

Technical Article Series

16 Tons per hour of pellet mill output accepted by Kason classifiers in animal and poultry feed plant.

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

16 tons per hour maximum output of pellet mill accepted by Kason Pellet & Crumble.

Classifiers - producing one more product in automated system with no screen changes and no operator attendance

PROBLEM:

Supersweet Feeds Division of Robin Hood Flour Mills Limited, Montreal, Canada required a screen system in its Quebec City Plant that would effectively classify a wide variety of pellets and "crumbles" at high capacity throughput.

Total feed capacity to be processed was 16¹ tons per hour maximum on pellets - the output of a 100 hp California floating die" Pelletizer. This pellet mill has a higher capacity than standard mills, but space limits at the Supersweet plant plus a desire for simplified and flexible operation dictated using a single classifier to guarantee Supersweet product size accuracy at the specified feed flow.

Most available screen classifiers did not meet this capacity. The space limitations were too confining or the economics of a given classifier/screen made it impractical.

Process line requirements made it mandatory that the vibrating screens recommended for classification be placed on the top level of a five-story building to maintain capacity and efficiency. It was therefore imperative to eliminate or minimize vibration being transmitted to the machine foundations.

SOLUTION:

Two KASON Vibrating Screen Separators were installed in the new Supersweet Animal and Poultry Feed plant at Quebec City.

The Scalper - One unit, the Kason Separator/Scalper, is a single-deck 48-inch diameter unit providing effective scalping and cleaning of feed material to the pelletizer with an integral single 5-mesh screen.

Material from the mixer is fed to this unit by a bucket-elevator system. The material which passes the screen (about 98%) falls directly to a surge hopper over the pelletizer. Oversize is separated and reprocessed. The KASON also helps to break lightly compacted material, thus increasing pelletizer production and minimizing reprocessing.

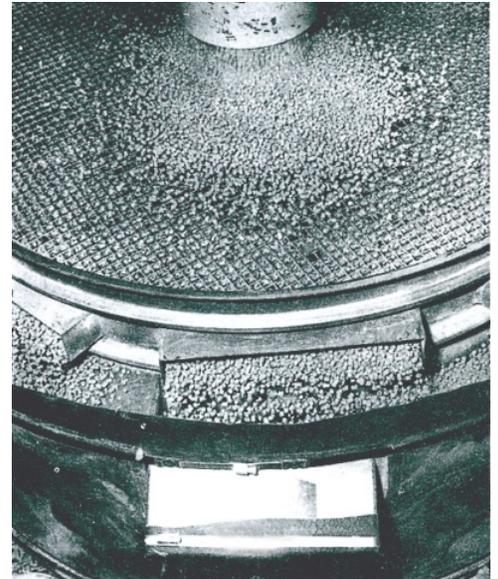
The Classifier - The other unit, a Kason Separator/Classifier, is a four-deck, 48-inch diameter unit, which accurately classifies pellets and crumbles at the required capacity of 16 tons per hour without special adjustments. It is equipped with four screens; i.e., 1/2inch, 5-mesh,

Depending on the particular kind of animal or poultry feed in process, the product is taken from the 5, 10 or 16 mesh screen with undersize and oversize particles automatically separated and returned for reprocessing. The 1/2inch screen, mounted about the 5-mesh, provides primary scalping for the screens below.

10-mesh and 16-mesh.

"A Partial List of Materials Effectively Screened by KASON"

DRY SEPARATION:



Close-up of material feed to the Kason Classifier also shows Cascade - Deck in operation. Highest screening capacities for larger pellets are achieved with unique 360° discharge. Half-inch screen shown provides primary scalping; undersized particles are removed convention- ally. Cover removed for photographic purposes. Normally operated as a closed system.

Foods -Recovery of rice from hulls, coffee beans from chaff and tea from bags.

Chemicals & Petrochemicals -Catalyst beads are classified into alundum balls, scale, clean catalyst pellets and dust.

Minerals -Separation of rock dust from asbestos shorts, alumina from rotary kiln brick impurities and stones from pit sand

Animal Feeds -Scalping of foreign material from mash, removal of bone chips from meat meal. Grains -Separation of dockage (wheat, wild oats, etc.) from flax seeds, cleaning of agricultural seeds and grains.

DRY CLASSIFICATION:

Foods -Pea grading, instant coffee powders, ground coffees, dried, milk, sugars, salts, cereals, starches, spices, nuts, rebolting flour, potato powder and flakes, powdered eggs, candies, powdered cheese and bread crumbs.

Chemicals- Polyvinyl chloride, polyethylene pellets, melamine, phenolics, cellulose acetate, polystyrene, sodium carbonate, calcium chloride, copper sulphate, detergents, adipic acid, iron oxide, caustic soda flake, di-calcium phosphate, stearic acid, titanium dioxide, zinc oxide, sodium sulphate, potassium iodide, sodium alginate, borax, calcium carbonate, silicon carbide, monosodium glutamate, alum, calcium chloride and sodium cyanide.

Minerals & Metals -Metal powders (aluminum, copper, bronze, nickel, iron, magnesium, etc.) barytes, silica, bauxite, cement, brick clay, coke, flurspar, limestone, mica, perlite, talc, antimony, dolomite, feldspar, diatomaceous earth, rock salt and nepheline syenite.

Pulp & Wood Products -Wood chips, particle board, sawdust and wood flour. Pharmaceuticals -Aspirin, boric acid, epsom salts, sodium bicarbonate, tablet de-dusting and granulations.

Fertilizers -Granulated mixes, potash, phosphate rock, urea, ammonium nitrate, sulphates and phosphates.