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NEWS LETTER

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Recycling system for low-density film flakes

1. Outline

Crushed flakes are made from trimmed edges and off-grade films in biaxially oriented film lines and subject to recycling. However, because of their low bulk density, it is difficult to feed them into extruder by general feeding methods. That extremely reduces extrusion capacity.

In order to efficiently recycle such low bulk density flakes, we developed the recycling system in combination of a special feeder with compactor and a counter-rotating twin screw extruder of good feeding capability as follows.

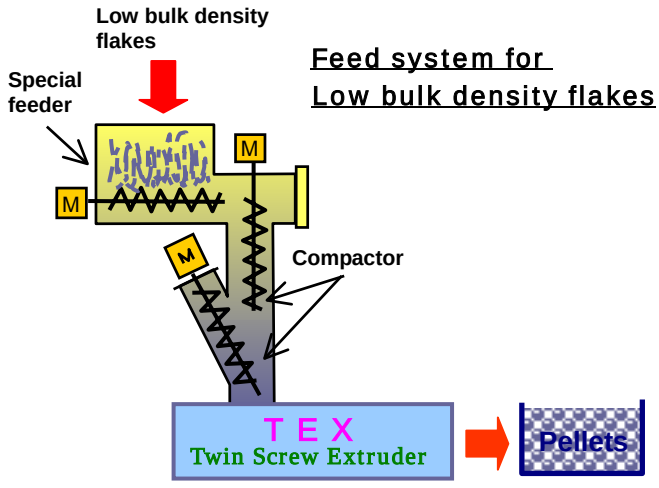
2. Features

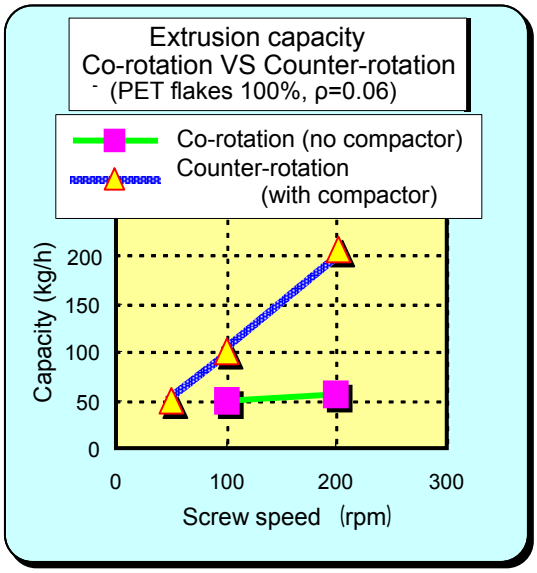
1) Special feeder allows smooth feeding of low bulk density flakes without “bridge”.
2) Extrusion capacity is extremely increased by means of a compactor and a counter-rotating twin screw extruder that has positive material feed characteristic.

3. System flow and effect

The compactor is installed between the feeder and the hopper cylinder of TEX. The upper screw in the compactor gives stirring effect to prevent flakes from bridging. The lower screw functions as a pusher to feed flakes into TEX with loose compression.

The following graph shows the comparison of extrusion capacity between the conventional and the new developed systems. The capacity of counter-rotating TEX with compactor can be approx. four times as large as the co-rotating TEX without compactor.





4. Afterwords

This system can be widely applied to handle low bulk density materials in a great variety of fields. Test equipment is available in our Plastics Machinery Developing Center in Hiroshima, Japan and you can execute a trial to confirm the performance.

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