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E. I. DU PONT DE NEMOURS & COMPANY
KREBS PIGMENTS DEPARTMENT
256 VANDERPOOL STREET
NEWARK. NEW JERSEY

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NEWARK PLANT
PIGMENT COLOR RESEARCH REPORT

Final Report

"WATCHUNG" RED LAKE, RM-417-D
PLANT STANDARDIZATION OF A 10% STRONGER PRODUCT

Period Covered: FEBRUARY - AUGUST, 1948.

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NEWARK PLANT

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"WATCHUNG" RED LAKE, RM-417-D
PLANT STANDARDIZATION OF A 10% STRONGER PRODUCT.

FEBRUARY - AUGUST, 1948.

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SUBMITTED BY: E.J.Hess E. J. Hess DATE SUBMITTED: 12/30/48

APPROVED BY: J.O.Morrison Jan 5, 1949. DATE ISSUED: 1/5/49

INTRODUCTION:

The appearance on the market of a Red LB lake similar to RM-417-D but 10% stronger than the then current standard, lot 48150, made it necessary to adjust the tinting strength of RM-417-D upward to maintain our competitive position in this field.

SUMMARY & CONCLUSIONS:

Upon receipt of the Sales request to restandardize RM-417-D at a 10% higher strength level a number of batches were made decreasing the extender amounts (blanc fixe and alumina hydrate) by approximately 16%.

One of these batches, lot 54116, was selected as being of the tinctorial quality normally being obtained during this period and of the desired strength and was set up as the new strong RM-417-D standard. A comparison of lot 54116 versus the previous standard follows:

Varnish dryer rubout:

Lot 54116 vs lot 48150: s.light - s.yellow - 10% strong - vs.yellow, intense.

Rubber test:

Lot 54116 vs lot 48150: 8-10% strong - yellow, intense. Migration OK.

A new standard formula, RM-417-D(B), based on the revised process was issued in July, 1948. A cost disadvantage of approximately 2-1/2 cents per pound resulted from the necessary extender decrease.

The Production Division accepted supervision of manufacture on the new strong RM-417-D formula in August, 1948.

DISCUSSION:

In October, 1947, the Sales Division requested that the strength of "Watchung" Red Lake, RM-417-D, be increased to equal that of the competitive product, Federal's Harrison Red #3005. A rubout comparison of the RM-417-D standard, lot 48150 versus a sample of the competitive material, follows:

Lot 48150 vs C #49603: dark - vs blue - wk (110-100)- vvs blue.

In order to save standardization costs it was suggested that some consideration be given to lowering the selling price of regular RM-417-D but this was rejected by Sales.

After some discussion it was decided that the only practical method for obtaining the desired strength increase was by cutting the blanc fixe and alumina hydrate extenders by 16% which was equivalent to increasing the toner content from 41.6% to 44.6%. This entails a cost penalty of about 2-1/2 cents per pound.

In February, 1948, plant manufacture was started on this revised formula. A series of seven batches were made during the period February-June, 1948. Masstone varied over a fairly wide range and it was finally decided to submit a single batch, lot 54116 as the proposed standard.

Lot 54116 was submitted for evaluation in May, 1948; results of the tests were reported in June, 1948 and the lot set up as the RM-417-D standard in July, 1948.

At the same time a new standard formula based on the lot 54116 process was issued as RM-417-D(B). A number of changes other than the extender decrease were incorporated in the new formula in line with plant procedures in use subsequent to the issuing of the RM-417-D(A) formulation. RM-417-D(B) differs from RM-417-D(A) as follows:

1. The process has been established on a stepwise basis.

2. The batch size has been increased approximately 23%.

3. The extender ingredients (alumina hydrate and blanc fixe) have been cut approximately 16%.

4. The Red 2B acid consumption per batch has been decreased 5% as a result of the improved accuracy of the suppliers (Orchem) analysis.

5. The pH after heat development is adjusted to 8.2-8.7 instead of 7.5-8.0 to obtain a closer approximation to the standard masstone.

The Production Division accepted supervision of RM-417-D(B) manufacture in August, 1948.

PATENT SITUATION:

There is no patent restriction in the manufacture of Red 2B colors. It is not believed that this study has resulted in any patentable developments.

GLOSSARY:

RM-417-D A 44-1/2% extension of RT-428-D on an equal part mixture of alumina hydrate and blanc fixe.

RT-428-D The calcium-strontium salt of the coupling of Red 2B acid, [illegible] diazo and beta hydroxy naphthoic acid.

Red 2B Acid - Ortho-chlor-meta-toluidine para-sulfonic acid.

"Watchung" Red colors - All Calcium Red 2B dyestuff pigments.

EXPERIMENTAL DETAILS: DSN-48-38.