

D.P.K.

TABLE OF CONTENTS

Summary	1
Distribution of R&D Expenditures for First 6 Months of 1967	2
Market Performance of New Products	3
Savings from New Lightweight 5/8" Firestop (1st 6 Months 1967). . .	4

PROCESS AND PRODUCT IMPROVEMENT

Lightweight Gypsum Wallboard.	5
Hard End Wallboard	5
New Clay Sources for Firestop	5
Glass Fiber in Firestop	6
Evaluation of Rock Deposits at Lovell	6
Vermiculite Aggregate Texture	6
Denscal	6
Dens-Cote System	7
Photomicrographs of Denscal and Densite	8

SALES SERVICE

Weight Reduction of 1/2" Firestop	9
1/4" Sound Deadening Board and 1/2" Firestop Over Wood Studs for One Hour Rating	9
Three-Hour Floor and Ceiling	9
Fire Test to Reduce the Glass Fiber Content of 5/8" and 1/2" Firestop	9
Sound Test Program	10
Fire and Sound Test Records	10
Round Edge Wallboard	10
Flamespread Rating for Eternawall	11

NEW PRODUCT DEVELOPMENT

Molded Grainboard	12
Photographs Showing Splicing of Molded Grainboard Belt	13
Photograph Showing Portion of Lab Prototype Machine	14
Radiant Heating Panel	14
Thin Gypsum Wallboard for Plywood Grainboard	15
Gypsum Firedoor Filler	15
Paint Filler	16

TABLE OF CONTENTS

Page 2

FUNDAMENTAL RESEARCH & TESTING

Improved Firestop Patent Application	17
Dens-Cote Base Patent Application	17
Dens-Cote Plaster Patent Application	17
General	17
Gypsum Association and ASTM	18
Research Equipment and Facilities	19

PLANS FOR THE FUTURE	20
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S U M M A R Y

This report covers the activities of the Research Department for the first six months of 1967. This period has been marked with a number of unusual situations created by the move to Tigard.

Our Research budget for 1967 is \$221,400. In the first six months we have spent \$100,362. We will probably be under-budget by an even larger amount at the end of the year because of the loss of personnel. A chart showing the distribution of Research expenditures for this period is shown on Page 2.

The market performance of new products is shown on Page 3. The sales from products developed through Research represents 4.4% of the total sales for the Division. The profits from these products represent 4.2% of the Division total. Both sales and profits from new products are higher than for any previous six month period. The improvement in the profit figure has been helped by Ready Mix joint compound finally becoming profitable. Another factor was the new texture formulas that have increased the profitability.

In September of 1966 we introduced a new 5/8" Firestop with a lower weight limit. Based on the plant figures for weight reductions, the savings generated from this improved product in the first six months were approximately \$35,970. It is felt that even further savings can be generated when the plants are able to take fuller advantage of the lower weight limits. A breakdown of these figures by plants is shown on Page 4.

Other fire and sound testing is conducted as a service to the Sales Department. The fact that the sales of 1/2" Firestop was up 27.3% and 5/8" Firestop up 11.4% over the first six months of 1966 is an indication of the value of this expenditure.

These results are realized from the project work which follows the guidelines and objectives set forth by our Division Management. The project work of today will produce the results of the future. A progress report of the current R & D programs comprises the body of this report and is divided into the following sections.

Product and Process Improvement

Sales Service

New Product Development

Fundamental Research, Laboratory

Service and Testing

MARKET PERFORMANCE OF NEW PRODUCTS

<u>Product</u>	<u>Units</u>	<u>List Sales</u>	<u>Before Taxes</u>
Vinyl Tape Tile Backer	-	\$ 257.70	\$ 59
Dens-Cote Plaster Smooth Finish	1,533.5	94,968.56	5,983
Dens-Cote Plaster Sand Finish	23.4	1,375.73	181
Dens-Cote Plaster Sand Finish	108.3	4,874.88	165
Dens-Cote Tape - 300'	.1	3,104.26	173
Dens-Cote Tape - 100'	.1	3,784.16	394
1/4" Sound Deadening Board	325.4	14,851.31	1,888
Tile Backer-Water Resistant 1/2"	1,808.1	145,111.98	24,428
Tile Backer 5/8"	203.8	18,959.34	3,483
Tile Backer-5/8" Firestop	96.4	10,867.33	1,423
Wood Grained Gyp. Bd. 3/8"	336.5	19,118.64	(943)
Wood Grained Gyp. Bd. 1/2"	51.7	4,197.69	792
Dens-Cote Base 3/8" x 48" Pinholelath	1,302.1	48,621.39	4,730
Dens-Cote Base 1/2" x 48" Pinholelath	5,834.0	256,603.60	26,982
Dens-Cote Base 1/2" x 48" Firestop	262.4	14,390.67	1,431
Dens-Cote Base 5/8" x 48" Regular	133.1	6,836.59	585
Dens-Cote Base 5/8" x 48" Firestop	101.4	6,085.15	579
Triple Duty Joint Compound - 25# Bag	1,586.0	248,723.44	16,511
Triple Duty Joint Compound - 50# Bag	801.3	94,468.09	6,847
Ready Mix Joint Compound - 5 Gal.	3,071.7	394,235.35	14,868
Ready Mix Joint Compound - 1 Gal.	75.5	15,614.61	1,214
One-Day Joint Compound - 50# Bag	2.5	390.00	5
One-Day Joint Compound - 25# Bag	139.3	24,548.35	1,809
Bestex A	425.9	68,791.89	2,589
Bestex B	16.2	3,181.34	(3)
Bestex C	117.5	22,862.47	(274)
Grabit Adhesive	27.0	3,957.58	409
Ram Process Plaster	21.0	2,155.95	283
		<u>\$1,532,939.25</u>	<u>\$116,530</u>

