Neville Chemical Discovers Wealth of Benefits from New Filtration System

In an extremely competitive industry, Neville Chemical found that modernizing their resin filtration system could enable significant productivity gains, reduce waste and eliminate a laborious task that was risky to workers' health.

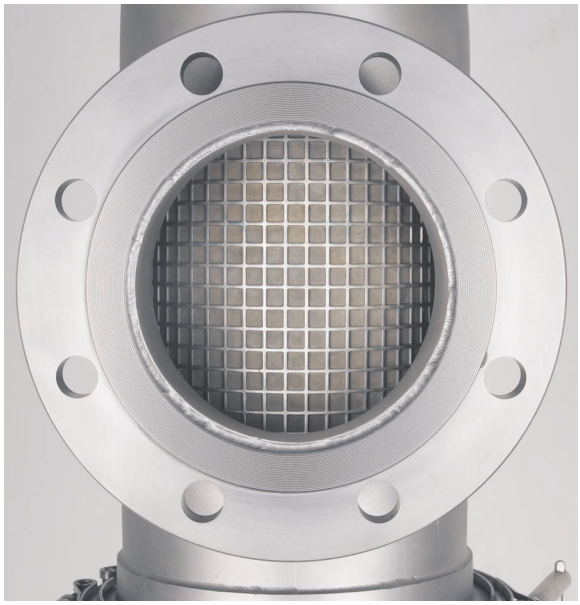
When Neville Chemical Company opened its Anaheim, California plant in 1958, its major competitors in the burgeoning hydrocarbon resin industry were domestic giants such as Eastman and Exxon. Neville Chemical makes a variety of hydrocarbon resins for applications such as printing inks, adhesives and various coatings. Today, with a strong lineup of Asian competitors, the market has become much more competitive, particularly for smaller, family-owned manufacturers like Neville Chemical.

"With all of the competitive forces out there, productivity and safety are essential to our survival," says Rob Lonergan, general manager of Neville Chemical's Anaheim plant. "Of course, given cost and labor issues plaguing the California manufacturing environment today, those challenges have become even more critical here."

A recognized leader in synthetic hydrocarbon resins and coumarone-indene resins, Neville Chemical determined that updating its resin filtration system with a state-of-the-art system on the finished goods line would improve productivity and reduce waste.

"The call to upgrade our filtration on the solid resin line was beneficial in several ways," Lonergan says. "It not only enabled us to operate leaner through improved productivity and reduced waste, but also led us to vastly reduce the health and safety hazards that were present with our old system."

Neville Chemical, which established its Corporate Headquarters and main manufacturing facility near Pittsburgh in 1925, has used a variety of different systems for filtration of impurities from its finished resin products for many years. While filter bags performed well in removing impurities from resin, the use of filter bags was costly, required continual changing that interrupted production, was a difficult task for workers, and was also potentially hazrdous.



- Improved product quality with accurate oversize particle removal
- Increased productivity and reduced labor costs with simple dis-assembly and cleaning
- Reusable filter elements eliminate the need to replace and dispose of messy bags
- Totally enclosed filtration eliminates health and safety hazards to operators

All of those problems were completely eliminated when Neville Chemical replaced that bag filter system with a state-of-the-art self-cleaning Eco Filter® system from Russell Finex

Neville Chemical's bag filters in question were located on the molten resin line, where the resin material is heated to 400-500 degrees Fahrenheit in order to permit flow. After being filtered, the resin goes through a flaking process and becomes solidified and then packaged.

The combination of the heat of the resin and build-up of contaminants causes filtration bags to load up and decompose to the point that they have to be changed at regular intervals. "Unfortunately, those intervals require stopping resin product flow before a batch is complete," Lonergan explains.

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Manufactured at the Russell Finex plant, the Eco filter is a self-cleaning system that integrates directly into the pipeline and completely eliminates the need to change filtration bags. By means of a unique spiral wiper design, the filter element is kept continuously clean, which ensures optimum efficiency of filtration. Because of its self-cleaning design, cleaning of the filter between batch runs is quick and easy with minimal disruptions during production changeovers.

The totally enclosed Eco Filter prevents pollutants from outside the system from contaminating the product, and protects the operators from harmful fumes and spillage. This filter also features the Russell Filter Management System, a technology that continuously monitors the filtration system, thereby enabling the filter to be operated efficiently without operator involvement.

