SRS Bi-Cutter Screenless Granulator Generates Savings For Wheaton, USA

Rob Krawiec, Micro Molding Manager for Wheaton, USA, Inc. in Milville New Jersey was looking for a granulator that would reduce the firm's injection molding material cost by allowing the firm to utilize more of its regrind material. After testing different granulators, Krawiec, said, "We became convinced the Bi-Cutter screenless granulator from SRS in East Lansing, MI could do the job for us. Due to the material savings we experienced from the first few we purchased and the fact we had no down time, we added five more, and by the end of the year we purchased two more so now we have nine Bi-Cutters. Now I feel we are comfortable enough with the Bi-Cutter's performance that we may outfit the entire floor with the SRS Bi-Cutters.

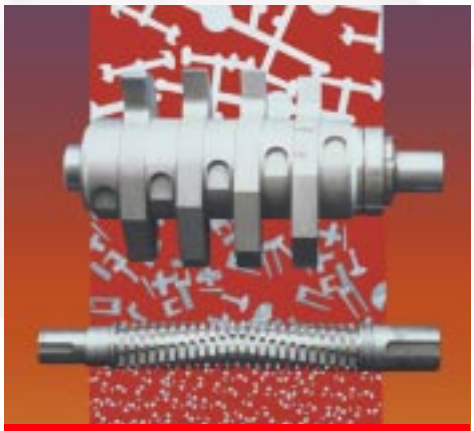
Reprocessed Savings Can Lower Our Bids

"Anytime we quote a job, we put in what we expect our material cost to be. Our savings naturally depends upon the cost of the material we are processing and what percentage we are able to recycle. Some of our material costs are over a dollar a pound and some runner systems are up to 60 to 70% of the overall shot size. Utilizing all of the regrind material is a significant savings. If we we're quoting a job, say in a conventional system and we didn't have an opportunity to re-feed the runners, the runners are a total loss, there is no savings. When you can go back and recalculate the material and say we are going to use 95% of the runners when you go through the quoting process ... the material cost is going to drop. That lowers our quote price and that is a major selling point to our customers. If our competitors don't have the capability to reach the proportion of regrind that we do, we will have a lower bid.

Less Cleaning Time ... More Production

"The Bi-Cutter enables us to be more successful with our closed loop system. Because we have very little down-time, we don't have labor tied up, having to clean-up the grinders. Now, our operators have more time to pay attention to the products they are manufacturing. They are responsible for packing the products, inspection and keeping their areas clean and making sure everything is operating properly. Because there is no worry about fixing the machines ... that is definitely a big time saver."

Anthony Purdy- Micro Molding Maintenance Supervisor, Wheaton, USA, Inc.



The Two stage cutting action of the SRS Bi-Cutter Granulator

Selecting A Granulator For Reprocessing Materials

Anthony Purdy, Micro Molding Maintenance Supervisor for Wheaton, USA, Inc., commented, "Our company started some new projects and they decided that one of our main goals would be to recapture the runner material that we were basically throwing away. For this reason, our goal when we purchased the first SRS Bi-Cutter screenless granulator was to select grinders that would re-process a high percentage of our runner materials.

There Were Two Problems

With our conventional grinders, we were having a difficult time feeding the materials back through the system and into the throat of the machine because the material wanted to bridge.

1. The polyethylene wanted to cling to itself and it wouldn't feed properly
2. The material would bridge and it was inconsistent at best.

Unless you got a perfect cut it was hard to get the material to flow back through. The Bi-Cutter improved this situation dramatically and allowed us to substantially increase the use of our regrind material.

How Do You Estimate Savings On A Large Job?

"To figure our costs we take the cost of the virgin material and figure up the amount of total material the job is supposed to use and then we deduct that from the amount of regrind used. The Maguire blender tells us exactly how much virgin material the job used, how much regrind and color additive the job required. We figure up our costs from that information. It doesn't put a total cost on it but it tells us how many pounds we are using. We'll tell the blender ... figure a total shot and then we'll put that percentage in on the blender. If we were allowed to use the entire runner on that particular part, then we'll put that percentage in. The blender will drop in that percentage of regrind, then it will compensate with the virgin material and the color and everything else. This is of course different on every job. High density materials cost more than low density materials. What we have to do when starting a new job is figure how much the materials cost, put that in and figure how much the color costs.

For example, we have run this same job on several different orders. On one order, using our conventional grinders, we ran a total of 1,281 lbs. of virgin material and used only 250 lbs. of regrind. We ran the same job again on a larger order using the 14" x 13" SRS Bi-Cutter and we used 2,005 lbs. of virgin material and used 1,996 lbs. of regrind. That was a savings of $1,159.00.

We also count color savings in there. The actual regrind savings was $800.00 because when putting regrind back into the system, this happens to be a part that has color to it and color is very expensive. (Color can run from $1.50 to $10.00 per lb.). You're putting regrind back into the system and the type of blending we are using only adds color to the virgin material you are using. It doesn't add color to the regrind.

Finely cut material ready for reprocessing from the Bi-Cutter

So you also save on color when you put regrind back into the system and that final number includes the color savings. We add that all together on one job.

We've had a couple of jobs, where the runner was really large and we were using another grinder (not the Bi-Cutter). The runner was 70% of the shot. It was large and there was a lot of waste. We were only able to put back 23%. When we switched to the Bi-Cutter, we were able to put the entire runner back through the system. 100% of the regrind... this was a major savings.

Over the last month we have saved nearly $10,000 on regrind material using the Bi-Cutters and we saved approximately $30,000 last year. I felt that was exceptionally good being as we only installed many of our Bi-Cutters in April of last year. Our biggest savings is with low density polyethylene's.

Bi-Cutter Granulator Eliminates Meltdowns

"With our conventional grinders we had problems with meltdowns. When a grinder is running at very high speeds, it will back up in the hopper or the pan. Some of the resins we used would melt down, no matter what we did. When we switched to the Bi-Cutter we could run those same resins, using 55% of our regrind. The Bi-Cutter is almost an insurance policy against meltdowns.

Flexibility Of Material

"At our plant we process propylene's, styrene's, K-resin, high density and low density polyethylene's... we've run a pretty wide range of resins. Any material we can run on our conventional granulators, we can run on the Bi-Cutter. We are running parts such as orifice reducers, cap enclosures, paint tips and snap-on enclosures, etc. We also run many jobs for the pharmaceutical industry and for these we can only use virgin material. Whenever we use regrind, we always obtain our customers approval. We would never run regrind without permission from our customer."

Krawiec commented, "The SRS Bi-Cutter screenless granulator has been more successful than any granulator we have used in the past... especially in a closed loop arrangement that we need for our runner system. We are now using a mix of both 10" x 13" and 14" x 13" cutting chambers and with the savings we have experienced, we plan to purchase many more in the future."

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