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VAN DYK NEWS

Presenting the
 newest technologies for
 cost-efficient recycling.



PROCESS AUTOMATION

The newest systems from Van Dyk minimize or eliminate labor while maximizing throughput, recovery and quality.

Since installing its first single-stream system at City Fibers in Los Angeles in 1996, Van Dyk Recycling Solutions has continued to work with industry processors, its internal engineers and the range of equipment suppliers the firm represents to offer meaningful advancements in processing methodology and equipment solutions.

"We have learned over the years that it's

not only about understanding the equipment but also understanding the materials streams coming into a plant," says Wilfred Poiesz, western region vice president for Van Dyk. "Of course, what is in those streams has changed a lot.

When City Fibers built that first plant, capturing ONP early in the process was essential. Today, there is nearly no ONP, so things evolve."



Setting the stage

"In today's work environment, every plant operator is challenged with labor," shares Mark Neitzey, sales director at Van Dyk. "Designing plants that minimize human labor and maximize recovery and the cleanliness of recovered materials is what everyone is looking for."

Through its ongoing R&D work and continual evaluation of the performance at plants it has installed across the country, Van Dyk has learned that while achieving the dual goals of reduced labor and increased recovery of cleaner material is challenging, it's not impossible.

Frank M. Antonacci, chief operating officer, USA Waste & Recycling, Enfield, Connecticut, says, "It really comes down to preparing material for the separation equipment. As we build our new 'All American MRF' at Murphy Road Recycling, we're integrating what we've learned through our decades of plant operation: that leveraging the mechanical equipment upfront to deliver a cleaner, more prepared stream to the more expensive back end of the plant is vital to success and lower cost operation."

"Van Dyk has developed and deployed some highly effective ways of doing that, which helps the overall plant operate much more effectively," Antonacci continues.

Poiesz says, "We're using some proprietary screen packages and building a more robust front end of the plant. By doing this, we're able to ensure a tremendous flow

of consistent, debris-free, clean material to feed the opticals at the back of the plant. This not only eliminates labor but also maximizes production and creates very clean recovered materials. We've done this with the EDCO plant, at WM Houston, Republic Plano and at Murphy Road. It works very well."

Maximizing production

"What we've seen in our existing plants and many plants we toured as we planned the new 'All American MRF' was the back end of the plant with little material flow on the conveyors, the opticals are barely working," Antonacci says. "We knew we wanted to avoid that; it's too much capital to work that little."

"Realizing that we are first in the hauling business and that collection has to happen, we also wanted redundancy in



our plant," he continues.

To achieve these goals, Van Dyk designed a 50-ton-per-hour plant with dual infeeds. This same concept is used at EDCO's MRF in Southern California. The front end is duplicated, allowing the incoming stream to be split across two lines. Should one of those lines go down, the other ensures continued operation.

"This approach also allows the presort to work more effectively, and the pickers working the presort are able to keep up with the material flow," shares Ryan Cournoyer, process engineer for Van Dyk. "This also ensures better operation of the plant downstream."

Following the unique and aggressive screen package at the front end, the flow hits an elliptical separator for final 2D/3D separation before converging into a single line.

Using this approach delivers significantly increased material flow to the heavily automated back end of the plant. That flow is exceptionally clean and preconditioned for efficient, effective

separation. This allows the opticals to do their job and eliminates manual sorting.

"Depending upon inbound materials, these plants can produce up to four grades of fiber," Cournoyer says. "The PE, PET, PP and natural PE are all sorted automatically. There is no need for human pickers. In the 'All American MRF,' there is a single robot on the mixed paper line to pick film."

Doing it right

The new generation of MRFs from Van Dyk dramatically reduces dependency on labor with industrial automation. The refined screening packages ensure material liberation for effective and efficient separation.

"These new plants are designed for efficiency and flexibility," shares Pieter van Dijk, president of Van Dyk Recycling Solutions. "They remove the bulky materials, like large OCC and oversized contamination, right away. They remove the glass and fines upfront to create finite streams that can be effectively sized and sorted downstream. They are adaptable and can pivot quickly based upon inbound material and commodity markets."

