BOILERMECH Oretech

Get more oil with M.O.R.E.

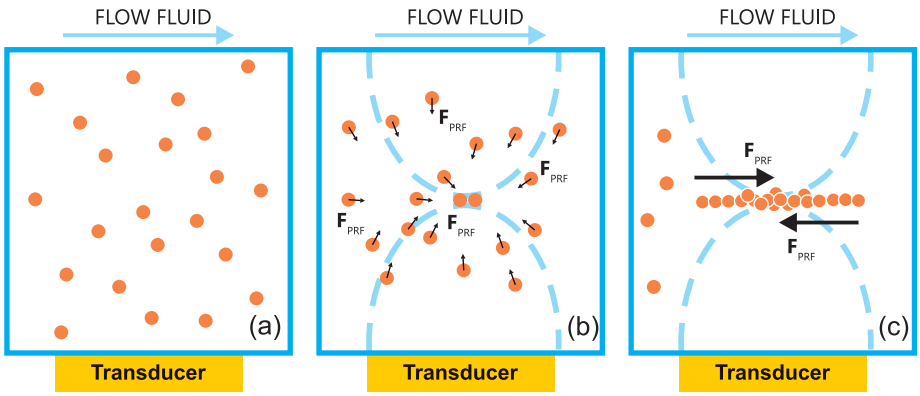
(Megasonic Oil Recovery Enhancer)

M.O.R.E. (Megasonic Oil Recovery Enhancer) is designed to be incorporated into the conventional palm oil mill to gain additional oil recovery.

How do you get more?

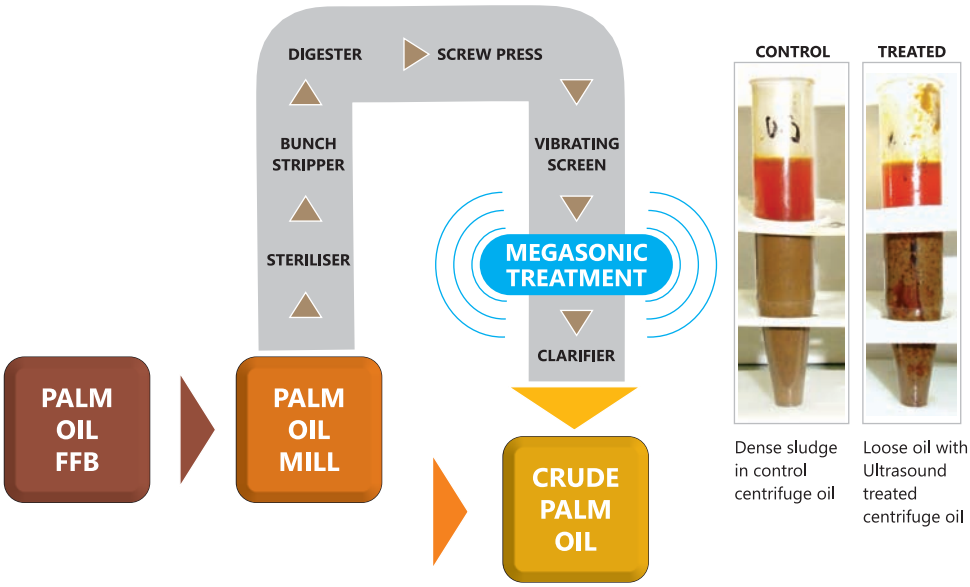
More Megasonic

Megasonic processing is proven able to separate different density particles when applied to a medium. The 'standing wave' produced by an ultrasonic transducer will cause particles of different densities to be collected at either the node or antinode of the ultrasonic wave. This can be used to assist in separation of palm oil.



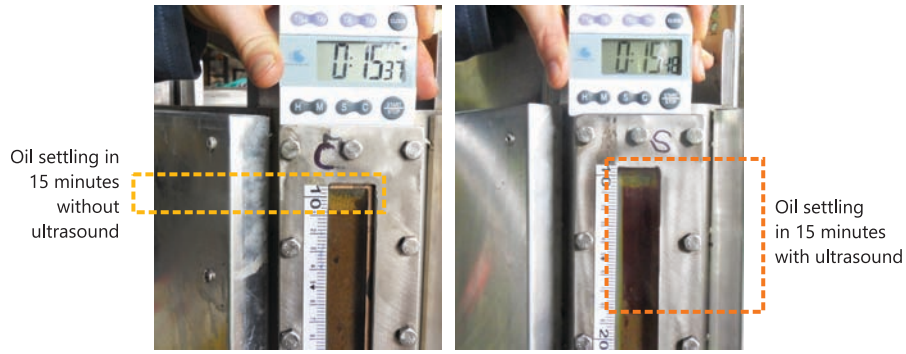
More Oil Yield

Megasonics helps to overcome mechanical limitations of centrifugal machines. The megasonic treated sample shows large quantities of loose oil as compared to an untreated sample. This results in greater oil yields as the trapped oil is released from the sludge.



More Recovery Speed

Research started in 2010 for application in palm oil mills. In the batch testing, significant amounts of oil are released faster with the megasonic treated sample as compared to control sample in the same duration.



More about M.O.R.E.

In a conventional palm oil mill after the press station, Crude Palm Oil (CPO) goes through a separation/clarifier process. During this process, the mixture of sludge, water and CPO is left to separate by gravitational settling. Approximately 70% to 75% of CPO can easily settle but the remaining 25% will tend to stay emulsified and cannot be separated by gravitational force or further dilution.

With the limitation of gravity settling, mechanical extraction of CPO from sludge is the next step where only a fraction of oil is recovered and remaining stays emulsified and disposed as Palm Oil Mill Effluent (POME).

M.O.R.E. (Megasonic Oil Recovery Enhancer) is designed to be incorporated into the conventional palm oil mill to overcome the mechanical limitations in oil recovery.

The crude oil from distribution tank is channeled through the reaction chamber installed with ultrasonic transducers. Immediate separation of oil particles will take place and agglomerate to form larger oil globules. Once the treated oil reaches the clarifier, it will be easily recovered.

Benefits of M.O.R.E.

More Profits

- Maximizes oil separation from green fruit sludge
- Low operating cost

More Design

- Modular skid design reduces on-site installation time
- Fit for purpose size, 45T, 60T and 90T Palm oil mill

More Results

- Immediate oil separation
- Improve recovery of emulsified oil
- Increases collectable oil in a well operational mill

More Quality

- No chemical oil enhancers
- Oil quality maintained
- Environmentally friendly by operating with lower dilution, reducing POME discharge

Licences

The technology involving application of ultrasonics for oil separation and recovery of palm oil is used under licence from CSIRO (Commonwealth Scientific and Industrial Research Organisation - Australia).

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