



## Case Study

Black Powder Contamination in LPG  
LPG Loading Terminal  
Houston, Nov 2016 - Nov 2017

### ROI Realized in 72 Hours

- Black Powder Magnetic Separator cost: \$13,000
- After 12 month of operations with no shut downs or demurrage fines, a cost savings of \$199,482.25 was realized.
- Eliminated opportunity for injury and reduced labour requirements to clean traditional filtration at \$8,000/boat.

### Problem:

The plant inlet traditional filters allow Black Powder to enter the facility, damaging pump and compression equipment. During the loading process, small quantities of Black Powder contamination plug off the basket screens extending loading hours and creating costly downtime and demurrage penalties

### Variables:

Loading Arm:	16"
Volume of Flow:	10,000 BPH Ethane Propane
Ship Size:	15,000-20,000 M3
Volume	3.2 - 4,2 Million gallons on smaller ships 20.2 - 40.2 Million gallons on larger ships

### Solution:

The installation of BPS Magnetic Separator technology to trap the Black Powder before it plugs the basket screens off.

### Results:

In one year there was no downtime, eliminating labor and demurrage costs. The LPG was brought to a higher cleanliness, reducing the volume of Black Powder displacing storage capability and damaging off loading pumps.

### Recommendation:

Install BPS technology on the inlet and outlet of the facility to reduce the volume of Black Powder contamination damaging process pumps and compression equipment. Reduced Black Powder volumes will increase reliability and improve production and profitability, also providing a cleaner product to the customer.

### Photos:

**A:** Application example

**B:** Collection of Black Powder after loading 3 ships

**C:** Collection of Black Powder after 1 cleaning, loading 27 ships

