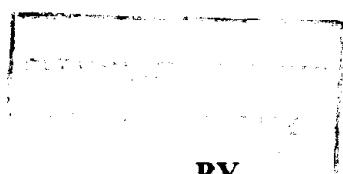


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**MANUFACTURE OF
PRECIPITATED CALCIUM CARBONATE
FROM DOLOMITIC QUICK LIME**

A PROJECT REPORT PRESENTED



BY

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ABSTRACT

Precipitated calcium carbonate can be manufactured from dolomite by carbonation method. This work had been done to find whether precipitated calcium carbonate could be manufactured from dolomite in Sri Lanka by carbonation method. Experiments have been done in both lab scale and pilot plant scale. Certain aliquots of dolomitic quick lime were taken regarding with its molecular weight 96 and dissolve in water to get milk of lime and filtrate to remove unburned particle.

Then carbon dioxides in different molar ratios were bubbled through the milk of lime up to get the product. Sodium bicarbonate was used as a carbon dioxide source in the lab scale experiments and LPG was used in the pilot plant scale experiments.

The obtained product was dried and checked for the purity. When the molar ratio between quick lime and carbon dioxide was 1:3, the purity of the product was 98%. Both pH and conductivity can be used as the parameters to determine the end of the reaction. When the pH decreases from 11.5 to 6.8 and conductivity decreases from $5.6 \times 10^3 \mu\text{scm}^{-1}$ to $2.4 \times 10^3 \mu\text{scm}^{-1}$, the operation can be shut down. LPG is a satisfactory fuel in Sri Lanka for the manufacture of precipitated calcium carbonate from dolomite in industrial scale.