

[54] WET GRINDING PHOSPHATE ROCK IN AN ACIDIC SLURRY

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423/167, 319, 320

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[57] ABSTRACT

Phosphate rock contained in an acidic slurry is ground by equipment wherein the acidic slurry contacts the metallic surfaces of the equipment. A method for monitoring and controlling grinding ball consumption is provided in which acid-neutralizing particulate iron contained in the acidic slurry is measured and correlated to control curves, which relate particulate iron concentration to slurry pH and slurry pH to the rate grinding ball consumption. If the measured particulate iron concentration equates to an unacceptable ball corrosion rate, the equilibrium of the slurry pH and particulate iron concentration can be varied to maintain a predictable ball consumption. When making the slurry, waste water from other steps of the wet process manufacture of phosphoric acid can be used as part of an acidic diluting medium.

16 Claims, 3 Drawing Figures

WET PHOSPHORIC ACID PLANT FLOW DIAGRAM

