CASE STUDY

Kerosene Pump Around Loop

Update 2021: 6+ years in service providing continuous reduction in ESG Risk and OPEX

Petromax Gulf Coast Refinery, Houston, TX USA, 2015 - 2021

Problem

Crude oil feedstock entering the refinery is loaded with high volumes of Black Powder contaminants. The entire unit was experiencing issues with Black Powder building up and plugging the suction screens in front of the pumps.

Solution

Deploy a Magnetic Separator (Figure 1) on the kerosene pump around loop to protect the pump.

Result

During a recent cleaning, the Magnetic Separator system protecting Pump 104 had collected not only Black Powder (Figure 3), but a group of piping knockouts from a recent facility upset. Had they entered the pump impeller and become stuck, the facility would have had to replace the pump resulting in lost product on unplanned maintenance.

Application Data	
Operating Fluid	Kerosene
Operating Temperature	450° F
Max. Flow Rate	1500 gpm

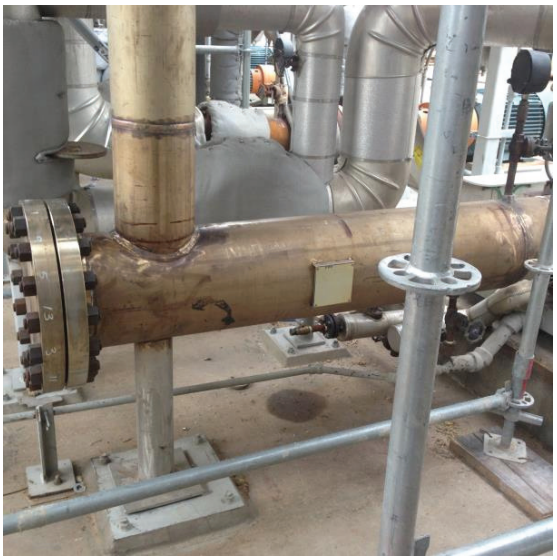

Figure 1. Black Powder Solutions Magnetic Separator System

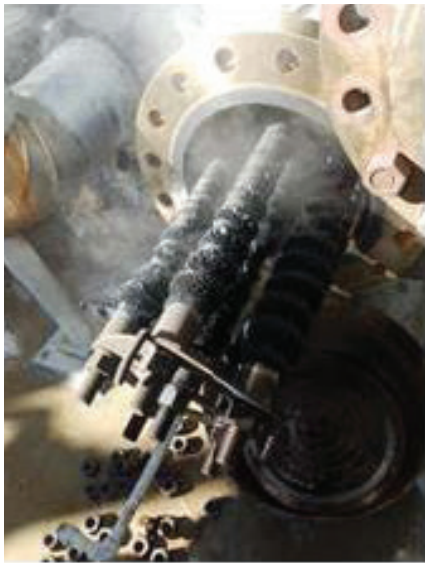

Figure 2. Removal of Magnetic Separator elements.

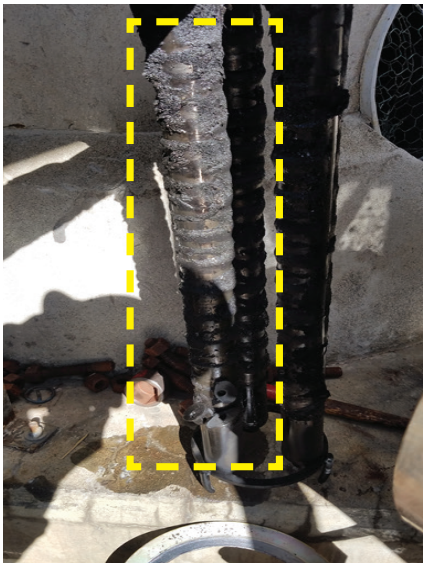

Figure 3. Black Powder collected after six weeks of operation.