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NEWARK PLANT
PIGMENT COLOR RESEARCH REPORT

Final Report

PARA RED B, RT-442-D ECONOMY STUDIES - SEMI-WORKS & PLANT

Period Covered:

OCTOBER 1944 to DECEMBER 1945.

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NEWARK PLANT

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Final Report

PARA RED B, RT-442-D ECONOMY STUDIES - SEMI-WORKS & PLANT

OCTOBER 1944 to DECEMBER 1945.

SUBMITTED BY: V. Chalupski DATE SUBMITTED: 11/20/45

V. Chalupski Nov. 27, 1945

APPROVED BY: V. Chalupski DATE ISSUED: 11/27/45

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INTRODUCTION:

Laboratory recommendations for reduction of ingredient costs of RT-442-D were given a semi-works trial, and then applied in the plant. A slight change in tinctorial properties resulting from the ingredient modifications was acceptable to the Sales Department and the process was, therefore, standardized and a new formula, K-2218, was written. All plant production of RT-442-D and of the pulp, RT-35-P, has been by the new process since the middle of 1945.

SUMMARY & CONCLUSIONS:

Laboratory work is discussed in Research Report KN-45-7. A single semi-works batch was made incorporating four of the laboratory suggestions: -

1. Decrease amount of Mono Acid F by 20%
2. Omit phenyl-methyl-pyrazolone accessory agent.
3. Omit cooling beta-naphthol solution for coupling, using a higher coupling temperature.
4. Omit cooling of pigment slurry after heat development before adding Barium Rosinate.

All of these changes result in an ingredient saving of about 3¢ per lb. Semi-works batch was close to standard in masstone and yellow in tint; this change in tint was discussed with the Sales Department, who agreed to accept it.

After several months delay due to the demand for standard quality, a plant trial was finally made at 450 lb. batch size. This batch was dark in masstone and yellow in tint. A series of 3 more plant batches were then made at a larger plant size, 790 lbs. These also were somewhat dark in masstone and light and yellow in tint. A mix of the 4 plant batches mentioned above was proposed as standard in March 1945 and was finally approved early in June. Plant production was then changed over to the new process. A large percentage of the production during the next few months was light in masstone compared with the new standard. A study of these batches indicated that this resulted from over-washing, and possibly the use of dried barium resinate instead of freshly prepared slurry barium resinate. Shading material was made from time to time using increased amounts of Mono Acid F, but this is undesirable because of increased cost. By correction of the two factors mentioned above better control of masstone was finally obtained. A new standard formula, K-2218, was set up in September, 1945 and the process was turned over to the Production Department.

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A new goal yield was established on the revised process in the laboratory. A 1-1/2% increase in yield over the old determination was indicated; this is equivalent to 799 lbs. "as is" for the plant size formula, compared with the old figure of 787 lbs. The new figure is consistent with plant performance, which showed a performance average of 788 lbs. for the 12 batches made during the development work.

EXPERIMENTAL DETAILS:

See Development Section Data Book DSM-45-24

Laboratory Goal Yield Study Research N.B. 908-31.

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