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NEWARK PLANT
PIGMENT COLOR RESEARCH REPORT
Progress Report

Sick List Study of Blue Toner BT-181-D

November 1943 - October 1944

Period Covered:

FILE:

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NEWARK PLANT

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Progress Report

Title: Sick List Study of Blue Toner BP-181-D

Period Covered: November 1943 - October 1944.

SUBMITTED BY: V. Chalupski

DATE SUBMITTED: 10-4-44

APPROVED BY: *V. Chalupski Oct. 9, 1944*
V. Chalupski

DATE ISSUED: 10-10-44

INTRODUCTION:

Assistance was requested by the plant late in 1943 because of persistent weakness of production. Some of the weak sub-standard which had been made was blended with the strong Silico-Molybdate Toner K-1962, the development of which is discussed in another report. Several modifications were introduced into the BT-181-D formula in the course of plant production during the first half of 1944. Fairly satisfactory control appears to have been attained; no further study is contemplated because of the proposed revision in the process to permit larger batch sizes.

SUMMARY AND CONCLUSION:

A recommendation by the laboratory to adjust the pH of the Sodium Tungstate Molybdate solution before forming the Phospho-Tungstic-Molybdic Acid was first tried in the plant. A Number of plant batches with satisfactory strength were thus made. After several trials the amount of dye was reduced from 50 to 48 pounds "as is". These two changes were incorporated into a new standard formula K-2011.

Later attempts to duplicate the good results obtained with this formula were unsuccessful; weak material was again produced. Another change in formula was then made, using the dye on an analyzed basis instead of "as is". This was possible because of the development of a modified analytical procedure which appears to give fairly reliable results. Using the dye on an analyzed basis good results were obtained from June to October 1944 (first batch of this series Lot 16592).

Two other minor changes which contribute to better operation but probably do not affect quality were also used. 1) Dilution of Sulfuric Acid to 1:1 makes it possible to add the acid to the PTMA without shutting off steam; 2) the use of Crystalline Sodium Acetate instead of preparing this from Caustic Soda and Acetic Acid was found to be cheaper because of the small amount involved (10 lbs.). Other variables tried were a 10% cut in acid which appeared to have no effect in this case, and striking at 190° instead of at boil, which gave increased strength but poor light-fastness.

Yields of individual batches varied as much as 15% higher or lower than the goal yield, but the average of 25 consecutive batches was 98% of goal.

The changes discussed have been incorporated into a new standard formula, K-2064.

EXPERIMENTAL DETAILS:

See DSN 44-16