

EXTERIOR PAINTS
AND ARCHITECTURAL FINISHES

4 Chemists
3 Helpers

- I. Lower Cost and Better House Paints. 1 man
- A. Lower cost whites and tints.
 - B. Better color retention.
 - C. Control of mildew.
 - D. Special primers.
 - E. Moisture peeling.
 - F. Prefabricated houses.
- II. Metal Protective Finishes. 1-1/4 man
- A. Surface preparation.
 - B. New fast drying shopcoats.
 - C. Lead-free primers.
 - D. Factors affecting corrosion.
 - E. New pigments.
- III. Miscellaneous Finishes. 3/4 man
- A. Cement & Stucco.
 - B. Freight Car Paints.
 - C. Galvanized Metal Primers.
 - D. Ship & Deck and Service Station Finishes.
- IV. Architectural Products. 1 man
- A. Cheaper Flats.
 - B. Washable Flats.
 - C. "DULUX" Flat.
 - D. Harder F. & D.
 - E. Faster Ovalite Undercoater.
 - F. More uniform Super White.
 - G. Better Super White Eggshell.
 - H. Faster drying "Dulite".
 - I. Chalk resistant Brush "Duco".
 - J. Faster Interior Gloss and Semi-Gloss.

EXTERIOR PAINTS
AND ARCHITECTURAL FINISHES GROUP

4 Chemists
3 Helpers

This group is trying:

- 1 man I. To lower the cost and improve the appearance retention and durability of house paints. They are working at this along the following lines:
- A. Lowering the cost of whites and tints by further replacement of lead by titanium pigments and the use of soya bean oil.
 (III. Potential savings
 Whites 10¢ per gal. \$40,000 per year
 Tints 10¢ per gal. \$20,000 per year)
- B. Improving the color retention of tints and solid colors.
1. By broadening the use of "Ti-Tints" to make color stable pastel shades.
 (III. Straw yellow
 Light blue and green "Ti-Tint" paints)
2. By introducing alkyds into P.P. solid colors to improve color retention.
 (III. Solid color greens, slides (K-46-43 T. & T. vs P.P.)
 Justen's brown house showing work yet to be done (G-28-1)
3. By using special blue pigment such as Monastral to get dark Trim & Trellis Blues.
 (III. Fading of iron blue and bronzing of monastral.)
- C. Finding improved methods for preventing mildewing of prepared paints so as to reduce zinc oxide content with resulting lower cost and better durability.
 (III. Mildew on house paint G-50-1
 Phenox vs control vs Mer-Q-Ree (bottom).)
- D. Developing special house paint primers to make better two coat systems and reduce peeling.
 (III. Peeling from yellow pine with and without special primer, 2-1/2 years 45° Texas.)

E. Studying factors affecting moisture peeling of house paints.

F. Developing special paint systems for the outside of prefabricated houses.

(Ill. Blistering of Gunnison wall section)

(2 slides - G-32-3 32-2)

II. To establish a basis on which proprietary metal protective paint can be sold involume at a satisfactory profit against the competition of cheap specification material. This includes developing improved and more foolproof products and also collecting information which can be used to educate the consumers to use these materials in such a way that improved service and not complaints will result from their use.

They are trying to do this:

3/4 man

A. By establishing the relationship between surface preparation and corrosion resistance and supplying sales with information that can be used to persuade the trade to clear steel properly so that we can safely sell more durable primer of the "DUJJA" type. This includes an extensive cooperative test with Bethlehem, preparing of our own panels and examination of field structures.

(Ill. of effect of cleaning

Panels at Phila.

Junction at Natchez

Baton Rouge (2)

Greenville (1)

Marine Parkway (3)

Easton-Phillipsburg (3)

1/2 man
12 mo.

