



Sugar Industry Expertise

Peter Brotherhood has been supplying steam turbines to sugar mills all over the world with proven reliability of 60 years. We have in excess of 500 steam turbines installed in the sugar cane industry.

Cane sugar mills are often sited in remote locations and therefore need to generate their own power. The vast majority burn bagasse, the waste product left after processing sugar cane, to raise steam to drive turbines.

Steam turbines can export energy to the grid to provide an additional revenue stream for the sugar mill as well as providing a secure electricity supply to the local area, bringing vital energy to the local hospital, schools and community.

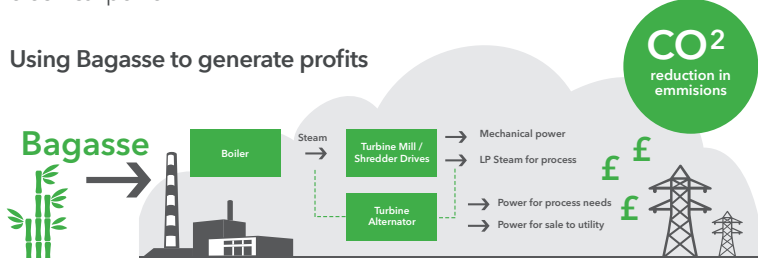
Single stage machines are used for mill and cane shredder drives; multi-stage machines are normally used for the generation of electrical power.

WASTE-TO-ENERGY

Steam turbines produce energy from a waste product providing a self-sufficient power supply to the plant:

- Helping to reduce it's running costs
- Making it self-sufficient
- Providing reliable power
- Surplus power can be used to power local villages and communities - benefiting the local community that otherwise would not have power or certainly an unreliable source of power due to the remote location

Using Bagasse to generate profits



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Powering sugar mills and the local community

Location: Zimbabwe & Mozambique

In Southern Africa our customer installed what is believed to be the largest back pressure steam turbines operating in an African sugar mill – almost 50 per cent bigger than any similar machine. The 20 MW back pressure turbines use steam raised from burning bagasse to generate the mill's electrical power and the exhaust steam is used in the sugar production process. In addition to providing the mill's electrical power, the turbines also export power to the national grid.



Location: South Africa

The Komati sugar mill in South Africa processes 2.6 million tonnes of sugar cane in 38 weeks at a rate of 500 tonnes per hour. In a world beating delivery time we installed a multi-stage steam turbine, gearbox and AC generator to fit a very unconventional layout. Working across the entire sugar mill process we optimised the system to give our customer the flexibility of power and process steam capabilities which allowed them to optimise the use of the mill's energy so it could sell the excess power to the grid at any time. Through burning bagasse the mill has a self sufficient power supply, is environmentally friendly and carbon neutral at the same time.

