Siempelkamp

EcoPulser

size reduction of chips and particles

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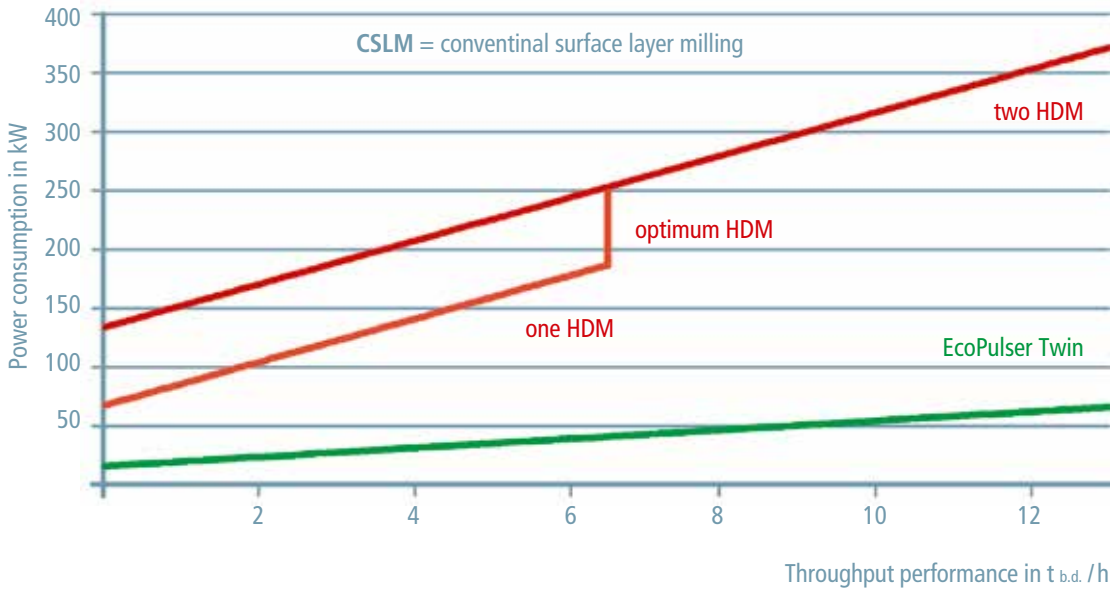
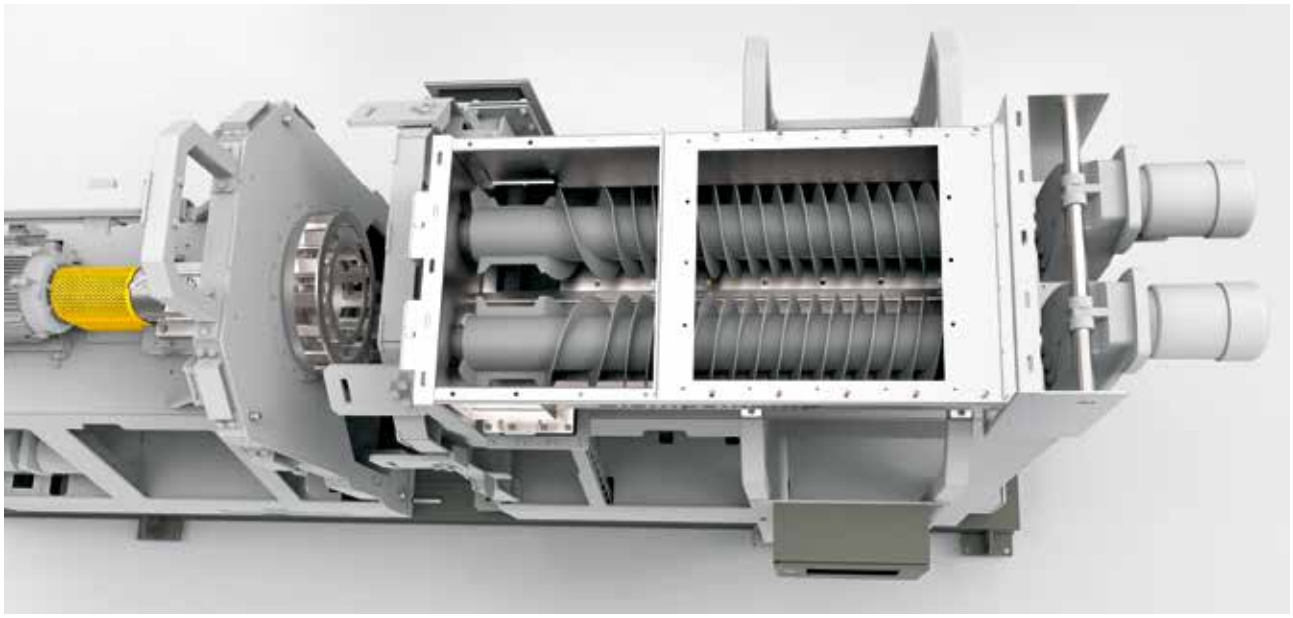
The EcoPulser by Siempelkamp uses a completely new almost wear-free, bladeless process to achieve an additional size reduction of chips and particles. Shock waves, generated by interferences of wavefronts affect the bulk material by breaking up its structure. Even the most abrasive particles can be processed using this non-contact treatment because the particles are broken up in the air.

The EcoPulser disintegration bases on two counter rotating impeller wheels, which generate by their fast rotation extreme air oscillation and negative pressures. This air current takes in the chips or particles through the rotor so that their wood cells filled with air, water or ice tear apart by the negative pressure impact with the fibres separating along their grain. The length of the wood fibre nearly remains unchanged thus ensuring a higher board stability.

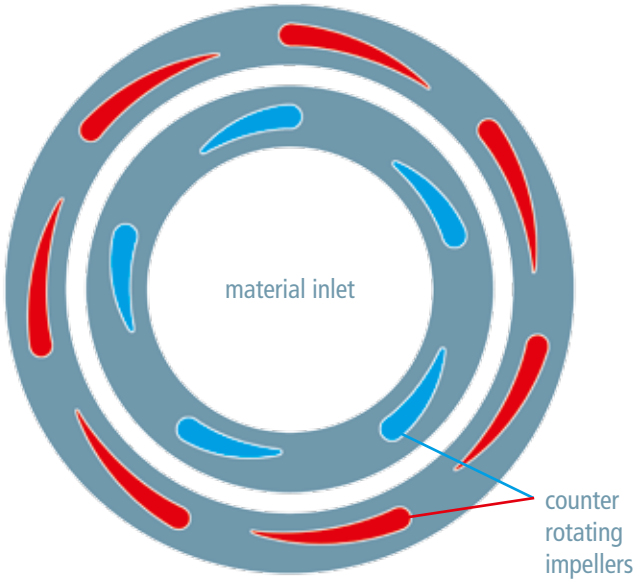
The EcoPulser boasts an excellent energy efficiency due to the innovative disintegration method because only 10% of the friction energy is lost in the form of heat. The potential energy savings are enormous. When disintegrating the core-layer material about 10 kWh/t can be saved; producing surface-layer material about 40 kWh/t can be saved.

Additional savings with respect to maintenance and repair: disintegration does without blades, hence no regrinding or blade replacement required. The EcoPulser is even insensitive to contaminants like stones or tramp metal as there is no material contact with the vane rings. The energy consumption of the EcoPulser is significantly lower than 10 kW/t of bulk material at a throughput of about 5 t/h. The twin design has twice this capacity.





Principle of operation



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