

Final Diesel Product Dehazing Brings Terminal Loading Operations Back on Track



PICSRENTIEN

CASE STUDY

Background

Haze in diesel fuel is easily identified by the presence of suspended particles such as water droplets, dirt, and other contaminants, giving the fuel a cloudy or murky appearance when agitated. Haze can reduce the lubricity of the fuel, which can lead to increased wear on fuel injectors, fuel pumps, and other engine components as well as damage refinery equipment. It can also lead to increased emissions of particulate matter, which can negatively affect air quality and pose health risks to humans.

Problem

A consulting firm had a troubleshooting contract at this Northern US refinery. The firm referred the refinery to Pall, suggesting the possibility of implementing rental solutions to resolve immediate contamination issues (dehazing) at two of its hydro-processing units. One unit, a Mild Diesel Hydrocracker used to convert lower-value gas oils into higher-value diesel fuels, the other, a Kerosene Hydrotreater, used to remove sulfur and other contaminants from kerosene and other clean burning petroleum products.

- The northerly US location experienced cold temperatures that produced more free water seasonally
- The current filter/coalescer system was not removing haze caused by water contamination from the hydro-processed diesel and kerosene rundown products
- This caused aqueous corrosion in the product storage tanks and created rust particles that further exacerbated the off-spec haze.

Pall solution

After consulting the Pall Rental and Services team, the refinery chose to rent two 37-element coalescer skids, utilizing Pall's PhaseSep® liquid/liquid coalescer technology. This effective solution enabled the refinery to restore the fuel product quality at their railcar and truck loading terminals back to the required specification, while they then worked on obtaining CAPEX approval for a permanent, upgraded Pall filter/coalescer solution on each of the Hydro-processing units.




The 37-element liquid/liquid coalescer skid prior to installation at the refinery.

Results

Now in operation for nearly three years, the Pall rental coalescers have consistently produced "clear and bright" diesel for the refinery, maximising the value of their final diesel products and filtering out impurities to reduce emissions of pollutants.

To learn more about Pall Rentals and Services, please visit our website or contact your local Pall sales representative.

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June 2023