

- a strong solution for the environment



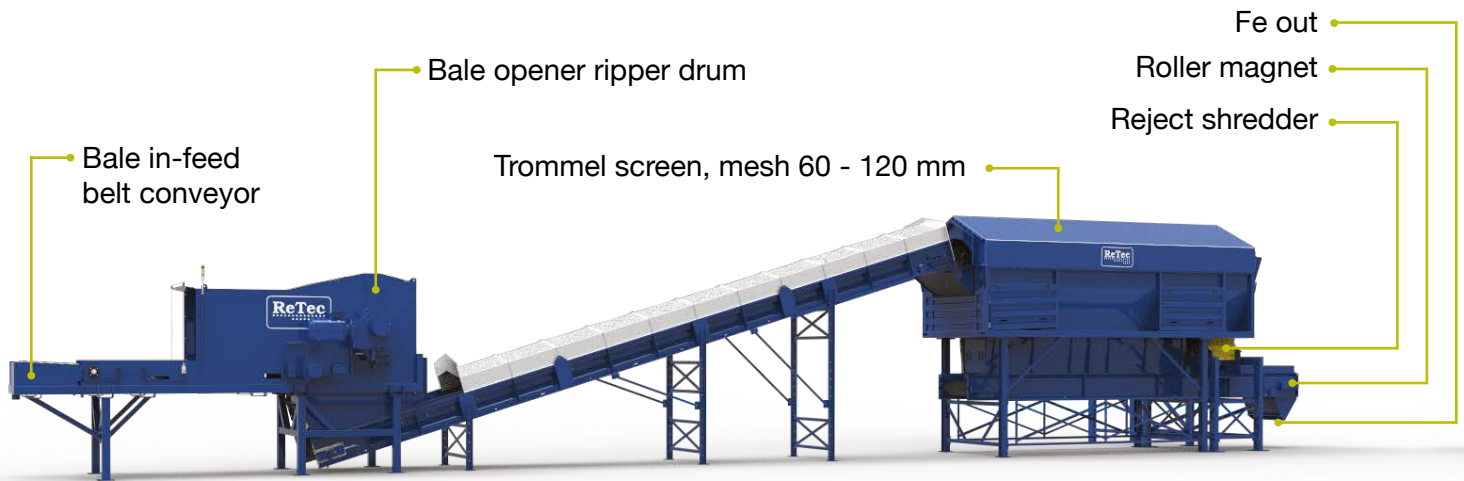
CASE: LaFarge Holcim, Greece, February 2021



ZERO WASTE SOLUTION - a clean and cost efficient TSR plant

The Holcim owned Heracles cement plant in Volos, Greece, is beautifully located directly by the blue Aegan Sea, surrounded by green hills, and is a few kilometres outside the historic town centre of Volos. So, as the plant is increasing its alternative fuel thermal substitution rate (TSR), it is very aware of its responsibility to its neighbours. It has 'cast in concrete' that there shall be no negative environmental impacts as a result of raising its TSR.





Capacity up to 40 tons per hour • OPEX incl. operator < 2 €/ton • From waste to fuel: 100 % zero waste

The plant receives its AF in bulk by walking floor trucks and in bales by vessel. The plant operates its own harbour terminal and uses a pallet elevator to transport bales and palletised goods from the harbour to the plant, thereby avoiding heavy traffic on the public road that runs along the coast.

Inside the plant, bales are stored under a roof at an interim storage facility. Flatbed trailers pulled by wheel-loader are used to transport bales from this area to the AF feeding hall.

Recent upgrades at the plants AF feeding system includes two ReTec debalers with trommel screens. The first from 2019, and the second from 2021. The debalers are installed parallel to each other to feed the main burner and calciner with their own independent debaler.

The ReTec debaler with its powerful ripper drum will loosen the material almost entirely, while the trommel-screen will further break lumps down into loose fractions in their original sizes. Any oversize material will, together with wrapping and ropes (or straps) that the bales are tied with, be shredded into the 40 mm combustible by the powerful UNTHA RS-40 37 kW 4 shaft shredder that each baler is equipped with.

Therefore, there is no waste from the debaling operation that needs to leave the Volos plant; A zero-waste-solution.

The ReTec debalers are built in heavy duty 20mm steel and weigh in at a total of around 11t each. The main electric motor driving the ripper drum has a nominal power consumption of only 45kW. The total nominal power for the whole installation,

including motors for the trommel screen, shredder and intermediate belt conveyors, is 109.5kW. The actual power consumption depends on the bale density, but will often be around 50-70 % of the nominal consumption.

The Volos twin debalers are in operation with a capacity of 20t/hr for the main burner and 40t/hr for the calciner. The plant is thus equipped to reach ambitious substitution rates for the years to come.



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