MISC ITEMS WHICH CAN ALSO IMPROVE ENERGY EFFECIENCY

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IMPROVING METALLURGY OF AIR HEATER TUBES

- Acid dew point is usually between 105 c to 145 c.
- Metal temperature is average of Air and Flue gas temperature.
- Therefore most boilers are designed for Flue gas temperature of 160-180c.
- Mauritius Sugar institute presented a paper in ISSCT 2007 that boilers can be designed for a flue gas temperature of 135c by improving the metallurgy of the air heater tubes.
- They also said that work on condensing boiler is under way.
- Perhaps we can also ask our boiler manufacturers to improve the metallurgy of air heater tubes.

CONTROL EXTRA WATER AT PANS

- Normally evaporation at raw pans is 2.5 times, the water in syrup.
- Similarly evaporation at refinery pans is 1.75 times,the water in melt .

SOURCES OF EXTRA WATER

- Water of circulation.
- Water used at magma.

- Water used at centrifugals.
- If we can reduce the evaporation at raw pans from 2.5 times water in syrup to only 2.4.
- And reduce evaporation at refinery pans from 1.75 times water in melt to only 1.65.
- We can reduce steam consumption by 1%
- Properly designed and adequately sized magmas should be used .
- This is especially relevant to small mills expanding to mega units.
- Centrifugal station should be given due attention.
- Water of circulation should be controlled and , if possible, measured.

IMPROVING TEMPERATURE OF IMBIBITION

- Improving temperature of imbibitions will not only improve milling results it will also improve energy efficiency.
- Improving temperature of MJ by 10 degrees reduces steam consumption by 0.5 %

SEED CONDITIONING

- We all know and most of us practice molasses conditioning due to its advantages in steam economy and better pan boiling.
- Similarly if we practice seed conditioning we can take more advantage in reducing steam consumption etc
- SRI Australia has a patent on seed conditioners but we can try.

THANK YOU