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E. I. DU PONT DE NEMOURS & COMPANY
PIGMENTS DEPARTMENT
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NEWARK, NEW JERSEY

NEWARK PLANT
CHEMICAL DIVISION - COLORS

TITLE: AQUEOUS MILLING OF CPC (HF PROCESS)
MONTHLY PROGRESS REPORTS OF A. J. STRATTON

Period Covered NOVEMBER, 1949 - FEBRUARY, 1952

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NEWARK, NEW JERSEY
FEBRUARY 11, 1952

J.H.C.

CONFIDENTIAL

✓ DR. J. H. COOPER (3)

AQUEOUS MILLING OF CPC

For Period Jan. 12, 1952 to Feb. 8, 1952

A-IIC-261 AJS - 75%
 SFK - 20%
 OJCK- 33%

The ninth charge of dispersed green paste (now coded AGT-732-P) was processed in the laboratory and found to be of the same quality as the previous charges. A proportional mix of all nine charges was made in the 10 Bldg. Abbé Lenart mixer and, at 18% solids is strong, blue and intense vs. BT-321-P at 22% solids. Pursuant to a decision of the Sales Division, a mix of eight of these batches has been scheduled in the plant Abbé Lenart mixer, to have a solids content of 17.5% and to be offered as a proposed new standard. There will be about 2600 lbs. of paste from this mix.

A formula for AGT-732-P has been written and translation to the stepwise procedure for plant use is under way.

During the period, five charges of CPC-LB have been processed through the 100 gal. Cowles unit with very promising results. The first three have been finished and are ready for standardization. There is good evidence that a solids content approximately 18% will give the desired strength of BT-321-P (at 22% solids). The new color will be on the green, intense side of BT-321-P, but will carry this same code designation. One of the charges made in this unit was made with 120 lbs. of pigment, instead of the usual 75 lbs. The pigment in this charge appeared to be poorly wet and to entrap considerable air during incorporation into the mix so that the vessel was undesirably full at this point. However, this was a temporary condition and the charge was normal in behavior thereafter. The control samples indicate that the particle size reduction was accomplished in substantially the usual two-hour cycle. A study is proposed to try to eliminate the excessive incorporation of air, which is present in all charges to a greater or lesser extent, and then to give further attention to the use of larger pigment charges. There seems to be every reason to anticipate success in this step, which should result in a substantial reduction in cost.

Most of these charges of BT-321-P have been made from different lots of Newport crude, and it is proposed to set up a new proposed standard before the end of February from this material.

Using samples of dispersed blue paste from the above study, efforts have been made to prepare BL-288-D and BL-220-D. The tests are not complete, but it seems doubtful if the superior strength will be found in the BL-288-D. This is in line with previous evidence that BL-288-D will be difficult to make on standard formula from pastes containing 10% of Blancol. In the case of BL-220-D, the product was superior to the control; but both were weaker than standard so that further trials are required.

One attempt to make GP-501-D from the green dispersed paste gave a product substantially equal to standard in strength and very close in hue. The masstone was very light and dull. Again, however, the control was not satisfactory and more work is needed.

A further attempt to decrease the water content of the borax sludge from the rake classifier was made using a 40-mesh screen on the filter bed. A measure of success was obtained in that the borax content was increased from about 72% to 79-80%. The material appeared fairly dry, but still contained enough water to become a uniform and very dilatant paste, which was not easier to handle than that previously obtained. It is believed that it may be possible to find mechanical conditions which will facilitate this operation, and it will be given further attention as time is available.


A. J. STRATTON
CHEMICAL DIVISION

AJS:lg

JHC