At Neville Chemical, this resulted in substantial savings of both downtime and labor. The Eco Filter also has a unique Q-Tap valve that allows the sampling of freshly filtered material, so the quality of the resin can easily be monitored on the fly without interrupting production.

Due to the heat and "stickiness" of the resin running through Neville Chemical's line, changing filter bags was difficult, messy and potentially dangerous. "Each filter bag was about three ft. long, and they became quite cumbersome when full. If the person changing the bags spilled resin on himself, the molten resin would stick and possibly burn him. The new Eco Filter system completely eliminates that risk," says Lonergan.

"Too often the workers would have to muscle out the filter bags because they were sticky. So, to some extent the filter bag changing task was a back injury waiting to happen," Lonergan says. "Fortunately, we have not had any serious injuries in this area."

Lonergan points out that his workers had to be wary of other risks when changing filter bags in the past. For instance, exposure to the hot resin posed potential respiratory risks due to heavy resin fumes.

"You couldn't really control the fumes while the filter system was open," he says. "And of course, you had to protect your face from the heat and resin." For all of those reasons, filter bag changers wore face shields, respirators and high temperature gloves.

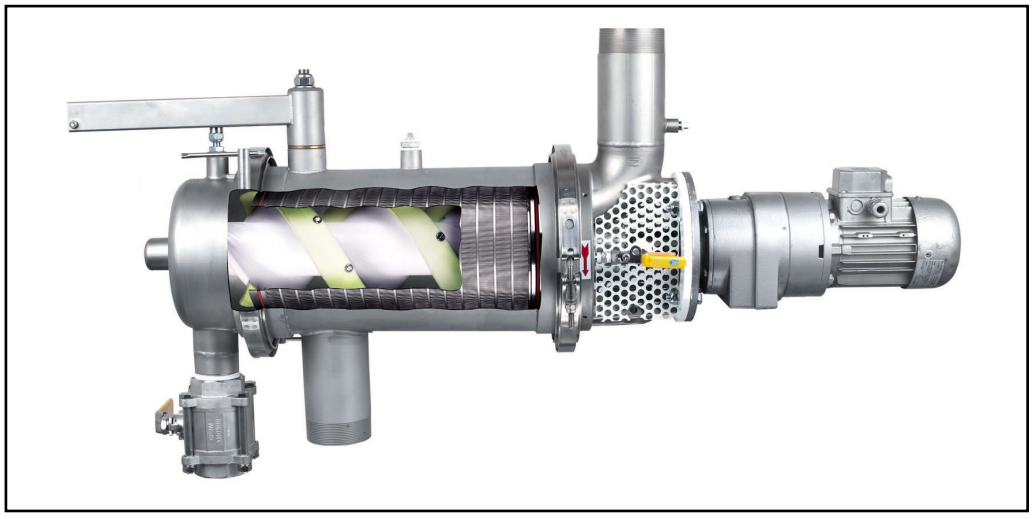
"All of those risks have now been eliminated because of the new Russell Finex Eco Filter system," says Lonergan.

The Eco Filter's reusable filter element eliminates the need to replace and dispose of messy bags or cartridges. These self-cleaning filters fit neatly into existing production lines, in many instances adding significant capacity without requiring excessive space. Most users also see substantial improvement in product purity as well as throughput and waste elimination.

"I'm sure the Eco Filter has paid for itself in terms of productivity and waste elimination. But perhaps the health and safety benefits have saved us even more. We're safer now, and our workers love the Eco Filter system because it eliminates all those physical demands. It dumps all the junk directly into a drum. The filter does all the work."

The competitive advantages of installing the new filter system have surprised Lonergan. "I have to believe it is making us more competitive. The Pittsburgh operation tested an Eco Filter system a few months after we installed ours, and they have ordered some based on our success. Also, we're planning to expand the new filter throughout our Anaheim plant."

For over 70 years Russell Finex has been manufacturing and supplying sieves and filters to ensure that powders and liquids are free from contamination, improve product quality, enhance productivity and safeguard the health of workers. Throughout the world, Russell Finex serves a variety of industries with applications including chemicals, adhesives, plastisols, food, paint, coatings, pharmaceuticals, metal powders and ceramics.



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