

C725939 : MAJOR CHEMICAL TECHNOLOGY

KEY WORD: ABSORPTION / SULPHUR DIOXIDE / PELLETIZED FLY ASH

PANTAVEE THAMTHARATHAN : ABSORPTION OF SULPHUR DIOXIDE WITH PELLETIZED FLY ASH IN FLUIDIZED BED. THESIS ADVISOR : ASSIST.PROF. THARAPONG VITIDSANT, Doctorat de l'INT. SOMKIAT NGAMPRASERTSITH, Doctorat de l'INT. 138 pp. ISBN 974-635-133-8

Lignite fly ash from Mae Moh mine at Lumpang Province was mixed with lime and gypsum in varying composition to produce pelletized fly ash. The variable studied were composition by weight of fly ash, lime and gypsum 6:0:2, 6:0:4, 6:2:4 and 6:3:4 respectively, temperature range of 180-240 °C, U/Umf (1.2-1.75), pelletized fly ash diameter equivalent to Mesh no. -4+8, -8+16 and -16+30 and weight of pelletized fly ash (400-700 gm). For feed gas containing SO₂ 2000-2500 ppm, the result showed that the suitable condition for absorption of SO₂ was as follows : temperature of absorption 200-240 °C, U/Umf 1.25, diameter of pelletized fly ash Mesh no. -16+30, weight of pelletized fly ash 700 gm.

Pelletized fly ash with composition by weight of fly ash, lime and gypsum was 6:0:2 and 6:3:4, the result showed that they broke down between absorption SO₂, the absorption had 3 steps. In the first step, the absorption varied with time. The second step, they had constant absorption and they had quickly low absorption in the last step.

Pelletized fly ash with composition by weight of fly ash, lime and gypsum was 6:0:4 and 6:2:4, the result showed that they had strong structure and the absorption varied with time.

The suitable composition by weight of fly ash, lime and gypsum to produce pelletized fly ash for used of SO₂ absorption was 6:2:4

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