

MASTER SYSTEM THE FUTURE OF ALTERNATIVE FUEL UTILISATION IN CEMENT PLANTS



The target of the entire system is to increase the substitution rate on the main burner up to 100 % (depending on material composition) with solid alternative fuel. To achieve this target three significant steps are necessary:

- New fine grinding equipment
- Drying step
- New burning equipment

With the MASTER System, A TEC will optimize the core of the plant and improve the firing of the kiln for individual fuel mixes and the secondary fuels used. The MASTER System is an intelligent combination of two advanced components – the Rocket Mill and the Flexiflame EcoPro® rotary kiln burner.

The MASTER System increases the TSR significantly. By combining the mill and

the burner, a substitution rate of 100 % of solid alternative fuel is possible.

Advantages

- Increased fuel substitution rates
- Higher efficiency with same alternative fuel source
- Complete solution from one hand – from waste to fuel
- CO₂ savings
- Low maintenance
- Low energy consumption per ton
- Free from conventional fuel prices fluctuations
- Improved fuel quality

As the MASTER system is a complete system from the drying/grinding until the flame, the contamination with foreign and oversized bodies is not possible.



Single grinding chamber mill.
First pilot plant in Wietersdorf, Austria.



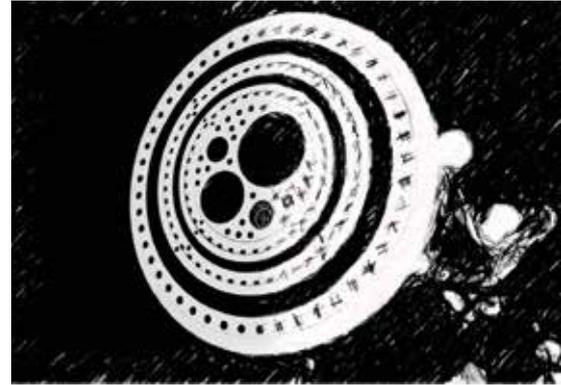
Flexiflame EcoPro®

Flexiflame EcoPro® combines economic and environmental sustainability

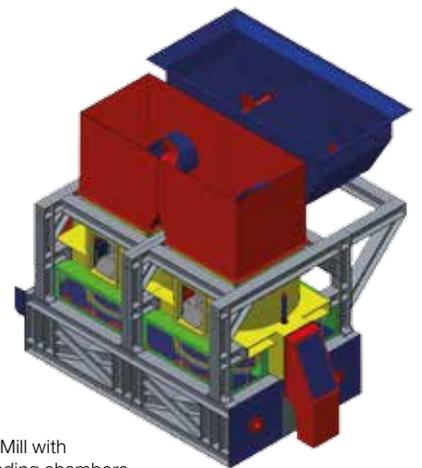
The innovative technology Flexiflame EcoPro® offers a new concept for solid alternative fuels injection. It uniquely combines high control (through the burner) and high oxygen (near secondary air) with the benefit of negative fuel costs. Who said environmental friendly solutions cannot also be financially advantageous? Flexiflame EcoPro® guarantees high performance with low grade alternative fuels. The patented process helps avoiding traditional fuel price fluctuations and contributes to a clean environment.

The Rocket Mill: Drying and grinding in one step

The Rocket Mill is A TEC's innovation for alternative fuel preparation which combines drying and grinding in one step. The machine is equipped with two grinding chambers which can be independently loaded. Permanent control of the mill power guarantees optimum and secure utilization. The input material usually only requires one pre-shredding step followed by a sieving step, which is sorting out the organic, and a magnetic separation. Interchangeable perforated screens will adapt the size of the final product to the optimum for the customer pyrolysis process. Due to the grinding technology, a drying effect of approx. 10 % is given improving the alternative heat value per ton. Additional drying with process waste gas is possible to achieve a higher drying rate. The ultra-fines are dedusted and also closed to the kiln system.



Flexiflame EcoPro®



Rocket Mill with two grinding chambers