

## ABSTRACT

The main object of this study was to investigate the effects in filtration and precipitation given by the conditions as

1. Effect of Dilution
2. Effect of Temperature
3. Effect of Order of Mixing
4. Effect of Stirring and Settling
5. Effect of Common Ion
6. Effect of Organic Chemical Solution
7. Effect of Excess Reagents
8. Effect of Concentration.

Final products resulting from precipitation were magnesium silicate and magnesium carbonate. The reason of selecting these final products were as follows: magnesium silicate is very gelatinous and difficult filtrable material when it is precipitated from sodium silicate solution and magnesium sulfate solution. On the other hand, the magnesium carbonate is very small particle ( $10^{-3}$  Cm) when it is precipitated from the solution of magnesium sulfate and sodium carbonate. The results were found to agree in general with the theory. Among the conditions the temperature, order of mixing, settling, and excess of reagent showed increasing filtration and precipitation rate.

PRECIPITATION FACTORS AFFECTING FILTRATION

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A Thesis  
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Tennessee Technological University

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In Partial Fulfillment  
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MASTER OF SCIENCE  
CHEMICAL ENGINEERING

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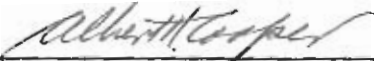
by  
Moon S. Park  
May, 1968

CERTIFICATE OF APPROVAL OF THESIS

PRECIPITATION FACTORS AFFECTING FILTRATION

by

Moon S. Park

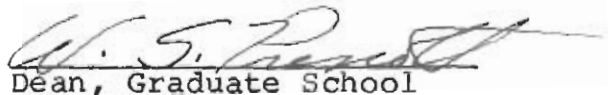


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