B. Developing fast drying durable shop coats from alkyd-raw oil mixtures or GF acids.

(Ill. New 800 primer)

Intermittent

C. Developing lead-free primers from zinc chromate, zinc dust or other non-toxic pigments. These are needed for welding.

(Ill. slides of red lead vs zinc chromate)

Inactive

D. Studying the factors affecting corrosion.

Intermittent

E. Evaluation of new metal protective pigments especially in cooperation with Krebs and the Exp. Sta.

III. To keep our line of miscellaneous exterior finishes, such as Cement & Stucco, Acid & Alkali Resisting Paints, Marine Finishes, etc., at as high a standard as possible by incorporating into them new materials as available and new formulating technique developed in the house paints and metal protective studies. This includes the following problems at present:

- | | |
|------------------|--|
| 1/4 man
1 mo. | A. An improvement in Cement & Stucco Paint by reformulating to a semi-alkyd basis. |
| 1/2 man
2 mo. | B. Improvement of freight car and coal car paints by reformulation to a semi-alkyd basis. |
| Inactive | C. Development of a lower cost galvanized metal primer by finding a substitute for zinc dust. |
| Inactive | D. Introduction of chalk resistant titanium pigment into Ship & Deck and Service Station Finishes. |

IV. To develop a certain number of Interior Trade Sales and mill maintenance finishes of distinctive sales appeal and keep the remainder of these products at as high a quality and as low a cost as is possible by introducing new materials as they become available and new formulating procedures, such as the substitution of soya alkyds for bodied oils and varnishes.

During the last six months the following improvements have been made effective while replacing CWO with semi-alkyd formulas:

1. Ovalite Undercoater drying, sanding properties, initial color and color retention.
2. Floor & Deck odor, appearance retention.
3. Interior Gloss - initial color and color retention, gloss, drying and washability.
4. "Dulite" Gloss White - Brushing, hiding, color and color retention.
5. "Dulite" Eggshell - Hiding, initial color and color retention.
6. Brush "Duco" - Chalk resistance of white tints.
7. One Coat Enamel - Hiding, drying, color and gloss retention, washability.

8. Elimination of CWO in major Trade Sales items.

The following possibilities are to be followed up as soon as possible:

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|------------------|-----------|--|
| 1/4 man
3 mo. | <u>A.</u> | Develop a lower cost flat wall paint thru the use of cheap soya-maleic vehicle and lined linseed oil. (CWO eliminated)
(Ill. savings 11¢ per gal. \$45,000 per year) |
| 1/4 man
3 mo. | <u>B.</u> | Develop a cheap orthodox washable flat to match competitive quality. Our standard flats cannot be revised to a washable basis because washable flats to meet competitive price and quality are low hiding. |
| 1/4 man
6 mo. | <u>C.</u> | Develop a "DULUX" Flat sufficiently outstanding in washability, hiding, flow and evenness of sheen to permit selling at a premium price as a companion to "DULUX" Super White Gloss.
(Ill. Washing test panels) |
| Inactive | <u>D.</u> | Develop a Floor & Deck Paint of more rapid hardening, possibly thru use of GF oils. Introduce yellow "Ti-Tint" into poorest F. & D. to improve chalking.
(Ill. Overnight dry by present F. & D.) |
| Inactive | <u>E.</u> | Improve the speed of hardening of Ovalite Undercoater especially in bad weather. Need to find way to make shorter oil alkyd resin primers which brush well and have good flow. |
| Inactive | <u>F.</u> | Improve the uniformity of levelling gloss and sagging of "DULUX" Super White and related enamels by applying results of theoretical dispersion study now under way. |
| Inactive | <u>G.</u> | Improve the leveling and brushing of "DULUX" Super White Eggshell, thru use of different resins, extenders and dispersion control agents. |
| 1/4 man
2 mo. | <u>H.</u> | Improve the drying of "Dulite" by finding way to use shorter oil resins without encountering sagging. |
| Intermittent | <u>I.</u> | Improve the chalk resistance of Brush "Duco" by use of treated titanium pigments.
(Ill. Brush Duco chalking) |
| Inactive | <u>J.</u> | Improve the drying of Interior Gloss & Semi-Gloss by use of more alkyd resin, drier or other means. |