

Laboratory Scale Production of Commercial Grade Calcium Carbonate from Lime-Soda Process

MS Islam, AKMA Quader

Abstract

Quality precipitated calcium carbonate has much demand in various chemical and allied industries as filler, surface coating, whitening, adhesive etc. A study was carried out by modifying classical lime-soda process to obtain high quality precipitated calcium carbonate. The experiments were carried out in two stages using commercial and analytical grades of sodium carbonate and lime as reactants. After causticization, the filtrates from the washing of calcium carbonate were used to prepare all solutions for reactions in next stage. The precipitated calcium carbonate obtained from the process was analyzed and comparisons were made with the commercially available precipitated calcium carbonate produced from carbonation method. The calcium carbonate produced from causticization was superior to those produced by carbonation method in the country. The crystal structure of carbonate was calcite.

Keywords: Causticization; Settle Volume; Bulk Density; Yield.

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ABOUT THE AUTHORS

MS Islam
Department of Chemical Engineering, Bangladesh University of Engineering & Technology, Dhaka-1000, Bangladesh
Bangladesh

AKMA Quader
Department of Chemical Engineering, Bangladesh University of Engineering & Technology, Dhaka-1000, Bangladesh
Bangladesh

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