

Veolia Environmental Services improves productivity by more than 50% while protecting operators

With the installation of two Self-Cleaning Russell Eco Filters[®], Russell Finex have helped Veolia Environmental Services streamline the filling of fuel tankers, resulting in increased productivity and a safer working environment for operators.

Established in 1990, Veolia is the UK's waste management leader. While they are involved in numerous waste management activities across the country, one of their Sheffield sites, in Northern England, focuses on the recovery of hydrocarbons, diesel oils and industrial solvents.

One particular recovery process is the manufacturing of a secondary liquid fuel (SLF) from liquid wastes. These materials come from various sources, with the majority from the manufacturing industry and include waste fuels, waste thinners, waste paint, waste oils and waste solvents. The waste materials are carefully recovered by Veolia and then blended, macerated, and filtered under strictly regulated conditions before being delivered to cement manufacturers. As the fuel is processed to such high standards, and has to conform to strict parameters set by the Environment Agency, its combustion characteristics mean it burns cleaner than traditional fossil fuels commonly used to power cement kilns. This in turn helps the cement manufacturers with their efforts in reducing their carbon footprint.

After Veolia's mixing and blending process, some debris remains in the resultant fuel oil. The debris must be removed before the fuel can be used and pumped into delivery tankers. Veolia used basket filters to achieve this check-screening function, leading to some delays in the filtering process due to blockages.

Veolia realised that they required a better filtration solution that would minimise filtering time and increase employee health and safety.

After considering several options, Veolia turned to specialists Russell Finex of Feltham, England. With over 70 years of experience in separation and filtration technology, Russell Finex were well equipped to conduct the necessary proving trials and ultimately streamline Veolia's filtering system.



One of the Russell Eco Filters[®] installed at Veolia

- Increased productivity by more than 50% due to self-cleaning design
- Protects the health and safety of operators and contains hazardous materials
- No serious breakdowns in over two years of operation

Peter Hithersay, plant manager of the Sheffield site, comments "Russell Finex were the only company willing to provide us with a test unit before we had to commit to any equipment. Because of this, we ran the trial unit for approximately one month before deciding that this was clearly the right choice for us". Veolia procured two Self-Cleaning Russell Eco Filters[®] to filter their reclaimed fuel and immediately reaped the benefits of their installation. The filters were supplied to meet the latest ATEX approval ratings, essential to operate safely in Veolia's secured environment.

The unique design of the Eco Filter ensures that material flow passes through the filter screen whilst the screen is automatically cleaned using a rotating wiper inside the element. The Russell Eco Filter® wiper system works on a continuous basis, cleaning the filter element surface at all times thereby maintaining maximum open screen area, which in turn gives a consistent throughput rate and prevents a build up of differential pressure.

Because of this unique design, Veolia are no longer experiencing filter blockages. Productivity at the tank-filling stage has improved by more than 50% since the installation. While filling a 28,000-litre delivery tanker with fuel used to take between 1.5 to 2 hours due to continual stoppages to clean out the filter baskets, this can now be achieved in only 25 minutes with the Russell Eco Filter®. Additionally, their operators are working in a much safer and more efficient environment.

John Jarvis, Engineering Manager, explains "A major benefit of the installation has been the improved morale of our operators whose working conditions have changed for the better."

An unexpected benefit of the filters was the satisfaction of Veolia's end customer, the cement manufacturers. Whereas previously, contaminants would potentially remain in the fuel and block the tanker outlet off-site, this has now ceased.

Some of the cement companies used to filter the fuel at their site after receiving it, but the quality of the fuel is now so high that there is little to no need for this activity.

The filters have also helped Veolia increase their overall throughput. Mr. Jarvis elaborates, "Since their installation two years ago, each filter has processed about 40,000 tons of material, with no serious breakdown. We are very satisfied with their durability and they are doing far better than we ever anticipated. Before the filters were installed, about 16,000 to 17,000 tons of fuel were passing through our plant on a yearly basis. Now, we are achieving volumes of about 50,000 tons a year, something which we would have struggled with without the Eco Filters."

For over 70 years Russell Finex have manufactured and supplied filters, sieves and separators to improve product quality, enhance productivity, safeguard worker health, and ensure liquids and powders are contamination-free. Throughout the world, Russell Finex serve a variety of industries with applications including food, pharmaceuticals, chemicals, adhesives, plastisols, paint, coatings, metal powders and ceramics.



A tanker ready for fuel loading at the Veolia site

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