

Technical Article Series

Two-stage separation eases scrap re-use for injection molder.

KASON CORPORATION

67-71 East Willow St.
Millburn, NJ 07041-1416
USA
Tel: 973-467-8140
Fax: 973-258-9533
E-mail: info@kason.com

**KASON CORPORATION,
EUROPE**

Units 12 & 13
Park Hall Business Village
Park Hall Road
Longton
Stoke-on-Trent ST3 5XA
UNITED KINGDOM
Tel: (+44)1782 597540
Fax: (+44)1782 597549
E-mail:
sales@kasoneurope.co.uk

SEPARATOR ENGINEERING LTD.

2220 Midland Ave., #85
Scarborough, Ontario M1P 3E6
CANADA
Tel: 416-292-8822
Fax: 416-292-3882
E-mail:
info@separatorengineering.com



www.kason.com

Two-Stage Separation Eases Scrap Re-use.

REPRINTED FROM MODERN PLASTICS

Injection molder All Metal Inc. says it is saving up to \$800/day in resin costs since installing a separation system that solves a problem in sorting nylon scrap for recycling.

The problem stemmed from All Metal's desire for an efficient closed-loop molding operation. It was being thwarted by the fact that online scrap granulation was not producing uniform particle sizes, with the result that regrind couldn't be fed directly back to the extruder for reuse. Nor did the Bensenville, IL-based firm have the in-plant space for a large new-equipment installation.

The solution came in the form of a circular double-deck vibratory screen separator manufactured by Kason Corp., Linden, NJ. Only 24 in. in diameter, it met the criterion of compactness. Ditto for performance, says All Metal.

Regrind is deposited on the unit's upper or plate deck, which is perforated with 3/8-in. openings. Vibration in the horizontal plane shuttles away imperfectly ground long strands (about 10% of the total regrind mix, says the molder) and prevents "up-ending" that could cause strands to drop through to the lower deck.

Regrind that passes through the openings in the upper deck is deposited on the lower screen deck (12 mesh), which separates out the fines (accounting for about 1% of the total mix) and discharges on-size regrind for return to the extruder. (R. R. M.)

FACTS & FIGURES

- 1100 pounds of regrind are recycled daily. The usable screened material, approximately 90% of the total regrind, is readily molded into high-quality products.

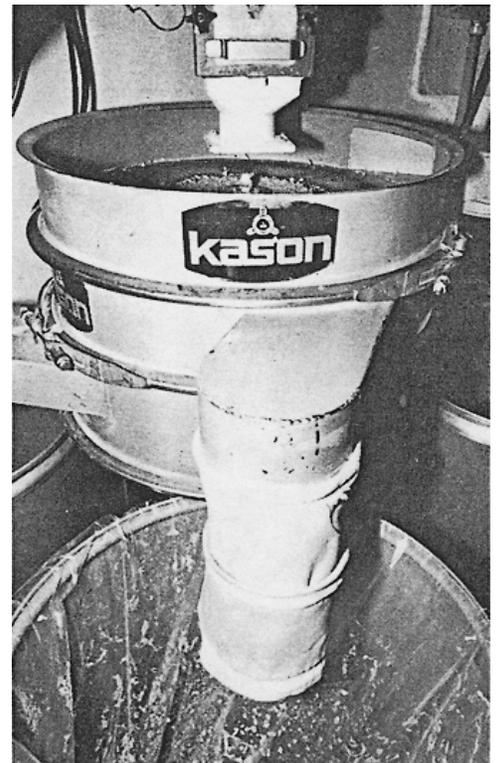
- By saving All Metal up to \$800 per day, the circular two-deck Kason vibratory screen separator has paid for itself many times over.

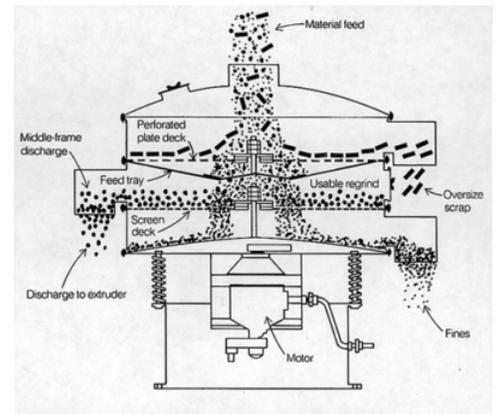
- The separator is operated 3 hours per day, five days a week.

- The ground Type 6 nylon scrap is fed to the top deck, a carbon steel, 2 millimeter thick plate with 3/8 inch holes located on 1/2 inch triangular centers. Perforations are omitted in the center and periphery to facilitate retention of long filaments. The vertical feed of nylon pieces onto the unperforated center of the plate prevents passing long filaments, which are made to travel horizontally with the regrind to the perforated area. The regrind falls through the holes and the filaments slide over them to the periphery and exit through the large port.

- The lower deck's woven wire mesh screen takes out fines.

- All Metal chose the circular vibratory type screen separator because of its space savings and efficient operation.





Double deck separator offloads oversize and undersize regrind; channels usable material back to extruder for re-use.