Antonacci says, "When we went through the bidding process for our plant, we looked at several vendors. In the end, we selected Van Dyk because they had the best solution. We also had decades of experience working with them and knew we could rely on their service and support for years to come."

A SECOND GENERATION JOINS IN

As a company founded and run by brothers Pieter and Erik van Dijk, Van Dyk Recycling Solutions has always been a family business. It's only more recently, however, that a second generation of the van Dijk family has joined the firm.

Maarten van Dijk, Pieter's oldest son, joined the company Oct. 16, 2017. That he would do so, however, was not a foregone conclusion. "My father had always shared that entering the family business was an option for me, but I was not always sure I wanted that. I truly wanted to go out on my own, gain experiences and see where those experiences took me," Maarten shares.

From a young age, Maarten had an interest in science, math and engineering. He attended the five-year co-op program at Northeastern University College of Engineering, graduating in 2014.

Following graduation, Maarten worked for a structural engineering firm in New York City and as a member of the internal engineering team for one of the largest construction firms in the United Kingdom.

"During my tenure in London, I was on a trip home," Maarten says. "I visited my dad and uncle in the offices and realized how good it felt, that it was comfortable and felt like home. After returning to London, I was speaking to my father, and they were working on hiring an engineer to add to the operations team. Ultimately my job in London shifted to something entirely different, and Van Dyk had not filled that position. Those two factors combined to create the opportunity for me to join the company."

The first project Maarten worked on when he joined Van Dyk Recycling Solu-



In the photo above, Maarten visits a customer to follow up on the success of its HBC-140 baler installation two years prior. The new generation of balers may be bigger than Pieter van Dijk's first sale almost 40 years ago, but customer support is as important as ever.

tions was the company's new headquarters in Norwalk, Connecticut. The facility encompasses Van Dyk's fully operational test facility, the baler and optical rebuild shops, parts warehouse, training academy and offices.

While that project consumed a significant part of his first year with the company, Maarten also was integrated into the operations team that oversees recycling plant installations, retrofit projects and service work.

Today, Maarten works for Chris Bova, VP of operations, to coordinate the company's installation and service work, as well as the staffing and management of their rebuild shops and the Van Dyk University training programs. He spends time on-site during MRF and recycling plant projects.

"Since joining the company, I've come to truly appreciate and love the culture," Maarten says. "At the same time, I love the pace of change in the recycling industry and how Van Dyk has learned to swiftly evolve with that change to meet the needs of our customers. I believe that protecting both of those elements will be pivotal to the continued success of Van Dyk, and I look forward to contributing to that for many years to come."





The HAAS line of shredders

Powerful tools for processing wood waste, commercial waste and C&D material

With stationary and mobile platforms, the HAAS line of shredders processes the toughest material.

HAAS has an intelligent two-shaft shredding system that sets it apart from other industrial waste shredders. Two independently driven shafts can move in either

direction simultaneously to keep the infeed material constantly in motion.

Material is shredded in forward and reverse rotation, ensuring maximum throughput at all times while also preventing jams. When processing heavy C&D debris or industrial waste, the shafts auto-

matically reverse themselves to properly handle the material.

Shred, break or chip even the toughest material with HAAS. Like all the machinery offered by Van Dyk, these machines are meant for pure production and designed for minimum downtime and wear.

V-Consyst

Smart waste and recyclables collection and storage



These sleek containers store waste and recyclables in underground receptacles. Storage capacity is vastly improved (33 times the storage of a typical 40-gallon waste bin), and the unit can be

emptied less frequently. Sealing the waste off underground is more hygienic and does not emit odors or attract animals.

Collection is hands off, safe and can be performed by just one truck operator. Access can be open to the public or restricted to card carriers only. Software tracks which bins need to be emptied and can collect data on consumer habits.

These are ideal for large public places like universities, apartment complexes, shopping centers and stadiums.

SMICON

The ideal solution for source-separated organics



SMICON depackaging machines flawlessly separate metallic and plastic food packaging from organic material. Inputs can be grocery store or commercial food waste. The depackager decouples the packaging while screening the organics to create a pumpable organic stream. The packaging emerges as a relatively clean, dry material that can be sold to recycling or fuel markets. The organics are ideal inputs for composting or digester operations.