

LIME KILN INFLUENCE ON FACTORY OPERATIONS

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The Mini-Cassia Factory has installed a new Eberhardt mixed feed (coke fired) kiln during the 2012-2013 campaign. It replaced two kilns, one a mixed feed kiln using anthracite coal and one using natural gas. Both of these kilns together would only support 1/2 of the factory slice and the other half of factory slice was supported by buying pebble lime and liquid CO₂. The new kiln was operated upon the premise that the amount of CO₂ needed for the carbonation station would be supplied by the kiln with the remainder of the needed lime supplied by purchasing pebble lime. Several unexpected operational conditions were observed under these conditions that have improved the factory operations. First, the carbonation tank agitation was much less violent and the quality of the first and second carbonation juices are excellent. Second, the amount of raw materials needed from the new kiln and purchased pebble lime is less than the amount used in preceding years. This has resulted in savings in raw materials and a much smoother factory operation through the purification process. The operation of the kiln is much simpler and safer than the previous combination of kilns and pebble lime.

There is however a down side to the new kiln and that is the amount of raw material that is being discarded due to the prescreening operation. The new kiln needs larger sized rock than the previous kilns and results in the removal of fines and small rock to recover the large fraction of the rock supplied to the kiln. Work with the quarry is under way to reduce the amount of fines shipped to the factory to reduce the amount of fines that have to be handled or discarded.