approved, several of which are more economical than the clay we have been using. Based on last years sale of 1/2" and 5/8" Firestop, the annual savings which will be realized from these less expensive clays is \$43,000. The Purchasing Department has made even further inroads in getting better prices for some of these clays, so future savings will be even more than \$43,000 per year.

4. Glass Fiber in Firestop - R&D 131

We have had some comments from our Firestop licensees and subsequently from some of our own plants to the effect that they experience some difficulty in incorporating the formula amount of glass fiber in our Firestop products. Mr. R. W. Hinkel has suggested that it may be possible to use less glass fiber in the new Firestop formula, particularly if we are able to reduce the length from 1/2" to 1/4". In addition to easing the plant situation, this would offer some rather large potential for raw material savings, so we are pursuing the project with all possible speed. It will be necessary as a first step to purchase a fiber glass cutter which will cut 1/4" lengths. It is planned to have Wilmington purchase a cutter so we can make all of the necessary trial runs there prior to our move to Tigard.

5. Evaluation of Rock Deposits at Lovell - R&D 2

We have been assisting with the evaluation of samples of ore from the deposit at Lovell, Wyoming.

Joint System

1. Vermiculite Aggregate Texture - R&D 275

Field and market testing of two versions of a spray-on vermiculite texture have been successfully completed. The only difference in the two textures being field tested are that one has 8% vermiculite and the other has 10%. This type of texture is very popular on the West Coast and at the present time we do not even have a product to sell. The cost analysis of these formulas has been completed and it would appear that they will be more profitable than the Perlite textures we are currently selling. It is now up to Sales to initiate a New Product Request, based on the results of the field testing and the cost analysis which has been made available to them.

Industrial

1. Denscal - R&D 308

During the first few months of 1967 we assisted with the trial runs of the new Denscal plant at Blue Rapids. Mr. Maturo spent practically

PLANS FOR THE FUTURE

The past six months has been a period of planning and re-adjustment in preparation for the move to Tigard. Arrangements to move families and equipment; the planning of the new Research Center in Tigard; the recruiting of personnel replacements; and the other problems that develop in such an undertaking have taken precedence over some of the normal project work. We have tried to maintain continuity of some of the major projects such as the molded grainboard, radiant heating panel, fire and sound test programs and Firestop improvement patent application.

Messrs. E. F. Morrone and R. F. Martin have resigned and have left. In addition, Mr. A. Schnable will not be making the move to Portland. We were able to retain one Drexel Co-op student, but this program will terminate in September. This has necessitated some fast recruiting in order to start rebuilding the Department. With the excellent cooperation of the Portland Personnel Department, we have been able to find three excellent replacements for the permanent people we have lost. Mr. A. K. Stalker of Beaverton, Oregon was hired in May and has been training in Paoli since May. Mr. Stalker formerly worked in the wood treating industry. Mr. Michael Robinson of Tigard has recently accepted a position and will start in September. Mr. Robinson is a June graduate from Oregon State. We also arranged to transfer Mr. D. F. Klus from our Grand Rapids plant to Tigard in September. Mr. Klus, after four years experience in Manufacturing, has expressed a desire to work in Research and Development. During the next six months we will make the move to Tigard. We will be involved in setting up our equipment and training new personnel, but hope to accomplish this with a minimum of interruption to our major projects.

Our objectives for the remainder of 1967 are -

1. To bring the Brunswick pilot plant of the molded grainboard project to a successful conclusion.
2. To complete the Underwriters' testing of the radiant heating panel.
3. To reduce the glass fiber content of 5/8" and 1/2" Firestop. The anticipated annual savings from this are \$47,000.
4. To maintain a fire and sound testing schedule that will keep us in a favorable competitive position.
5. To continue the investigation to determine whether it is feasible to use gypsum wallboard as a core material in plywood grainboard.

6. To rebuild our research organization by training the new personnel.
7. To set up our equipment in Tigard so that we can return to the normal development work and provision of Sales and Manufacturing services.

There are many worthwhile projects such as the development of a gypsum firedoor filler, continued investigation of particle size of wallboard stucco, supplying of data for Sales, and participation in Gypsum Association and ASTM testing programs which are being held in abeyance until the move is consummated and our operation has returned to normal. This doesn't mean that we won't continue to be alert for new products or new applications which may occur. Every effort is being made to put our time to the best possible use and in the best interests of the company during this difficult period.