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J. H. C.

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NEWARK

GRINDING STUDIES
HF PROCESS

This represents an informal progress report on the HF process for the month of January, 1950.

The second semi-works charge (13 gal. unit) was evaluated and showed results similar to the first. The bearings on the unit have been repaired and further tests will be scheduled in the near future.

One attempt to cause CPC-LB to grind itself in this process was carried to about 7 hours with no significant strength improvement over the starting material.

One further attempt to promote phase conversion in Blue BG by adding Percelene to the acetone grind again resulted in a substantially weaker product without any certain evidence of more rapid phase change. The addition of Span 80 to such a grind did not influence it favorably.

One attempt to separate the salt from a ground slurry with a Syntron vibrator was not successful. Further work with the vibrator gives hope, however, that some success may be attained by the proper selection of conditions.

Perhaps the most hopeful advance in the month has been in the use of Borax as the grinding medium followed by crystallization from water after boiling off the acetone and reuse of the crystallized borax. In one such run, the borax was reused without drying and without replacing that lost and the results were fully equal to the control. The solubility of borax is such that there is no difficulty in obtaining complete solution in a reasonable volume of water. When cool, however, (say below 25°C) the loss of borax in this water should be quite small possibly as low as 1 lb. per lb. of pigment. By reuse of the mother liquor this might even be reduced. This line of attack will be actively followed up. One attractive feature in addition to the ease of recovery of borax is the lack of tendency to corrode equipment. Also since there should be no metal present due to corrosion or abrasion of equipment, it may be possible to eliminate the acid extraction.

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