

Vecoplan[®]



100% CLEAN IN-HOUSE RECYCLING

Vecoplan[®] has engineered, manufactured and implemented a system for the 100 % clean in-house recycling of different coloured reject material. At the centre is the shredder V-ECO 1300. The greatest guarantee of clean and homogeneous processing.

You name it,
we solve it!

COMPLETELY CLEAN AND HOMOGENEOUS IN-HOUSE RECYCLING

As an internationally leading manufacturer of high-quality IBC totes, tanks and containers, the Vecoplan® customer must be able to rely 100% on the clean and homogeneous reprocessing of different coloured pre-consumer material coming directly from the production line. The material has to be completely clean for it to be profitably returned to the production process.

The company therefore relied on its long-standing partner from the initial planning phase to the turnkey handover.

THE PROJECT REQUIRED:

- Implementation of a compact in-house recycling plant in a tight space
- Electrical installation and turnkey handover
- Particularly easy to maintain and able to be thoroughly cleaned
- High safety standards assured
- Integration of a compact lifting and tilting device
- Fully clean output
- Coordinated material flow between shredding and granulation
- Recycling of up to 2,000 kg per hour

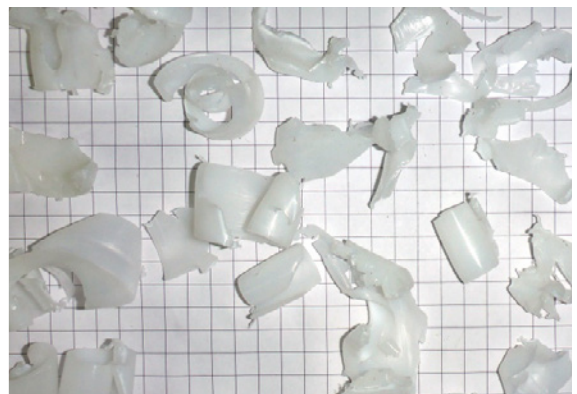
INPUT

- Different coloured hard plastic rejects (HDPE) from production
- Pre-consumer material
- Up to 2 tonnes per hour
- Clean and homogeneous



OUTPUT

- Grain size 40 x 40 mm
- Homogeneous material for further granulation in the grinding mill
- Clean and homogeneous



PLANNING, PROJECT MANAGEMENT AND IMPLEMENTATION BY VECOPLAN®

The pivotal point of this project was the V-ECO 1300 from Vecoplan®. Vecoplan® tailored its performance exactly to the requirements throughout the entire project. The system test under real-life conditions and the factory acceptance test took place in Germany. After shipping it to the location, the system was commissioned for „turnkey handover“.

THE VECOPLAN® SOLUTION:

- Project management, construction and test run of the V-ECO-1300 system in Germany.
- Attachment of a lifting and tilting device (material input) and a closed conveyor belt (material output)
- Assurance that the recycled material is completely clean and homogeneous (solid, different coloured HDPE plastic from production rejects)
- Connection of the Vecoplan® system control (shredding) to the mill control (granulation)

CLEAN SOLUTION: MATERIAL INPUT – MATERIAL SHREDDING – MATERIAL OUTPUT

The challenges faced: Intermediate bulk containers (IBC) are produced in different colours (e.g. white, black, blue). The production rejects supplied must therefore be 100 % separated according to colour so that a homogeneous and same-colour regranulate can be produced to go back into production. If any impurities got in (e.g. black particles remaining in white output material), this would produce further rejects that could no longer be recycled. Therefore, the system needs to be 100% clean before a change of colour. The particularly maintenance- and cleaning-friendly design of the V-ECO-1300 system is ideal for this.

Another advantage: The optimally adapted material flow between shredder and grinding mill: The power consumption of the mill motor controls the load capacity of the shredder.



MATERIAL OUTPUT

- Completely closed kink belt (45 degree gradient angle) with waved-edge belt conveyor
- Particularly cleaning-friendly openings with electrically-powered shutter closure
- Discharge into the in-feed shaft of the grinding mill for further granulation in the second shredding process

MATERIAL SHREDDING

- V-ECO 1300 shredder with in-feed opening 1,255 mm in width
- 55-kW U-rotor
- 60 cutting crowns for 40x40mm grain size
- Simple, perfect cleaning thanks to floor flap and pivotable sieve screen
- High throughput of up to 2,000 kg per hour
- Shredding of an IBC in 30 seconds

MATERIAL INPUT

Input of material (hard plastic HDPE) into the large hopper via the automatic lifting and tilting device. The lamellar curtain of the in-feed opening prevents material from escaping.

HIGHLY EFFICIENT REUSE OF PRODUCTION REJECTS

With the V-ECO-1300 system, the customer saves time, space and raw materials And increases profitability in terms of the cost and quantities of raw materials used. Quite simple with the highly efficient in-house recycling of the residual production material and rejects.

- ✓ Time saving: no more transport costs to external recycling facilities
- ✓ Space saving: extreme volume reduction of rejects that would otherwise need storage
- ✓ Raw material savings and increased efficiency: renewed supply of clean, 100% homogeneous residual material/rejects back into the production process

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