that for 500 ppm of H_2S in the CD-1 residual, the average product consumption was 150 gallons per day (95 ppm) (R H_2S/product: 5/1), demonstrating a high product efficiency and additional removal of H_2S from open vents in the 150 X 2 tank.

ChemTreat®